

The Media Streaming Journal

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Covering Audio and Video Internet Broadcasting

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Welcome to The Media Streaming Journal

Greetings,

Businesses or organizations that want to remain fiscally viable need to maintain thorough and accurate financial records. Not only does this provide detailed information regarding the financial condition of the business or organization, but it can also furnish essential information for tax preparation. Accurate financial data management can ensure continued success, or the lack thereof can guarantee a very short lived existence.

GNUCash provides an Open Source software application that can be used to input, retrieve, and manage many forms of financial records for both small or large businesses or organizations.

<http://www.sourceforge.net/projects/gnucash/>

Please feel free to contact either the Publication Director (Derek Bullard) or myself if you have any questions or comments regarding The Media Streaming Journal.

Namaste

David Childers

The Grand Master of Digital Disaster
(Editor In Chief)



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David Childers

The Grand Master of Digital Disaster

Current Member: International Association Of Internet Broadcasters

Former Member: Society of Motion Picture and Television Engineers

Published Author

Introduction To Internet Broadcasting
Amazon Publishing

30 Creative Commons Computer, Technical and Internet Broadcasting Guides

Newspaper Interviews

New York Times

Lagniappe - "Something Extra for Mobile"

Internet TV: Don't Touch That Mouse!
Tim Gnatek
July 1, 2004

Mobile Gets Hoaxed
Rob Holbert
Mar 16, 2016

Cited By

Five Essays on Copyright In the Digital Era
Ville Oksanen
2009

Turre Publishing
Helsinki Finland

Open Source Developer

Developed software architecture to continuously source multimedia content to Youtube Live servers.
Scenic Television - The sights and sounds of nature on the Internet.

<http://www.ScenicTelevision.com>

Projects

Researched and developed documentation for Peercast P2P multimedia streaming project.

<http://en.wikipedia.org/wiki/PeerCast>

Researched and developed technical documentation for NSV / Winamp Television.

http://web.archive.org/web/20080601000000*/http://www.scvi.net

MidSummer Eve Webfest

A virtual International festival focusing on Digital art and Free Software that was coordinated by OrganicaDTM Design Studio.

Presentation and discussion regarding Internet multimedia content distribution.

<http://web.archive.org/web/20061104230522/http://www.organicdtm.com/index.php?module=articles&func=display&catid=37&aid=61>

LinkedIn Contact Information

<http://www.linkedin.com/pub/david-childers/4/736/72a>

My Published Guides

Computer Operating System

- FreeBSD Compact Guide
<https://archive.org/details/FreeBSD.Compact.Guide>
- Debian Linux Desktop
<https://archive.org/details/Debian.Linux.Desktop>

Security

- Cyber Security
<https://archive.org/details/Cyber.Security>
- Wireless Network Security
<https://archive.org/details/Wireless.Security>
- Multimedia Server Security Guide
<https://archive.org/details/Multimedia.Server.Security.Guide>

Intelligence

- Competitive Intelligence For Broadcasters
<https://archive.org/details/Competitive.Intelligence.For.Broadcasters>
- Codex Notitia
<https://archive.org/details/Codex.Notitia>
- Techniques For Information Research
<https://archive.org/details/Techniques.For.Information.Research>
- Introduction To Open Source Intelligence
<https://archive.org/details/Introduction.To.Open.Source.Intelligence>

Technical

- Basic Internet Video Production Guide
<https://archive.org/details/Video.Production.Guide>
- SHOUTcast Audio And Video Streaming Guide
<https://archive.org/details/SHOUTcast.Audio.And.Video.Streaming>
- SHOUTcast Streaming Best Of Technical Support
<https://archive.org/details/Shoutcast.Streaming.Best.Of.Tech.Support>
- Tips For Internet Broadcasters
<https://archive.org/details/Tips.For.Internet.Broadcasters>
- Icecast Multimedia Server Handbook
<https://archive.org/details/Icecast.Multimedia.Server.Handbook>
- Internet Broadcasters Information Handbook
<https://archive.org/details/Internet.Broadcasters.Information.Handbook>
- Linux Applications For Internet Broadcasters
<https://archive.org/details/Linux.Applications.For.Internet.Broadcasters>

- Youtube Live Video File Streaming
<https://archive.org/details/Youtube.Live.Video.File.Streaming>

Revenue

- Broadcaster Revenue Handbook
<https://archive.org/details/Broadcaster.Revenue.Handbook>
- Effective Audio Commercials
<https://archive.org/details/Effective.Audio.Commercials>

Marketing

- Broadcast Station Imaging
<https://archive.org/details/Broadcast.Station.Imaging>
- Creating An Effective Media Kit
<https://archive.org/details/Creating.An.Effective.Media.Kit>
- Creating An Effective Broadcast Station Newsletter
<https://archive.org/details/Creating.An.Effective.Broadcast.Station.Newsletter>
- Broadcasters Promotion Handbook
<https://archive.org/details/Broadcasters.Promotion.Handbook>
- Planning and Conducting Multimedia Influence Campaigns
<https://archive.org/details/Planning.and.Conducting.Multimedia.Influence.Campaigns>
- Social Media Guide
<https://archive.org/details/Social.Media.Guide>

Website

- Website Development
<https://archive.org/details/Station.Website.Development>
- Search Engine Optimization
<https://archive.org/details/Search.Engine.Optimization>

Audience

- Internet Broadcasters Guide To Understanding Your Audience
<https://archive.org/details/Internet.Broadcasters.Guide.To.Understanding.Your.Audience>
- How To Mobilize Your Broadcast Audience
<https://archive.org/details/How.To.Mobilize.Your.Broadcast.Audience>

General

- Creative Commons Licensing For Broadcasters
<https://archive.org/details/Creative.Commons.Licensing.For.Broadcasters>

The Media Streaming Journal

What is in this edition of the Media Streaming Journal

GnuCash Help Manual
The GnuCash Documentation Team

GnuCash Tutorial and Concepts Guide
The GnuCash Documentation Team



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GnuCash Tutorial and Concepts Guide

The GnuCash Documentation Team

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GnuCash is the personal finance software package is versatile enough to keep track of all your financial information, from the simple to the very complex.

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GnuCash Tutorial and Concepts Guide

The GnuCash Documentation Team

GnuCash Tutorial and Concepts Guide

by The GnuCash Documentation Team

This Guide contains a tutorial for using GnuCash and describes the concepts behind GnuCash.

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Feedback

To report a bug or make a suggestion regarding the program or this documentation, follow the instructions at the Bugzilla page of the GnuCash wiki [<https://wiki.gnucash.org/wiki/Bugzilla>] and use the GnuCash Bug Tracking System [<https://bugs.gnucash.org/>]. At first you want to browse [<https://bugs.gnucash.org/describecomponents.cgi>] or search [<https://bugs.gnucash.org/query.cgi>] it for already existing bugs. Select the product *GnuCash* for the program or *Documentation* for any parts of this documentation.

Table of Contents

About the Authors	xiii
I. Getting Started	1
1. Overview	4
Introduction	4
Features	4
Easy to Use	4
Tracks Your Investments	6
International Support	6
Business Support	6
Accounting Features	6
About this Book	7
Getting More Help	8
Context Help	8
GnuCash Website	8
GnuCash Wiki	8
GnuCash On-line Assistance	9
Topic Search	9
Installation	9
2. The Basics	10
Accounting Concepts	10
The 5 Basic Accounts	10
The Accounting Equation	10
Debits and Credits	11
Double Entry	11
Data Entry Concepts	12
Files	12
Accounts	13
Transactions	13
Running GnuCash	13
Welcome to GnuCash dialog	14
New Account Hierarchy Setup	14
Tip of the Day	15
Account Tree Window	16
Account Register Window	17
Toolbar Buttons	17
Tab Bar	18
Menu Items	18
Menu Shortcuts	18
Storing your financial data	18
Overview	18
Storage Comparison and Recommendations	19
Storage Comparison Table	19
Creating a file	19
Saving data	20
Opening data	22
Duplicating an Account Hierarchy	22
Backing Up and Recovering Data	22
Backup file (.gnucash)	23
Log file (.log)	23
Lock files (.LNK and .LCK)	23
File Management	24

Migrating GnuCash data	24
Migrating financial data	24
Migrating preferences data	24
Putting It All Together	25
Accounts	30
Basic Accounting Concepts	30
GnuCash Accounts	31
Putting It All Together	35
Transactions	38
Basic Concepts	38
The Account Register	39
Simple vs. Split Transactions	42
Reconciliation	45
Scheduled Transactions	50
Putting It All Together	58
3. Importing Data into GnuCash	65
Importing Transactions from Files	65
File Import Formats	65
Import Matcher	65
Import QIF	66
Import OFX/QFX	67
Import CSV	68
Import MT940	69
Import MT942	69
Import DTAUS	69
4. Configuring GnuCash	70
Overview	70
Main Configuration Screens	70
Preferences: Accounting Period Tab	70
Preferences: Accounts Tab	70
Preferences: Online Banking	70
II. Managing Personal Finances	71
5. Checkbook	75
Setting up Accounts	75
Entering Deposits	75
Entering Withdrawals	76
ATM/Cash Withdrawals	76
Reconciling Your Accounts	77
Putting It All Together	77
Opening Balances	77
Add some transactions	78
Opening Balances	79
Save file	80
Reports	81
6. Expense Accounts	85
Concepts	85
Setting Up Accounts	85
Simple Expense Account Setup	85
Complex Expense Account Setup	85
Entering Expense Transactions	85
Other Considerations for Expense Accounts	86
7. Credit Cards	87
Concepts	87
Setting Up Accounts	87

Simple Setup	87
Complete Setup	88
Entering Charges	88
Entering Payments	89
Putting It All Together	90
Open GnuCash file	90
Purchases	92
Refund	92
Interest Charge	92
Reconciliation	93
Payment	94
Save file	96
Reports	96
8. Loans	99
Basic Concepts	99
Terminology	99
Setting Up Accounts	99
Calculations	100
Example: Monthly Payments	101
Example: Length of Loan	101
Advanced: Calculation Details	101
House Mortgage (How-To)	103
A Personal Loan to a friend (How-To)	106
Loan Specifications	107
Accounts for the loan	107
Lending the money	108
Receiving first payment	108
Receiving second payment	109
Automobile Loan (How-To)	110
Reconciling with the Loan Statements (How-To)	111
Selling a house or a car (How-To)	111
Simple Transaction	111
A More Complex Transaction	112
9. Investments	114
Basic Concepts	114
Terminology	114
Types of Investments	116
Setting Up Accounts	116
Using Predefined Investment Accounts	117
Creating Investment Accounts Manually	118
Custom Accounts Example	118
Interest Bearing Accounts	119
Account Setup	119
Example	120
Setup Investment Portfolio	122
Setup Accounts for Stocks and Mutual Funds	123
Example Stock Account	123
Buying Shares	127
Entering Preexisting Shares	127
Buying New Shares	128
Setting Share Price	130
Initial Price Editor Setup	130
Setting Stock Price Manually	131
Configuring for Automatic Retrieval of Quotes	132

Displaying Share Value	133
The “Price Source” in Reports	134
Selling Shares	136
Selling Shares with Manual Calculation of Capital Gain or Loss	136
Examples of Selling Shares with Manually Entry of Capital Gain or Loss	139
Selling Shares with Automatic Calculation of Capital Gain or Loss Using Lots	143
Dividends	155
Dividends in Cash	155
Dividends Re-Invested	156
Return of Capital	156
Splits and Mergers	157
Simple Stock Split	157
Moderately Complex Stock Merger	160
10. Reports	163
Overview	163
Saved Reports Configurations Concepts	163
Standard Reports Overview	164
Transaction Report	164
Assets & Liabilities Group	164
Budget Group	167
Business Group	167
Income and Expense Group	169
Sample & Custom Group	172
Other Reports	173
Using the Transaction Report	174
11. Capital Gains	177
Basic Concepts	177
Estimating Valuation	177
Account Setup	178
Example	179
Unrealized Gains	179
Selling	180
Taxation	182
12. Multiple Currencies	184
Basic Concepts	184
Account Setup	184
User-Defined Currencies	185
Recording and Updating Currency Exchange Rates	186
Manually Updating Exchange Rates	187
Automatic Updating Exchange Rates (How-To)	188
Disabling Exchange Rate Retrieval	189
Recording Purchases in a Foreign Currency	190
Purchase of an Asset with Foreign Currency	190
Purchasing Foreign Stocks	192
Tracking Currency Investments	195
Purchasing Currency	195
Selling a currency investment	196
Reconciling Statements in a Foreign Currency	196
III. Managing Business Finances	197
13. Business Features	200
Introduction to Business Features	200
Business Setup	200
Account Setup	200
Setting up Sales Tax Tables	201

Enter Company Information	203
Setting Business Preferences	205
Setting Billing Terms	205
Accounts Receivable	206
System Components	207
Customers	207
Invoices	209
Customer Jobs	212
Process Payment	213
Changing the Invoice Appearance	214
Accounts Payable	216
System Components	216
Vendors	217
Bills	218
Vendor Jobs	221
Process Payment	221
Payroll	222
Basic Concepts	222
Account Setup	222
Payroll Protocol Sample	223
Business Payroll Example	225
14. Budgets	229
Basic Concepts	229
Terminology	229
Creating a Budget	229
Choose Which Accounts To Budget For	229
Choosing a Budget Period	230
Getting Started	230
Entering Budget Values	230
Budget Reporting	230
Budgeted Income Statement	231
Budgeted Balance Sheet	231
15. Other Assets	232
General Concepts	232
Other Assets Described	232
Current Assets	232
Long-term (Fixed) Assets	232
Current Assets	232
Short-term Receivables	233
Reimbursable Expenses	233
Travel Advances	234
Prepaid Premiums or Prepaid Rent	234
Suspense or Wash Accounts	235
Short or Long-term Assets	236
Long-term (Fixed) Assets	236
Land	236
Buildings	236
Leasehold Improvements	237
Vehicles or Equipment	237
Intangibles	237
16. Depreciation	238
Basic Concepts	238
Personal Finances	238
Business	238

Estimating Valuation	239
Depreciation Schemes	239
Account Setup	241
Example	242
17. Python Bindings	246
18. Importing Business Data	247
Importing Bills and Invoices	247
General	247
The format of the import file	247
Import your data	249
Feedback and statistics	250
What could go wrong?	250
Not supported invoice functionality	251
Importing Customers and Vendors	252
General	252
The format of the import file	252
Import your data	253
Feedback and statistics	254
What could go wrong?	254
Not supported customer/vendor functionality	255
IV. Appendices	256
GnuCash Glossary	259
A. Migration Guide	263
Using Accounts vs. Categories	263
Organization of QIF Files (Discussion)	263
Common Duplication Issues (Discussion)	263
Checking QIF Data (Discussion)	263
Converting XML GnuCash File	263
B. Frequently Asked Questions	265
Sources of Information	265
Q: Where's the FAQ?	265
Q: Are there mailing lists for GnuCash?	265
Q: Is there a searchable archive for the mailing lists?	265
Q: Are there other means of obtaining support for GnuCash?	265
General Information	265
Q: Can I run GnuCash on Windows?	265
Q: I heard it is too hard to compile GnuCash!	265
Q: Is there a batch mode (non-interactive) available for GnuCash, for building reports, etc?	266
Q: Can multiple people access the same datafile in GnuCash?	266
Q: Why is GnuCash written in C?	266
Q: Why don't you rewrite GnuCash in programming language xyz so that I can contribute easily?	266
Q: I really want feature XYZ but GnuCash doesn't have it. How do I get it added?	266
Q: Is there a web interface available for GnuCash?	267
Q: How can I provide security for GnuCash data using CFS, etc.)	267
Q: How can I contribute to the GnuCash project?	267
Q: I think I found a bug. How do I report it?	267
Using GnuCash	267
Q: How can I move the transactions from account "A" into account "B", thus combining them?	267
Q: Is it possible to merge two GnuCash files?	267
Q: How can I save a template of my account structure?	268

Q: When I search for customers (or anything else for that matter), how can I return a list of everything?	268
Q: How can I record a transaction on different dates (actual date and bank date)?	268
Accounting	268
Q: How do I treat taxes? As an account payable or as an expense?	268
C. Contributed Account Trees	269
UK Vat	269
D. Auxiliary File Formats	272
Check Format Files (*.chk)	272
Overview	272
Example file	272
Field Descriptions	273
Creating Check Format Files	281
E. GNU Free Documentation License	283
0. PREAMBLE	283
1. APPLICABILITY AND DEFINITIONS	283
2. VERBATIM COPYING	284
3. COPYING IN QUANTITY	284
4. MODIFICATIONS	285
5. COMBINING DOCUMENTS	286
6. COLLECTIONS OF DOCUMENTS	286
7. AGGREGATION WITH INDEPENDENT WORKS	286
8. TRANSLATION	287
9. TERMINATION	287
10. FUTURE REVISIONS OF THIS LICENSE	287
Addendum	287

List of Figures

2.1. The basic accounts relationships	11
2.2. Save screen when XML or sqlite3 is selected.	20
2.3. Save screen when mysql or postgres is selected.	21
2.4. Entering a split transaction	45
9.1. Selling Shares - Capital Gains - Lots in Account window	144
9.2. Selling Shares - Capital Gains - Security register before scrubbing a single lot	147
9.3. Selling Shares - Capital Gains - Lots before scrubbing a single lot	147
9.4. Selling Shares - Capital Gains - Lots before scrubbing a single lot, after manual linking	148
9.5. Selling Shares - Capital Gains - Register after manual linking and scrubbing a single lot	148
9.6. Selling Shares - Capital Gains - Register before Scrub Account	150
9.7. Selling Shares - Capital Gains - Lots before Scrub Account	150
9.8. Selling Shares - Capital Gains - Lots after Scrub Account	151
9.9. Selling Shares - Capital Gains - Register after Scrub Account	152
9.10. Selling Shares - Capital Gains - Register after Scrub Account	153
9.11. Selling Shares - Capital Gains - Lot 0 after Scrub Account	153
9.12. Selling Shares - Capital Gains - Lot 1 after Scrub Account	154
9.13. Selling Shares - Capital Gains - Register after scrubbing a single lot	155
13.1. Sales Tax Tables Editor	202
13.2. New Sales Tax Table Entry	202
13.3. Entering Company Information	204
13.4. Billing Terms Editor	205
13.5. New Billing Term	206
13.6. New Customer Registration Window	208
13.7. Find Customer Window	209
13.8. Creating a New Invoice	210
13.9. Edit Invoice Window	210
13.10. Post Invoice Window	211
13.11. Invoice Print Output	212
13.12. New Customer Job	213
13.13. Process Customer Payment	214
13.14. The New Style Sheet Window	214
13.15. HTML Style Sheets Example Window	215
13.16. HTML Style Sheets Example Output	216
13.17. New Vendor Registration Window	217
13.18. Find Vendor Window	218
13.19. New Bill Registration Window	219
13.20. Edit Bill Window	220
13.21. Post Bill Window	220
13.22. New Vendor Job	221
13.23. Process Vendor Payment	222
13.24. Payroll Example: Initial Setup	225
13.25. Payroll Example: Employee Split Transaction	226
13.26. Payroll Example: Accounts After Salaries Paid	227
13.27. Payroll Example: Accounts After Paying Government	228

List of Tables

2.1. Summary of effect of debits (Dr) and credits (Cr) on the balance of accounts of the 5 account types	11
2.2. Storage Comparison	19
2.3. Application Settings Locations	25
2.4. Saved Reports Locations	25
2.5. Online Banking Settings Locations	25
8.1. Buying a House Split Transaction	104
8.2. Personal loan to a Friend	108
8.3. Selling an asset (house) with a profit	112
8.4. Selling an asset (house) with a loss	112
8.5. Selling an asset (house) with a profit	113
8.6. Selling an asset (house) with a profit 2	113
9.1. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Combined, Gross Pricing	137
9.2. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Combined, Net Pricing	138
9.3. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Separate Transactions, Sale Transaction	138
9.4. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Separate Transactions, Capital Gain/Loss Transaction	138
9.5. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Separate Transactions, Sale Transaction	138
9.6. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Separate Transactions, Capital Gain/Loss Transaction	139
9.7. Selling Shares Split Scheme, Sale & Gain Combined, Gross Pricing	139
9.8. Selling Shares Split Scheme, Sale & Gain Combined, Net Pricing	140
9.9. Selling Shares Split Scheme, Sale Transaction, Gross Pricing	141
9.10. Selling Shares Split Scheme, Gain Transaction, Gross Pricing	141
9.11. Selling Shares Split Scheme, Sale Transaction, Net Pricing	142
9.12. Selling Shares Split Scheme, Gain Transaction, Net Pricing	142
9.13. Transaction 1 dealing with value received and the reduction of the number of shares	146
9.14. Transaction 2 capital gain/loss (loss in this example)	146
10.1. Sample Chart of Accounts for Income and GST Statement	172
10.2. Income and GST Statement	172
10.3. Sample Chart of Accounts for the Transaction Report	174
11.1. Turning an Accrued Gain into a Realized Gain - Accurate Estimation	181
11.2. Turning an Accrued Gain into a Realized Gain - Underestimation	182
11.3. Turning an Accrued Gain into a Realized Gain - Overestimation	182
12.1. Selling a currency with a Split Transaction Scheme	196
13.1. Sample Tax Table Entries for EU country (e.g. 21% / 6% / 0% Belgium, 20% / 5% / 0% UK etc.) (2017)	203
13.2. Sample Tax Table Entries for Australia (2017)	203
13.3. Sample Tax Table Entries for Cook County, Illinois (2017)	203
13.4. Payroll Transaction Map	224
13.5. Payroll Transaction Map for Employee 1	226
16.1. Linear Depreciation Scheme Example	240
16.2. Geometric Depreciation Scheme Example	240
16.3. Sum of Digits Depreciation Scheme Example	241
D.1. Overall Page Description Fields	273
D.2. Multiple Checks Per Page Fields	275
D.3. Individual Check Item Fields	277
D.4. Individual Check Item Types	279

List of Equations

2.1. The static accounting equation	10
2.2. The (dynamic) accounting equation	10
2.3. The rearranged accounting equation	11

About the Authors

The GnuCash Documentation Team is a self-designated group of GnuCash users and developers who have volunteered to write this documentation for the benefit of the broader user base. People who are interested in joining this group are encouraged to express their interest on the GnuCash lists (<gnucash-users> and <gnucash-devel>) for further direction.

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Part I. Getting Started

Table of Contents

1. Overview	4
Introduction	4
Features	4
Easy to Use	4
Tracks Your Investments	6
International Support	6
Business Support	6
Accounting Features	6
About this Book	7
Getting More Help	8
Context Help	8
GnuCash Website	8
GnuCash Wiki	8
GnuCash On-line Assistance	9
Topic Search	9
Installation	9
2. The Basics	10
Accounting Concepts	10
The 5 Basic Accounts	10
The Accounting Equation	10
Debits and Credits	11
Double Entry	11
Data Entry Concepts	12
Files	12
Accounts	13
Transactions	13
Running GnuCash	13
Welcome to GnuCash dialog	14
New Account Hierarchy Setup	14
Tip of the Day	15
Account Tree Window	16
Account Register Window	17
Toolbar Buttons	17
Tab Bar	18
Menu Items	18
Menu Shortcuts	18
Storing your financial data	18
Overview	18
Storage Comparison and Recommendations	19
Storage Comparison Table	19
Creating a file	19
Saving data	20
Opening data	22
Duplicating an Account Hierarchy	22
Backing Up and Recovering Data	22
Backup file (.gnucash)	23
Log file (.log)	23
Lock files (.LNK and .LCK)	23
File Management	24
Migrating GnuCash data	24
Migrating financial data	24

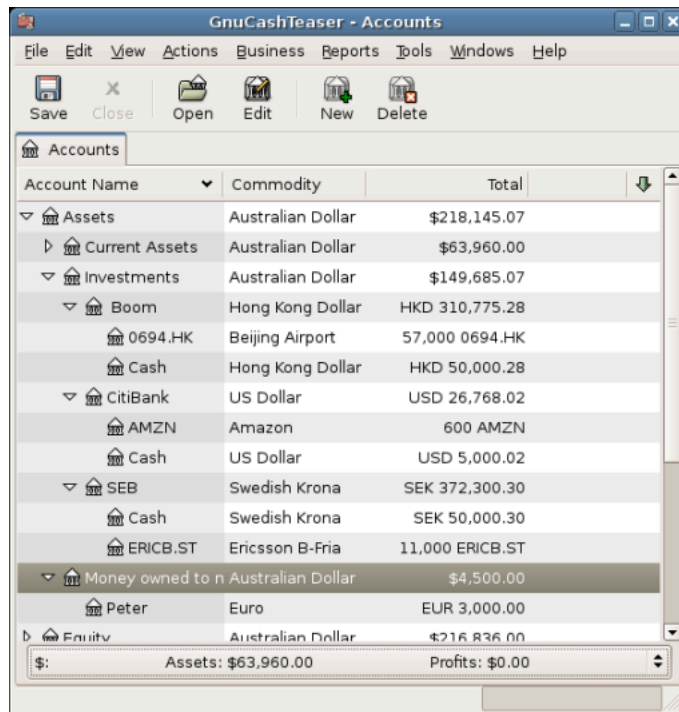
Migrating preferences data	24
Putting It All Together	25
Accounts	30
Basic Accounting Concepts	30
GnuCash Accounts	31
Putting It All Together	35
Transactions	38
Basic Concepts	38
The Account Register	39
Simple vs. Split Transactions	42
Reconciliation	45
Scheduled Transactions	50
Putting It All Together	58
3. Importing Data into GnuCash	65
Importing Transactions from Files	65
File Import Formats	65
Import Matcher	65
Import QIF	66
Import OFX/QFX	67
Import CSV	68
Import MT940	69
Import MT942	69
Import DTAUS	69
4. Configuring GnuCash	70
Overview	70
Main Configuration Screens	70
Preferences: Accounting Period Tab	70
Preferences: Accounts Tab	70
Preferences: Online Banking	70

Chapter 1. Overview

Introduction

GnuCash is the personal finance software package made for you. It is versatile enough to keep track of all your financial information, from the simple to the very complex. It is one of the few financial software packages that supports global currencies, and it is the only open-source program of its kind. Best of all, GnuCash is easy to learn and use!

So, what can GnuCash do for you? It can keep track of your personal finances in as much detail as you prefer. If you are just starting out, use GnuCash to keep track of your checkbook. You may then decide to track cash as well as credit card purchases to better determine where your money is being spent. When you start investing, you can use GnuCash to help monitor your portfolio. Buying a vehicle or a home? GnuCash will help you plan the investment and track loan payments. If your financial records span the globe, GnuCash provides all the multiple-currency support you need.



Account Name	Commodity	Total
Assets	Australian Dollar	\$218,145.07
Current Assets	Australian Dollar	\$63,960.00
Investments	Australian Dollar	\$149,685.07
Boom	Hong Kong Dollar	HKD 310,775.28
0694.HK	Beijing Airport	57,000 0694.HK
Cash	Hong Kong Dollar	HKD 50,000.28
CitiBank	US Dollar	USD 26,768.02
AMZN	Amazon	600 AMZN
Cash	US Dollar	USD 5,000.02
SEB	Swedish Krona	SEK 372,300.30
Cash	Swedish Krona	SEK 50,000.30
ERICB.ST	Ericsson B-Fria	11,000 ERICB.ST
Money owned to n	Australian Dollar	\$4,500.00
Peter	Euro	EUR 3,000.00
Equity	Australian Dollar	\$216,826.00
\$:	Assets: \$63,960.00	Profits: \$0.00

This image shows a Chart of Accounts with multiple currencies and investments.

While GnuCash is well suited for personal finances, it is also powerful enough for business use. There are many business features, from integrated accounts receivable and payable systems, to tax table construction. You will find these and the many other business features surprisingly powerful and easy to use.

Features

Easy to Use

Within a matter of minutes you will be able to enter your personal finance information and generate color graphs that represent your financial status. If you can use the register in the back of your checkbook - you

can use GnuCash! Type directly into the register, tab between fields, and use quick-fill to automatically complete transactions. The interface is customizable from within the application itself.

- *Easy to Use Menus:* GnuCash menus conform to the GNOME Human Interface Guidelines. This means that they are simple and similar in appearance to many other GNOME applications.
- *Documentation:* GnuCash has built-in Help and extensive User's Guide documentation.
- *Import Methods:* GnuCash supports many ways to input transactions besides manual entry. If you can access your bank accounts on-line, this is especially useful, as most banks and credit card companies support one of the following import methods. You will spend less time entering data and more time analyzing results.
 - *Quicken Import File (QIF):* Import Quicken QIF style files, a popular file format with many commercial personal finance software packages.
 - *Open Financial Exchange (OFX):* GnuCash has been the first free software application to support the Open Financial Exchange protocol. Many financial institutions are moving towards this format.
 - *Home Banking Computer Interface (HBCI):* GnuCash has been the first free software application to support the German Home Banking Computer Interface protocol. This protocol includes statement download, initiates bank transfers, and makes direct debits possible.
- *Reports:* GnuCash comes with over 30 prebuilt reports, including Account Summary, Income, Expenses, Transaction Report, Balance Sheet, Profit&Loss, Portfolio Valuation, and many others. Reports support graphical views of the data, including pie charts, bar charts, and scatter plots. The reports can be exported to HTML files, and are easily customized.
- *Scheduled Transactions:* GnuCash now has the ability to automatically create and enter transactions, or remind you when these transactions are due, giving you the choice of entering, postponing or removing the automated transaction.
- *Mortgage and Loan Repayment Assistant:* Used to set up a variable payment loan scheduled transaction.
- *Easy Account Reconciliation:* Integrated reconciliation makes reconciling your GnuCash accounts with statements simple and effective.
- *Multi-platform Compatibility:* GnuCash is supported on a variety of platforms and operating systems. The list of fully supported operating systems (and platforms) is for

GnuCash 3.7	GNU/Linux (x86, x86_64), FreeBSD (x86, x86_64), OpenBSD (x86, x86_64), Apple MacOS (64-bit Intel), and Microsoft Windows (Windows 7 and later).
GnuCash \leq 2.6.21	Apple MacOS (32-bit Intel, PPC) and Microsoft Windows (XP and Vista).
GnuCash \leq 2.2.9	Microsoft Windows (2000).
Previous versions of GnuCash	have been known to work with SGI IRIX (MIPS), IBM AIX 4.1.5 (RS/6000), Unixware 7 (Intel), SCO OpenServer 5.0.4 (Intel), and Solaris (Sparc) but their current status is unknown.

Tracks Your Investments

GnuCash includes a number of investment features that allow you to track all your investments. With GnuCash you can track stocks individually (one per account) or in a portfolio of accounts (a group of accounts that can be displayed together).

GnuCash supports online stock and mutual fund quotes. This means you no longer need to look up stock prices one at a time. The process can be automated, and you can see the latest value of your stocks.

International Support

GnuCash is truly an application that works with and understands users from all around the world. There are many built-in features to facilitate interaction with the international world we live in today.

- *Native Languages:* GnuCash has been fully translated into 12 languages: Chinese, Czech, Dutch, English, French, German, Italian, Portuguese, Russian, Slovak, Spanish and Swedish. More than 25 other languages are partially supported.
- *International Format Handling:* GnuCash understands that different countries display the date and numbers differently. You are able to work with the date and number formats you are accustomed to.
- *Multiple Currencies and Currency Trading:* Multiple currencies are supported and can be bought and sold (traded). Currency movements between accounts remain fully balanced if "Trading Accounts" is enabled.
- *On-line exchange rates:* With GnuCash, you no longer need look up your exchange rates one at a time. The process can be automated, to always present you with the account values converted to your preferred currency using the latest exchange rates.

Business Support

GnuCash has many features to support the needs of the business accounting community.

- *Accounts Receivable/Payable:* GnuCash has an integrated Accounts Receivable and Accounts Payable system. You can track Customers, Vendors, Invoicing and Bill Payment, and use different Tax and Billing Terms in a small business.
- *Depreciation:* GnuCash can track depreciation of capital assets.
- *Reports:* GnuCash offers a wide variety of ready-to-use business reports.

Accounting Features

For those knowledgeable in accounting, here is a list of GnuCash's accounting features.

- *Double Entry:* Every transaction must debit one account and credit others by an equal amount. This ensures the "books balance" - that the difference between income and expense exactly equals the sum of all bank, cash, stock and other assets.
- *Split Transactions:* A single transaction can be split into several pieces to record taxes, fees, and other compound entries.
- *Chart of Accounts:* A master account can have a hierarchy of detail accounts underneath it. This allows similar account types such as Cash, Bank, or Stock to be grouped into a master account such as "Assets".

- *General Journal*: One register window can display multiple accounts at the same time. This eases the trouble of tracking down typing/entry errors. It also provides a convenient way of viewing a portfolio of many stocks, by showing all transactions in that portfolio.
- *Income/Expense Account Types (Categories)*: These categorize your cash flow and, when used properly with the double-entry feature, will provide an accurate Profit&Loss statement.

About this Book

This manual's goal is to save you time. It will get you started using GnuCash as quickly as possible.

Each chapter follows a simple format. A chapter begins with a "Concepts" discussion which introduces general themes and terminology, addressed and used within that chapter. "How-To" sections, which address specific procedures follow. Finally, a "Putting It All Together" section ends the chapter by giving detailed, concrete examples.

Beginning users will find the "Concepts" sections very helpful. They provide a reference for good ways to track your finances, and serve as a general introduction to financial background and terminology. Experienced users can flip to the "How-To" sections to quickly scan procedures. These sections provide to-the-point steps for accomplishing specific tasks. The "Putting It All Together" sections present real-world examples in the form of a tutorial. Beginning with creation of a file in Chapter 2, *The Basics*, each successive chapter builds on the previous chapter's tutorial.

This manual is organized into 3 main parts:

- *Getting Started*
- *Managing Personal Finances*
- *Managing Business Finances*

Getting Started provides you with the most basic information needed to begin using GnuCash. The chapters in this section explain concepts that are fundamental to using GnuCash. New users of GnuCash should familiarize themselves with the information in these chapters to get you up and running:

- Chapter 1, *Overview* - (this chapter) gives a general overview of GnuCash
- Chapter 2, *The Basics* - gives users a very brief introduction to accounting principles, and then provides information about how GnuCash structures its data. There is also information on basic interface elements in GnuCash. Finally, this chapter explains how GnuCash stores and manages your data.
- the section called "Accounts" - gives further information about accounts and how to organize them.
- the section called "Transactions" - gives basic information about transactions and how to enter them.

Managing Personal Finances addresses common applications and features of GnuCash in greater detail. You will see more specific cases, based on frequently asked questions about applying GnuCash to everyday situations. Here are the applications and features covered in this part:

- Chapter 5, *Checkbook*
- Chapter 7, *Credit Cards*
- Chapter 8, *Loans*
- Chapter 9, *Investments*
- Chapter 11, *Capital Gains*

- Chapter 12, *Multiple Currencies*

Managing Business Finances discusses the use of GnuCash in business accounting:

- Chapter 13, *Business Features*
- Chapter 14, *Budgets*
- Chapter 15, *Other Assets*
- Chapter 16, *Depreciation*
- Chapter 17, *Python Bindings*
- Chapter 18, *Importing Business Data*

This manual also includes several appendices, which contains extra information you might want to know:

- GnuCash Glossary - Glossary of terms used in GnuCash
- Appendix A, *Migration Guide* - Guide for former Quicken®, MS Money or other QIF users
- Appendix B, *Frequently Asked Questions*
- Appendix C, *Contributed Account Trees*
- Appendix D, *Auxiliary File Formats*
- Appendix E, *GNU Free Documentation License*

Last, but not least, a glossary and index help you quickly locate topics.

Getting More Help

GnuCash offers help in many ways, including the Tip of the Day, context help, a website, a wiki, the mailing lists, and IRC chat.

Context Help

The context help provides detailed instructions for using GnuCash's menus, windows, and controls. To open online help, select Help → Contents.

The GnuCash Help window also acts as a simple web browser, so you can pull up a website for additional information. You can open any website under this window by clicking the Open *Toolbar* button and then typing in the URL. Use the Back, Forward, Reload, Stop, and Print buttons as you would in a standard browser.

GnuCash Website

The *GnuCash* [<http://www.gnucash.org>] website contains helpful information about the program and about any updates to it. It also contains links to other online resources.

GnuCash Wiki

An immense amount of less-formal documentation, both of GnuCash itself and its maintenance and development may be found in the GnuCash Wiki [<https://wiki.gnucash.org/wiki>]; the Frequently Asked Ques-

tions [<https://wiki.gnucash.org/wiki/FAQ>] page should be a first stop whenever you encounter difficulty using GnuCash.

GnuCash On-line Assistance

Mailing List

The primary source of user support is the user mailing list [<mailto:gnucash-user@gnucash.org>]. If you prefer a web forum-like presentation, you can use it via Nabble [<http://gnucash.1415818.n4.nabble.com/GnuCash-User-f1415819.html>]. One must subscribe [<https://lists.gnucash.org/mailman/listinfo/gnucash-user>] before posting, even if using Nabble.

IRC

Several of the developers monitor the #gnucash channel at <irc.gnome.org>. They're usually doing something else, too, and of course aren't always at their computers. Log in, ask your question, and stay logged in; it may be several hours before your question is noticed and responded to. To see if you missed anything check the IRC logs [<https://code.gnucash.org/logs>].

The GnuCash website [<http://www.gnucash.org>] has more details on these channels. You will also find pointers there to additional useful resources such as the GnuCash wiki and bug tracking system.

Topic Search

The online manual also provides a search function. To search for a particular topic, click the Search tab at the bottom of the help window and type in your topic in the field provided. Click the Search button to complete your search. A list of choices should appear in the box below, clicking a choice will bring up its text on the right.

Installation

Installation of GnuCash is usually simple.

The *GnuCash download page* [<http://www.gnucash.org/download.phtml>] contains detailed instructions on how to install GnuCash for each operating system supported.

Chapter 2. The Basics

This chapter will introduce some of the basics of using GnuCash. It is recommended that you read through this chapter, before starting to do any real work with GnuCash. Next chapters will begin to show you hands on examples.

Accounting Concepts

GnuCash is easy enough to use that you do not need to have a complete understanding of accounting principles to find it useful. However, you will find that some basic accounting knowledge will prove to be invaluable as GnuCash was designed using these principles as a template. It is highly recommended that you understand this section of the guide before proceeding.

The 5 Basic Accounts

Basic accounting rules group all finance related things into 5 fundamental types of “accounts”. That is, everything that accounting deals with can be placed into one of these 5 accounts:

Account types

<i>Assets</i>	Things you own
<i>Liabilities</i>	Things you owe
<i>Equity</i>	Overall net worth
<i>Income</i>	Increases the value of your accounts
<i>Expenses</i>	Decreases the value of your accounts

It is clear that it is possible to categorize your financial world into these 5 groups. For example, the cash in your bank account is an asset, your mortgage is a liability, your paycheck is income, and the cost of dinner last night is an expense.

The Accounting Equation

With the 5 basic accounts defined, what is the relationship between them? How does one type of account affect the others? Firstly, equity is defined by assets and liability. That is, your net worth is calculated by subtracting your liabilities from your assets:

Equation 2.1. The static accounting equation

$$\text{Assets} - \text{Liabilities} = \text{Equity}$$

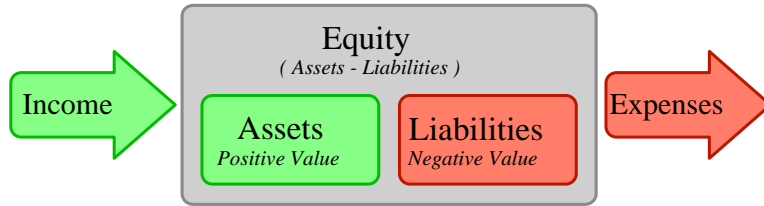
Furthermore, you can increase your equity through income, and decrease equity through expenses. This makes sense of course, when you receive a paycheck you become “richer” and when you pay for dinner you become “poorer”. This is expressed mathematically in what is known as the Accounting Equation:

Equation 2.2. The (dynamic) accounting equation

$$\text{Assets} - \text{Liabilities} = \text{Equity} + (\text{Income} - \text{Expenses})$$

This equation must always be balanced, a condition that can only be satisfied if you enter values to multiple accounts. For example: if you receive money in the form of income you must see an equal increase in your assets. As another example, you could have an increase in assets if you have a parallel increase in liabilities.

Figure 2.1. The basic accounts relationships



A graphical view of the relationship between the 5 basic accounts. Net worth (equity) increases through income and decreases through expenses. The arrows represent the movement of value.

Debits and Credits

The use of debits and credits in accounting and their effect on accounts of different types is often confusing when first encountered in accounting. The accounting equation introduced above is the key to understanding which accounts types are debited or credited and when. First of all we need to rearrange the expanded form a little bit with Assets on the left hand side of the equal sign and transposing any account type with a negative sign to the other side to obtain:

Equation 2.3. The rearranged accounting equation

$$\text{Assets} + \text{Expenses} = \text{Liabilities} + \text{Equity} + \text{Income}$$

With the accounting equation in this form, the accounts on the left hand side of the equal sign are known as *debit balance accounts* in accounting practice, that is the normal positive balance for these accounts is increased by *debit* entries to accounts of these types. Conversely credit entries to accounts of these types will decrease the balance of accounts of these types.

Similarly, the account types on the right hand side of the equal sign are known as *credit balance accounts*, that is the normal positive balance for these account types is increased by *credit* entries to the accounts of these types. Again debit entries to accounts of these types will reduce the balance in the account.

Table 2.1. Summary of effect of debits (Dr) and credits (Cr) on the balance of accounts of the 5 account types

Account Type	Effect on Account Balance	
	Debit (Dr)	Credit (Cr)
Assets	Increase	Decrease
Expenses		
Liabilities	Decrease	Increase
Equity		
Income		

Double Entry

The accounting equation is the very heart of a *double entry accounting system*. For every change in value of one account in the Accounting Equation, there must be a balancing change in another. This concept is known as the *Principle of Balance*, and is of fundamental importance for understanding GnuCash and

other double entry accounting systems. When you work with GnuCash, you will always be concerned with at least 2 accounts, to keep the accounting equation balanced.

Balancing changes (or transfers of money) among accounts are done by debiting one account and simultaneously crediting another. Accounting *debits* and *credits* do not mean “decrease” and “increase”. Debits and credits each increase certain types of accounts and decrease others as described in the previous section. In asset and expense accounts, debits increase the balance and credits decrease the balance. In liability, equity and income accounts, credits increase the balance and debits decrease the balance.

In traditional double-entry accounting, the left column in the register is used for debits, while the right column is used for credits. Accountants record increases in asset and expense accounts on the debit (left) side, and they record increases in liability, revenue, and equity accounts on the credit (right) side. GnuCash follows this convention in the register.

Note

This accounting terminology can be confusing to new users, which is why GnuCash allows you to use the common terms Deposit and Withdrawal. If you prefer the formal accounting terms, you can change the account register column headings to use them in the Accounts tab under Preferences (see the GnuCash Help Manual for more information on setting preferences).

Warning

Common use of the words *debit* and *credit* does not match how accountants use these words. In common use, *credit* generally has positive associations; in accounting, *credit* means *affecting the right column* of the ledger sheet of an account. This is associated with a *decrease* in asset and expense, but an *increase* of income, liability and equity accounts.

For more details see http://en.wikipedia.org/wiki/Debits_and_credits.

Data Entry Concepts

When entering data in GnuCash, you should be aware of the 3 levels of organization in which GnuCash divides your data: files, accounts and transactions. These levels are presented in their order of complexity, one file contains many accounts and one account contains many transactions. This division is fundamental to understanding how to use GnuCash.

Files

GnuCash stores information at the highest level in files. A file can be stored on your computer either as a single XML file (in all versions of GnuCash), or in a SQL database (in GnuCash version 2.4 and higher).

Note

SQL is pronounced “sequel”, so in spoken and written language we would say “a SQL database”.

With the XML file format, GnuCash stores your data in an XML data file, usually in compressed format (although this can be changed in the General tab of the GnuCash Preferences).

With SQL storage, GnuCash stores your data in a SQL database under the database application you select (SQLite3, MySQL or PostgreSQL).

You will need one main file or database for each set of accounts you are maintaining. To learn how to create and manage GnuCash files, see the section called “Storing your financial data”.

Note

If you think you might need more than one set of accounts, you might want to consult a professional accountant or bookkeeper before proceeding. Most users will probably have only one data file.

Backup files and log files are automatically generated by GnuCash when appropriate. Backup and log files are described in the section called “Backing Up and Recovering Data”.

Accounts

An *account* keeps track of what you own, owe, spend or receive. Each GnuCash file can contain any number of accounts, and each account can contain many sub-accounts up to an arbitrary number of levels. This simple feature gives GnuCash much of its power in managing your finances, as you will see in later chapters.

Examples of accounts include: checking accounts, savings accounts, credit card accounts, mortgages, and loans. Each GnuCash account tracks the activity for that “real” account, and can inform you of its status.

In addition, accounts are also used to categorize the money you receive or spend. For example, you can create expense accounts to track the money you pay on utilities or groceries. Even though these are not accounts that receive statements, they allow you to determine how much money is being spent in each of these areas.

Accounts will be covered in more detail in the section called “Accounts”.

Transactions

A *transaction* represents the movement of money among accounts. Whenever you spend or receive money, or transfer money between accounts, that is a transaction.

Examples of transactions are: paying a phone bill, transferring money from savings to checking, buying a pizza, withdrawing money, and depositing a paycheck. the section called “Transactions” goes more in depth on how to enter transactions.

In double entry accounting, transactions always involve at least two accounts—a source account and a destination account. GnuCash manages this by inserting a line into the transaction for every account that is affected, and recording the amounts involved in each line. A line within a transaction that records the account and amount of money involved is called a *split*. A transaction can contain an arbitrary number of splits.

Note

Splits in transactions will be covered in the section called “Split Transaction Example”

Running GnuCash

GnuCash can be run from your desktop main menu by selecting the associated menu entry.

Alternatively it can be run from a command line prompt with the command **gnucash**.

During start up, GnuCash will display the Splash Screen, where some information about the program (version number, build, etc.) and the loading process are displayed.

Welcome to GnuCash dialog

The very first time you open GnuCash, you will see the Welcome to GnuCash! screen. This dialog includes three choices:

- Create a new set of accounts - Runs the New Account Hierarchy Setup assistant (see the section called “New Account Hierarchy Setup”). Select this option if you want to be assisted in creating a set of accounts.
- Import my QIF files - Runs the Import QIF Files assistant (see the section called “Import QIF”). Select this option if you already have Quicken files (.qif files) and wish to import them into GnuCash.
- Open the new user tutorial - Opens the GnuCash Tutorial and Concepts Guide. Select this option if you are completely new to GnuCash and accounting concepts.

Note

It is possible to access each of these items after you have left this screen, but the Welcome to GnuCash! screen will not reappear. To create a new set of accounts, see the section called “New Account Hierarchy Setup”. To import QIF files, see the section called “Import QIF”.

New Account Hierarchy Setup

The *New Account Hierarchy Setup* assistant helps you to create a set of GnuCash accounts. It will appear if you choose Create a new set of accounts in the Welcome to GnuCash! menu, or when you select File → New.

This assistant will create a new blank GnuCash file and guide you through the creation of a *Chart of Accounts*. There are several steps in the assistant, which are outlined below.

1. The first screen briefly describes what this assistant does.
2. New Book Options allows you to set different attributes for your file that affect the file as a whole. This screen has four tabs: Accounts, Budgeting, Business, and Counters. These items are explained elsewhere in the Guide, and can be changed at a later point.
3. Choose Currency sets the default currency for new accounts. This is based on the computer locale settings, and can be modified later in the Accounts tab under Preferences (see the section called “Preferences: Accounts Tab”).
4. Choose accounts to create allows you to create an initial set of accounts. These can be edited as needed afterward. The screen is divided into three parts.
 - The left upper portion has a list of Categories for commonly used hierarchies of accounts. Select from this list the types of accounts you wish to use. You can select as many of the categories of accounts as you wish.
 - The left lower section has a Category Description that displays a detailed description of the category currently highlighted.
 - The right side has a list of the Accounts that will be created from a selected category. Note that the accounts listed here are *only* the selected category; your final data file will include *all* of the accounts for all of the selected Categories.
5. Setup selected accounts lists all the accounts you selected on Choose accounts to create, and allows you to enter opening balances and to designate *Placeholder* accounts.

Note

Equity accounts do not have opening balances, so the opening balance value for this kind of account is locked and set to zero.

Note

Placeholder accounts are used to create a hierarchy of accounts and normally do not have transactions or opening balances.

- The left side of the screen has a list of Account Names. Select an account by "clicking" once in the Account Names column with the account highlighted. This will open the account name for changes.
- The right side of the screen has a check-box to make an account a Placeholder and a box to add the Opening Balance for the selected account. Again a single click in the Opening Balance or Placeholder column will open the field for changes.

6. Finish account setup is the last screen and gives you a final option to cancel the process.

Warning

If you choose to cancel, any selections you have made up to this point will be lost.

Tip of the Day

GnuCash provides a Tip of the Day screen to give helpful hints for using the program:

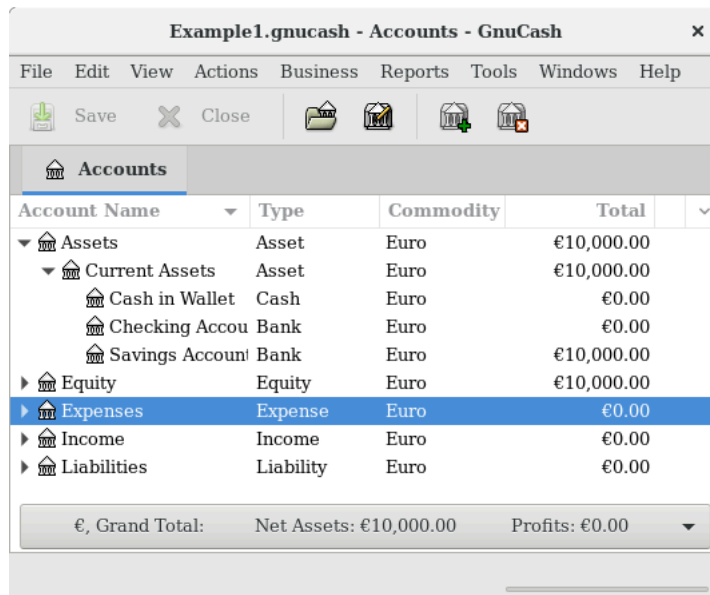


This image shows the Tip of the Day.

These tips provide useful information for beginning users. To view more of the tips, click Forward to continue. If you do not wish to see this screen box on start-up, deselect the box next to Show tips at startup. When you have finished viewing the helpful tips, click Close to close the Tip of the Day screen.

Account Tree Window

You should now see the Accounts window, which appears as shown below. The exact layout of the account tree will depend on which default accounts you selected during the New Account Hierarchy Setup. In this example, the Common Accounts are shown.



The screenshot shows the 'Example1.gnucash - Accounts - GnuCash' window. It features a menu bar (File, Edit, View, Actions, Business, Reports, Tools, Windows, Help) and a toolbar with icons for Save, Close, and other functions. The main area displays a tree view of accounts with columns for Account Name, Type, Commodity, and Total. The 'Expenses' account is highlighted in blue. At the bottom, a status bar shows '€ Grand Total: Net Assets: €10,000.00 Profits: €0.00'.

Account Name	Type	Commodity	Total
Assets	Asset	Euro	€10,000.00
Current Assets	Asset	Euro	€10,000.00
Cash in Wallet	Cash	Euro	€0.00
Checking Account	Bank	Euro	€0.00
Savings Account	Bank	Euro	€10,000.00
Equity	Equity	Euro	€10,000.00
Expenses	Expense	Euro	€0.00
Income	Income	Euro	€0.00
Liabilities	Liability	Euro	€0.00

This image shows the Accounts window.

The Account Tree window (also known as a Chart of Accounts, or CoA) provides an overview of the data contained in the current file. It contains a list of account names and their current balances.

From this window, you can open the register of any account either by double-clicking the account name, right clicking the account name and selecting Open Account from the menu, or by using the Open button on the toolbar. GnuCash allows you to have as many account registers open as you wish. For more information on using account registers, see the section called “Account Register Window”.

Tip

Clicking the small triangle to the left of an account that has children will expand the tree view showing child accounts.

At the top of this window is the *Titlebar*, which displays the file name for this set of accounts (once you have saved the file.) Below that is the *Menubar*. You can access the menu options by either clicking on these menu headings or by using shortcuts and access keys (see the section called “Menu Shortcuts”). Next is the *Toolbar*, which contains buttons for the most common functions.

The account tree appears below the *Toolbar*. Once you have started creating accounts, the account names will appear in the account tree. You can customize which headings show up by using the small down-arrow at the far right just above the account tree.

At the bottom is the *Statusbar*, which tells you information about what you own (Net Assets) and how much money you have made (Profits).

Account Register Window

Account Register windows are used to enter and edit your account data. As the name suggests, they look similar to a checkbook register.

Date	Num	Description	Transfer	R	Deposit	Withdrawal	Balance
06/03/06		Transfere Money	Assets:Savings	y	100.00		679.79
06/03/06	106	ABC Hardware	-- Split Transaction --	y		100.00	579.79
14/03/06		Employers R Us	-- Split Transaction --	y	670.00		1,249.79
24/03/06		Transfer Money	Assets:Savings	y	500.00		1,749.79
25/03/06		ATM Withdrawal	Assets:Cash	y		100.00	1,649.79
28/03/06		Internet Subscription	Expenses:Internet	y		20.00	1,629.79
28/03/06	102	Light Company	Expenses:Electricity	y		78.00	1,551.79
28/03/06	103	Phone Company	Expenses:Phone	y		45.00	1,506.79
28/03/06	104	April Rent	Expenses:Rent	y		350.00	1,156.79
31/03/06		Service Charge	Expenses:Service Charge	y		5.00	1,151.79
28/04/06		May Rent	Expenses:Rent	n		350.00	801.79
05/05/06		Partial Payment of Visa Bill	Liabilities:Visa	n		300.00	501.79

Present: USD 1,151.79 Future: USD 501.79 Cleared: USD 1,451.79 Reconciled: USD 1,451.79 Projected Minimum: USD 501.79
Tuesday 18 April 2006

This image shows the Checking Account - Register with several transactions.

the section called “Transactions” explains more about account register windows and how to enter data into them. For now, note that the parts of an account register window are similar to the parts of the account tree window described earlier. The *Titlebar* at the top contains the account name. Below that, the *Menubar* contains menu options related to the account register. *Toolbar* buttons simplify common data entry functions. The *Statusbar* at the bottom of the window, displays some account balances covered in the section called “Transactions”. At the bottom of the account register window, information appears about the current location of the cursor.

Note

In the register windows, you can resize the various columns that GnuCash displays, *but keep in mind that the Description and Balance columns behave differently from other columns.*

The Description column is designed to expand automatically to fill all unused horizontal screen space. Therefore you should set the widths of all your other columns before setting the Description column width.

The Balance column must be resized by double-clicking on the column heading.

Toolbar Buttons

Both the account tree window and the account register window contain *Toolbar* buttons. These buttons provide quick access to common functions such as Save and Open in the account tree window and Record and Delete in the account register window. If you are not sure what a button does, move the mouse pointer over that button, and you should see a description of the function appear.

Here is a summary of the account tree window buttons:

Account tree window buttons

Save

Save the current file to disk

Close

Close the current notebook page

Open, Edit, New and Delete

These are functions related to accounts. They are discussed in the section called “Accounts”.

Register-specific buttons are discussed in the section called “Transactions”.

Tab Bar

GnuCash uses a tabbed model that allows you to open multiple account registers and reports simultaneously. Each open window (which can include account registers, reports, or Scheduled Transactions windows) is given a tab on this bar that you can click to view that window. Tabs can be configured in Preferences to appear along any side of the GnuCash window.

To see the full name for a tab, hover the mouse pointer over an account window tab.

If more screens are open than can be displayed across the screen, some tabs will not display. You can move through all tabs by clicking the arrows on either end of the tab bar. A complete list of tabs can be viewed by right-clicking the Tab Bar and any tab can be selected by clicking it.

Menu Items

The account tree window and the account register window both contain menu headings in a *Menubar*. Clicking on a menu heading brings up the menu items for that heading.

You can click on the account tree menu headings and then move the mouse pointer over the menu items to see what they do. As the pointer moves over a menu item, a description of the item appears in the lower left-hand corner of the window (inside the *Statusbar*). To select a menu item, click on it.

You can also access the most common menu items in a window by right-clicking the mouse anywhere in that window. In the account tree window, this will bring up a list of account items. In the account register window, this will bring up a list of transaction items.

Other ways of accessing menu items are through keyboard shortcuts and access keys, described next.

Menu Shortcuts

All of the menu items have access keys which are marked by underlined characters in the menu names. Pressing the **Alt** key with the underlined character in the menu heading will bring up the menu items for that heading. Once the menu items are displayed, type the underlined character in the menu item to activate it. For example, typing **Alt+F** in the main window brings up the File menu, then typing **S** will save the file. Access keys are fixed and cannot be changed by users.

Some of the more commonly used menu items also have shortcut keys that directly activate the command without having to traverse the menu structure. These shortcuts typically use the **Ctrl** key, although they can use any key combination. Menu shortcuts are displayed at the end of each menu item.

Storing your financial data

Overview

GnuCash offers several formats for storing your financial data. The default file storage format is XML, while SQL storage is available in SQLite, MySQL, and PostgreSQL formats. Users can choose a file format for new files from File → Save and for existing files from File → Save As... dialogs.

The XML storage format is a text file that by default is compressed, which is a preference that is set at Edit → Preferences General Compress files. SQLite storage is also available, and stores your data in a single file on your system, like the XML format. However, internally, an SQLite file is managed as a database. The MySQL and PostgreSQL storage options require access to a MySQL or PostgreSQL database server and the installation of additional database drivers on your machine.

Tip

Users can change the format at any time by using File → Save As.... This will create a copy of the data file in the selected format.

Storage Comparison and Recommendations

Each storage format has benefits and shortcomings that users should consider for their needs and abilities. See the Storage Comparison below for further details.

The XML format is the most stable and established, and for this reason, it is recommended for most users. SQL storage was added for the 2.4 release and has become an increasingly popular choice for users. The SQLite format allows users to realize the benefits of SQL storage without the overhead of installing or managing a full DBMS. MySQL and PostgreSQL require the installation of MySQL and PostgreSQL DBMS, respectively, and are best maintained only by experienced database administrators.

Note

Use of a SQL back end for storage implies to many that GnuCash has fully implemented DBMS features, including multi-user and incremental data manipulation. However, GnuCash does not currently implement these features, although it is a long term goal of the development team.

Storage Comparison Table

Table 2.2. Storage Comparison

	XML	SQLite	MySQL	PostgreSQL
Availability	Built-in	Depends on packaging ^a		
File extension	gncash		N/A ^b	
Additional software	None		MySQL	PostgreSQL
Additional expertise	None		Database Administrator	
Compression	gzip	N/A		
File Save	On command		On commit	
Multi-user	No	No	No	No

^aSQLite relies on an additional package and driver (called libdbi and libdbd-sqlite3, respectively), which are installed by default on Mac OS and Windows. Linux users may need to manually install these for SQLite.

MySQL and PostgreSQL may require the installation of additional software drivers (libdbd-mysql and libdbd-pgsql).

^bMySQL and PostgreSQL place data within their own storage system.

Creating a file

To create a new GnuCash file do the following:

1. From the GnuCash *Menu*bar, choose File → New File. The New Account Hierarchy setup assistant will start.

Note

If you are running GnuCash for the first time, you will be presented with the Welcome to GnuCash! screen. This screen is described in detail in the GnuCash manual.

2. Set your preferences in the assistant and move through the screens with the Forward, Cancel and Previous buttons.

Saving data

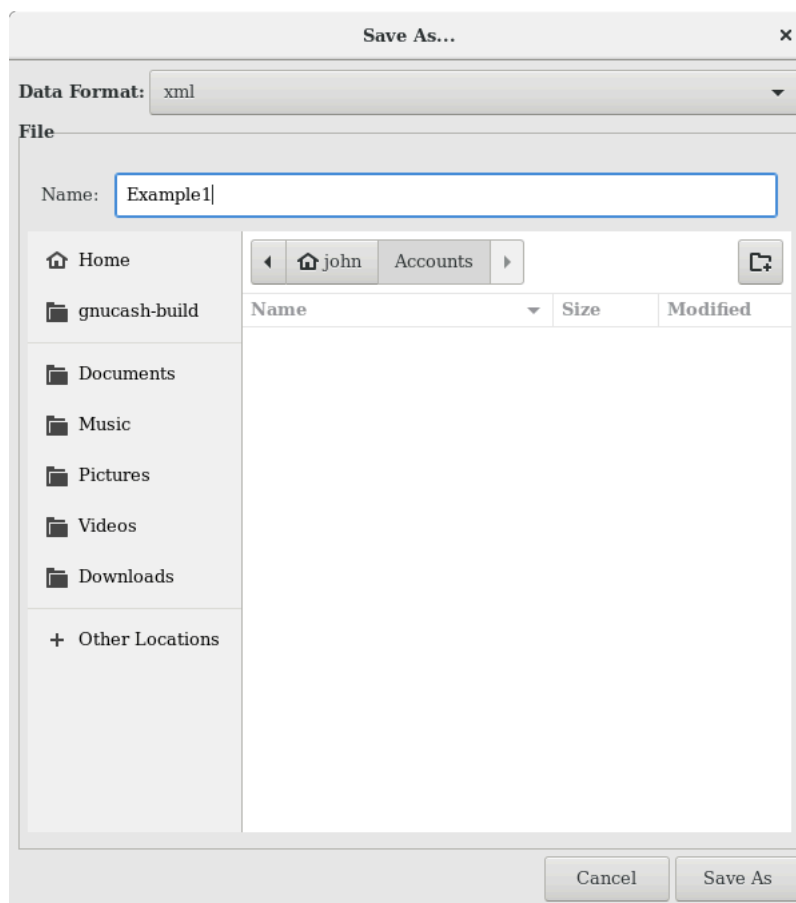
Follow these steps to save the file under your preferred name:

1. Choose File → Save As... from the *Menubar* or select the Save *Toolbar* button. GnuCash will bring up the save window.
2. Select the Data Format of the file you are saving from the drop down list. The default selection is XML but if you have set up a database back end you can change to that format.

Depending on the selected Data Format the window can change as described in the following.

3.
 - If you selected XML or sqlite3 you will see a screen like this:

Figure 2.2. Save screen when XML or sqlite3 is selected.



This image shows the Save screen when the selected Data Format is XML or sqlite3.

Type your chosen filename in the Name field. It is not necessary to specify an extension when you write the file name. GnuCash will automatically add the extension `.gnuCash` to the file.

Note

The `.gnucash` extension was introduced in the 2.3 series of GnuCash. For already existing files, the extension will never be changed. So if you open an existing file named `MyOld-file`, that name won't be changed if the file is saved. You might use the `Save As...` command and give the file a new name in order to have it saved with the extension `.gnucash`.

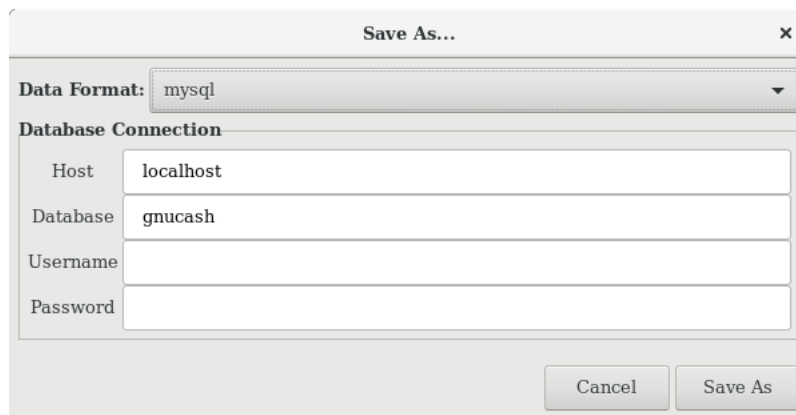
Select the path where the file will be saved by browsing the tree in the lower panes.

Tip

Click on the `Create Folder` button to create a new folder with a custom name in the selected path.

- If you selected `mysql` or `postgres` Data Format you will see a screen like this:

Figure 2.3. Save screen when mysql or postgres is selected.



The image shows a 'Save As...' dialog box. At the top, there is a title bar with 'Save As...' and a close button. Below the title bar, there is a 'Data Format:' dropdown menu with 'mysql' selected. Underneath, there is a section titled 'Database Connection' which contains four text input fields: 'Host' (with 'localhost' entered), 'Database' (with 'gnucash' entered), 'Username' (empty), and 'Password' (empty). At the bottom right of the dialog, there are two buttons: 'Cancel' and 'Save As'.

This image shows the Save screen when the selected Data Format is `mysql` or `postgres`.

Enter in this window the Database Connection information: Host, Database, Username and Password.

Warning

Saving to `mysql` or `postgres` requires the proper permissions in that database, that is you need to have the permissions to create a new database with the given database name, or you need to have write access to an existing database with the given database name.

4. Click the `Save As` button to save the file.

If you are keeping track of finances for a single household, you need only one file. But if you are also tracking business finances or want to keep data separate for some reason, then you will need more than one file.

Before ending each GnuCash session, be sure to save your data changes using `File → Save` or the `Save Toolbar` button.

Note

As it is very important to save your data frequently to avoid losing them for whatever reason, GnuCash is able to automatically save the opened file every a certain amount of time. This interval can be set in the General tab under Edit → Preferences (GnuCash → Preferences on MacOS). Keep in mind that this option is relevant only if you are saving in XML format. If you are working with a database, the Save button and the Save menu entry will be grayed out because changes are stored right away.

Opening data

To open an existing file or database, select File → Open from the menu. In the window that will open, select the Data Format. If you selected File choose the file you want to open by browsing the folders in the lower panes. Else, enter the required Database Connection information.

Tip

GnuCash keeps a list of the recently opened files. Open the File menu and you will see listed the names of recently opened files. Click on the one you want to load to open it.

Duplicating an Account Hierarchy

In some cases, it might be useful to duplicate the structure of an existing data file in a new file. For example, you might want to try out new accounting techniques without corrupting your actual accounting data, or you might need to follow accounting guidelines that require you to close your books at the end of the year and begin each year with a fresh set of books.

GnuCash allows you to create an empty copy of your Chart of Accounts simply by selecting File → Export → Export Accounts. When you select this command, you are asked to provide the name for the new empty file, and GnuCash creates a new data file that contains only your account hierarchy (that is, there is no transaction data). Once saved, the new file can be opened like any other GnuCash data file as described above.

Backing Up and Recovering Data

GnuCash creates several types of files to help ensure that your data is not lost. If you look in the folder where your saved file resides, you may see other files generated by GnuCash with the following extensions: .gnucash, .log, .LCK, .LNK in the same directory as your primary data file. What each of these files does is presented below.

Note

The following sections are relevant only if you are saving your financial data in the XML format

```
$ ls
myfile.gnucash
myfile.gnucash.20100414185747.gnucash
myfile.gnucash.20100414223248.log
myfile.gnucash.20100415114340.gnucash
myfile.gnucash.20100415154508.log
myfile.gnucash.20100415173322.gnucash
myfile.gnucash.20100415194251.log
```

```
myfile.gnucash.7f0982.12093.LNK  
myfile.gnucash.LCK
```

Backup file (.gnucash)

Each time you save your data file, a backup copy will also be saved with the extension `.YYYYMMDDHHMMSS.gnucash`. This backup file is a complete copy of your previous data file, and the filename format refers to the data file, year, month, day and time of the backup. For example, the filename `myfile.gnucash.20100414185747.gnucash` indicates this is a backup copy of the file `myfile` saved in the year 2010, April 14, at 6:57:47 p.m.

To restore an old backup file, simply open the `.YYYYMMDDHHMMSS.gnucash` file with the date to which you wish to return. Be sure to save this file under a different name.

Note

`.YYYYMMDDHHMMSS.xac` instead of the actual extension `.YYYYMMDDHHMMSS.gnucash`. So if you upgrade from the 2.2 series to the 2.4 series, you may end up with both `.YYYYMMDDHHMMSS.xac` and `.YYYYMMDDHHMMSS.gnucash` backup files in your directory.

Log file (.log)

Each time you open and edit a file in GnuCash, GnuCash creates a log file of changes you have made to your data file. The log file uses a similar naming format as the backup files: `.YYYYMMDDHHMMSS.log`. Log files are not a full backup of your data file - they simply record changes you have made to the data file in the current GnuCash session.

In case you exit GnuCash inadvertently, possibly due to a power outage or a system wide crash, it is possible to recover most of your work since the last time you saved your GnuCash file using this log file. This is the procedure:

1. Open the last saved GnuCash file.
2. Go to File → Import → Replay GnuCash .log file and select the one .log file with the same date as the saved file you just opened. Make sure that you picked the right .log file, or you will possibly wreak havoc in your accounts.

Log replaying will recover any transaction affecting the balance entered since the last save, including those created from scheduled transactions and business features (invoices, bills, etc.).

Warning

Changes to the scheduled transactions, invoices or bills themselves are NOT recovered, and their transactions that were recovered may not be properly associated with them, and should thus be double-checked. Especially for business transactions, you may have to delete and re-create some of them. If you do not, although the balance will be correct, some reports may not.

Lock files (.LNK and .LCK)

You may occasionally see `.LNK` and `.LCK` files appear. These do not store any data, but they are created to prevent more than one user from opening the same file at the same time. These files are automatically created when you open the file, to lock it so no one else can access it. When you close your GnuCash session or open another file, GnuCash unlocks the first data file by deleting the `.LCK` and `.LNK` files.

If GnuCash crashes while you have a data file open, the `.LCK` and `.LNK` files are not deleted. The next time you try to open GnuCash, you will get a warning message that the file is locked. The warning message appears because the `.LNK` and `.LCK` files are still in your directory. It is safe to choose Yes to open the file, but you should delete the `.LNK` and `.LCK` files (using a terminal window or your file manager). Once those files are deleted, you will not get the warning message again unless GnuCash crashes.

File Management

So which files should you keep around? Keep your main data file, of course. It's a good idea to keep some of the more recent `.YYYYMMDDHHMMSS.gnucash` backup files, but you can safely delete the `.log` files since they are not complete copies of your data.

Note

If you upgraded from a GnuCash version prior to 2.4, you may also have backup files in the old `.xac` format. For these files you can apply the same principle described above for `.YYYYMMDDHHMMSS.gnucash` backup files.

You should also delete any `.LCK` and `.LNK` files that you see after closing GnuCash. If you decide to back up your data file to another disk manually, it's enough to back up the main data file - not the `.YYYYMMDDHHMMSS.gnucash` backup files.

Note

By default GnuCash will automatically delete any `.log` and `.YYYYMMDDHHMMSS.gnucash` backup files that are older than 30 days. You can change this behavior in the GnuCash preferences in the General tab under Edit → Preferences (GnuCash → Preferences on MacOS).

Migrating GnuCash data

Sometimes you may need to move your financial data and GnuCash settings to another machine. Typical use cases are when you buy a new computer or if you want to use the same settings over two different operating systems in a dual boot configuration.

Migrating financial data

Migrating GnuCash financial data is as simple as copying `.gnucash` files with a file manager if you know where they are saved. If you can't remember where a file is stored but you can open it directly within GnuCash, save it in the desired path from within GnuCash.

All other files in the folder are either backups or log files. It won't do any harm to copy them too, but it's not likely to do any good, either.

Migrating preferences data

Preferences are stored in three different locations: one for GnuCash preferences, one for reports, and one for online banking settings. Preferences are managed by `gsettings`, reports are managed by GnuCash itself, and online banking is managed by `aqbanking`. If you do not use online banking, then you will not have this folder on your machine.

Where the GnuCash preferences are stored varies depending on your operating system (see Table 2.3, "Application Settings Locations", Table 2.4, "Saved Reports Locations", and Table 2.5, "Online Banking

Settings Locations”). To back up and transfer your entire installation, you must copy these preferences as well.

Table 2.3. Application Settings Locations

Operating system	folder
Unix	GnuCash preferences are stored in dconf. You can use the commands <code>dconf dump /org/gnu-cash/</code> on the old machine and <code>dconf load /org/gnucash/</code> on the new machine to migrate your preferences.
Mac OSX	<code>~/Library/Preferences/gnu-cash.plist</code>
Windows	The preferences are stored in the Windows registry <code>HKEY_CURRENT_USER/software/GSettings</code>

Table 2.4. Saved Reports Locations

Operating system	folder
Unix	<code>~/ .gnucash</code>
Mac OSX	<code>~/Library/Application Support/gnu-cash</code>
Windows	<code>Documents and Settings/User-name/ .gnucash</code> or <code>Users/User-name/ .gnucash</code>

Table 2.5. Online Banking Settings Locations

Operating system	folder
Unix	<code>~/ .aqbanking</code>
Mac OSX	<code>~/ .aqbanking</code>
Windows	<code>Documents and Settings/User-name/ .aqbanking</code>

Note

On Unix and Mac OSX, these folders will generally not display in the file manager. You must set the file manager to show hidden files and folders to see them.

Tip

On Unix and Mac OSX, the `~` symbol means the home folder.

Putting It All Together

Note

This section begins a tutorial that will continue throughout this book. At the end of each chapter, you will see a Putting It All Together section that walks you through examples to illustrate con-

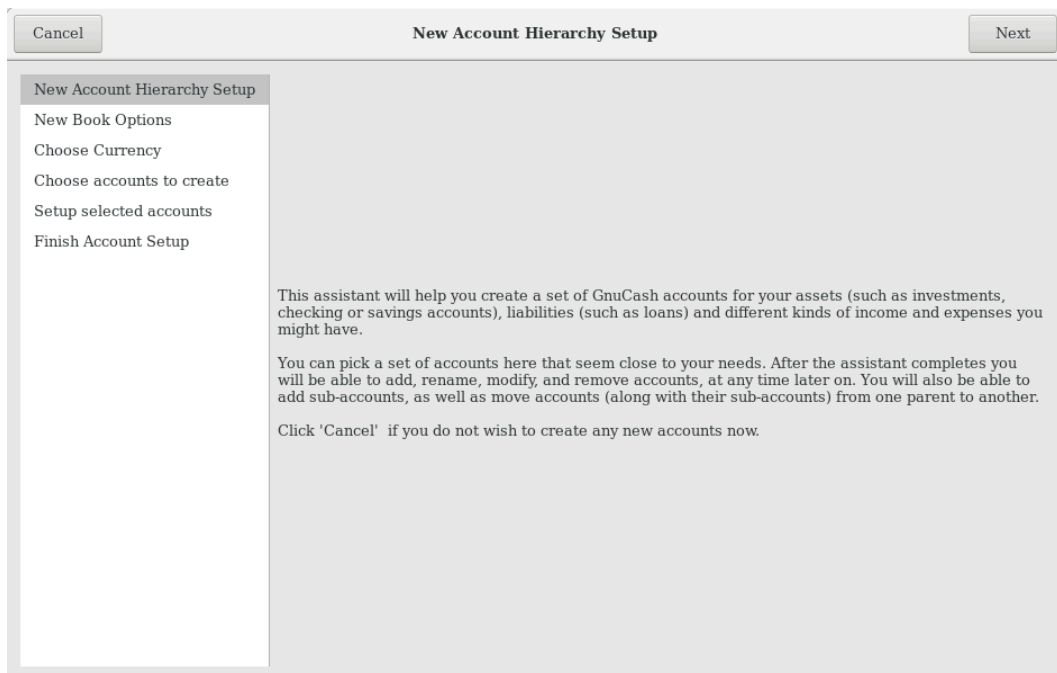
cepts discussed in that section. Each Putting It All Together section builds on the previous one, so be sure to save your file for easy access.

Let's get started!

1. First, let's create a file to store your real data. Open GnuCash and select File → New File from the *Menubar*. This will start the New Account Hierarchy Setup assistant that allows you to create several accounts at once.

Note

If you are running GnuCash for the first time, you will be presented with the Cannot find default values screen which is described in details in the GnuCash manual.



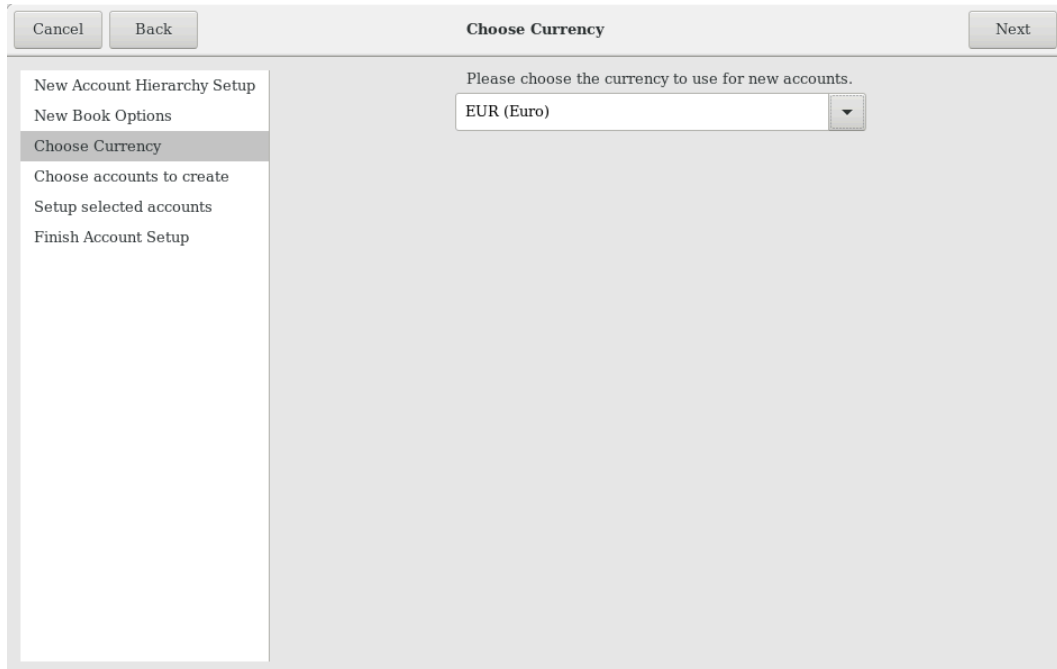
This image shows the first screen of the New Account Hierarchy Setup assistant.

The first screen of the assistant gives you a description of what the assistant does. Click the Forward button to proceed to the next screen.

2. In the second screen, select the currency to use for the new accounts from the dropdown list. Then press the Forward button.

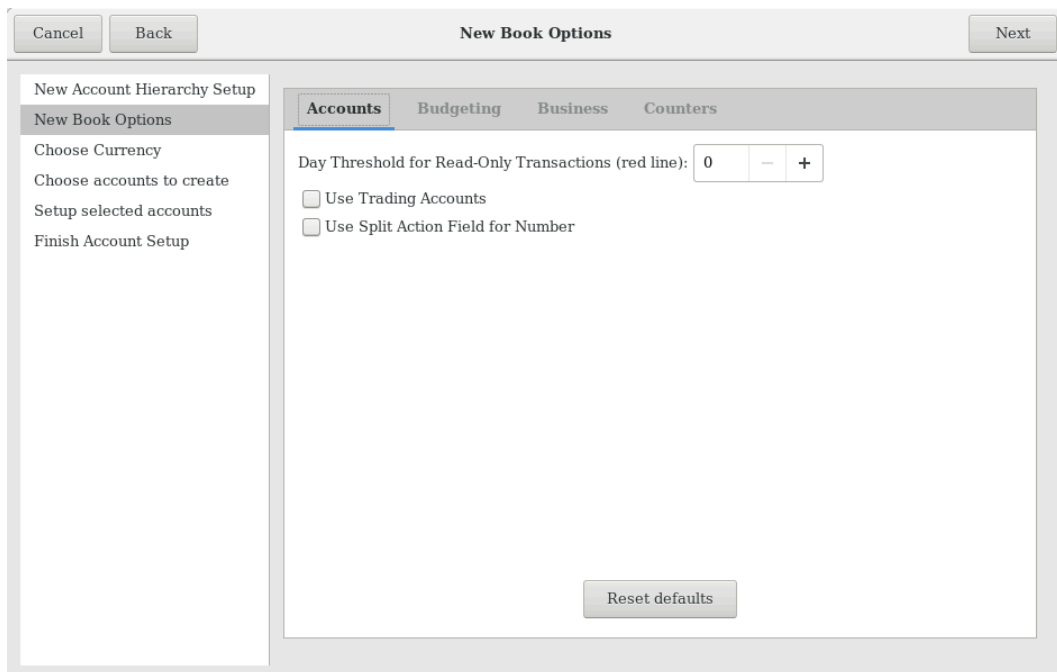
Note

The currency you select here, will be assigned to all the accounts created in this assistant.



This image shows the second screen of the New Account Hierarchy Setup assistant where you select the currency.

3. In the third screen, set the New Book Options, then press the Forward button. You can also update these options later using File → Properties. For details of these options, see the GnuCash Help manual, chapter Customizing GnuCash, Book Options.

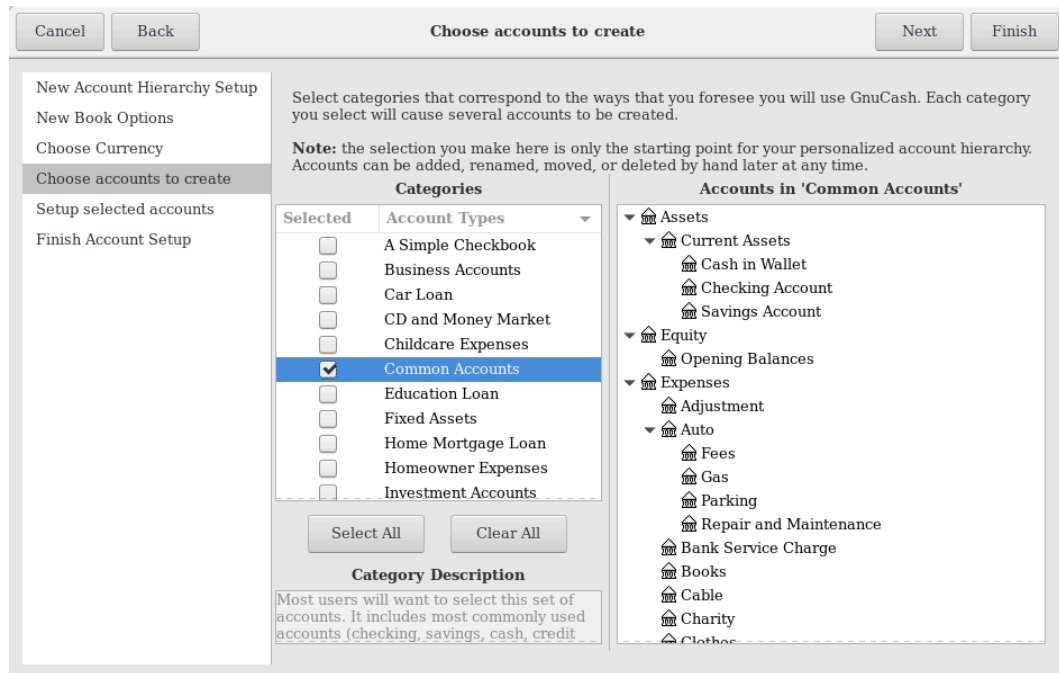


This image shows the third screen of the New Account Hierarchy Setup assistant where you select the book options.

- In the fourth screen select the Common Accounts group in the Categories pane. Then press the Forward button to proceed.

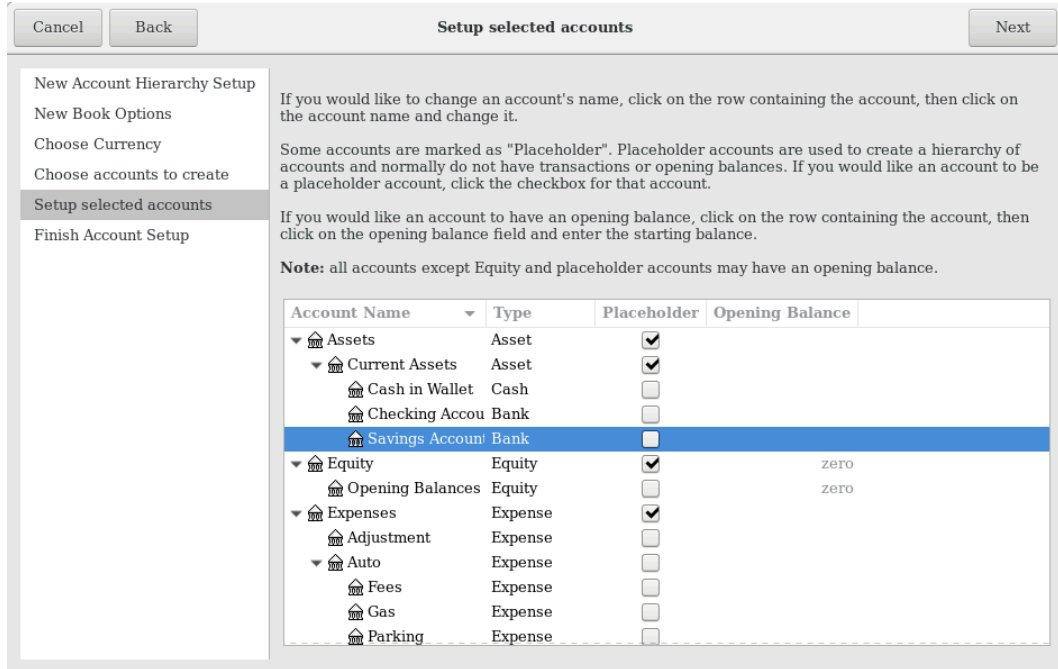
Note

If you want, you can select one or more of the predefined account-groups here. For more information on account types, see the section called “GnuCash Accounts”.



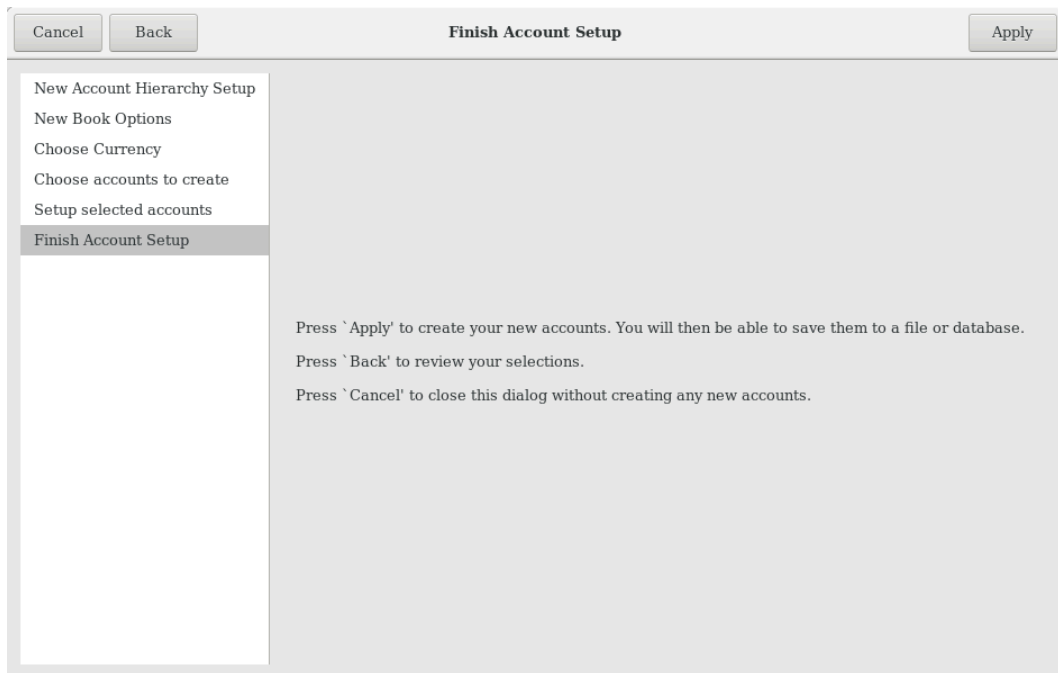
This image shows the fourth screen of the New Account Hierarchy Setup assistant where you choose the various accounts.

- In the fifth screen you will be able to set an Opening Balance on each of the accounts, as well as indicate if the account should be a Placeholder. As these features will be described in next chapters, leave all as configured by GnuCash and click Forward to open the last screen of the assistant.



This image shows the fifth screen of the New Account Hierarchy Setup assistant where you can set Opening Balance.

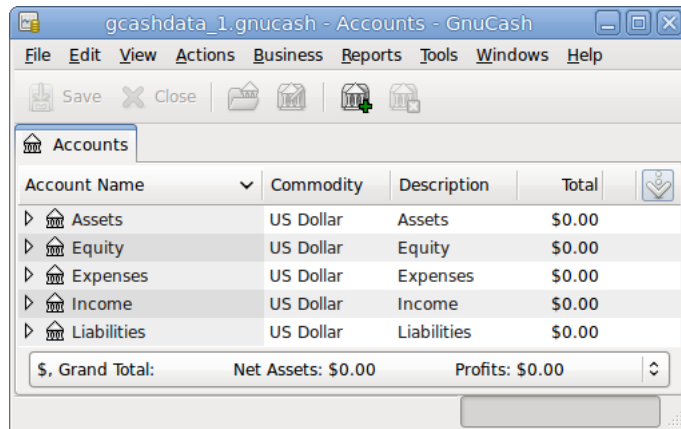
6. In the last screen of the assistant, click Apply to create all the accounts and leave the assistant.



This image shows the last screen of the New Account Hierarchy Setup assistant.

7. After pressing Apply in the previous window, you will be presented with the save dialog. Select the XML Data Format, Name the file as gcashdata_a_1, select the folder where to save the file (remember it as the data file will be used in the tutorials throughout this manual), and finally press the Save as button.

Your main window should now look something like this:



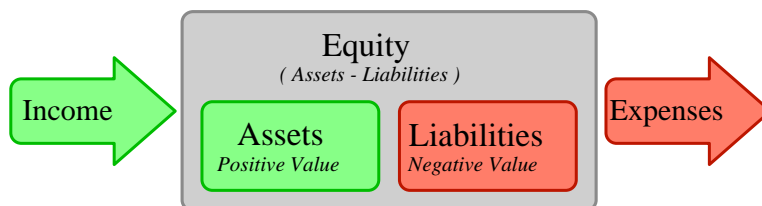
Accounts

This section discusses some useful concepts for organizing your accounts. Since GnuCash does not impose any specific account tree layout, you are free to design your account structure in any manner you wish. However, there are a few basic accounting concepts which you will probably want to follow when designing your accounts to maximize their utility.

Basic Accounting Concepts

As we saw in the previous chapter, accounting is based on 5 basic account types: Assets, Liabilities, Equity, Income and Expenses. We will now expand on our understanding of these account types, and show how they are represented in GnuCash. But first, let's divide them into 2 groups, the balance sheet accounts and the income and expense accounts. As the name says the balance sheet accounts can be summarized in the balance of what you own and owe *at a point in the time*, while the income and expense accounts can be summarized in the Profit & Loss report, which shows the *change of values in a period of time* like the economic year

Let's have a quick look at the Accounting Equation ($Assets - Liabilities = Equity + (Income - Expenses)$) again as a reminder, before we go deeper into each account type.



A graphical view of the relationship between the 5 basic accounts. Net worth (equity) increases through income and decreases through expenses. The arrows represent the movement of value.

Balance Sheet Accounts

The three so-called *Balance Sheet Accounts* are Assets, Liabilities, and Equity. Balance Sheet Accounts are used to track the things you own or owe.

Assets is the group of things that you own. Your assets could include a car, cash, a house, stocks, or anything else that has convertible value. Convertible value means that theoretically you could sell the item for cash.

Liabilities is the group of things on which you owe money. Your liabilities could include a car loan, a student loan, a mortgage, your investment margin account, or anything else which you must pay back at some time.

Equity is the same as "net worth." It represents what is left over after you subtract your liabilities from your assets. It can be thought of as the portion of your assets that you own outright, without any debt.

Income and Expense Accounts

The two Income and Expense Accounts are used to increase or decrease the value of your accounts. Thus, while the balance sheet accounts simply *track* the value of the things you own or owe, income and expense accounts allow you to *change* the value of these accounts.

Income is the payment you receive for your time, services you provide, or the use of your money. When you receive a paycheck, for example, that check is a payment for labor you provided to an employer. Other examples of income include commissions, tips, dividend income from stocks, and interest income from bank accounts. Income will always increase the value of your Assets and thus your Equity.

Expense refers to money you spend to purchase goods or services provided by someone else *for early consumption*. Examples of expenses are a meal at a restaurant, rent, groceries, gas for your car, or tickets to see a play. Expenses will always decrease your Equity. If you pay for the expense immediately, you will decrease your Assets, whereas if you pay for the expense on credit you increase your Liabilities.

GnuCash Accounts

This section will show how the GnuCash definition of an account fits into the view of the 5 basic accounting types.

But first, let's begin with a definition of an account in GnuCash. A GnuCash account is an entity which contains other sub-accounts, or that contains transactions. Since an account can contain other accounts, you often see account trees in GnuCash, in which logically associated accounts are grouped together within a common parent account.

A GnuCash account must have a unique name (that you assign) and one of the predefined GnuCash "account types". There are a total of 12 account types in GnuCash. These 12 account types are based on the 5 basic accounting types; the reason there are more GnuCash account types than basic accounting types is that this allows GnuCash to perform specialized tracking and handling of certain accounts. There are 6 asset accounts (*Cash*, *Bank*, *Stock*, *Mutual Fund*, *Accounts Receivable*, and *Other Assets*), 3 liability accounts (*Credit Card*, *Accounts Payable*, and *Liability*), 1 equity account (*Equity*), 1 income account (*Income*), and 1 expense account (*Expenses*).

These GnuCash account types are presented in more detail below.

Balance Sheet Accounts

The first balance sheet account we will examine is *Assets*, which, as you remember from the previous section, refers to things you own.

To help you organize your asset accounts and to simplify transaction entry, GnuCash supports several types of asset accounts:

1. **Cash** Use this account to track the money you have on hand, in your wallet, in your piggy bank, under your mattress, or wherever you choose to keep it handy. This is the most *liquid*, or easily traded, type of asset.
2. **Bank** This account is used to track your cash balance that you keep in institutions such as banks, credit unions, savings and loan, or brokerage firms - wherever someone else safeguards your money. This is the second most *liquid* type of account, because you can easily convert it to cash on hand.
3. **Stock** Track your individual stocks and bonds using this type of account. The stock account's register provides extra columns for entering number of shares and price of your investment. With these types of assets, you may not be able to easily convert them to cash unless you can find a buyer, and you are not guaranteed to get the same amount of cash you paid for them.
4. **Mutual Fund** This is similar to the stock account, except that it is used to track funds. Its account register provides the same extra columns for entering share and price information. Funds represent ownership shares of a variety of investments, and like stocks they do not offer any guaranteed cash value.

GnuCash treats account types Stock and Mutual Fund the same.

5. **Accounts Receivable (A/Receivable)** This is typically a business use only account in which you place outstanding debts owed to you. It is considered an asset because you should be able to count on these funds arriving.

Transactions involving an Accounts Receivable account should not be added, changed or deleted in any way other than by using

- post/unpost bill/invoice/voucher or
- process payment

6. **Asset** No matter how diverse they are, GnuCash handles many other situations easily. The account type "Asset", covers all assets not listed above.

GnuCash treats account types Cash, Bank and Asset the same.

Accounts are repositories of information used to track or record the kinds of actions that occur related to the purpose for which the account is established.

For businesses, activities being tracked and reported are frequently subdivided more finely than what has been considered thus far. For a more developed treatment of the possibilities, please read the descriptions presented in Chapter 15, *Other Assets* of this Guide.

For personal finances a person can follow the business groupings or not, as they seem useful to the activities the person is tracking and to the kind of reporting that person needs to have to manage their financial assets. For additional information, consult Chapter 15, *Other Assets* of this Guide.

The second balance sheet account is *Liabilities*, which as you recall, refers to what you owe, money you have borrowed and are obligated to pay back some day. These represent the rights of your lenders to obtain repayment from you. Tracking the liability balances lets you know how much debt you have at a given point in time.

GnuCash offers three liability account types:

1. **Credit Card** Use this to track your credit card receipts and reconcile your credit card statements. Credit cards represent a short-term loan that you are obligated to repay to the credit card company. This type of account can also be used for other short-term loans such as a line of credit from your bank.

2. Accounts Payable (A/Payable) This is typically a business use only account in which you place bills you have yet to pay.

Transactions involving an Accounts Payable account should not be added, changed or deleted in any way other than by using

- post/unpost bill/invoice/voucher or
- process payment

3. Liability Use this type of account for all other loans, generally larger long-term loans such as a mortgage or vehicle loan. This account can help you keep track of how much you owe and how much you have already repaid.

GnuCash treats account types Credit Card and Liability the same.

Tip

Liabilities in accounting act in an opposite manner from assets: *credits* (right-column value entries) increase liability account balances and *debits* (left-column value entries) decrease them. (See note later in this chapter)

The final balance sheet account is *Equity*, which is synonymous with “net worth”. It represents what is left over after you subtract your liabilities from your assets, so it is the portion of your assets that you own outright, without any debt. In GnuCash, use this type of account as the source of your opening bank balances, because these balances represent your beginning net worth.

There is usually only a single GnuCash equity account, called naturally enough, Equity. For companies, cooperatives etc. you can create a subaccount for each partner.

Tip

In equity accounts, credits increase account balances and debits decrease them. (See note later in this chapter)

Note

The accounting equation that links balance-sheet accounts is $\text{Assets} = \text{Liabilities} + \text{Equity}$ or rearranged $\text{Assets} - \text{Liabilities} = \text{Equity}$. So, in common terms, the *things you own* minus the *things you owe* equals your *net worth*.

Income and Expense Accounts

Income is the payment you receive for your time, services you provide, or the use of your money. In GnuCash, use an Income type account to track these.

Tip

Credits increase income account balances and debits decrease them. As described in the section called “Accounting Concepts”, credits represent money transferred *from* an account. So in these special income accounts, when you transfer money *from* (credit) the income account to another account, the balance of the income account *increases*. For example, when you deposit a paycheck and record the transaction as a transfer from an income account to a bank account, the balances of both accounts increase.

Expenses refer to money you spend to purchase goods or services provided by someone else. In GnuCash, use an Expense type account to track your expenses.

Tip

Debits increase expense account balances and credits decrease them. (See note later in this chapter.)

Note

When you subtract total expenses from total income for a time period, you get net income. This net income is then added to the balance sheet as retained earnings, which is a type of Equity account.

Below are the standard Income and Expense accounts after selecting Common Accounts in the assistant for creating a new Account Hierarchy (Actions → New Account Hierarchy...).

The screenshot shows the 'Accounts' window in GnuCash. The title bar reads 'Example1.gnucash - Accounts - GnuCash'. The menu bar includes File, Edit, View, Actions, Business, Reports, Tools, Windows, and Help. Below the menu bar is a toolbar with icons for Save, Close, and other functions. The main area displays a table of accounts:

Account Name	Type	Commodity	Total
Income	Income	Euro	€0.00
Bonus	Income	Euro	€0.00
Gifts Received	Income	Euro	€0.00
Interest Income	Income	Euro	€0.00
Other Income	Income	Euro	€0.00
Salary	Income	Euro	€0.00

At the bottom of the window, a summary bar shows: €, Grand Total: Net Assets: €10,000.00 Profits: €0.00

This image shows the standard *Income* accounts

The screenshot shows the 'Accounts' window in GnuCash. The title bar reads 'Example1.gnucash - Accounts - GnuCash'. The menu bar includes File, Edit, View, Actions, Business, Reports, Tools, Windows, and Help. Below the menu bar is a toolbar with icons for Save, Close, and other functions. The main area displays a table of accounts:

Account Name	Type	Commodity	Total
Expenses	Expense	Euro	€0.00
Adjustment	Expense	Euro	€0.00
Auto	Expense	Euro	€0.00
Bank Service Char	Expense	Euro	€0.00
Books	Expense	Euro	€0.00
Cable	Expense	Euro	€0.00
Charity	Expense	Euro	€0.00
Clothes	Expense	Euro	€0.00
Computer	Expense	Euro	€0.00
Dining	Expense	Euro	€0.00
Education	Expense	Euro	€0.00
Entertainment	Expense	Euro	€0.00
Gifts	Expense	Euro	€0.00

At the bottom of the window, a summary bar shows: €, Grand Total: Net Assets: €10,000.00 Profits: €0.00

This image shows some standard *Expenses* accounts

Other Account Types

There are some special other account types.

Trading Multiple currency transactions have splits in “Trading” accounts to make the transaction balance in each currency as well as in total value. See Chapter 12, *Multiple Currencies* for more information.

Money Market and *Credit Line* are used only in the OFX importer, apparently for completeness with the specification.

Putting It All Together

Let’s go through the process of building a common personal finance *chart of accounts* using the information we have learned from this chapter. A chart of accounts is simply a new GnuCash file in which you group your accounts to track your finances. In building this chart of accounts, the first task is to divide the items you want to track into the basic account types of accounting. This is fairly simple, let’s go through an example.

Simple Example

Let us assume you have a checking and a savings account at a bank, and are employed and thus receive a paycheck. You have a credit card (Visa), and you pay monthly utilities in the form of rent, phone, and electricity. Naturally, you also need to buy groceries. For now, we will not worry about how much money you have in the bank, how much you owe on the credit card, etc. We want to simply build the framework for this chart of accounts.

Your assets would be the bank savings and checking account. Your liabilities are the credit card. Your Equity would be the starting values of your bank accounts and credit card (we do not have those amounts yet, but we know they exist). You have income in the form of a salary, and expenses in the form of groceries, rent, electricity, phone, and taxes (Federal, Social Security, Medicare) on your salary.

The Basic Top Level Accounts

Now, you must decide how you want to group these accounts. Most likely, you want your *Assets* grouped together, your *Liabilities* grouped together, your *Equity* grouped together, your *Income* grouped together, and your *Expenses* grouped together. This is the most common way of building a GnuCash chart of accounts, and it is highly recommended that you always begin this way.

Start with a clean GnuCash file by selecting File → New File from the menu. The New Account Hierarchy Setup assistant will start. Press Cancel to close the assistant as we don’t want to use one of the predefined accounts structure; instead we will build a basic starting account structure from scratch. In the empty GnuCash window select View → New Accounts Page from the menu: the Accounts tab will open. Finally select Actions → New Account....

Now you are ready to build this basic starting account structure

1. Account name Assets (account type Asset, parent account New top level account)

New Account - Assets [X]

General | Opening Balance

Identification

Account name:

Account code:

Description:

Security/currency:

Smallest fraction: ▼

Account Color:

Notes:

Tax related Hidden

Placeholder

Account Type **Parent Account**

Bank
Cash
Asset
...

New top level account

This image shows the dialog to create an assets account

2. Account name Liabilities (account type Liability, parent account New top level account)
3. Account name Equity (account type Equity, parent account New top level account)
4. Account name Income (account type Income, parent account New top level account)
5. Account name Expenses (account type Expenses, parent account New top level account)

When you have created the top-level accounts, the main Account page in GnuCash should look like below.

The screenshot shows the 'Accounts' window in GnuCash. The window title is 'Example1.gnucash - Accounts - GnuCash'. The menu bar includes File, Edit, View, Actions, Business, Reports, Tools, Windows, and Help. Below the menu bar are icons for Save, Close, and other functions. The main area displays a table of accounts with columns for Account Name, Type, Commodity, and Total. The 'Equity' account is highlighted in blue. At the bottom, a summary bar shows '€ Grand Total: Net Assets: €10,000.00 Profits: €0.00'.

Account Name	Type	Commodity	Total
▶ Assets	Asset	Euro	€10,000.00
▶ Equity	Equity	Euro	€10,000.00
▶ Expenses	Expense	Euro	€0.00
▶ Income	Income	Euro	€0.00
▶ Liabilities	Liability	Euro	€0.00

Summary: € Grand Total: Net Assets: €10,000.00 Profits: €0.00

This image shows the basic top-level accounts.

Making Sub-Accounts

You can now add to this basic top-level tree structure by inserting some real transaction-holding sub-accounts. Notice that the tax accounts are placed within a sub-account named *Taxes*. You can make sub-accounts within sub-accounts. This is typically done with a group of related accounts (such as tax accounts in this example).

Tip

Instead of selecting Actions → New Account... from the menu, you can alternatively create a new sub-account of an account by right clicking on the main account's name and selecting the New Account... entry. This will open a dialog similar to the one depicted in the section called "The Basic Top Level Accounts" where the new sub-account will be already set as a child of the main account.

1. Account name Cash (account type Cash, parent account *Assets*)
2. Account name Checking (account type Bank, parent account *Assets*)
3. Account name Savings (account type Bank, parent account *Assets*)
4. Account name Visa (account type Credit Card, parent account *Liabilities*)
5. Account name Salary (account type Income, parent account *Income*)
6. Account name Phone (account type Expense, parent account *Expenses*)
7. Account name Electricity (account type Expense, parent account *Expenses*)
8. Account name Rent (account type Expense, parent account *Expenses*)
9. Account name Groceries (account type Expense, parent account *Expenses*)
10. Account name Taxes (account type Expense, parent account *Expenses*)
11. Account name Federal (account type Expense, parent account *Expenses:Taxes*)
12. Account name Social Security (account type Expense, parent account *Expenses:Taxes*)

13.Account name Medicare (account type Expense, parent account *Expenses:Taxes*)

14.Account name Opening Balance (account type Equity, parent account *Equity*)

After you have created these additional sub-accounts, the end result should look like below

Account Name	Type	Commodity	Total
Assets	Asset	Euro	€10,000.00
Current Assets	Asset	Euro	€10,000.00
Cash in Wallet	Cash	Euro	€0.00
Checking Account	Bank	Euro	€0.00
Savings Account	Bank	Euro	€10,000.00
Equity	Equity	Euro	€10,000.00
Opening Balances	Equity	Euro	€10,000.00
Expenses	Expense	Euro	€0.00
Income	Income	Euro	€0.00
Bonus	Income	Euro	€0.00
Gifts Received	Income	Euro	€0.00
Interest Income	Income	Euro	€0.00
Checking Interest	Income	Euro	€0.00
Other Interest	Income	Euro	€0.00
Savings Interest	Income	Euro	€0.00
Other Income	Income	Euro	€0.00
Salary	Income	Euro	€0.00
Liabilities	Liability	Euro	€0.00
Credit Card	Credit Card	Euro	€0.00

€, Grand Total: Net Assets: €10,000.00 Profits: €0.00

This image shows a simple chart of accounts.

Save this chart of accounts with the name `gcashdata_3`, as well as `gcashdata_3emptyAccts`, as we will continue to use them in the later chapters.

You have now created a chart of accounts to track a simple household budget. With this basic framework in place, we can now begin to populate the accounts with transactions. The next chapter will cover this subject in greater detail.

Transactions

This chapter will give you the basic information you need to understand and use transactions in GnuCash. Whereas accounts are the framework and structure of a chart of accounts, transactions are the data which fills each account.

Basic Concepts

A *transaction* in a double entry accounting system such as GnuCash is an exchange between at least 2 accounts. Thus, a single transaction must always consist of at least two parts, a *from* and a *to* account. The

from account is transferring value to the *to* account. Accountants call these parts of a transaction *Ledger Entries*. In GnuCash, they are called *Splits*.

A split identifies the account to which it refers, the amount of money specifically moved to or from that account, and can contain a few other specific pieces of information if needed. GnuCash supports multiple splits in a single transaction, and the splits can move money into or out of the involved accounts arbitrarily.

For example, you receive a paycheck and deposit it into your savings account at the bank. The *transaction* that occurs is that your bank savings account (an asset) received money from your income account. Two accounts are affected, and in this case there is a net increase in your equity.

Working with transactions in GnuCash is performed using what is known as the *account register*. Every account you create has an account register. It will appear familiar to you as it looks very similar to the log used to track checkbooks.

The account register is explained in the upcoming section, the section called “The Account Register”.

The Account Register

The *account register* is the window that allows you to view or edit preexisting transactions, or add new transactions for a particular account. To open an account register from the Account Tree, double-click the account name, right click the account name and select Open Account from the menu, or use the Open button on the toolbar. GnuCash will display the account register window.

Features of the Account Register

The *Titlebar* of the account register displays the account name. Below the *Titlebar*, the *Menubar* displays the menu items available within the account register, and the *Toolbar* contains handy buttons that help you work with the account register.

At the bottom left of the register window, GnuCash displays helpful messages as you move about the register. To the right, you can see the current account balance and the total of cleared splits.

Choosing a Register Style

GnuCash offers several options for viewing your registers. The default style is Basic Ledger mode, which displays only the summary of splits affecting the current account. This is the style that most closely resembles other popular personal financial packages. You can choose a different register style from the View menu. There are two other view modes:

- View → Auto-Split Ledger style expands the current transaction automatically. As you highlight a new transaction in the register, the transaction automatically expands to show all splits.
- View → Transaction Journal style shows all splits for all transactions in the register, which is more like an accounting journal.

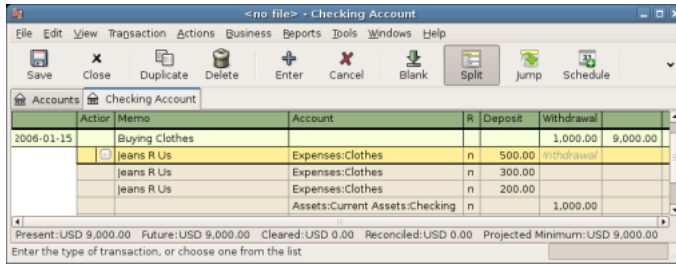
All styles permit you to view your data in either single-line or double-line format. Select View → Double Line, and you will see your transaction line expand to two register lines. Double-line mode will also display the transaction-level Notes field.

Below are screenshots that demonstrate how the Basic Ledger and Transaction Journal views differ.

For this example, let’s assume that you have purchased 3 pair of Jeans for \$1,000, and have recorded the purchase as a split transaction with each pair entered on a separate split.

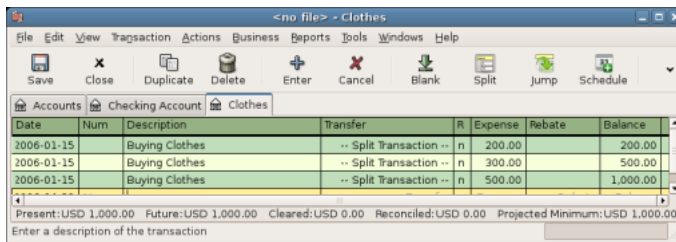
The below screenshots illustrate the different view modes.

First let's view the Jeans transaction from your checking account:



This image shows one split transaction with 3 Jeans purchases

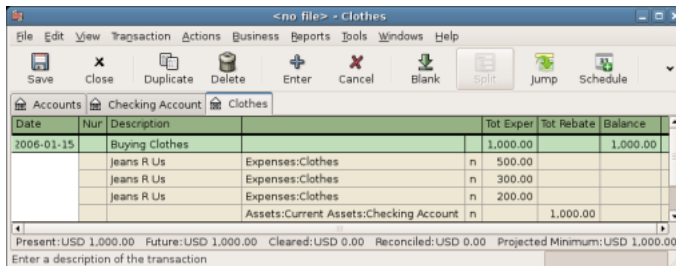
Now, let's open the *Expenses:Clothes* account, and look at it in Basic view.



This image shows *Expenses:Clothes* account in Basic Ledger mode.

Three entries appear here, but there was only the single split entry in the checking account. Further examination shows that each row has a different amount, \$200, \$300, and \$500. This demonstrates that each row in this view reflects a single split from the original transaction.

Changing to Transaction Journal mode will display only the original split transaction.



This image shows *Expenses:Clothes* account in Transaction Journal mode.

Using Entry Shortcuts

GnuCash provides several time-saving shortcuts for entering your data. When you type the first few characters of a description that you have used before, the QuickFill feature automatically fills in the rest of the transaction as you last entered it. When you type in the first characters of an account name in either the Transfer field of the transaction line or the Account field of the split line, QuickFill will automatically complete the name from your account list. It also helps you with entering sub-accounts in these fields: simply type the first characters of the parent account name followed by a : (colon) and the first characters of the sub-account name. For example, to enter *Assets:Checking*, you might type **A:C** and let GnuCash fill in the rest.

Warning

Because **:** is the account separator symbol, you can not use it in your account names.

Tip

If you really need the colon in your account names, you can select another symbol by Edit → Preferences → Accounts+Character.

Register keyboard shortcuts also save you time, and GnuCash provides several of them. In the date field, you can type:

- + or = to increment the date and - or _ to decrement the date
-] or } to increment the month and [or { to decrement the month
- **M** or **m** to enter the first date of the month
- **H** or **h** to enter the last date of the month
- **Y** or **y** to enter the first date of the year
- **R** or **r** to enter the last date of the year
- **T** or **t** to enter today's date

Tip

These date shortcuts not only work in the account register but everywhere you can enter a date.

Tip

Specifically for dates there's another way you can save time: you can enter partial dates. For example if you only enter one number, GnuCash will interpret it as the day in the current month of the current year. If you only enter a day and month, GnuCash will automatically append the year. The default this to take such a date in a sliding window starting 11 months before the current month. This means that if you enter 1/5 (January 5th) as date while the current date is in December 2015, the date will be completed as 1/5/16. This default can be changed via Edit → Preferences → Date/Time+Date Completion. You can change it to either always evaluate a date in the current calendar year or change the start of the sliding window.

In the Num field of the transaction line, you can type + to increment the transaction number from the last one you typed in. Typing - will decrement the number. This will also work in the Action field of the split line, if you choose to enter split numbers there. The Action field also supports QuickFill - if you type the first characters of a common action (such as Deposit), GnuCash will fill in the rest.

The Transfer field supports QuickFill of account names. You can start typing an account name and GnuCash will fill in the remaining part of the name. Typing the separator character at any time will complete the current level of the account name, leaving the cursor positioned to start the next level of account name. For example, typing **A:C** the standard set of account names will complete to the *Assets:Checking* account. You can also type the **Menu** or **Ctrl+Down** keys in this field to pop up a list of all account names.

In any of the amount fields, you can use a built-in calculator. Simply type in the first value, followed by +, -, *, or /, then type in the second value. GnuCash will perform the calculation and return the resulting value to the amount field when you press the **Tab** key.

All of the menu items have access keys defined, and these are marked by underlined characters in the menu names. Press **Alt** + [underlined character] to bring up the menu, then select an item by typing its underlined

character. For example, typing **Alt+A** brings up the Actions menu, then typing **P** will split the transaction. A few of the menu items also have shortcut keys that immediately invoke the command (typically using the **Ctrl** key). These shortcuts are listed next to the item.

To move around the register, use these keys to save time:

- **Tab** to move to the next field, **Shift+Tab** to move to the previous field
- **Home** to move to the beginning of the field, **End** to move to the end of the field
- **Enter** or **↓** to move to the next transaction, **↑** to move to the previous transaction
- **Page Up** to move up one screen, **Page Down** to move down one screen
- **Shift+Page Up** to go to the first transaction, **Shift+Page Down** to go to the last transaction

In the Reconcile window you can use these keyboard shortcuts:

- **Tab** moves to the next box and **Shift+Tab** moves to the previous box
- Space bar toggles the status between reconciled and not reconciled
- **↑** and **↓** navigate through the entries within the current box

Simple vs. Split Transactions

Every transaction in GnuCash has at least two splits, but a transaction can have more than two splits. A transaction with only two splits is called a *simple transaction*, since it only involves the current account and a single remote account. A transaction with three or more accounts is called a *split transaction*.

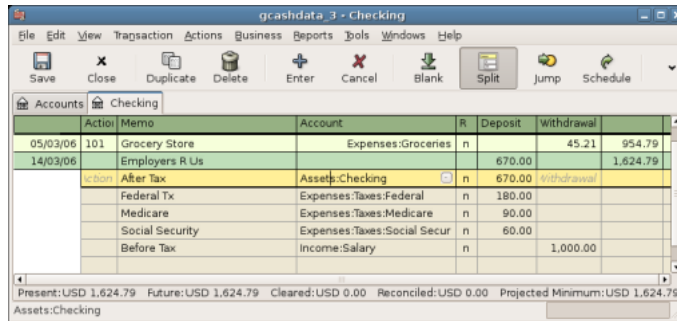
When the register is in Basic view, you will see a summary of the splits affecting the current account. For a simple transaction, the Transfer column will display the other account from which money is *transferred*. For a split transaction, the Transfer column will display -- Split Transaction --. You can see the individual splits of each transaction by clicking the Split button in the *Toolbar* while selecting the appropriate transaction.

For split transactions, the first line of the transaction is the *transaction line*. It contains a Date, optional Num (such as a check number), transaction Description, total amount affecting the current account (Tot Deposit here), and updated account Balance after the current transaction. Note that in the expanded view, the Transfer column heading disappears, and there is no account name listed in that field. This line shows you only a summary of the transaction's effect on the current account. For more detailed information, you need to look at the individual splits that make up the transaction.

Note

Note: An account register displays a transaction when that transaction has a split assigned to the account. If a given transaction has more than one split assigned to the account, then in Basic and Auto-Split views, that transaction will appear in the register one time for each split assigned to that account. In Transaction Journal view, such a transaction will only appear once in the register.

The partial lines below the transaction line are the *split lines*, and they are separated by gray lines. As you highlight one of the split lines, the column headings change to show the split-related fields:

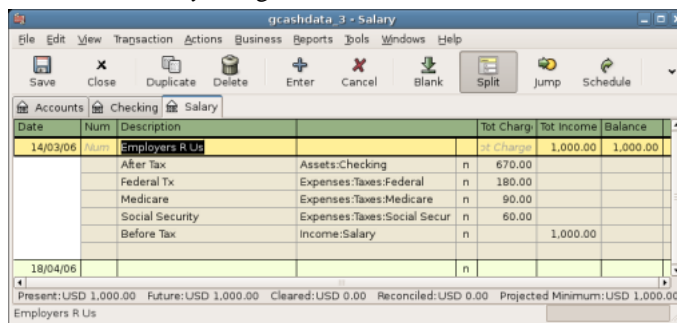


This image shows how split headings change.

Each split contains an optional Action, or type of split, which you can either type in or choose from a pull-down list. The split also contains an optional Memo which describes the split. Each split affects an Account, which can be selected from a pull-down list of your accounts. The R field indicates whether the split has been reconciled. The last two columns show the amount of the split and whether money is coming into or going out of the account.

As we discussed in the section called “Accounting Concepts”, total debits (left-column entries) must equal total credits (right-column entries) for each transaction. In the example shown above, the total debits equal the total credits, so this transaction is balanced. If you notice, the transaction line contains the same debit amount as the Checking split line. Why is this shown twice? Because the transaction line is merely a *summary* of the transaction’s effect on the current account. The same transaction in a different account will have a different transaction line, one that shows the effect on that particular account. You can see this by highlighting another split line and clicking the Jump button on the *Toolbar*.

In this example, if you jump to the *Income:Salary* account, GnuCash brings up the same transaction in the *Income:Salary - Register*:



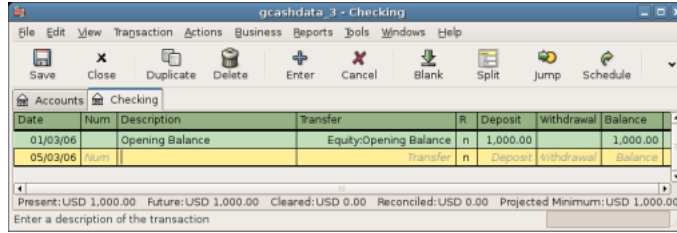
This image shows a jump to the *Income:Salary* account.

Note that the transaction line total now summarizes the effect on the *Income:Salary* account instead of the *Checking Account*, because you are looking at the *Income:Salary* account register. The splits are exactly the same, but the transaction line now reflects the credit to the *Income:Salary* account.

Simple Transaction Example

Starting with the chart of accounts we created in the previous chapter *gcashdata_3*, double click on the Checking asset account. Let’s add a simple transaction to the checking account. When you first create your accounts in GnuCash, it is common to start them off with an initial balance.

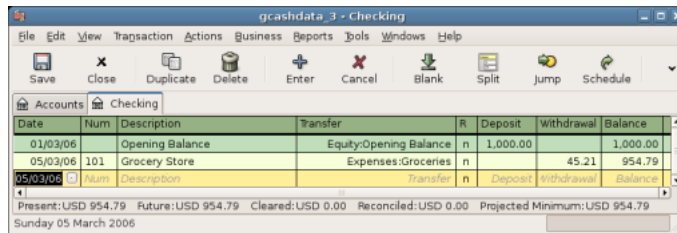
In the first transaction row, enter a date (eg: March, 1, 2006), a description (eg: “Opening Balance”), click on the Transfer pop-up menu and select *Equity:Opening Balances*, add a deposit value of \$1000, and press the **Enter** key. The account register should now appear similar to this figure:



This image shows *Assets:Checking* - Register after inserting a starting value transaction.

Setting the starting balances of an account is an example of a simple two account transaction. In this case, affecting the *Assets:Checking* and the *Equity:Opening Balances* accounts.

As another example of a simple 2 account transaction, add another transaction to describe the purchase of \$45.21 worth of groceries. From within the *Assets:Checking* account, you would set Transfer to *Expenses:Groceries*. The account register should now appear:



This image shows *Assets:Checking* - Register after adding a transaction for groceries.

Split Transaction Example

The need for 3 or more splits in a transaction occurs when you need to split either the “from” or the “to” account in a transaction into multiple accounts. The classic example of this is when you receive a paycheck. Your take home pay from a paycheck will typically be less than your net pay, with the difference being due to taxes, retirement account payments, and/or other items. Thus, the single transaction of you receiving a paycheck involves other accounts besides simply *Assets:Checking* and *Income:Salary*.

To add the paycheck split transaction from the *Assets:Checking* account register window, click on a new transaction line and click Split. Note that if you have set your register view to Auto-Split or Transaction Journal, the splits will be opened for you. Enter the description of this transaction on the first line (e.g. “Employers R Us”). In the split lines below this, enter the various splits that make up this transaction, one by one. To enter the splits, first choose the account, then enter the amount by which to change the account. Keep in mind that when in an asset account register, amounts entered in the left column increase the account balance, while amounts entered in the right column decrease the balance (for more about this, see the section called “Transactions”). Tab or click the next split line and repeat the process. Note that if you are using the keyboard to navigate the transaction, use **Tab** to move from field to field, as using **Enter** will commit the transaction and create splits to an Imbalance account.

Note

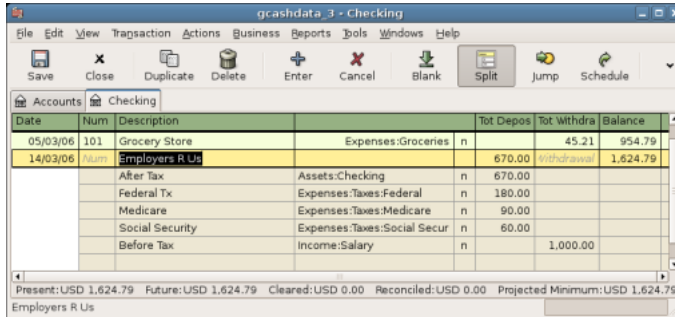
When creating a transaction in GnuCash, splits can be entered in any order. However, when the transaction is closed (either when leaving the transaction, or when pressing the **Enter** key), all debit splits will jump ahead of all credit splits.

In this example, choose the deposit account (*Assets:Checking*) and then enter the amount that is being deposited into it (e.g. \$670). Follow this by entering the amounts for the various taxes: *Expenses:Tax-*

es:Federal account, \$180; *Expenses:Taxes:Medicare* account, \$90; and *Expenses:Taxes:Social Security* account, \$60. Finally, enter the gross total of your paycheck (\$1,000 in this example) as a withdrawal transfer from *Income:Salary*.

The final split should look like Figure 2.4, “Entering a split transaction”. Remember to press **Enter** after finishing the entry. But you should also know that when you press **Enter**, the split view will be “folded” back into a simplified transaction view. The splits are still there; you just have to click Split to view them. See the section called “Features of the Account Register” for details.

Figure 2.4. Entering a split transaction



Reconciliation

Once transactions have been entered into GnuCash, it is important to verify that they agree with the records of your financial institution. This verification process is known as **reconciliation**, and it is key to determine whether your records are accurate. Most commonly, you will check transactions against bank statements, although you can use this process to verify any transaction.

GnuCash keeps track of the reconciliation status of each transaction. The reconciliation status of a transaction is shown by the reconciliation R field in a register: *y* indicates that a transaction has been reconciled, *n* indicates that it has not, and *c* indicates that it has been cleared, but not reconciled. A split marked cleared signifies that you got some kind of confirmation that the institution accepted the order (e.g. you have the restaurant’s receipt for your credit card purchase). You can toggle the reconciliation status between *n* and *c* by clicking in the R field; you can set it to *y* by using the section called “Reconcile windows”.

At the bottom of the account window, there are (among others) two running balances (the cleared and reconciled balance), and the total balance. The former balances should correspond to how much money the bank thinks you have in your account, while the latter includes outstanding transactions.

For example, when you write a check for something, you should enter the transaction into GnuCash. The reconciliation R field of the transaction will initially contain *n* (new). Your new entry will contribute to the total balance, but not to the cleared and reconciled balance. Later, if you got some confirmation that the check has been cashed, you might click on the transaction’s R field to change it to *c* (cleared). When you do this, the cleared balance will change to include this amount. When the bank statement arrives, you can then compare it to what you’ve recorded in GnuCash by opening the reconciliation window. There, you will be able to change the R field to *y* (reconciled).

Note

You cannot reconcile directly in a register window by clicking in the R field. You must use the reconciliation window. Once a transaction has been marked *reconciled*, it can no longer be easily changed without breaking the Starting Balance of the next reconciliation.

Warning

It is important to understand that reconciliation is done for a given date, and when you reconcile an account based on a statement from a given date, you are reconciling **all transactions prior to that date**. Therefore, if you add or modify transactions that predate your last reconciliation, your **reconciled** balances will be thrown off.

Reconcile windows

The reconciliation windows are used to reconcile a GnuCash account with a statement that a bank or other institution has sent you. Reconciliation is useful not only to double-check your records against those of your bank, but also to get a better idea of outstanding transactions, e.g. uncashed checks.

To use the reconciliation windows, select an account from the account tree and click on Actions → Reconcile. A window like the one below will appear in which you can enter the reconcile information.

The initial reconcile window.

In the initial reconcile window, some Reconcile Information need to be entered.

Statement Date

The date of the statement you will be reconciling against.

Tip

Click on the down arrow in the right of this field to open a calendar

Starting Balance

This is a non-editable item which displays the balance from the previous reconciliation. It should match the starting balance in your statement.

Warning

Sometimes, the opening balance in GnuCash does not match that found on your

statement. This can happen the first time you reconcile your account or when a previously-reconciled transaction is de-reconciled or deleted.

Note

The first time you reconcile your account, the starting balance will be 0.00, thus probably not the *opening balance* of your account. When you reconcile the account, the *opening balance* for the account will be included in the reconciliation, and the result should balance.

Tip

In the case when a previously-reconciled transaction is accidentally de-reconciled, you can simply re-reconcile the transaction along with the transactions on the current statement, and the result should balance.

The case of accidentally deleting a previously-reconciled transaction presents more of a challenge; if you cannot determine what was deleted and restore it to the register, you will have to create a dummy transaction to get the reconciliation to finish.

Caution

While the latter case does not matter for your private accounting, you should have a really good explanation for your auditors, if you are the accountant of a club or a company.

Ending Balance

This field should be filled with the ending balance as it appears in the statement.

Note

GnuCash automatically fills this field with the Present balance as shown in the lower part of the account's register.

Include Sub-accounts

Check this option if you want to include in the reconciliation the transactions that belongs to the sub-accounts of the currently selected account. Note that all sub-accounts must be in the same commodity as the parent for the option to be enabled.

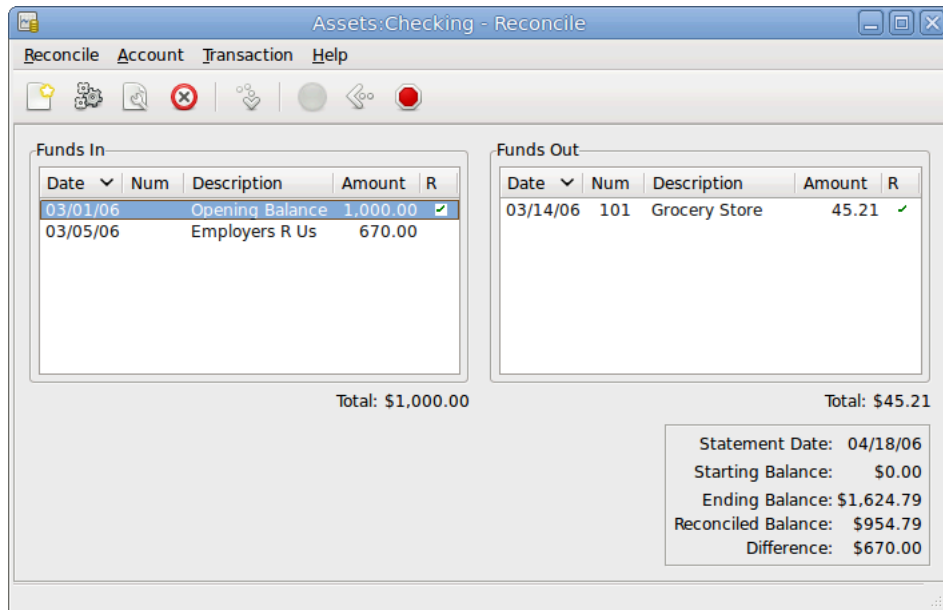
Enter Interest Payment

Clicking this button opens a new window that allow you to enter an interest transaction to the account to be reconciled.

Tip

The Interest Payment window might be opened automatically when you start a reconciliation for an account of the type *Bank*, *Credit*, *Mutual*, *Asset*, *Receivable*, *Payable*, and *Liability*. If you want to disable this behavior for any of the previous accounts, go to the Register tab of the GnuCash Preferences and uncheck the Automatic interest transfer option. Alternatively, to disable this behavior only for the selected account, press the No Auto Interest Payments for this Account button in the Interest Payment window.

Then, click on the Ok button, and you will see the transactions listing reconcile window:



The transactions listing in the reconcile window.

The two panes called Funds In and Funds Out, lists all the unreconciled transactions that belongs to the account that is going to be reconciled. The R columns show whether the transactions have been reconciled.

Now, examine each item on the bank statement, and look for the matching item in the Reconcile window.

If you cannot find a transaction, then perhaps you forgot to enter it, or did not know that the transaction had happened. You can use the New button on the *Toolbar*, or the Transaction → New menu item in the menu, to open a register window and enter the missing transaction. The new item will appear in the Reconcile window when you press the Enter button in the register after entering the transaction.

When you find the item in the Reconcile window, compare the amount in the item to the amount on the statement. If they disagree, you may have made an error when you entered the transaction in GnuCash.

You can use the Edit button on the *Toolbar*, or the Transaction → Edit item, to open a register window and correct the transaction.

If the amounts agree, click on the item in the Reconcile window. A check mark will appear in the R column beside the selected transaction. GnuCash will automatically update the amounts in the lower right summary pane.

Tip

You can use the **up/down** arrow keys to scroll to the item, the **space** key to mark the item as reconciled and the **Tab** key to switch panes.

You then repeat this for each item that appears on the bank statement, verifying that the amounts match with the amounts in GnuCash, and marking off transactions in GnuCash as they are reconciled.

Tip

You can check or uncheck the reconcile status of all transactions in either pane by clicking on a transaction in the required pane then clicking **Ctrl-A** followed by **space**. This will toggle the reconcile status of all transactions in the pane to either checked or unchecked state. This procedure can be repeated to achieve the desired status for the transactions in the pane.

At the bottom of the Reconcile window there is a Difference field, which should show 0.00 when you are done reconciling. If it shows some other value, then either you have missed transactions, or some amounts may be incorrect in GnuCash. (Or, less likely, the bank may have made an error.)

Note

Under some circumstances, it may be difficult or impossible to determine why an account will not reconcile. If you are unable to correct the discrepancy between your books and a statement, GnuCash includes a Balance button on the *Toolbar* that will automatically create a balancing entry for you in the amount that cannot be reconciled.

To use this, carry out the full reconciliation (marking all transactions that you can identify) and then click this button. GnuCash will create a balancing entry for the remaining discrepancy that uses the *Special Accounts:Orphan-XXX* account (where "XXX" represents your currency). The Reconcile window will close; re-opening it will allow you to check the newly-created balancing entry and finish the process.

When you have marked off all the items on the bank statement and the difference is 0.00, press the Finish button on the *Toolbar* or select Reconcile → Finish from the menu. The Reconcile window will close. In the register window, the R field of the reconciled transactions will change to y.

In this case, we have not received all the information yet, so we simply press the Postpone button, so we can continue at a later stage. Observe that the R column indicates we cleared (c) two transactions. They have not been reconciled yet, but we have verified these two transactions so they have been marked as cleared. If you look at the *Statusbar* at the bottom of the account register, you will see a summary of what has been reconciled and what has been cleared (Cleared:USD 954.79 Reconciled:USD 0.00)

Date	Num	Description	Transfer	R	Deposit	Withdrawal	Balance
01/03/06		Opening Balance	Equity:Opening Balance	c	1,000.00		1,000.00
05/03/06	Num	Grocery Shop	Expenses:Groceries	c	Cleared	45.21	954.79
14/03/06		Employers R Us	Income:Salary	n	670.00		1,624.79
05/03/06				n			

Present:USD 1,624.79 Future:USD 1,624.79 Cleared:USD 954.79 Reconciled:USD 0.00 Projected Minimum:USD 1,624.79 Expenses:Groceries

The Checking account after postponing the reconciliation.

Scheduled Transactions

Scheduled transactions are made to help entering repetitive money operations, like subscriptions, insurances or taxes. By using scheduled transactions, you only have to enter the concerned transaction once, set a few parameters like start date, frequency and a little description, and then GnuCash will tell you whenever a scheduled transaction is ready to be created, and create it for you.

In this howto, we'll take a monthly Internet subscription of 20 USD as example, which is taken on the 28th of each month.

In GnuCash, there are two ways of creating scheduled transactions, from the ledger or from the Scheduled Transactions Editor.

Creating from the Ledger

Enter the first occurrence of your to-schedule transaction in the ledger. In the Transfer field for this transaction, type *Expenses:Internet* as shown in the next screenshot.

The screenshot shows the GnuCash interface for a 'Checking' account. The ledger table contains the following data:

Date	Num	Description	Transfer	R	Deposit	Withdrawal	Balance
01/03/06		Opening Balance	Equity:Opening Balance	n	1,000.00		1,000.00
05/03/06	101	Grocery Store	Expenses:Groceries	n		45.21	954.79
14/03/06		Employers R Us	-- Split Transaction --	n	670.00		1,624.79
28/03/06		Internet Subscription	Expenses:Internet	n		20.00	1,604.79
28/03/06			Transfer	n			

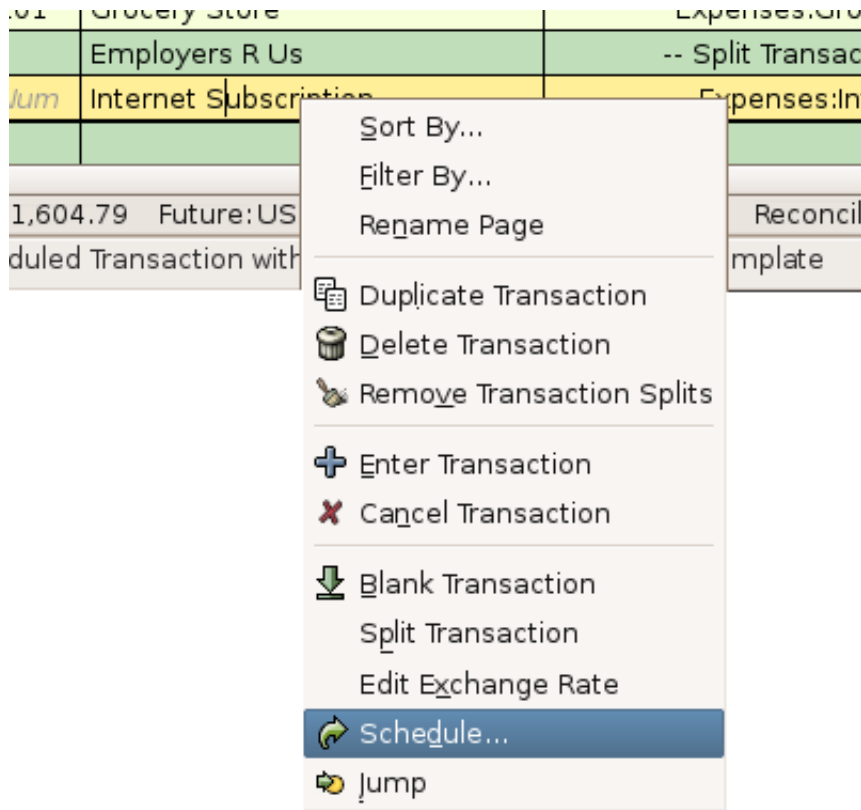
Summary statistics at the bottom of the window:
 Present: USD 1,604.79 Future: USD 1,604.79 Cleared: USD 0.00 Reconciled: USD 0.00 Projected Minimum: USD 1,604.79
 Tuesday 28 March 2006

Step one creating scheduled transaction from the ledger

Note

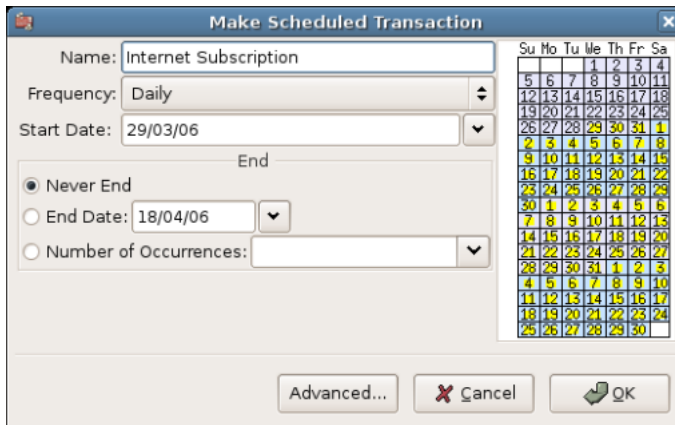
Since we did not create the *Expenses:Internet* account, GnuCash will prompt us to create it.

Then you right click on your transaction and select Schedule...



Step two creating scheduled transaction from the ledger

A window like this will appear:



Step three creating scheduled transaction from the ledger

Let's fill the values, we know that the subscription is taken on the 28th each month, and the next one is for next month (since we entered the one for this month manually) :

The screenshot shows the 'Make Scheduled Transaction' dialog box. The 'Name' field contains 'Internet Subscription'. The 'Frequency' dropdown is set to 'Monthly'. The 'Start Date' field is '28/04/06'. Under the 'End' section, the 'Never End' radio button is selected. The 'End Date' field is '18/04/06'. The 'Number of Occurrences' field is empty. To the right is a calendar grid for April 2006, with the 28th highlighted in yellow. At the bottom are 'Advanced...', 'Cancel', and 'OK' buttons.

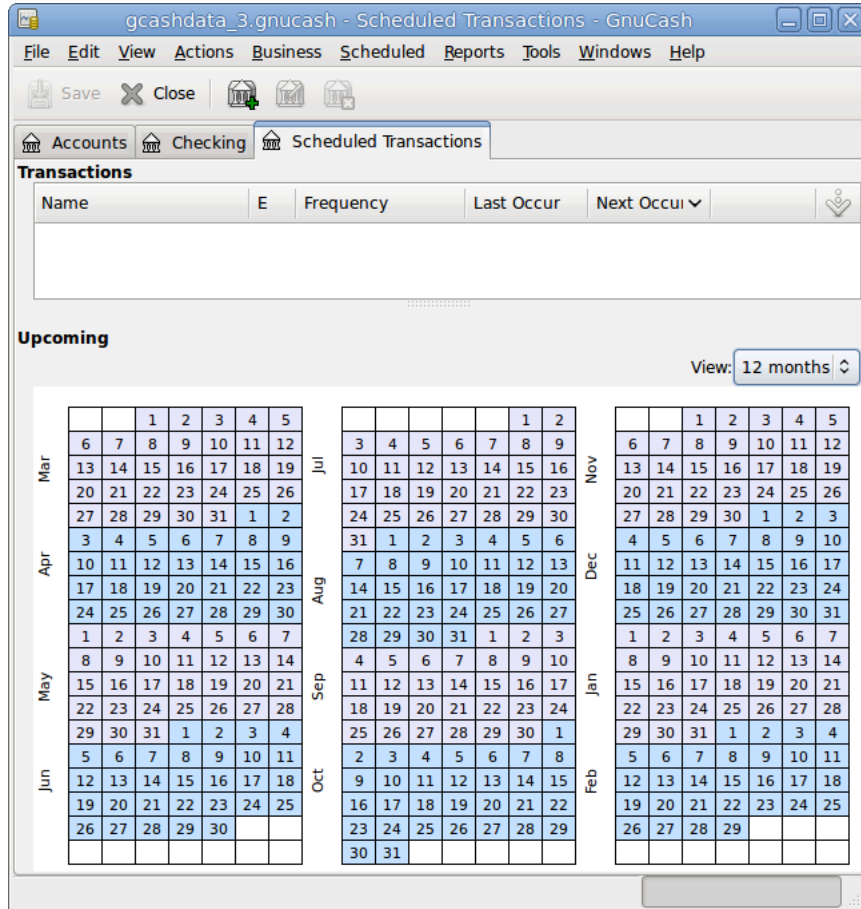
Filling in data to a scheduled transaction

Click the OK button, and the transaction will be scheduled. GnuCash now has memorized this scheduled transaction and on the 28th of next month, it will pop up a window asking if it should create it (see far below for a screenshot of this window).

Creating from the Editor

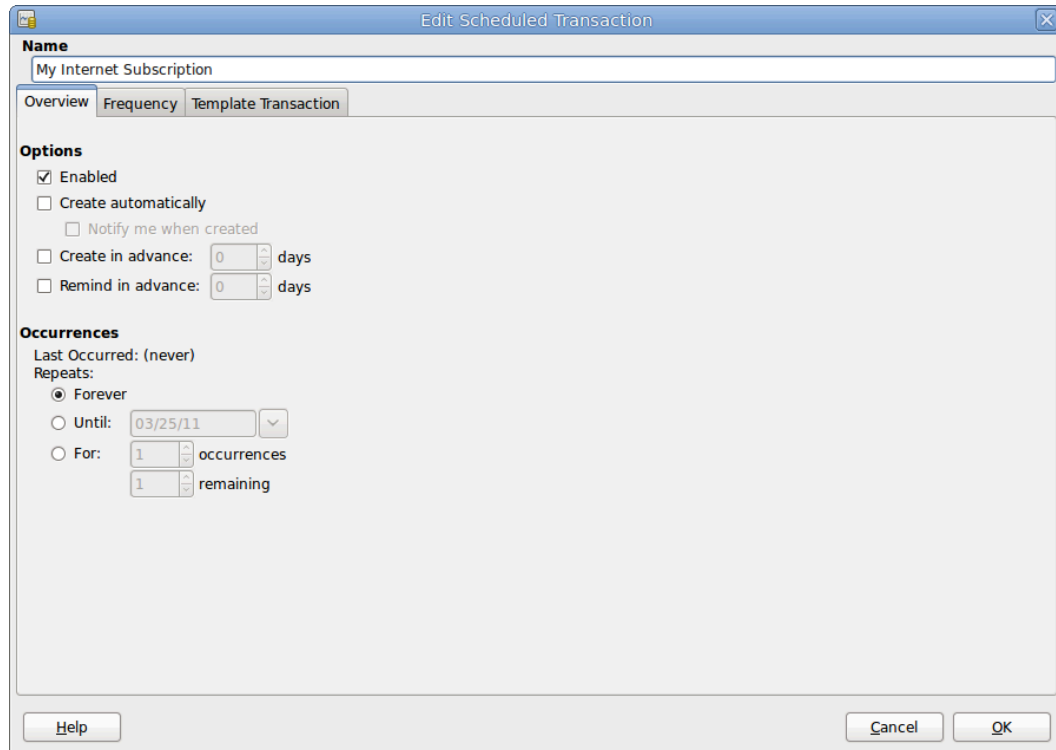
Another way of entering a scheduled transaction is from the Scheduled Transaction Editor, it may be faster if we have several scheduled transactions to create at once.

From the main accounts windows, select Actions → Scheduled Transactions → Scheduled Transaction Editor from the *Menubar*. A new Scheduled Transactions tab will be opened in the current GnuCash window as shown above:



Empty Scheduled Transactions tab

This tab contains a list, now empty, of all the scheduled transactions. Let's create a new one by clicking on the New button in the *Toolbar*. A window like the one below will pop up:



Edit Scheduled Transaction window, Overview tab

First, let's enter a name for this new scheduled transaction in the top of the window.

Note

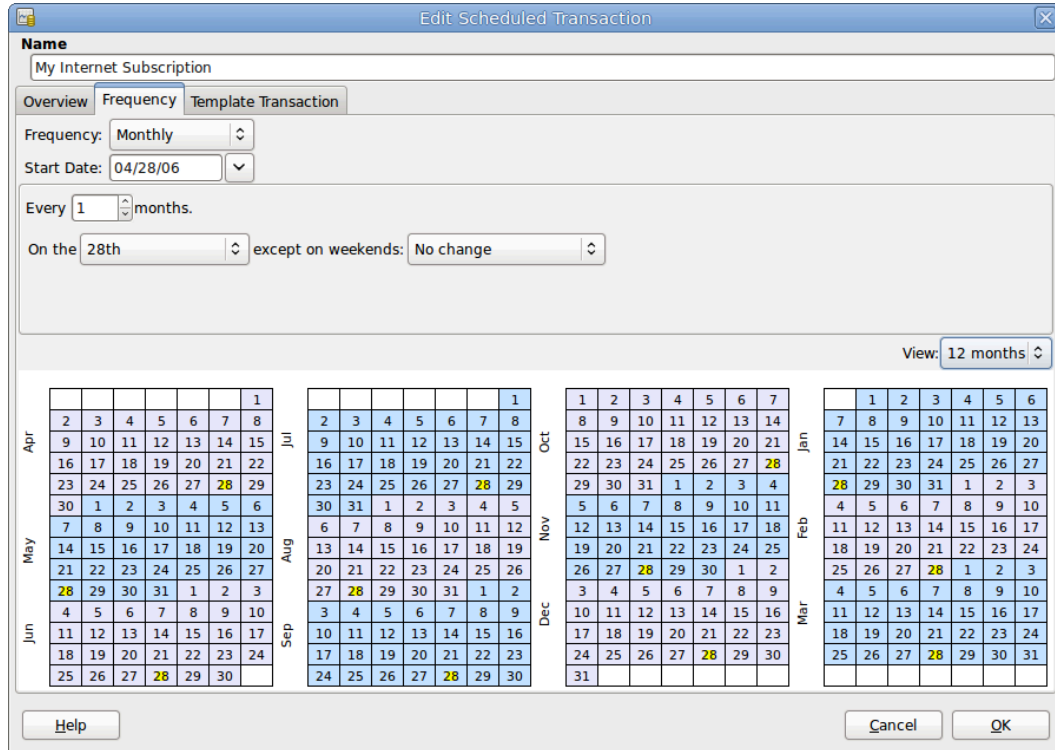
This name will only identify the transaction in the Edit Scheduled Transaction window, it will never appear in the ledger.

In the Options pane of the Overview tab you have four options:

Enable	Sets the status of the scheduled transaction.
Create automatically	If enabled, will insert this transaction in the ledger without asking you before (see below). If needed, you can be advised when the transaction is entered by checking the Notify me when created option.
Create in advance	Sets how many days in advance the transaction will be created.
Remind in advance	Sets how many days in advance a reminder is presented. This can be used, for example, when you have to pay something by check, and a reminder one week before allows you to send your check before the deadline.

The Occurrences pane allows you to tell GnuCash that this scheduled transaction won't last for ever. For example if you are repaying a loan, you can enter the loan end date or the number of occurrences left.

Select now the Frequency tab in the Edit Scheduled Transaction window. Here you can set the time-related options of the transaction.



Edit Scheduled Transaction window, Frequency tab

Frequency

Sets the basic frequency of the transaction, with options for once, daily, weekly, semi-monthly and monthly. In this example, this is set to monthly.

Note

It is possible to set a transaction to occur at intervals *other* than those listed in the Frequency list, by changing the setting in the Every control (see below).

Start Date

Sets when the transaction will begin. In the example, this would be set to the start of the next month.

Every

This option allows you to schedule transactions by multiplies of the value in Frequency. For example, to create a transaction that runs every 3 weeks, set Frequency to Weeks and Every to 3.

On the and Except on weekends

Sets the day of the month that the transaction is scheduled, and controls what GnuCash will do when the day occurs on a weekend day.

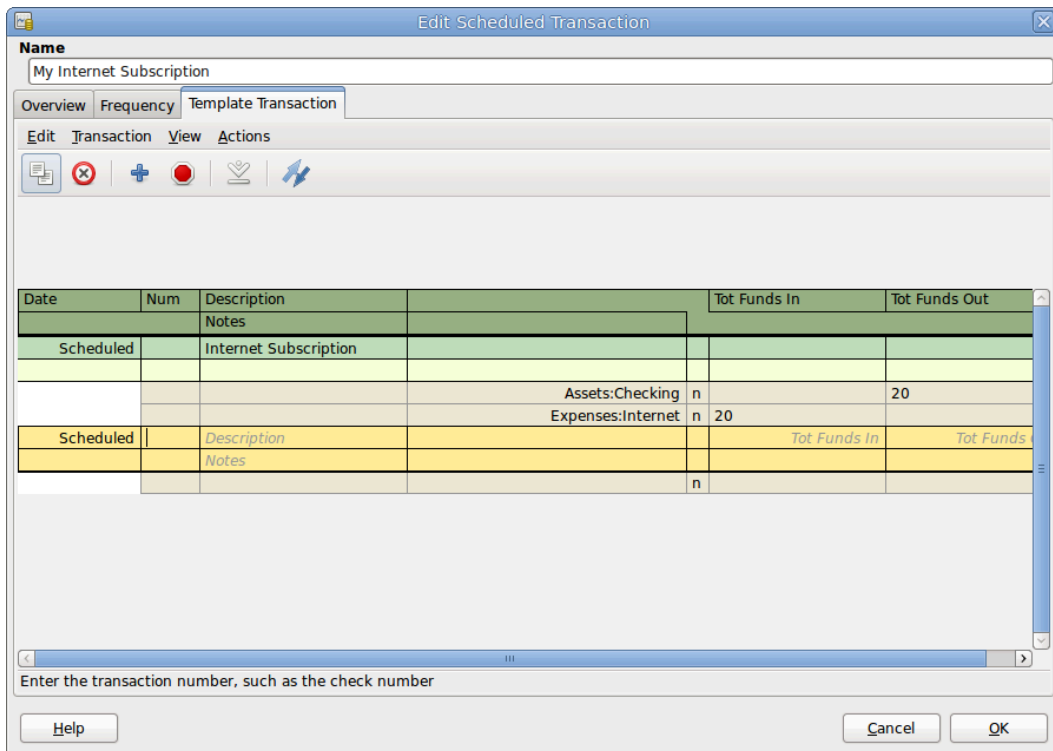
Note

We know that the subscription is taken on the 28th each month, so the Start date will be November 1, 2003 (assuming November is the next month), the Frequency will be Monthly, it will be taken every month on the 28th. Since in our example the internet subscription is automatically taken from the account, we have no need to create it in advance, nor give an end date.

When the elements on this tab are filled in, GnuCash will highlight the calendar below to indicate when future transactions will be run.

Finally select the Template Transaction tab and enter your transaction in the lower part as you would do in the ledger, with the only difference of having no date.

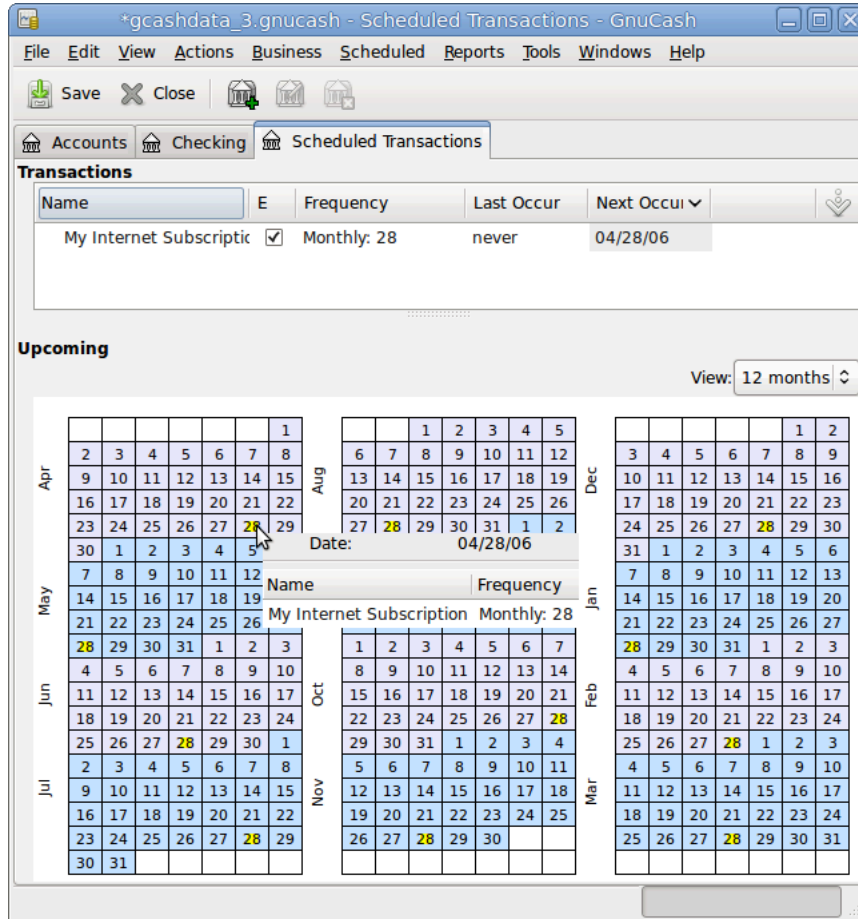
Now, you should have a window like this:



Edit Scheduled Transaction window, Template Transaction tab

Remember to click on the Enter icon, to validate and enter the transaction.

Now click OK, it takes you to the Scheduled Transactions tab, now showing one item in the Transactions list:



Entered scheduled transaction

Tip

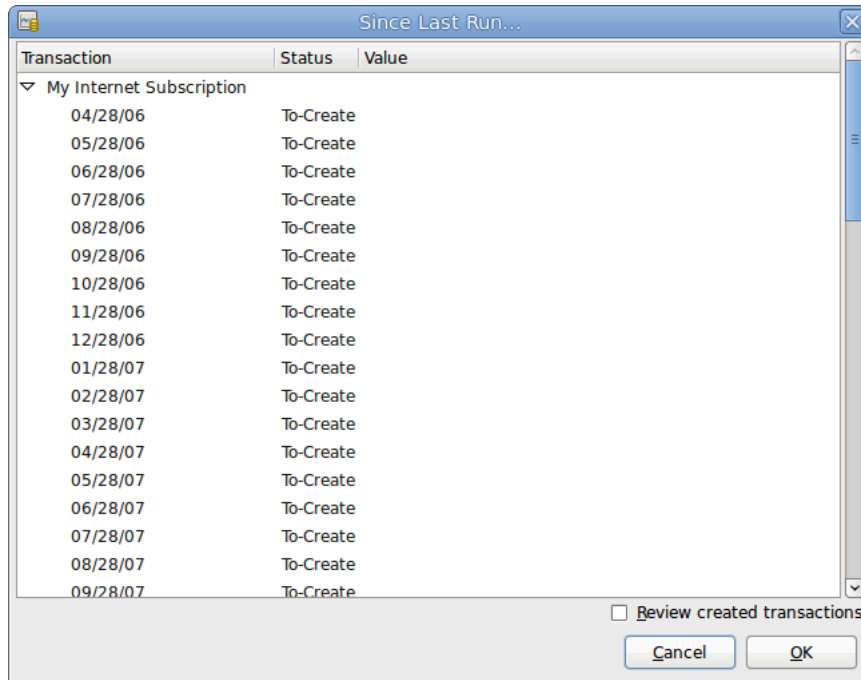
If you click in the calendar part on the first day of one month, a small window, following your mouse, will show you what is planned for this day. To make the small window disappear again, just click in it one more time.

You can now close the Scheduled Transaction tab, and save your work.

Note

What comes below is just an illustration, and is not meant to be entered into the GnuCash database at this stage. As per this example, the below dialogs will appear when the scheduled transaction is supposed to run.

From now on, when GnuCash is launched and a scheduled transaction is scheduled or need to be entered, you may see a Since Last Run... window summarizing the scheduled transactions operations (Reminder, To-Create etc... a better description of each option can be found in the GnuCash manual):



Scheduled transaction popup reminder

You can click on the Status column to change the scheduled transaction status if needed. Then just click on Ok to close the Since Last Run... window and to apply the pending operations. Select Cancel to skip entering in the ledger the pending operations.

If the Status field was set to To-Create, then if you take a look in your bank account register, you'll see the transaction has been created:

Tip

If you enable the Review created transactions option in the lower right of the Since Last Run... window, GnuCash will open, after pressing Ok, the register tab of each account where the scheduled transactions were entered automatically.

Note

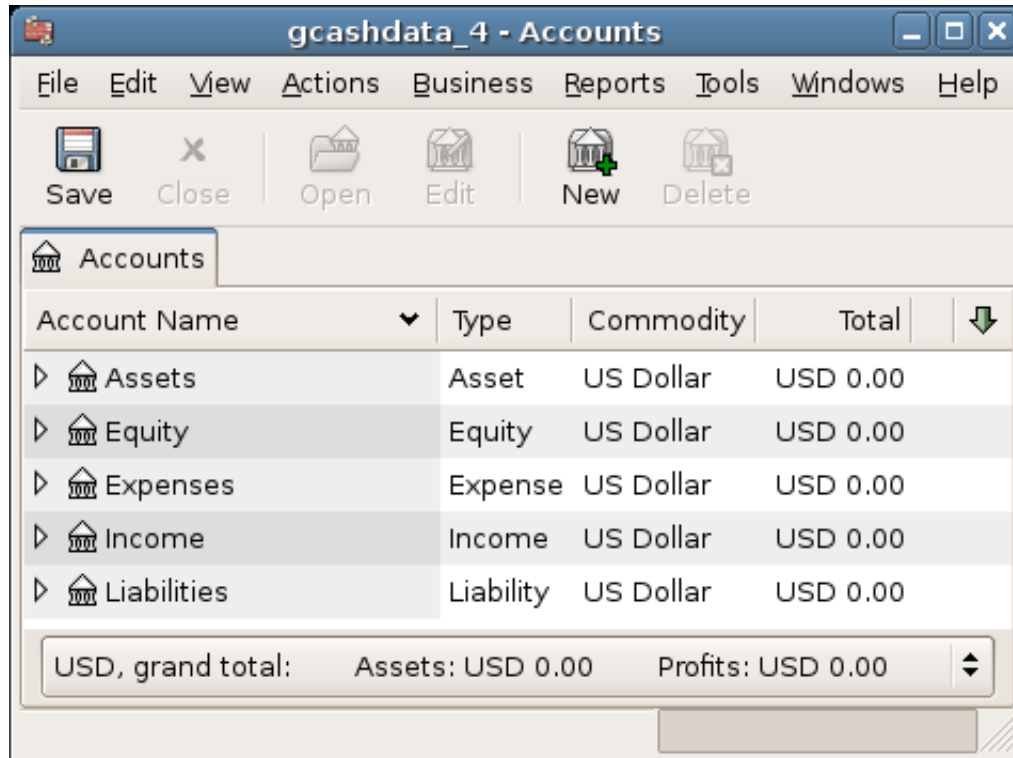
If you entered the transaction for 28 of April at this stage, then please *revert back* to the last saved GnuCash file by selecting File → Open and choosing the previously saved `gcashdata_a_3` GnuCash file.

Putting It All Together

In the previous sections of this chapter the concepts and mechanics of working with transactions in GnuCash have been discussed. This section will expand upon the chart of accounts initially built in the previous chapter, by setting some opening balances, adding transactions and a scheduled transaction.

Open GnuCash file

Start with opening the previous datafile we stored, `gcashdata_3emptyAccts`, and store it as `gcashdata_a_4` directly. The main window should look something like this:



This image shows the starting point for this section.

Opening Balances

As shown earlier in the section called “Simple Transaction Example” with the *Assets:Checking* account, the starting balances in an account are typically assigned to a special account called *Equity:Opening Balance*. To start filling in this chart of account, begin by setting the starting balances for the accounts. Assume that there is \$1000 in the savings account and \$500 charged on the credit card.

1. Open the *Assets:Savings* account register. Select View from the menu and check to make sure you are in Basic Ledger style. You will view your transactions in the other modes later, but for now let’s enter a basic transaction using the basic default style.
2. From the *Assets:Savings* account register window, enter a basic 2 account transaction to set your starting balance to \$1000, transferred from *Equity:Opening Balance*. Remember, basic transactions transfer money from a source account to a destination account. Record the transaction (press the **Enter** key, or click on the Enter icon).
3. From the *Assets:Checking* account register window, enter a basic 2 account transaction to set your starting balance to \$1000, transferred from *Equity:Opening Balance*.
4. From the *Liabilities:Visa* account register window, enter a basic 2 account transaction to set your starting balance to \$500, transferred from *Equity:Opening Balance*. This is done by entering the \$500 as a charge in the *Visa* account (or decrease in the *Opening Balance* account), since it is money you borrowed. Record the transaction (press the **Enter** key, or click on the Enter icon).

You should now have 3 accounts with opening balances set. *Assets:Checking*, *Assets:Savings*, and *Liabilities:Visa*.

The screenshot shows a software window titled "gcashdata_4 - Accounts". It features a menu bar with "File", "Edit", "View", "Actions", "Business", "Reports", "Tools", "Windows", and "Help". Below the menu is a toolbar with icons for "Save", "Close", "Open", "Edit", "New", and "Delete". The main area contains a table with the following data:

Account Name	Type	Commodity	Total
Assets	Asset	US Dollar	USD 2,000.00
Checking	Bank	US Dollar	USD 1,000.00
Savings	Bank	US Dollar	USD 1,000.00
Equity	Equity	US Dollar	USD 1,500.00
Expenses	Expense	US Dollar	USD 0.00
Income	Income	US Dollar	USD 0.00
Liabilities	Liability	US Dollar	USD 500.00
Visa	Credit Card	US Dollar	USD 500.00

At the bottom of the window, a summary bar displays: "USD, grand total: Assets: USD 1,500.00 Profits: USD 0.00".

This image shows the opening balances.

Additional Transaction Examples

Now add some more transactions to simulate a month's expenses. During the month, \$78 is spent on electricity, \$45 on phone, and \$350 on rent. All paid by check. We also spent \$45.21 on groceries, received \$670 as salary, and paid our Internet bill this month. Finally, let's move \$100 from the savings account to the checking account.

1. Open the *Expenses:Electricity* account register and enter a simple 2 account transaction to pay the \$78 electrical bill at the end of the current month (eg: March 28, 2006). Enter a description (eg: Light Company) and the check number (eg: 102). The Transfer account should be *Assets:Checking*.
2. Open the *Assets:Checking* account register and enter a simple 2 account transaction to pay the \$45 phone bill at the end of the current month (eg: March 28, 2006). Enter a description (eg: Phone Company Name) and the check number (eg: 103). The Transfer account should be *Expenses:Phone*. Notice that you can enter expense transactions from either the credit side (the expense accounts) or the debit side (the asset account).
3. Open the *Expenses:Rent* account register and enter a simple 2 account transaction to pay the \$350 in rent at the end of the current month (eg: March 28, 2006). Enter a description (eg: April Rent) and the check number (eg: 104). The Transfer account should be *Assets:Checking*.
4. Duplicate this transaction using the Duplicate button in the *Toolbar*. Start by clicking on the current rent transaction, and click on the Duplicate icon. Enter the transaction date a month out in the future

(eg: April 28, 2006), and notice the blue line separator that GnuCash uses to separate future transactions from current ones. In this way, you can enter transactions before they occur.

You could also set up a scheduled transaction to pay your rent, since the value of the rent is likely to be constant for the foreseeable future.

- Start by clicking on the current (April 28) rent transaction, and click on the Schedule icon
 - Change to Monthly, change description if needed and press OK
5. To transfer money from your savings account to your checking account, open the *Assets:Savings* account register, add a new transaction setting the Transfer to *Assets:Checking* in the amount of \$100 (date 6 March, 2006).
 6. As another example of a simple 2 account transaction, add another transaction to describe the purchase of \$45.21 worth of groceries on 5 of March. From within the *Assets:Checking* account, you would set Transfer to *Expenses:Groceries*. The account register should now appear:
 7. To add a paycheck transaction from the *Assets:Checking* account register window, click on a new transaction line, and click on Split. First enter the description of this transaction on the first line (eg: “Employers R Us”), as well as the date (14 March). In the “split” line below this, enter the deposit into *Assets:Checking* (eg:\$670). Follow this with the various tax deposits (*Assets:Checking* (eg: \$670), *Expenses:Taxes:Federal* account (eg: \$180), *Expenses:Taxes:Medicare* account (eg: \$90), and *Expenses:Taxes:Social Security* account (eg: \$60)) and lastly the gross total of your paycheck (eg: \$1000) as a withdrawal transfer from *Income:Salary*.
 8. You also need to pay for your Internet subscription of 20 USD on the 28th.

Account Name	Type	Commodity	Total
Assets	Asset	US Dollar	USD 1,781.79
Checking	Bank	US Dollar	USD 881.79
Savings	Bank	US Dollar	USD 900.00
Equity	Equity	US Dollar	USD 1,500.00
Expenses	Expense	US Dollar	USD 1,218.21
Electricity	Expense	US Dollar	USD 78.00
Groceries	Expense	US Dollar	USD 45.21
Internet	Expense	US Dollar	USD 20.00
Phone	Expense	US Dollar	USD 45.00
Rent	Expense	US Dollar	USD 700.00
Taxes	Expense	US Dollar	USD 330.00
Federal	Expense	US Dollar	USD 180.00
Medicare	Expense	US Dollar	USD 90.00
Social Se	Expense	US Dollar	USD 60.00
Income	Income	US Dollar	USD 1,000.00
Liabilities	Liability	US Dollar	USD 500.00
USD, grand total:			Assets: USD 1,281.79 Profits: -USD 218.21

This image shows the ending balances after the section called “Transactions”.

Save file

Before we go to the report section, let’s save the GnuCash data file (`gcashdata_4`).

Reports

But only having data available on the computer screen will not make your accountant happy, therefore GnuCash comes with a large number of highly customizable reports.

Let’s have a look at a Cash Flow, and a Transaction Report.

1. First let's have a look at the Cash Flow report for the month of March.

Select the cash flow report from Reports → Income & Expense → Cash Flow.

**Cash Flow - 01/03/06 to 31/03/06 for
Selected Accounts**

- [Assets](#)
- [Assets:Checking](#)
- [Assets:Savings](#)

Money into selected accounts comes from	
Income:Salary	USD 1,000.00
Money In	USD 1,000.00
Money out of selected accounts goes to	
Expenses:Electricity	USD 78.00
Expenses:Groceries	USD 45.21
Expenses:Internet	USD 20.00
Expenses:Phone	USD 45.00
Expenses:Rent	USD 350.00
Expenses:Taxes:Federal	USD 180.00
Expenses:Taxes:Medicare	USD 90.00
Expenses:Taxes:Social Security	USD 60.00
Money Out	USD 868.21
Difference	USD 131.79

This image shows the Cash Flow report after the section called “Transactions”.

To get this customized report, right click in the report and choose Report Options. Then set the time period, and specify which accounts you want in the report.

2. Now let's have a look at corresponding transaction report for the Checking account.

Select the transaction report from Reports → Transaction Report.

Transaction Report
From 01/03/06 To 31/03/06

Date	Num	Description	Transfer from/to	Amount
Checking				
05/03/06		Groceries	Groceries	<u>-USD 45.21</u>
06/03/06		Transfer	Savings	<u>USD 100.00</u>
14/03/06		Employers R Us	Split	<u>USD 670.00</u>
28/03/06		Internet subscription	Internet	<u>-USD 20.00</u>
28/03/06	102	Light Company	Electricity	<u>-USD 78.00</u>
28/03/06	103	Phone Company	Phone	<u>-USD 45.00</u>
28/03/06	104	April Rent	Rent	<u>-USD 350.00</u>
Total For Checking				USD 231.79
Grand Total				USD 231.79

This image shows the Transaction Report for the Checking account during March.

- Now let's change the transaction report to only show the various Expenses accounts.

Transaction Report
From 01/03/06 To 31/03/06

Date	Num	Description	Transfer from/to	Amount
March 2006				
05/03/06		Groceries	Checking	<u>USD 45.21</u>
14/03/06		Employers R Us	Split	<u>USD 180.00</u>
14/03/06		Employers R Us	Split	<u>USD 90.00</u>
14/03/06		Employers R Us	Split	<u>USD 60.00</u>
28/03/06		Internet subscription	Checking	<u>USD 20.00</u>
28/03/06	102	Light Company	Checking	<u>USD 78.00</u>
28/03/06	103	Phone Company	Checking	<u>USD 45.00</u>
28/03/06	104	April Rent	Checking	<u>USD 350.00</u>
Total For March 2006				USD 868.21
Grand Total				USD 868.21

This image shows the Transaction Report for the various Expense accounts during March.

Chapter 3. Importing Data into GnuCash

This chapter will detail procedures for importing data into GnuCash.

Importing Transactions from Files

Imported transactions will generally be to a specific account in your account tree. In the following this will be referred to as the **import** or **base** account. It may or may not be specified in the data being imported, depending on the import format. It is usually the first split of a transaction being imported.

All transactions will also must have a **destination** account for at least matching splits. This may or may not be supplied in the imported data. If it is not, an account can be assigned on the basis of the previous import history by matching to information in the imported data. The user may always over-ride this assignment.

Multi-split data previously exported from GnuCash may have both the import and destination accounts for transaction splits specified in the data file.

File Import Formats

Gnucash allows transactions to be imported in the following formats:

- **QIF** (.qif) Quicken Interchange format - import data from Quicken financial software;
- **OFX/QFX** (.ofx,.qfx) Open Financial eXchange format (QXF is an Intuit/Quicken proprietary version of OFX);
- **CSV** (.csv) Comma Separated Values;
- **MT940** MT940
- **MT942** MT942
- **DTAUS** DTAUS

These import methods can be accessed from File → Import

Import Matcher

Several of the Import Assistants use an Import Matcher to implement a Bayesian approach to assign destination accounts, if such accounts are not specified in the imported data, to each imported transaction based on the previous import history of the import account. It also attempts to match the transactions being imported to any existing transactions based on the date and the description fields.

Transaction rows which match existing transactions already in the import account are flagged not to be imported. They will have a light green background and the A and U+R checkboxes will be unchecked and the R checkbox will be checked. To override and import the transaction, check the A checkbox. The U and R boxes will be unchecked automatically. The reliability of the match is indicated by a bar display in the Info column. If a destination account for the second split is assigned by the matcher it will be appended to the info column.

Transaction rows which do not match existing transactions in the import account, for which an assignment of a destination account cannot be made on the basis of the previous import history to the account, will be displayed with an orange-yellow background and the A box will be checked and U+R and R unchecked. A destination account must be specified for these transactions.

Assign a Destination Account to a Single Transaction

The currently selected row is selected by Left-clicking it. It is displayed with a mid dark green background.

Double click on a row. This will select it and open an Account Selection dialog. Select the desired destination account in the dialog and click OK. The row background will change to a light green and the assigned destination account will be displayed in the Info column.

or alternatively, **Left-click** on a row to select it followed by a **Right-click** to bring up a popup menu then select "Assign a transfer account" to display the Account Selection dialog, select the destination account and click the OK button.

Assign a Destination Account to Multiple Transactions

Sometimes you will have several transactions which will have the same destination account. GnuCash allows you to select multiple transactions and apply the same destination account to all transactions in the selection.

Rows in a selection are displayed with a mid dark green background.

Multiple rows may be selected to have the same destination account assigned to them.

To select rows either:

- **Left click** on first row and then **Ctrl-Left click** on other rows to add to the selection or
- **Left-click** on a first row and then **Shift-Left-click** on another row to select all rows between them.

then **Right-click** to display a popup menu and then select "**Assign a transfer account**" to open the Account Selection dialog. Select the desired destination account and click the OK button in the Account Selection dialog.

Completing the Import

Once you have assigned destination accounts for all the imported transactions using the above methods (all row backgrounds will be a light green colour), check that the assigned destination accounts are correct and then press the OK button at the bottom of the Generic Import Matcher window. The transactions selected for import will have their splits added to the selected source and destination accounts.

The choices made for the destination accounts and description/memo fields are remembered and stored and used for future imports to the same account to automatically assign a destination account for transaction records not containing destination account information.

Import QIF

To import data from Quicken®, MS Money, or other programs that use QIF(Quicken® Interchange Format), you must first export your data to a QIF file. One way to do this is to export each account as a separate QIF file. An easier way, available in Quicken® 98 and beyond, is to export all accounts at once into a single QIF file. Check your program's manual to determine if this option is available.

To import QIF files:

Load all of the QIF files containing data you wish to import

To do this, select **File -> Import -> Import QIF...** from the menu. When the QIF Import dialog box appears, click **Next** and follow the instructions to guide you through the process of loading your files.

This image shows the start of the QIF Import assistant.

You will be prompted for a filename to load. Use the Select button to select your QIF file and click Next to load it. Once the file is loaded, select Load another file if you have more files to load. When you have loaded all your QIF files, click Next to continue with the import process.

Review the GnuCash accounts to be created.

The importer then matches up your QIF accounts and categories with GnuCash accounts and gives you a brief description of the matching process. Clicking Next will bring you to a view comparing your QIF accounts with the corresponding GnuCash accounts created. To change an account name, select the row containing that account name and edit the name in the dialog box provided. Click Next when you have finished making changes, and proceed through a similar category matching process. QIF income and expense categories import as GnuCash income and expense accounts. Make changes to these account names if necessary, and click Next to continue.

Note: If you are not sure what changes are needed, it is safe to accept the GnuCash account names. It is easy to edit the accounts later if you find you need to make a change.

From the drop-down list, select a standard currency to be used for the imported accounts and click **Next** to continue. If you have stocks, mutual funds, or other securities, you will be prompted for additional information. The importer dialog will ask for the exchange or listing (i.e. Nasdaq), the security's full name, and the ticker symbol. If you do not have this information handy, you can edit the account information later, once the import is complete. Click **Next** to continue.

Tell GnuCash to import the data.

The last step is the import. Once you have verified your account names and investment information, click **Finish** in the Update your GnuCash accounts page to complete the import process. Depending upon the size of your file, the import might take a few minutes to complete, so a progress bar displays the percentage finished. When the import process is complete, GnuCash will return you to the main window, which should now display the names of the accounts you imported.

Import OFX/QFX

This opens a file selection dialog. Navigate to the file you wish to import, select a file with the appropriate extension (.ofx or .qfx), then press the **Import** button.

Gnucash opens an Account Selection dialog to select an account in your CoA corresponding to data source. Select the appropriate account from the account tree and press the **OK** button. On subsequent import of files from the same source (identified by tags in the file), the source is remembered and the account selection dialog is not displayed.

The generic import transaction matcher dialog is opened next. See the Import Matcher section (common to both OFX/QFX and CSV import formats) following the Import CSV section to continue the import process.

Import CSV

Clicking on **Import CSV** in the Import menu will bring up the Import Assistant dialog. The first step brings up a file selection dialog. Navigate to the location where the file you wish to import is located and select the file to import then click the **OK** button.

The next window will allow you to set parameters for the importing of the file. All widgets have tooltips which explain what the setting affects and the options for the setting.

Load and Save Settings

If this import is a regular occurrence, once you have set the other import parameters, you can save these settings by typing in a setting name in the **Load and Save Settings Entry** combo box and pressing the **Save** button just to the right of the box. Previously defined settings can be retrieved by selecting the appropriate setting name from the dropdown list activated by the down arrow at the right end of the text box. The trash can button to the right of the Save button can be used to remove the settings selected from the drop down list for the box. The settings group "**GnuCash Export Settings**" define a setting group for the export and reimport of GnuCash transaction data - use this if importing data previously exported from GnuCash.

Account

This combo box allows you to select the base or import account into which the transactions will be imported. It may be left unset if the imported data contains a column listing the accounts associated with each split or the import data specifies the account for first split of the transaction.

File Format

This section allows you to define whether the file has:

- **Fixed width columns** Selecting this radio button will allow you to define column boundaries by double clicking at the appropriate positions in the sample records displayed in the panel below. Single clicking in a column will narrow, widen or merge the column.
- **Separators** Selecting this radio button will allow you to define characters which will be used to distinguish columns in the input file. The default is comma separated however spaces, tabs, colons or semi-colons or any combination of them may be used to separate columns in the input file by selecting the appropriate check boxes. You may also define custom separators by typing the required characters into the text box and selecting the **Custom** checkbox. This may be used in combination with any of the predefined separators.
- **Multi-split** Selecting this check box allows the splits for a single transaction to be defined on consecutive lines within the file with each line defining a single split. If not selected each line is assumed to contain the information for a single transaction including one or two splits.

Miscellaneous

The miscellaneous settings allow you to set:

- **Encoding** This is usually the UTF-8 variant for your locale;
- **Date Format** This does not default to the Locale setting so check it matches the data you are importing;
- **Currency Format**;
- **Leading Lines to Skip**;

- **Trailing Lines to Skip;**
- **Skip alternate lines;**

to match the settings for the file you are importing. Tooltips may also contain information on the setting and options.

Import Panel

The import panel shows the data being imported as it is interpreted using the settings chosen to define columns and formats. The dropdown lists in the headers for each column of the import allow you to associate a specific column in the imported data with a specific field in the display of a transaction in an account register. At a minimum to import data, columns in the imported data containing the following information **must** be specified:

- **Date** of transaction;
- **Account** into which transaction is to be imported (or alternatively set the base account as above);
- **Description** of the transaction;
- **Deposit or Withdrawal** column.

The **Skip Errors** check box will skip trying to import any rows with errors in matching the columns.

When you are happy with all the import settings, save them if you will use the same settings again, then press the **Next** button. This will bring up a window which allows you to map the accounts identified in the account column (Account Id) with accounts in the GnuCash account tree (Account name). Double click on a row to bring up a dialog to select the matching GnuCash account. When you have selected a match for all accounts, click on the **Next** button.

The Transaction Information panel allows review of data entry settings so far.

Clicking on Match Transactions will then bring up the main Import Matcher window described in the next section.

Import MT940

Use this option to import MT940 data.

Import MT942

Use this option to import MT942 data.

Import DTAUS

Use this option to import DTAUS data.

Chapter 4. Configuring GnuCash

This chapter will detail preference settings for GnuCash.

Overview

Configuring is fun.

Main Configuration Screens

GnuCash stores settings in two main locations.

Preferences: Accounting Period Tab

Stuff about the Accounting Period tab

Preferences: Accounts Tab

Stuff about the Accounts tab. Need this stub for the link in The Basics. More later.

Preferences: Online Banking

Stuff about the Accounts tab. Need this stub for the link in The Basics. More later.

Part II. Managing Personal Finances

Table of Contents

5. Checkbook	75
Setting up Accounts	75
Entering Deposits	75
Entering Withdrawals	76
ATM/Cash Withdrawals	76
Reconciling Your Accounts	77
Putting It All Together	77
Opening Balances	77
Add some transactions	78
Opening Balances	79
Save file	80
Reports	81
6. Expense Accounts	85
Concepts	85
Setting Up Accounts	85
Simple Expense Account Setup	85
Complex Expense Account Setup	85
Entering Expense Transactions	85
Other Considerations for Expense Accounts	86
7. Credit Cards	87
Concepts	87
Setting Up Accounts	87
Simple Setup	87
Complete Setup	88
Entering Charges	88
Entering Payments	89
Putting It All Together	90
Open GnuCash file	90
Purchases	92
Refund	92
Interest Charge	92
Reconciliation	93
Payment	94
Save file	96
Reports	96
8. Loans	99
Basic Concepts	99
Terminology	99
Setting Up Accounts	99
Calculations	100
Example: Monthly Payments	101
Example: Length of Loan	101
Advanced: Calculation Details	101
House Mortgage (How-To)	103
A Personal Loan to a friend (How-To)	106
Loan Specifications	107
Accounts for the loan	107
Lending the money	108
Receiving first payment	108
Receiving second payment	109
Automobile Loan (How-To)	110

Reconciling with the Loan Statements (How-To)	111
Selling a house or a car (How-To)	111
Simple Transaction	111
A More Complex Transaction	112
9. Investments	114
Basic Concepts	114
Terminology	114
Types of Investments	116
Setting Up Accounts	116
Using Predefined Investment Accounts	117
Creating Investment Accounts Manually	118
Custom Accounts Example	118
Interest Bearing Accounts	119
Account Setup	119
Example	120
Setup Investment Portfolio	122
Setup Accounts for Stocks and Mutual Funds	123
Example Stock Account	123
Buying Shares	127
Entering Preexisting Shares	127
Buying New Shares	128
Setting Share Price	130
Initial Price Editor Setup	130
Setting Stock Price Manually	131
Configuring for Automatic Retrieval of Quotes	132
Displaying Share Value	133
The “Price Source” in Reports	134
Selling Shares	136
Selling Shares with Manual Calculation of Capital Gain or Loss	136
Examples of Selling Shares with Manually Entry of Capital Gain or Loss	139
Selling Shares with Automatic Calculation of Capital Gain or Loss Using Lots	143
Dividends	155
Dividends in Cash	155
Dividends Re-Invested	156
Return of Capital	156
Splits and Mergers	157
Simple Stock Split	157
Moderately Complex Stock Merger	160
10. Reports	163
Overview	163
Saved Reports Configurations Concepts	163
Standard Reports Overview	164
Transaction Report	164
Assets & Liabilities Group	164
Budget Group	167
Business Group	167
Income and Expense Group	169
Sample & Custom Group	172
Other Reports	173
Using the Transaction Report	174
11. Capital Gains	177
Basic Concepts	177
Estimating Valuation	177
Account Setup	178

Example	179
Unrealized Gains	179
Selling	180
Taxation	182
12. Multiple Currencies	184
Basic Concepts	184
Account Setup	184
User-Defined Currencies	185
Recording and Updating Currency Exchange Rates	186
Manually Updating Exchange Rates	187
Automatic Updating Exchange Rates (How-To)	188
Disabling Exchange Rate Retrieval	189
Recording Purchases in a Foreign Currency	190
Purchase of an Asset with Foreign Currency	190
Purchasing Foreign Stocks	192
Tracking Currency Investments	195
Purchasing Currency	195
Selling a currency investment	196
Reconciling Statements in a Foreign Currency	196

Chapter 5. Checkbook

This chapter will give you all the specific information you need to manage your checkbook with GnuCash. Managing your checkbook register is the first step of tracking your finances, and GnuCash makes it much easier to manage than the traditional paper register does.

For one thing, as discussed in the section called “Transactions”, data entry of common transactions is practically done for you in GnuCash, because of its auto-completion feature. GnuCash keeps a running balance of each account, and it makes reconciling these accounts easy. And the double-entry method helps you account for your spending by requiring a transfer account for withdrawals, so you can easily find out how much money you spend in different areas.

Once you are comfortable with using GnuCash for your checking and other bank accounts, you may wish to continue on with tracking other financial accounts. Chapters 6 through 9 examine methods to manage your other accounts.

Setting up Accounts

The first step in managing your checkbook is to set up the necessary accounts. You can either use the default GnuCash accounts or set up your own. For more detail on how to set up a new account, refer to the section called “The Basic Top Level Accounts”. For instructions on importing your accounts from another program, refer to the GnuCash manual.

Let’s start with the bank accounts you’ll need. You need one GnuCash bank type account for each physical bank account you wish to track. If you are setting up your own accounts or using the default GnuCash accounts, make sure that you have an opening balance transaction for each bank account you own. The easiest way to get this number is to use the balance from your last bank statement as your opening balance. You can enter this in the account information window automatically as part of the New Account Hierarchy Setup assistant, or you can enter a manual transaction directly in the account. To enter the transaction manually, enter a transfer from an Opening Balances account (type equity) to the bank account.

The typical bank accounts you might track include:

- Checking - any institutional account that provides check-writing privileges.
- Savings - an interest-bearing institutional account usually used to hold money for a longer term than checking accounts.

Common transactions that affect these bank accounts are payments and deposits. *Payments* are transfers of money out of the bank account, usually to an expense account. *Deposits* are transfers of money into the bank account, usually from an income account. You will need to set up income and expense accounts to track where that money comes from and where it goes. Remember that a balanced transaction requires a transfer of an equal sum of money from at least one account to at least one other account. So if you deposit money in your checking account, you must also enter the account that money comes from. If you pay a bill from your checking account, you must also enter the account where that money goes.

Entering Deposits

Most deposit transactions are entered as a transfer from an income account to a bank account. Income may come from many sources, and it’s a good idea to set up a separate income type account for each different source. For example, your income may come mainly from your paychecks, but you may also

receive interest on your savings. In this case, you should have one income account for salary and another income account for interest income.

Tip

Be sure to check the Tax-Related box and assign an appropriate tax category in the Income Tax Information Dialog (Edit → Tax Report Options) when you set up taxable income accounts. Some types of income, such as gift income, may not be considered taxable, so check the appropriate tax rules to determine what is taxable. For ways to track capital gains income, refer to Chapter 11, *Capital Gains*.

Before you start entering paycheck deposits, decide how much detail you want to track. The basic level of detail is to enter your net pay, just like you would in your paper register. This is easiest, but you can get even more information out of GnuCash if you enter your gross pay with deductions. It takes a bit more effort to enter the deductions, but entering your tax withholding information throughout the year allows you to run useful tax status reports in GnuCash at any time. These reports can help you determine whether you are withholding enough tax, and they can help you estimate your tax bill ahead of time. If you are unsure about the level of detail, start by entering net pay. You can always go back and edit your transactions later if you decide you want more detail.

Entering Withdrawals

When you withdraw money from your bank account, for whatever reason, you are transferring money from your bank account to some other location. In GnuCash, this other location is tracked as an account. The more detailed accounts you create and use for your spending, the more information you will get about where your money goes.

Withdrawals take many forms. ATM withdrawals are one of the most common transactions. Writing checks is one way to withdraw money to pay bills, to buy purchases, or to give to charity. Depending on your bank, you might also have service charges, where the bank withdraws the money from your account. Transfers of money out to another account are also withdrawals. We will take a look at each of these types of withdrawals and how to record them in GnuCash.

ATM/Cash Withdrawals

Cash withdrawals are handled as a transfer from a bank account to a cash account. GnuCash provides special *Cash* type accounts for tracking your cash purchases, so you should set up a cash account to record your ATM and other cash withdrawals.

Cash accounts can be used for different levels of detail. On a basic level of detail, you simply transfer money to it from your checking account. That tells you how much money you took out of checking on a given day, but it doesn't tell you where that cash was spent. With a little more effort, you can use the cash account to record your cash purchases as well, so that you can see where that cash went. You record these purchases as a transfer from the cash account to expense accounts.

Some people record every cash purchase, but this takes a lot of work. An easier way is to record the purchases for which you have receipts, but then adjust the balance of the account to match what is in your wallet.

It's a good idea to at least set up a cash account for your withdrawals. Then if you decide to track where your cash goes, you can enter transactions for the money you spend. You determine what level of detail you want to use.

Reconciling Your Accounts

GnuCash makes reconciliation of your bank account with your monthly bank statement much easier. The section called “Reconciliation” gives instructions on how to reconcile your transactions with the monthly bank statement. This is the main reconciliation task that should be done every month.

But what about all those other accounts you created? Should those be reconciled too? If you receive a statement for the account, then you should consider reconciling that account. Examples include the checking account statement, the savings account statement, and the credit card statement. Credit card statements and credit card transactions are covered in the Chapter 7, *Credit Cards*, so if you are interested in tracking your credit cards in GnuCash, take a look at the instructions provided there.

Income and expense accounts are usually not reconciled, because there is no statement to check them against. You also don’t need to reconcile cash accounts, for the same reason. With a cash account, though, you might want to adjust the balance every once in a while, so that your actual cash on hand matches the balance in your cash account. Adjusting balances is covered in the next section.

Putting It All Together

In the section called “Transactions”, you entered some transactions in your checking account. In this chapter, we will add more transactions and then reconcile them.

Opening Balances

So, let’s get started by opening the gcashdata file you saved in the last chapter (`gcashdata_4`). Your chart of accounts should look like this:

Account Name	Type	Commodity	Total
Assets	Asset	US Dollar	USD 1,781.79
Checking	Bank	US Dollar	USD 881.79
Savings	Bank	US Dollar	USD 900.00
Equity	Equity	US Dollar	USD 1,500.00
Expenses	Expense	US Dollar	USD 1,218.21
Clothes	Expense	US Dollar	USD 0.00
Electricity	Expense	US Dollar	USD 78.00
Groceries	Expense	US Dollar	USD 45.21
Internet	Expense	US Dollar	USD 20.00
Phone	Expense	US Dollar	USD 45.00
Rent	Expense	US Dollar	USD 700.00
Taxes	Expense	US Dollar	USD 330.00
Income	Income	US Dollar	USD 1,000.00
Liabilities	Liability	US Dollar	USD 500.00
\$. grand total:			Assets: \$0.00 Profits: \$0.00

This image shows the Chart of Accounts.

Add some transactions

1. Now open the *Checking* account from the main window. In the last chapter, you entered some paycheck transactions as deposits into Checking. Now we will enter another kind of deposit - a transfer of money from Savings into Checking. On a blank line, enter a transaction to transfer \$500 from *Savings* to *Checking* (In this case, the last transaction date was March 28, but this transfer transaction took place on the March 24). Your Transfer account will be *Savings*, since you are in the *Checking* account. Your *Checking* account should now look like this:

Date	Num	Description	Transfer	R	Deposit	Withdrawal	Balance
14/03/06		Employers R Us	-- Split Transaction --	n	670.00		1,724.79
24/03/06		Transfer Money	Assets:Savings	n	500.00	Withdrawal	2,224.79
28/03/06		Internet Subscription	Expenses:Internet	n		20.00	2,204.79
28/03/06	102	Light Company	Expenses:Electricity	n		78.00	2,126.79
28/03/06	103	Phone Company	Expenses:Phone	n		45.00	2,081.79
28/03/06	104	April Rent	Expenses:Rent	n		350.00	1,731.79
28/04/06		May Rent	Expenses:Rent	n		350.00	1,381.79
17/04/06				n			

Present: USD 1,731.79 Future: USD 1,381.79 Cleared: USD 954.79 Reconciled: USD 0.00 Projected Minimum: USD 1,381.79

This image shows the Checking Account Register.

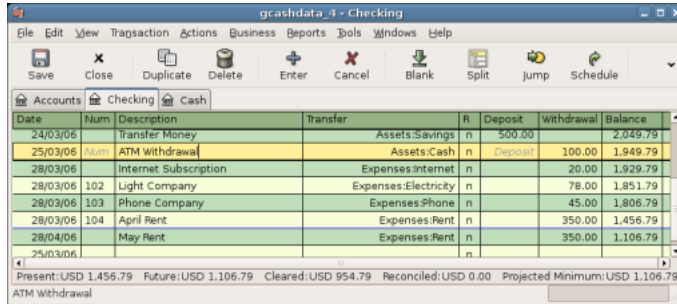
2. Now let's write some checks on this account. First, write a check to HomeTown Grocery for \$75 (5th of March). Your transfer account is *Groceries*, since all of this money is going to buy groceries. Next, write a check to ABC Hardware for \$100 (6 of March), and split this amount between two expenses: *Household* \$50 and *Tools* \$50. You will need to create an *Expense* type account for each of these, then enter splits for them. Your checking account should now look like this;

Date	Num	Description	Transfer	R	Deposit	Withdrawal	Balance
01/03/06		Opening Balance	Equity:Opening Balance	c	1,000.00		1,000.00
05/03/06	101	Grocery Store	Expenses:Groceries	c		45.21	954.79
05/03/06	105	HomeTown Grocery	Expenses:Groceries	n		75.00	879.79
06/03/06		Transfer Money	Assets:Savings	n	100.00		979.79
06/03/06	106	ABC Hardware	-- Split Transaction --	n	Deposit	100.00	879.79
14/03/06		Employers R Us	-- Split Transaction --	n	670.00		1,549.79
24/03/06		Transfer Money	Assets:Savings	n	500.00		2,049.79
28/03/06		Internet Subscription	Expenses:Internet	n		20.00	2,029.79
28/03/06	102	Light Company	Expenses:Electricity	n		78.00	1,951.79
28/03/06	103	Phone Company	Expenses:Phone	n		45.00	1,906.79
28/03/06	104	April Rent	Expenses:Rent	n		350.00	1,556.79
28/04/06		May Rent	Expenses:Rent	n		350.00	1,206.79

Present: USD 1,556.79 Future: USD 1,206.79 Cleared: USD 954.79 Reconciled: USD 0.00 Projected Minimum: USD 1,206.79

This image shows the Checking Account Register after registering some more checks.

3. Suppose you now need to withdraw some money. You don't have a cash account set up in your chart of accounts, so you will need to create one. Create the account as *Cash* as a top-level account of type *Asset*. From your *Checking* account register, enter an *ATM* type withdrawal to transfer \$100 from *Checking* to *Cash* on the 25 of March.



This image shows the Checking Account Register with an ATM withdrawal.

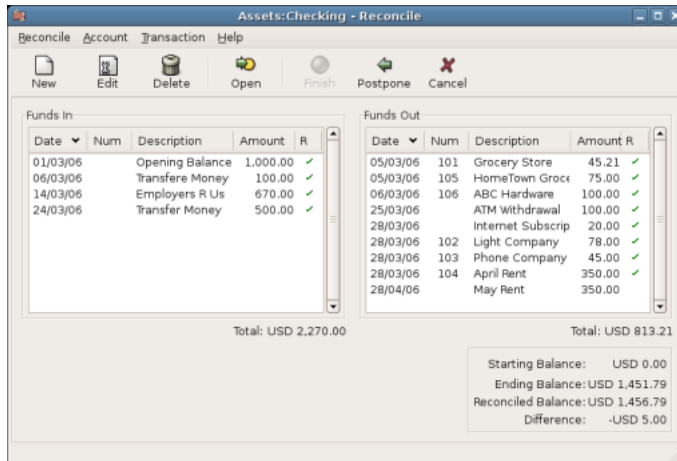
Opening Balances

Now we are ready to reconcile this *Checking* account, using this sample bank statement:

Date	Description	Decreasing	Increasing	Balance
1/03/2006	Starting Balance			1,000.00
5/03/2006	Check:101:Grocery Store	45.21		954.79
6/03/2006	Transfer		100.00	1,054.79
8/03/2006	Check:106:ABC Hardware	100.00		954.79
14/03/2006	Salary		670.00	1,624.79
15/03/2006	Check:105:HomeTown Grocery	75.00		1,549.79
24/03/2006	Transfer		500.00	2,049.79
25/03/2006	ATM	100.00		1,949.79
28/03/2006	Check:102:Light Company	78.00		1,871.79
28/03/2006	Check:103:Phone Company	45.00		1,826.79
28/03/2006	Check:104:Apartment 4 Rent	350.00		1,476.79
28/03/2006	Best Internet	20.00		1,456.79
31/03/2006	Service Charge	5.00		1,451.79
31/03/2006	Ending Balance			1,451.79

This image shows a sample Bank Statement.

1. Select Actions → Reconcile from the menu, and fill in the Closing balance as \$1451.79. Click OK to begin reconciling the account. Check off the entries as they appear on the sample statement. When you have checked off all your entries, the reconcile window should look like this:



This image shows the reconcile window with a \$5 difference.

Notice that your reconciled balance differs from your ending balance by \$5.00. If you look at the sample bank statement, you will see there is a \$5.00 service charge that has not been added to your *Checking* account.

- So click on the *Checking* register and add the \$5.00 service charge to your *Checking* account. On a blank line of the *Checking* register, enter a transaction to transfer \$5.00 from *Checking* to a *Service Charges* account. (You will need to create the *Service Charges* account as type Expense.) Use the transaction date printed on the sample statement as the date you enter for this transaction. Your *Checking* account should now look like this:

Date	Num	Description	Transfer	R	Deposit	Withdrawal	Balance
28/03/06	102	Light Company	Expenses:Electricity	n		78.00	1,851.79
28/03/06	103	Phone Company	Expenses:Phone	n		45.00	1,806.79
28/03/06	104	April Rent	Expenses:Rent	n		350.00	1,456.79
31/03/06	Num	Service Charge	Expenses:Service Charge	n	Deposit	5.00	1,451.79
28/04/06		May Rent	Expenses:Rent	n		350.00	1,101.79
31/03/06				n			

Present:USD 1,451.79 Future:USD 1,101.79 Cleared:USD 954.79 Reconciled:USD 0.00 Projected Minimum:USD 1,101.79
Service Charge

This image shows the Checking Account Register with service charge added.

- Click back on the Reconcile window, and you should see the service charge now under Funds Out. Click on it to mark it as reconciled, and note that the difference amount below now becomes 0.00. Click the Finish button on the *Toolbar* to complete the reconciliation. The Reconcile R column in your *Checking* register should now show y for each transaction you just reconciled. Also observe the bottom status row that now indicates Reconciled: USD 1451.79

Date	Num	Description	Transfer	R	Deposit	Withdrawal	Balance
01/03/06		Opening Balance	Equity:Opening Balance	y	1,000.00		1,000.00
05/03/06	101	Grocery Store	Expenses:Groceries	y		45.21	954.79
05/03/06	105	HomeTown Grocery	Expenses:Groceries	y		75.00	879.79
06/03/06		Transfer Money	Assets:Savings	y	100.00		979.79
06/03/06	106	ABC Hardware	-- Split Transaction --	y		100.00	879.79
14/03/06		Employers R Us	-- Split Transaction --	y	670.00		1,549.79
24/03/06		Transfer Money	Assets:Savings	y	500.00		2,049.79
25/03/06		ATM Withdrawal	Assets:Cash	y		100.00	1,949.79
28/03/06		Internet Subscription	Expenses:Internet	y		20.00	1,929.79
28/03/06	102	Light Company	Expenses:Electricity	y		78.00	1,851.79
28/03/06	103	Phone Company	Expenses:Phone	y		45.00	1,806.79
28/03/06	104	April Rent	Expenses:Rent	y		350.00	1,456.79
31/03/06	Num	Service Charge	Expenses:Service Charge	y	Deposit	5.00	1,451.79
28/04/06		May Rent	Expenses:Rent	n		350.00	1,101.79

Present:USD 1,451.79 Future:USD 1,101.79 Cleared:USD 1,451.79 Reconciled:USD 1,451.79 Projected Minimum:USD 1,101.79
Monday 17 April 2006

This image shows the reconciled Checking Account Register.

Save file

Go back to the main window and save your file with the new `gcashdata_5` name. Your chart of accounts is steadily growing, and it should now look like this:

The screenshot shows a software window titled "gcashdata_5 - Accounts". It features a menu bar with "File", "Edit", "View", "Actions", "Business", "Reports", "Tools", "Windows", and "Help". Below the menu bar is a toolbar with icons for "Save", "Close", "Open", "Edit", "New", and "Delete". The main area displays a tree view of accounts with columns for "Account Name", "Type", "Commodity", and "Total". The "Total" column values are in USD. At the bottom, a summary bar shows "USD: Assets: USD 1,101.79 Profits: -USD 398.21".

Account Name	Type	Commodity	Total
Assets	Asset	US Dollar	USD 1,601.79
Cash	Cash	US Dollar	USD 100.00
Checking	Bank	US Dollar	USD 1,101.79
Savings	Bank	US Dollar	USD 400.00
Equity	Equity	US Dollar	USD 1,500.00
Expenses	Expense	US Dollar	USD 1,398.21
Clothes	Expense	US Dollar	USD 0.00
Electricity	Expense	US Dollar	USD 78.00
Groceries	Expense	US Dollar	USD 120.21
Household	Expense	US Dollar	USD 50.00
Internet	Expense	US Dollar	USD 20.00
Phone	Expense	US Dollar	USD 45.00
Rent	Expense	US Dollar	USD 700.00
Service Charge	Expense	US Dollar	USD 5.00
Taxes	Expense	US Dollar	USD 330.00
Tools	Expense	US Dollar	USD 50.00
Imbalance-USD	Bank	US Dollar	USD 0.00
Income	Income	US Dollar	USD 1,000.00
Liabilities	Liability	US Dollar	USD 500.00
Orphan-USD	Bank	US Dollar	USD 0.00

Summary: USD: Assets: USD 1,101.79 Profits: -USD 398.21

This image shows the Chart of Accounts.

Reports

As we did in the previous chapter, let's have a look at a Cash Flow, and a Transaction Report.

1. First let's have a look at the Cash Flow report for the month of March.

Select the cash flow report from Reports → Income & Expense → Cash Flow.

Cash Flow - 01/03/06 to 31/03/06 for

Selected Accounts

- [Assets:Cash](#)
- [Assets:Checking](#)
- [Assets:Savings](#)

Money into selected accounts comes from	
Equity:Opening Balance	USD 2,000.00
Income:Salary	USD 1,000.00
Money In	USD 3,000.00
Money out of selected accounts goes to	
Expenses:Electricity	USD 78.00
Expenses:Groceries	USD 120.21
Expenses:Household	USD 50.00
Expenses:Internet	USD 20.00
Expenses:Phone	USD 45.00
Expenses:Rent	USD 350.00
Expenses:Service Charge	USD 5.00
Expenses:Taxes:Federal	USD 180.00
Expenses:Taxes:Medicare	USD 90.00
Expenses:Taxes:Social Security	USD 60.00
Expenses:Tools	USD 50.00
Money Out	USD 1,048.21
Difference	USD 1,951.79

This image shows the Cash Flow report after Chapter 5, *Checkbook*.

2. Now let's have a look at corresponding transaction report for the various Asset accounts.

Select the transaction report from Reports → Transaction Report.

Transaction Report
From 01/03/06 To 31/03/06

Date	Num	Description	Transfer from/to	Amount
Cash				
25/03/06		ATM Withdrawal	Checking	<u>USD 100.00</u>
Total For Cash				USD 100.00
Checking				
01/03/06		Opening Balance	Opening Balance	<u>USD 1,000.00</u>
05/03/06	101	Grocery Store	Groceries	<u>-USD 45.21</u>
05/03/06	105	HomeTown Grocery	Groceries	<u>-USD 75.00</u>
06/03/06		Transfere Money	Savings	<u>USD 100.00</u>
06/03/06	106	ABC Hardware	Split	<u>-USD 100.00</u>
14/03/06		Employers R Us	Split	<u>USD 670.00</u>
24/03/06		Transfer Money	Savings	<u>USD 500.00</u>
25/03/06		ATM Withdrawal	Cash	<u>-USD 100.00</u>
28/03/06	102	Light Company	Electricity	<u>-USD 78.00</u>
28/03/06	104	April Rent	Rent	<u>-USD 350.00</u>
28/03/06		Internet Subscription	Internet	<u>-USD 20.00</u>
28/03/06	103	Phone Company	Phone	<u>-USD 45.00</u>
31/03/06		Service Charge	Service Charge	<u>-USD 5.00</u>
Total For Checking				USD 1,451.79
Savings				
01/03/06		Opening Balance	Opening Balance	<u>USD 1,000.00</u>
06/03/06		Transfere Money	Checking	<u>-USD 100.00</u>
24/03/06		Transfer Money	Checking	<u>-USD 500.00</u>
Total For Savings				USD 400.00
Grand Total				USD 1,951.79

This image shows the Transaction Report for the Assets accounts during March.

- Now let's change the transaction report to only show the various *Expenses* account.

Transaction Report
From 01/03/06 To 31/03/06

Date	Num	Description	Account	Amount
05/03/06	101	Grocery Store	Groceries	<u>USD 45.21</u>
05/03/06	105	HomeTown Grocery	Groceries	<u>USD 75.00</u>
06/03/06	106	ABC Hardware	Household	<u>USD 50.00</u>
06/03/06	106	ABC Hardware	Tools	<u>USD 50.00</u>
14/03/06		Employers R Us	Federal	<u>USD 180.00</u>
14/03/06		Employers R Us	Social Security	<u>USD 60.00</u>
14/03/06		Employers R Us	Medicare	<u>USD 90.00</u>
28/03/06		Internet Subscription	Internet	<u>USD 20.00</u>
28/03/06	104	April Rent	Rent	<u>USD 350.00</u>
28/03/06	102	Light Company	Electricity	<u>USD 78.00</u>
28/03/06	103	Phone Company	Phone	<u>USD 45.00</u>
31/03/06		Service Charge	Service Charge	<u>USD 5.00</u>
Grand Total				USD 1,048.21

This image shows the Transaction Report for the various Expense accounts during March.

Notice that you have not yet used one of the accounts listed in your chart, the Credit Card account. Now that you know how to keep track of your bank and cash accounts in GnuCash, you may want to start tracking your credit cards as well. GnuCash provides a special type of account for credit cards, and this is discussed in the next chapter.

Chapter 6. Expense Accounts

If managing your checkbook is the first step in tracking your finances, then using expense accounts to see where you are expending money is a close second step. This chapter will give you an understanding of how GnuCash uses expense accounts to help you keep track of many different categories of transactions.

Concepts

An expense type account is used to allow you to track how much you spend on specific expenses. Many people's first experience with tracking expenses comes from Quicken(tm), where transactions can be assigned to one or more categories. In GnuCash, these categories are set up as separate accounts, which are designated as Expense type accounts. This allows GnuCash to apply the rules of double-entry accounting consistently. Expense accounts can be as detailed or as general as you need. Some users need only a few accounts for personal expense tracking. Others use GnuCash expense accounts to manage their expenses in great detail. The level of detail you choose is up to you. Keep in mind that with GnuCash, you can change accounts for transactions, so if your needs change later on, it is possible to move transactions around.

Setting Up Accounts

Simple Expense Account Setup

For many users, the easiest way to set up expense accounts is to check the "Common Accounts" when you create a new Account Hierarchy. This will establish many of the most common expense accounts that users need. See "New Account Hierarchy Setup" in Chapter 3 of the Help guide for more information.

Complex Expense Account Setup

If you have different expense accounting needs, you can refer to the section called "Transactions", or Chapter 5.4 in the Help manual for instructions on how to create accounts.

Typical reasons for adding new or different expense accounts include: to track expenses for particular business purposes (e.g., specific types of supply expenses), to track expenses for particular tax purposes (e.g., tax expenses that must be reported to others), or simply to track expenses that are meaningful to you (e.g., payments made to a particular charity).

Entering Expense Transactions

While it is possible to enter transactions directly into expense accounts, it is not normally how these are entered. For most people, transactions for an expense account are added when the user is entering data into the other account in the transaction. In other words, if you have an expense account for Charitable Donations (e.g., Expenses:Charity), you will typically add a transaction to the expense account by assigning a check in your checking account register to the Charity account.

If you open an expense account, you will see a register similar to most others you find in GnuCash. The informal column headings for the transaction amounts are slightly different, however. The left (debit) column will read *Tot Expense*, while the right (credit) column will read *Tot Rebate*.

Other Considerations for Expense Accounts

Because expense accounts are generated entirely by you, there are no statements against which you would reconcile your data. Therefore, there is technically nothing to reconcile. You can, of course use the reconcile process for expense accounts, which will lock the transactions for future editing.

One point to consider is that as your use of GnuCash continues, the balances in these accounts will grow, since there are usually very few credit transactions that reduce the balances. There is nothing wrong with this situation, but some users may wish to clear the balances in their expense accounts periodically. Zeroing transactions can be entered that transfer the balance of the account to an Equity account. GnuCash includes a Closing Books procedure that includes zeroing out expense accounts. Keep in mind that this is not necessary, and that if you need to gather information on a given expense account, you can use various reports to extract that data without zeroing the account out.

Chapter 7. Credit Cards

This chapter will show you how to manage your credit cards using GnuCash.

Concepts

Since you probably write a check or make an electronic payment to the credit card company each month, you may think of your credit card bill as an expense - but it really is not an expense. Why? A credit card account is a short-term loan - you buy things on that loan account, and then you eventually have to pay back the money, often with interest (your finance charge). The purchases you make with that credit card are your expenses.

You have a couple of options when entering credit card transactions, so choose the one that fits your desired level of detail. The simplest method is to simply track monthly payments to the credit card company. From your bank account, you enter a transfer of money each month to the credit card expense account. This will show you the amount of money you are paying each month to the credit card company, but it won't show you any information about your credit card balance or credit card purchases.

A more complete way to track your credit card in GnuCash is to enter each purchase and payment as a separate transaction. Using the credit card account register, you enter your receipts throughout the month. When your credit card statement arrives, you reconcile the credit card account to the statement, and you enter your payment as a transfer of money from your checking account to your credit card account. This method gives you more information about your balance during the month and points out any discrepancies during reconciliation, but you will have to do more data entry.

Setting Up Accounts

To begin managing your credit cards in GnuCash, you should set up a Liability top level account and under this parent account create credit card type accounts for each credit card you use. If you are tracking only the payments you make to the credit card company, then all you need is a bank account and a credit card account to enter your transactions.

The charges you make on your credit card are expenses, so you will have to set up these accounts under the top-level account called Expenses. If you decide to keep a more detailed records of your purchases, you will need to create expense accounts for each kind of purchase you make. Since you will also be reconciling the balance to your credit card statements, you should also enter an opening balance in each credit card account. The easiest way to do this is to use your last statement balance as the opening balance.

Simple Setup

If you do not want to track each expense made on the credit card, you can set up a simple account hierarchy like this:

- Assets
 - Bank
- Liabilities
 - Credit Card
- Expenses
 - Credit Card

In this example, if you enter your total amount charged per month as a transaction between *Liabilities:Credit Card* and *Expenses:Credit Card*. When you make a payment, you would enter a transaction between *Assets:Bank* and *Liabilities:Credit Card*.

The obvious limitation of this simple credit card setup is that you cannot see where your money is going. All your credit card expenses are being entered in the Credit Card expense account. This is, however, very simple to set up and maintain.

Complete Setup

If you want to track your expenses more completely, you should set up multiple expense accounts named for the various kinds of expenses you have. Each charge on your credit card is then entered as a separate transaction between your Credit Card liability account and a specific expense account. Below is an example of an account hierarchy for this:

- Assets
 - Bank
- Liabilities
 - Credit Card
- Expenses
 - Food
 - Car
 - Clothes
 - Entertainment
 - Interest
 - Service

Clearly, you should enter specific expense accounts which fit your spending habits. The only difference with this setup as compared to the simple setup is that the expenses have been subdivided by groups. Also notice that there is an “Interest” expense, this is used for when your credit card charges interest on your monthly unpaid balance. The “Service” expense account is used to track service expenses associated with the credit card, such as the yearly usage fee if it exists. With this setup, you will be able to see where your money goes every month, grouped according to the expense accounts.

The rest of this chapter will assume you are using the complete setup.

Entering Charges

Entering your charges provides you with a more complete picture of your spending habits. Charges on a credit card are tracked as a transaction between the credit card liability account and the appropriate expense account.

When you pay for goods or services with your credit card, you are telling the credit card company to pay the merchant for you. This transaction will increase the amount of money you owe the credit card company, and the credit card balance will increase. The other side of these transactions will in most cases be an expense account. For example, if you buy clothing from a store with your credit card for \$50, you would be transferring that money from the credit account into *Expenses:Clothing*.

Entering these transactions into GnuCash allows you to track how much you owe the credit card company, as well as provides you a better picture of your overall accounts. It also allows you to monitor your account and ensure that fraud is avoided.

Adding transactions to a credit card account is similar to entering transactions in other accounts. You can enter them manually, or import them from your credit card company using a compatible import format.

For assistance with entering transactions, see Chapter 6 of the Help manual and the section called “Transactions”.

Entering Payments

Most payments to your credit card bill are entered as transfers from a bank account (asset) to the credit card account (liability). When you pay the monthly bill, you are withdrawing money from a bank account to pay down the credit card balance. This transaction decreases both your bank account balance and the amount of credit card debt you owe.

When you return a purchase, you receive a refund on your credit card. This is another type of payment in that it decreases the amount of credit card debt you owe. If you recorded the original purchase transaction as a transfer from the credit card account to the expense, you now simply reverse that transaction: transfer the money back from the expense to the credit card account. This transaction decreases both the expense account balance and the credit card account balance. For example, if you originally recorded a credit card purchase of clothing, the transaction is a transfer from the credit card account to the clothing expense account. If you then return that clothing for a refund, you simply transfer the money back from the clothing expense account to the credit card account.

Note

A common mistake is to enter a refund as income. It is not income, but rather a “negative expense”. That is why you must transfer money from the expense account to your credit card when you receive a refund.

To clarify this, let’s run through an example. You bought some jeans for \$74.99 on your VISA card, but realized one day later that they are too big and want to return them. The shop gracefully agrees, and refunds your credit card.

1. Start with opening the previous datafile we stored (`gcashdata_5`), and store it as `gcashdata_6`.
2. Open the *Liabilities:Visa* account register and enter a simple 2 account transaction to pay the \$74.99 jeans purchase. The Transfer account should be *Expenses:Clothes* and you Charge your *Visa* account with the \$74.99.

Note

Since we had not created the *Expenses:Clothes* account previously, GnuCash will prompt us to create it. Just remember to create it as an Expense account

3. Enter the refund in one of the following way.
 - Enter the same transaction as the purchase transaction, but instead of a “Charge” amount, use a “Payment” amount in the Credit Card account register.
 - Select the purchase transaction you want to refund (that is the Jeans transaction in our case), and selecting Transaction → Add Reversing Transaction. Modify the date as needed.

After reversing the transaction, your credit card account should look something like this:

Date	Num	Description	Transfer	R	Payment	Charge	Balance
01/03/06		Opening Balance	Equity:Opening Balance	n		500.00	500.00
03/04/06		jeans R Us	Expenses:Clothes	n		74.99	574.99
05/04/06		jeans R Us	Expenses:Clothes	n	74.99		500.00

Present:USD 500.00 Future:USD 500.00 Cleared:USD 0.00 Reconciled:USD 0.00 Projected Minimum:USD 500.00
Monday 17 April 2006

This image shows *Liability:Credit Card* - Register after reversing a purchase transaction.

And the *Expenses:Clothes* register should look something like this:

Date	Num	Description	Transfer	R	Expense	Rebate	Balance
03/04/06		jeans R Us	Liabilities:Visa	n	74.99		74.99
05/04/06		jeans R Us	Liabilities:Visa	m		74.99	0.00
17/04/06			Transfer	n	Expense	Rebate	Balance

Present:USD 0.00 Future:USD 0.00 Cleared:USD 0.00 Reconciled:USD 0.00 Projected Minimum:USD 0.00
Enter a description of the transaction

This image shows *Expenses:Clothes* register after reversing a purchase transaction.

4. Save the GnuCash data file.

Putting It All Together

Now that we have covered the basic ideas behind the various transactions you must make to successfully track your credit card in GnuCash, let's go through an example. In this example, we will make credit card purchases, refund two of the purchases, get charged interest on the unpaid balance, reconcile the credit card account, and finally make a partial payoff of the credit card.

Open GnuCash file

Start with opening the previous datafile we stored, `gcashdata_5`, and store it as `gcashdata_6` directly. The main window should look something like this:

The screenshot shows the 'gcashdata_6 - Accounts' window. The menu bar includes File, Edit, View, Actions, Business, Reports, Tools, Windows, and Help. The toolbar contains icons for Save, Close, Open, Edit, New, and Delete. The main area displays a table of accounts with columns for Account Name, Type, Commodity, and Total. The table is organized into categories: Assets, Equity, Expenses, Income, and Liabilities. A summary bar at the bottom shows USD: Assets: USD 1,101.79 and Profits: -USD 398.21.

Account Name	Type	Commodity	Total
Assets	Asset	US Dollar	USD 1,601.79
Cash	Cash	US Dollar	USD 100.00
Checking	Bank	US Dollar	USD 1,101.79
Savings	Bank	US Dollar	USD 400.00
Equity	Equity	US Dollar	USD 1,500.00
Expenses	Expense	US Dollar	USD 1,398.21
Clothes	Expense	US Dollar	USD 0.00
Electricity	Expense	US Dollar	USD 78.00
Groceries	Expense	US Dollar	USD 120.21
Household	Expense	US Dollar	USD 50.00
Internet	Expense	US Dollar	USD 20.00
Phone	Expense	US Dollar	USD 45.00
Rent	Expense	US Dollar	USD 700.00
Service Charge	Expense	US Dollar	USD 5.00
Taxes	Expense	US Dollar	USD 330.00
Tools	Expense	US Dollar	USD 50.00
Income	Income	US Dollar	USD 1,000.00
Liabilities	Liability	US Dollar	USD 500.00
Visa	Credit Card	US Dollar	USD 500.00

USD: Assets: USD 1,101.79 Profits: -USD 398.21

Starting account structure for tracking a credit card in the putting it all together example.

Purchases

Let's make some purchases on our visa card. Start by buying \$25 worth of food from the Greasy Spoon Cafe, \$100 worth of clothing from Faux Pas Fashions, \$25 worth of gasoline from Premium Gasoline, \$125 worth of groceries and household items from Groceries R Us (split between \$85 in groceries and \$40 in household items) and finally, \$60 worth of household items from CheapMart.

We also redo the exercise in previous chapter, with purchasing a pair of Jeans for \$74.99 on April 3, and refund them two days later.

The register window for the credit card liability should look like this:

Date	Nurr	Description	Transfer	R	Payment	Charge	Balance
01/03/06		Opening Balance	Equity:Opening Balance	n		500.00	500.00
03/04/06		Jeans R Us	Expenses:Clothes	n		74.99	574.99
05/04/06		Jeans R Us	Expenses:Clothes	n	74.99		500.00
10/04/06		Greasy Spoon Cafe	Expenses:Food	n		25.00	525.00
11/04/06		Faux Pas Fashion	Expenses:Clothes	n		100.00	625.00
12/04/06		Premium Gasolin	Expenses:Car	n		25.00	650.00
13/04/06		Groceries R Us	-- Split Transaction --	n		125.00	775.00
13/04/06		CheapMart	Expenses:Household	n		60.00	835.00

Present: USD 835.00 Future: USD 835.00 Cleared: USD 0.00 Reconciled: USD 0.00 Projected Minimum: USD 835.00
Thursday 13 April 2006

Initial credit card purchases.

Refund

Now suppose that on April 15th you return the clothes you bought on April 11th from Faux Pas Fashions and they give you credit back on your credit card. Enter a transaction for the credit card refund for the full \$100 amount. Remember to use the same transfer account you used for the original purchase, and enter the amount under the Payment column. GnuCash will automatically complete the name and transfer account for you, but it will also automatically enter the \$100 in the Charge column. You will need to reenter the amount in the Payment column. The transaction looks like this:

Date	Nurr	Description	Transfer	R	Payment	Charge	Balance
11/04/06		Faux Pas Fashion	Expenses:Clothes	n		100.00	625.00
12/04/06		Premium Gasolin	Expenses:Car	n		25.00	650.00
13/04/06		Groceries R Us	-- Split Transaction --	n		125.00	775.00
13/04/06		CheapMart	Expenses:Household	n		60.00	835.00
15/04/06		Faux Pas Fashion - Refund	Expenses:Clothes	n	100.00		735.00

Present: USD 735.00 Future: USD 735.00 Cleared: USD 0.00 Reconciled: USD 0.00 Projected Minimum: USD 735.00
Enter a description of the transaction

Returning clothes to Faux Pas Fashions, refund to credit card.

Interest Charge

After the month of spending, unfortunately, the credit card bill arrives in the mail or you access it on-line through the internet. You have been charged \$20 in interest on the last day of April because of the balance you carried from the previous month. This gets entered into the credit card account as an expense.

Date	Num	Description	Transfer	R	Payment	Charge	Balance
13/04/06		CheapMart	Expenses:Household	n		60.00	825.00
15/04/06		Faux Pas Fashion - Refund	Expenses:Clothes	n	100.00		735.00
30/04/06		Interest	Expenses:interest	n		20.00	755.00
30/04/06		Num Description	Transfer	n	Payment	Charge	Balance

Present: USD 735.00 Future: USD 755.00 Cleared: USD 0.00 Reconciled: USD 0.00 Projected Minimum: USD 755.00
Sunday 30 April 2006

Interest charge.

Reconciliation

When your credit card bill arrives you should reconcile your credit card account to this document. This is done using GnuCash's built-in reconciliation application. Highlight the credit card account and click on Actions → Reconcile.... This reconciliation procedure is described in detail in the the section called "Reconciliation", but we will step through the process here as well. For this example, let's assume that the credit card statement is dated May 1st, with a final balance of \$455. Enter these values in to the initial Reconcile window as shown here.

Liabilities: Visa - Reconcile

Reconcile Information

Statement Date: 01/04/06

Starting Balance: USD 0.00

Ending Balance: 455.00

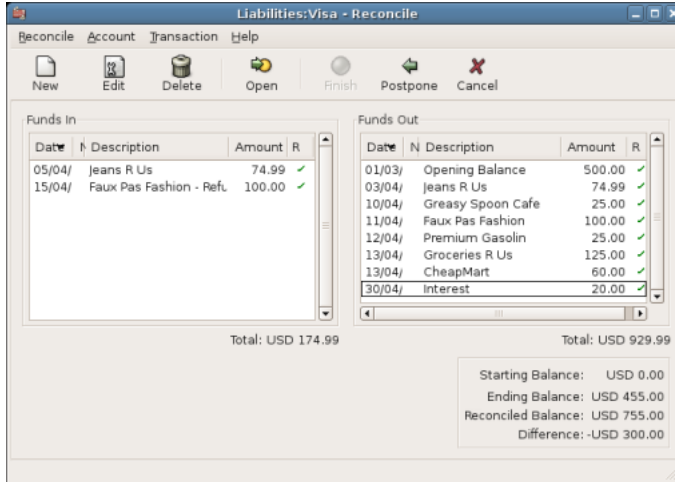
Include subaccounts

Enter Interest Charge...

Cancel OK

Initial account reconciliation window.

During the reconciliation process, you check off each transaction in the account as you confirm that the transaction appears in both your GnuCash account and the credit card statement. For this example, as shown in the figure below, there is a \$300 difference between your GnuCash accounts and the credit card statement.



Main account reconciliation window, demonstrating a discrepancy of \$300.

Some investigation uncovers that you forgot to record a payment you made on March 5th to the credit card company for \$300, you must enter this payment transaction from your bank account to the credit card. Now the credit card statement and your GnuCash account can be reconciled, with a balance of \$455.

Payment

Assuming you have completed reconciliation of your credit card account, you need to make a payment to the credit card company. In this example, we owe \$455 but will make a partial payment of \$300 again this month. To do so, enter a transaction from your bank account to the credit card account for \$300, which should reduce your credit card balance to \$155. Your credit card account register should now appear like this:

Account register after account reconciliation and payment.

Go back to the main window and save your file (gcashdata_6). Your chart of accounts is steadily growing, and it should now look like this:

Account Name	Type	Commodity	Total
Assets	Asset	US Dollar	USD 1,001.79
Cash	Cash	US Dollar	USD 100.00
Checking	Bank	US Dollar	USD 501.79
Savings	Bank	US Dollar	USD 400.00
Equity	Equity	US Dollar	USD 1,500.00
Expenses	Expense	US Dollar	USD 1,653.21
Car	Expense	US Dollar	USD 25.00
Clothes	Expense	US Dollar	USD 0.00
Electricity	Expense	US Dollar	USD 78.00
Food	Expense	US Dollar	USD 25.00
Groceries	Expense	US Dollar	USD 205.21
Household	Expense	US Dollar	USD 150.00
Interest	Expense	US Dollar	USD 20.00
Internet	Expense	US Dollar	USD 20.00
Phone	Expense	US Dollar	USD 45.00
Rent	Expense	US Dollar	USD 700.00
Service Charge	Expense	US Dollar	USD 5.00
Taxes	Expense	US Dollar	USD 330.00
Tools	Expense	US Dollar	USD 50.00
Income	Income	US Dollar	USD 1,000.00
Liabilities	Liability	US Dollar	USD 155.00
Visa	Credit Card	US Dollar	USD 155.00

USD: Assets: USD 846.79 Profits: -USD 653.21

GnuCash Chart of Accounts after account reconciliation and payment.

Save file

Last, save the GnuCash data file (gcashdata_6).

Reports

As we did in the previous chapters, let's have a look at a Cash Flow, and a Transaction Report.

1. First let's have a look at the Cash Flow report for the liability account Visa during the month of March.

Select the cash flow report from Reports → Income & Expense → Cash Flow.

Cash Flow - 01/03/06 to 30/04/06 for

Selected Accounts

- Liabilities:Visa

Money into selected accounts comes from	
<u>Assets:Checking</u>	USD 300.00
<u>Expenses:Clothes</u>	USD 174.99
Money In	USD 474.99
Money out of selected accounts goes to	
<u>Equity:Opening Balance</u>	USD 500.00
<u>Expenses:Car</u>	USD 25.00
<u>Expenses:Clothes</u>	USD 174.99
<u>Expenses:Food</u>	USD 25.00
<u>Expenses:Groceries</u>	USD 85.00
<u>Expenses:Household</u>	USD 100.00
<u>Expenses:Interest</u>	USD 20.00
Money Out	USD 929.99
Difference	-USD 455.00

This image shows the Cash Flow report after Chapter 7, *Credit Cards*.

2. Now let's have a look at corresponding transaction report for the Visa account.

Select the transaction report from Reports → Transaction Report.

Transaction Report
From 01/03/06 To 30/04/06

Date	Num	Description	Transfer from/to	Amount
<u>Visa</u>				
March 2006				
01/03/06		Opening Balance	Opening Balance	<u>USD 500.00</u>
05/03/06		Partial Payment	Checking	<u>-USD 300.00</u>
Total For March 2006				USD 200.00
April 2006				
03/04/06		Jeans R Us	Clothes	<u>USD 74.99</u>
05/04/06		Jeans R Us	Clothes	<u>-USD 74.99</u>
10/04/06		Greasy Spoon Cafe	Food	<u>USD 25.00</u>
11/04/06		Faux Pas Fashion	Clothes	<u>USD 100.00</u>
12/04/06		Premium Gasolin	Car	<u>USD 25.00</u>
13/04/06		Groceries R Us	Split	<u>USD 125.00</u>
13/04/06		CheapMart	Household	<u>USD 60.00</u>
15/04/06		Faux Pas Fashion - Refund	Clothes	<u>-USD 100.00</u>
30/04/06		Interest	Interest	<u>USD 20.00</u>
Total For April 2006				USD 255.00
Total For Visa				USD 455.00
Grand Total				USD 455.00

This image shows the Transaction Report for the Visa account during March/April.

- Now let's change the transaction report to only show the various Expenses accounts.

Transaction Report
From 01/04/06 To 30/04/06

Date	Num	Description	Account	Amount
Car				
12/04/06		Premium Gasolin	Car	<u>USD 25.00</u>
Total For Car				USD 25.00
Clothes				
03/04/06		Jeans R Us	Clothes	<u>USD 74.99</u>
05/04/06		Jeans R Us	Clothes	<u>-USD 74.99</u>
11/04/06		Faux Pas Fashion	Clothes	<u>USD 100.00</u>
15/04/06		Faux Pas Fashion - Refund	Clothes	<u>-USD 100.00</u>
Total For Clothes				USD 0.00
Food				
10/04/06		Greasy Spoon Cafe	Food	<u>USD 25.00</u>
Total For Food				USD 25.00
Groceries				
13/04/06		Groceries R Us	Groceries	<u>USD 85.00</u>
Total For Groceries				USD 85.00
Household				
13/04/06		Groceries R Us	Household	<u>USD 40.00</u>
13/04/06		CheapMart	Household	<u>USD 60.00</u>
Total For Household				USD 100.00
Interest				
30/04/06		Interest	Interest	<u>USD 20.00</u>
Total For Interest				USD 20.00
Rent				
28/04/06		May Rent	Rent	<u>USD 350.00</u>
Total For Rent				USD 350.00
Grand Total				USD 605.00

This image shows the Transaction Report for the various Expense accounts during April.

Chapter 8. Loans

This chapter explains how to manage your loans with GnuCash.

Basic Concepts

A loan is defined as a financial transaction in which someone pays for the use of someone else's money. There are many familiar examples of loans: credits cards, auto loans, house mortgages, or a business loan.

Terminology

Before discussing tracking loan in GnuCash specifically, it will be helpful to present a glossary of terminology. The terms presented below represent some of the basic concepts found concerning loans. It is a good idea to become familiar with these terms, or at least, refer back to this list if you encounter an unfamiliar word in the later sections.

- *Amortization* - the repayment plan which will insure that a loan is eventually paid off, typically utilizing equal valued monthly payments. These payments are usually split into principal and interest, where the amount of principal per payment increases (and interest decreases) as the amortization period elapses.
- *Borrower* - the person or company that receives the money from a loan.
- *Default* - when a borrower fails to repay a loan according to the terms agreed upon with the lender.
- *Deferment* - a temporary delay in the repayment of a loan.
- *Delinquency* - is the term that refers to late payments.
- *Disbursement* - amount of the loan paid to the borrower. Some loans have multiple disbursements, meaning the borrower does not receive the full amount of the loan at one time.
- *Interest* - the expense charged by the lender to the borrower for the use of the money loaned. This is typically expressed in terms of a yearly percentage charged on the principal borrowed, known as the *Annual Percentage Rate* or APR.
- *Lender* - the company or person who lends money to a borrower.
- *Loan Fee* - a processing fee removed from the principal at the time the borrower receives a loan.
- *Principal* - the original amount of the loan, or the amount of the original loan that is still owed. When you make a monthly payment on a loan, part of the money pays the interest, and part pays the principal.
- *Promissory Note* - the legal agreement between the borrower and lender concerning the loan.

Setting Up Accounts

When a borrower obtains a loan, it is usually with the intention to make a purchase of something of value. In fact, most loans require the borrower to buy some predetermined asset, such as a house. This asset is insurance against the borrower defaulting on the loan. There are, of course, examples of loans which do not necessarily have an associated high value asset, such as educational loans.

For the account structure presented here, we will assume the loan was used to purchase a compensating asset.

A loan is a liability, the interest you accrue on the loan is an on-going expense, and any administrative fees you may have to pay would be another expense. The thing purchased with the money from a loan is an asset. With these parameters, we can now present a basic loan account structure:

Basic Loan Account Structure

- Asset
 - Current Assets
 - Savings Account
 - Fixed Assets
 - Asset Purchased
- Liability
 - Loans
 - Mortgage Loan
- Expenses
 - Interest
 - Mortgage Interest
 - Mortgage Adm Fees

GnuCash has a number of predefined loan account hierarchies available, including Car Loans and Home Mortgage Loans. To access these predefined account structures, click on Actions → New Account Hierarchy... and select the loan types in which you are interested.

Calculations

Determining loan amortization schedules, periodic payment amounts, total payment value, or interest rates can be somewhat complex. To help facilitate these kinds of calculations, GnuCash has a built-in Loan Repayment Calculator. To access the calculator, go to Tools → Loan Repayment Calculator.

The GnuCash Loan Repayment Calculator.

The Loan Repayment Calculator can be used to calculate any one of the parameters: Payment Periods, Interest Rate, Present Value, Periodic Payment, or Future Value given that the other 4 have been defined. You will also need to specify the compounding and payment methods.

- *Payment Periods* - the number of payment periods.
- *Interest Rate* - the nominal interest rate of the loan, ie: the yearly interest rate.
- *Present Value* - the present value of the loan, ie: current amount owed on the loan.
- *Periodic Payment* - the amount to pay per period.
- *Future Value* - the future value of the loan, ie: the amount owed after all payment periods are over.
- *Compounding* - two interest compounding methods exist, discrete or continuous. For discrete compounding select the compounding frequency from the popup menu with a range from yearly to daily.
- *Payments* - the popup menu allows you to select the payment frequency with a range from yearly to daily. You can also select whether your payments occur at the beginning or end of the period. Payments made at the beginning of the payment period have interest applied to the payment as well as any previous money paid or money still owed.

Example: Monthly Payments

What is your monthly payment on a \$100000 30 year loan at a fixed rate of 4% compounded monthly?

This scenario is shown in the example image above. To perform this calculation, set Payment Periods to 360 (12 months x 30 years), Interest Rate to 4, Present Value to 100000, leave Periodic Payment empty and set Future Value to 0 (you do not want to owe anything at the end of the loan). Compounding is Monthly, Payments are Monthly, assume End of Period Payments, and Discrete Compounding. Now, click on the Calculate button next to the Periodic Payment area. You should see \$-477.42.

Answer: You must make monthly payments of 477.42.

Example: Length of Loan

How long will you be paying back a \$20000 loan at 10% fixed rate interest compounded monthly if you pay \$500 per month?

To perform this calculation, leave Payment Periods empty, set Interest Rate to 10, Present Value to 20000, Periodic Payment is -500, and Future Value is 0 (you do not want to owe anything at the end of the loan). Compounding is *Monthly*, Payments are *Monthly*, assume End of Period payments, and Discrete Compounding. Now, click on the Calculate. You should see 49 in the Payment Periods field.

Answer: You will pay off the loan in 4 years and 1 month (49 months).

Advanced: Calculation Details

In order to discuss the mathematical formulas used by the Loan Repayment Calculator, we first must define some variables.

n == number of payment periods

%i == nominal interest rate, NAR, charged
 PV == Present Value
 PMT == Periodic Payment
 FV == Future Value
 CF == Compounding Frequency per year
 PF == Payment Frequency per year

Normal values for CF and PF are:

1 == annual
 2 == semi-annual
 3 == tri-annual
 4 == quaterly
 6 == bi-monthly
 12 == monthly
 24 == semi-monthly
 26 == bi-weekly
 52 == weekly
 360 == daily
 365 == daily

Converting between nominal and effective interest rate

When a solution for n, PV, PMT or FV is required, the nominal interest rate (i) must first be converted to the effective interest rate per payment period (ieff). This rate, ieff, is then used to compute the selected variable. When a solution for i is required, the computation produces the effective interest rate (ieff). Thus, we need functions which convert from i to ieff, and from ieff to i.

To convert from i to ieff, the following expressions are used:

Discrete Interest: $ieff = (1 + i/CF)^{(CF/PF)} - 1$

Continuous Interest: $ieff = e^{(i/PF)} - 1 = exp(i/PF) - 1$

To convert from ieff to i, the following expressions are used:

Discrete Interst: $i = CF * [(1 + ieff)^{(PF/CF)} - 1]$

Continuous Interest: $i = ln[(1 + ieff)^{PF}]$

Note

NOTE: in the equations below for the financial transaction, all interest rates are the effective interest rate, "ieff". For the sake of brevity, the symbol will be shortened to just "i".

The basic financial equation

One equation fundamentally links all the 5 variables. This is known as the fundamental financial equation:

$$PV * (1 + i)^n + PMT * (1 + i)^n * [(1 + i)^n - 1] / i + FV = 0$$

Where: X = 0 for end of period payments, and
 X = 1 for beginning of period payments

From this equation, functions which solve for the individual variables can be derived. For a detailed explanation of the derivation of this equation, see the comments in the file src/calculation/fin.c from the GnuCash source code. The A, B, and C variables are defined first, to make the later equations simpler to read.

$$A = (1 + i)^n - 1$$

$$B = (1 + iX)/i$$

$$C = PMT * B$$

$$n = \ln[(C - FV)/(C + PV)] / \ln(1 + i)$$

$$PV = -[FV + A * C] / (A + 1)$$

$$PMT = -[FV + PV * (A + 1)] / [A * B]$$

$$FV = -[PV + A * (PV + C)]$$

The solution for interest is broken into two cases.

The simple case for when $PMT = 0$ gives the solution:

$$i = [FV/PV]^{1/n} - 1$$

The case where $PMT \neq 0$ is fairly complex and will not be presented here. Rather than involving an exactly solvable function, determining the interest rate when $PMT \neq 0$ involves an iterative process. Please see the `src/calculation/fin.c` source file for a detailed explanation.

Example: Monthly Payments

Let's recalculate the section called "Example: Monthly Payments", this time using the mathematical formulas rather than the Loan Repayment Calculator. What is your monthly payment on a \$100000 30 year loan at a fixed rate of 4% compounded monthly?

First, let's define the variables: $n = (30 * 12) = 360$, $PV = 100000$, $PMT = \text{unknown}$, $FV = 0$, $i = 4\% = 4/100 = 0.04$, $CF = PF = 12$, $X = 0$ (end of payment periods).

The second step is to convert the nominal interest rate (i) to the effective interest rate ($ieff$). Since the interest rate is compounded monthly, it is discrete, and we use: $ieff = (1 + i/CF)^{(CF/PF)} - 1$, which gives $ieff = (1 + 0.04/12)^{(12/12)} - 1$, thus $ieff = 1/300 = 0.0033333$.

Now we can calculate A and B. $A = (1 + i)^n - 1 = (1 + 1/300)^{360} - 1 = 2.313498$. $B = (1 + iX)/i = (1 + (1/300)*0)/(1/300) = 300$.

With A and B, we can calculate PMT. $PMT = -[FV + PV * (A + 1)] / [A * B] = -[0 + 100000 * (2.313498 + 1)] / [2.313498 * 300] = -331349.8 / 694.0494 = -477.415296 = -477.42$.

Answer: You must make monthly payments of 477.42.

House Mortgage (How-To)

A house mortgage can be setup using the account structure present in the section called "Setting Up Accounts".

As an example, assume you have \$60k in you bank account, and you buy a \$150k house. The mortgage is charging 6% APR, and has administrative fees (closing costs, etc) of 3%. You decide to put \$50k down, and thus will need to borrow \$103k, which will give you \$100 after the closing costs are paid (3% of \$100k).

Your accounts before borrowing the money:

Account Name	Total
Assets	USD 60,000.00
Current Assets	USD 60,000.00
Savings Account	USD 60,000.00
Fixed Assets	USD 0.00
House	USD 0.00
Equity	USD 60,000.00
Opening Balances	USD 60,000.00
Expenses	USD 0.00
Interest	USD 0.00
Mortgage Interest	USD 0.00
Mortgage Adm Fees	USD 0.00
Liabilities	USD 0.00
Loans	USD 0.00
Mortgage Loan	USD 0.00

USD, grand total: Assets: USD 60,000.00 Profits: USD 0.00

Accounts Before Receiving Loan

The purchase of the house is recorded with a split transaction in the *Assets:House* account, with \$50k coming from the bank (IE: your down payment), and \$100k coming from the Mortgage. You can place the \$3k closing costs in the same split, and we increase the house loan to \$103k to include the closing costs as well.

Table 8.1. Buying a House Split Transaction

Account	Increase	Decrease
Assets:Fixed Assets:House	\$150,000	
Assets:Current Assets:Bank		\$50,000

Loans

Liabilities:Loans:Mortgage Loan		\$103,000
Expenses:Mortgage Adm Fees	\$3000	

The split will look like this in the *Assets:Fixed Assets:House* Account:

Date	Description		Tot Increase	Tot Decrease	Balance
01/01/06	Buy house		150,000.00	150,000.00	
	Total value of house	Assets:Fixed Assets:House	150,000.00		
	Closing costs	Expenses:Mortgage Adm Fees	3,000.00		
	Down payment	Assets:Current Assets:Savings Account		50,000.00	
	Loan & Closing costs	Liabilities:Loans:Mortgage Loan		103,000.00	

Present: USD 150,000.00 Future: USD 150,000.00 Cleared: USD 0.00 Reconciled: USD 0.00 Projected Minimum: USD 150,000.00

Mortgage Split Transaction

Which will give a Chart of Accounts like this:

Account Name	Total
Assets	USD 160,000.00
Current Assets	USD 10,000.00
Savings Account	USD 10,000.00
Fixed Assets	USD 150,000.00
House	USD 150,000.00
Equity	USD 60,000.00
Opening Balances	USD 60,000.00
Expenses	USD 3,000.00
Interest	USD 0.00
Mortgage Interest	USD 0.00
Mortgage Adm Fees	USD 3,000.00
Liabilities	USD 103,000.00
Loans	USD 103,000.00
Mortgage Loan	USD 103,000.00

USD, grand total: Assets: USD 57,000.00 Profits: -USD 3,000.00

Mortgage Account

A Personal Loan to a friend (How-To)

It is not always you are borrowing money from the bank, sometimes you borrow money from your family, or perhaps even lend money to a friend. This How-To chapter will describe one way to handle lending money to a friend.

We are basing this How-To on the following generic account structure.

- Asset
 - Bank
 - Bank Account

- Money owed to you
 - Person
- Income
 - Interest Income
 - Person

This example will show how to track a personal loan of 2,000 USD (default currency) to your friend Peter

Loan Specifications

Peter wants to borrow \$2,000 dollars from you and plans to pay you back monthly for the next 18 months. Since he is your friend, (but not that close) you both agree on a yearly interest rate of 5%.

In summary we have the below details. Peter’s loan details:

- Pinciple Amount - \$2,000
- Term - 18 months with 12 payments per year
- Annual Percentage Rate: 5%
- Monthly Payment : ??

So how do you calculate the Monthly Payment?

You have a number of different options, like paper and pen, Linux Calculator, Open Office’s Calc module, but the easiest is to use GnuCash Loan Repayment Calculator. This tells you that the Monthly Payment should be \$115.56.

But you need to know how much of this is Interest and how much is Principal to be able to do a proper bookkeeping. For this you need a more powerful tool, something like the Calc module in OpenOffice.org, and in particular the PMT function.

		<u>Start</u>			<u>End</u>
		<u>Amount</u>	<u>Interest</u>	<u>Principal</u>	<u>Amount</u>
<i>Jan</i>	2,000.00	8.33	107.23	1,892.77	
<i>Feb</i>	1,892.77	7.89	107.67	1,785.10	
<i>Mar</i>	1,785.10	7.44	108.12	1,676.97	
<i>Apr</i>	1,676.97	6.99	108.57	1,568.40	
<i>May</i>	1,568.40	6.54	109.03	1,459.37	
<i>Jun</i>	1,459.37	6.08	109.48	1,349.89	
<i>Jul</i>	1,349.89	5.62	109.94	1,239.96	
<i>Aug</i>	1,239.96	5.17	110.39	1,129.56	
<i>Sep</i>	1,129.56	4.71	110.85	1,018.71	
<i>Oct</i>	1,018.71	4.24	111.32	907.39	
<i>Nov</i>	907.39	3.78	111.78	795.61	
<i>Dec</i>	795.61	3.32	112.25	683.37	
<i>Jan</i>	683.37	2.85	112.71	570.65	
<i>Feb</i>	570.65	2.38	113.18	457.47	
<i>Mar</i>	457.47	1.91	113.65	343.81	
<i>Apr</i>	343.81	1.43	114.13	229.69	
<i>May</i>	229.69	0.96	114.60	115.08	
<i>Jun</i>	115.08	0.48	115.08	-0.00	
		Total	\$80.10	\$2,000.00	

Detailed view over the private loan to Peter

Accounts for the loan

Let’s start with the following accounts (all accounts have the same currency, in this case USD)

Assets:Bank:USD
 Assets:Money owed to you:Peter
 Income:Interest Income:Peter
 Equity:Opening Balances:USD

Lending the money

When you have lent money to your friend, you have in fact moved money from an Asset account (like Bank, Checking or similar) to your Asset account *Money owed to you*. To record this you enter the following transaction into the *Assets:Money owed to you:Friend* account.

Table 8.2. Personal loan to a Friend

Account	Increase	Decrease
Assets:Money owed to you:Friend	\$2,000	
Assets:Bank:USD		\$2,000

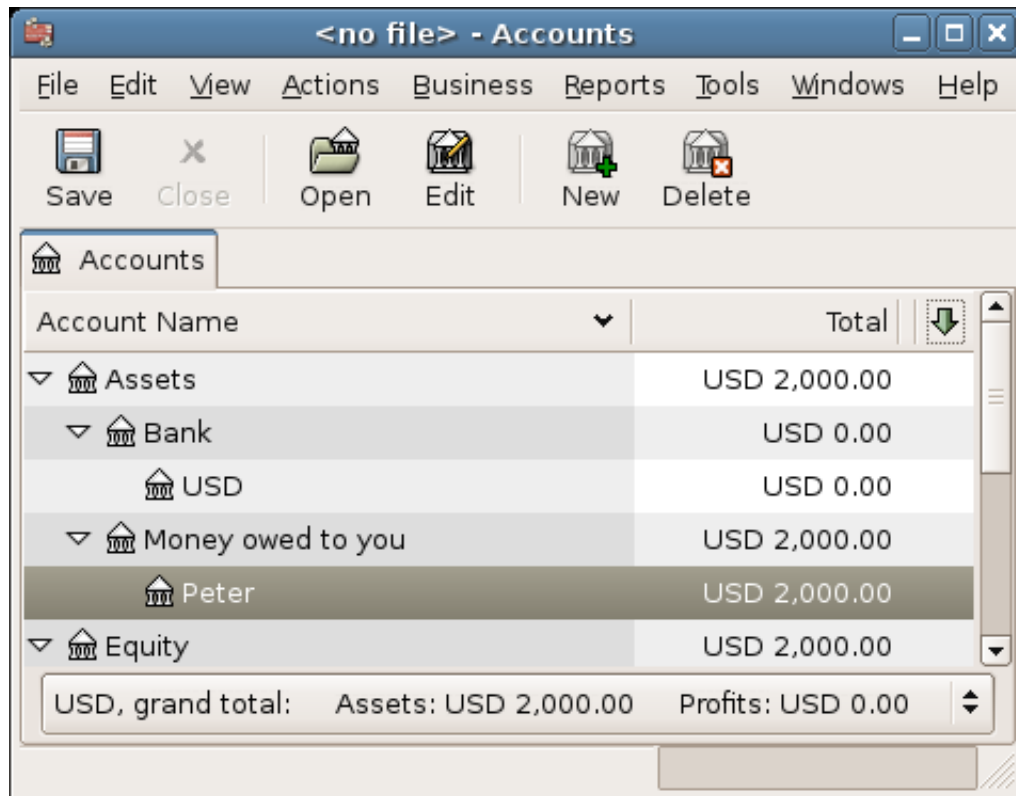


Chart of Accounts after lending money

Receiving first payment

When the first payment (\$115.56) is received, you will need to determine how much is for the principal loan, and how much is for the loan interest.

- Outstanding loan amount this period = \$2,000
- Payment per month = \$115.56
- Payment breakdown
- $5\%/12 * \$2,000 = \8.33 Interest
- $\$115.56 - \$8.33 = \$107.23$ Principal

This can be translated to the following GnuCash entry

Date	Memo	Account	R	Deposit	Withdraw
01/01/06	Loan to Peter	Assets:Bank:USD	n	2,000.00	2,000.00
		Assets:Money owed to you:Peter	n	2,000.00	
01/02/06	First payment	Assets:Bank:USD	n	115.56	107.23
	Principal	Assets:Money owed to you:Peter	n		107.23
	Interest	Income:Interest Income:Peter	n		8.33

Present: USD 1,892.77 Future: USD 1,892.77 Cleared: USD 0.00 Reconciled: USD 0.00 Projected Minimum: USD 1,892.77

Detailed view over first payment

The balance on Peter's loan is now $\$2,000 - \$107.23 = \$1,892.77$

Receiving second payment

When the second payment (\$115.56) is received, you will again need to determine how much is for the principal loan, and how much is for the loan interest.

- Outstanding loan amount this period = \$1,892.77
- Payment per month = \$115.56
- Payment breakdown
- $5\%/12 * \$1,892.77 = \7.89 Interest
- $\$115.56 - \$7.89 = \$107.67$ Principal

This can be translated to the following GnuCash entry

Date	Description	Account	Tot Depos	Tot Withd	Balance
01/01/06	Loan to Peter	Assets:Bank:USD	n	2,000.00	2,000.00
01/02/06	First payment	-- Split Transaction --	n	107.23	1,892.77
01/03/06	Second payment	Assets:Bank:USD	f Deposit	107.67	1,785.10
	Principal	Assets:Money owed to you:Peter	n		107.67
	Interest	Income:Interest Income:Peter	n		7.89

Present: USD 1,785.10 Future: USD 1,785.10 Cleared: USD 0.00 Reconciled: USD 0.00 Projected Minimum: USD 1,785.10

Detailed view over the second payment

The balance on Peter's loan is now $\$1,892.77 - \$107.67 = \$1,785.10$

The Chart of accounts looks now like this

Account Name	Total
Assets	USD 2,016.22
Bank	USD 231.12
USD	USD 231.12
Money owed to you	USD 1,785.10
Peter	USD 1,785.10
Equity	USD 2,000.00
Income	USD 16.22
Interest Income	USD 16.22
Peter	USD 16.22

USD, grand total: Assets: USD 2,016.22 Profits: USD 16.22

Chart of Accounts after second payment

As you can see, the interest varies for every month, as well as the principal amount. So for every payment you receive you need to calculate the proper amounts for your various split entries.

The interest amount will be less and less for every payment (since it is calculated on a smaller loan amount all the time), until the last payment where it is more or less 0. Please review the Figure of Detailed view over private loan to Peter for more details

Automobile Loan (How-To)

The Automobile Loan, or in common terms, Car Loan, is treated more or less exactly as the House loan. The only difference is different accounts, and different interest rates.

Basic Car Loan Account Structure

- Asset
 - Current Assets
 - Savings Account
 - Fixed Assets
 - Car

- Liability
 - Loans
 - Car Loan
- Expenses
 - Interest
 - Car Loan Interest
 - Car Loan Adm Fees

For more information, please check the section called “House Mortgage (How-To)”

Reconciling with the Loan Statements (How-To)

Reconciling a loan statement is no different from reconciling a bank or credit card statement.

During the period you should have recorded all the various loan related transactions, and every one of them are touching the Liability:Loans:*Loan* account. For instance, paying off a bit of the loan decreases your *Bank Account*, and increases the *Loan account*, *Loan Interest* as well as perhaps *Loan administration fee*.

With the loan statement in your hands, open the Loan account, start the reconcile assistant, and tick of all the various transaction you have recorded. When you have finished, the reconciling difference should be 0, and if it is not, then you will have to go through the account and compare it with the loan statement to find the difference. When you have reached a 0 in difference, then your loan account is reconciled and you can finish the Reconcile assistant.

For more information on how to Reconcile, please check the section called “Reconciliation”

Selling a house or a car (How-To)

When you will record the selling of your house in GnuCash you have some different options. Here we will go through two of them, one in which you only recorded the purchase amount, and now the selling amount. The other where you have followed the ups and downs on the property market and registered various Unrealized gains over the time.

Simple Transaction

In this way you only record the proper sale amount.

Let’s work through two samples of selling a house, one with a profit, and one with a loss. If you want to sell a car instead, just substitute the house account with a car account.

- Assets
 - Fixed Assets
 - House
 - Current Assets
 - Saving
- Income
 - Capital Gains Long
 - House

- You bought a house for \$300,000 once upon a time, and now managed to sell it for \$600,000. How do you record this?

To record this you need to increase our bank account with the \$600k, and decrease some other accounts with \$600k. The house account only contains \$300k which is what you bought it for, so you move this amount to your bank account. That means you are lacking \$300k. This amount you fetch from the *Income:Capital Gains Long:House* account. The split transaction you enter into your *bank* account (*Assets:Current Assets:Saving*) should look like this.

Table 8.3. Selling an asset (house) with a profit

Account	Increase	Decrease
Assets:Current Assets:Saving	\$600,000	
Assets:Fixed Assets:House		\$300,000
Income:Capital Gains Long:House		\$300,000

- You bought a house for \$300,000 once upon a time, but due to a newly created airport, could only sell it for \$230,000. How do you record this?

To record this you need to increase your bank account with the \$230k, and decrease some other accounts with \$230k. The house account contains \$300k which is more than what you sold it for. So let's move \$230k of it to your bank account. After this you have \$70k remaining in your house account which needs to be removed. You move it to our *Income:Capital Gains Long:House* account, which will indicate a loss. The split transaction you enter into your *house* account (*Assets:Fixed Assets:House*) should look like this.

Table 8.4. Selling an asset (house) with a loss

Account	Increase	Decrease
Assets:Fixed Assets:House		\$300,000
Assets:Current Assets:Saving	\$230,000	
Income:Capital Gains Long:House	\$70,000	

A More Complex Transaction

In this example, we will touch a little on some more complicated accounting principles. For more details on this subject, please check Chapter 11, *Capital Gains*

Here we will only touch on the case when you have accurately estimated the current value of your house. For the other cases (over-, and under-estimated), please check Chapter 11, *Capital Gains*.

- Assets
 - Fixed Assets
 - House
 - Cost
 - Unrealized Gain
 - Current Assets
 - Saving
- Income

- Realized Gain
 - House
- Unrealized Gain
 - House

You bought a house for \$300,000 once upon a time, and over the years kept a close look on the market and updated your records with the estimated current value of your house. At the time you want to sell it, you have determined that the current market value is \$600,000.

The difference between \$600,000 (estimated market value) and \$300,000 (purchase value) is the current Unrealized Gain value. Therefore you have a total of \$300,000 in your *Assets:Fixed Assets:House:Unrealized Gain* account

How do you record this sell transaction?

To record this you need to increase your bank account with the \$600k, and decrease some other accounts with \$600k. You must first change from unrealized gain to realized gain for your *Income* accounts. Lastly you need to transfer the full amounts from the *Assets:Fixed Assets:House* sub-accounts.

The transaction you enter into your *Income:Realized Gain:House* account should look like this.

Table 8.5. Selling an asset (house) with a profit

Account	Increase	Decrease
Income:Realized Gain:House	\$300,000	
Income:Unrealized Gain:House		\$300,000

The transaction you enter into your *Assets:Current Assets:Saving* account should look like this.

Table 8.6. Selling an asset (house) with a profit 2

Account	Increase	Decrease
Assets:Current Assets:Saving	\$600,000	
Assets:Fixed Assets:House:Cost		\$300,000
Assets:Fixed Assets:House:Unrealized Gain		\$300,000

After having recorded these transactions you see that your House Asset have a value of 0, your Savings account have increased with \$600,000, and lastly, the *Income:Realized Gain* have increased to \$300,000.

Chapter 9. Investments

This chapter explains how to manage your investments with GnuCash. Most people have an investment plan, whether its just putting money into a CD account, investing through a company sponsored plan at your workplace or buying and selling stocks and bonds through a brokerage. GnuCash gives you tools to help you manage these investments such as the *Price Editor* which allows you to record changes in the prices of stocks you own.

Basic Concepts

An investment is something that you purchase in the hopes of generating income, or that you hope to sell in the future for more than you paid. Using this simple definition, many things could be considered investments: the house you live in, a valuable painting, stocks in publicly traded companies, your savings account at the bank, or a certificate of deposit. These many types of investments will be discussed in this chapter in terms of how to track them using GnuCash.

Terminology

Before discussing investments specifically, it will be helpful to present a glossary of investment terminology. The terms presented below represent some of the basic concepts of investing. It is a good idea to become familiar with these terms, or at least, refer back to this list if you encounter an unfamiliar word in the later sections.

Capital gains

The difference between the purchase and selling prices of an investment. If the selling price is lower than the purchase price, this is called a *capital loss*. Also known as *realized gain/loss*.

Commission

The fee you pay to a broker to buy or sell securities.

Common stock

A security that represents a certain fractional ownership of a company. This is what you buy when you “buy stock” in a company on the open market. This is also sometimes known as *capital stock*.

Compounding

The concept that the reinvested interest can later earn interest of its own (interest on interest). This is often referred to as *compound interest*.

Dividends

Dividends are cash payments a company makes to shareholders. The amount of this payment is usually determined as some amount of the profits of the company. Note that not all common stocks give dividends.

Equities

Equities are investments in which the investor becomes part (or whole) owner in something.

	<p>This includes common stock in a company, or real estate.</p>
<i>Interest</i>	<p>What a borrower pays a lender for the use of their money. Normally, this is expressed in terms of a percentage of the principal per year. For example, a savings account with 1% interest (you are the lender, the bank is the borrower) will pay you \$1 for every \$100 you keep there per year.</p>
<i>Liquidity</i>	<p>A measure of how easily convertible an investment is to cash. Money in a savings account is very liquid, while money invested in a house has low liquidity because it takes time to sell a house.</p>
<i>Principal</i>	<p>The original amount of money invested or borrowed.</p>
<i>Realized vs Unrealized Gain/Loss</i>	<p>Unrealized gain or loss occurs when you've got a change in price of an asset. You realize the gain/loss when you actually sell the asset. See also <i>capital gain/loss</i>.</p>
<i>Return</i>	<p>The total income plus capital gains or losses of an investment. See also <i>Yield</i>.</p>
<i>Risk</i>	<p>The probability that the return on investment is different from what was expected. Investments are often grouped on a scale from low risk (savings account, government bonds) to high risk (common stock, junk bonds). As a general rule of thumb, the higher the risk the higher the possible return.</p>
<i>Shareholder</i>	<p>A shareholder is a person who holds common stock in a company.</p>
<i>Stock split</i>	<p>Occurs when a company offers to issue some additional multiple of shares for each existing stock. For example, a "2 for 1" stock split means that if you own 100 shares of a stock, you will receive an additional 100 at no cost to you. The unit price of the shares will be adjusted so there is no net change in the value, so in this example the price per share will be halved.</p>
<i>Valuation</i>	<p>The process of determining the market value or the price the investment would sell at in a "reasonable time frame".</p>
<i>Yield</i>	<p>A measure of the amount of money you earn from an investment (IE: how much income you receive from the investment). Typically</p>

this is reported as a percentage of the principal amount. Yield does not include capital gains or losses (see Return). Eg: A stock sells for \$100 and gives \$2 in dividends per year has a yield of 2%.

Types of Investments

Below is presented some of the broad types of investments available, and examples of each type.

- *Interest-bearing account or instrument*

This type of investment usually allows you immediate access to your money, and will typically pay you interest every month based on the amount of money you have deposited. Examples are bank savings accounts (and some interest bearing checking accounts) and cash accounts at your brokerage. This is a very low risk investment, in the US these accounts are often insured against loss, to a specified limit.

Sometimes an interest bearing investment is *time-locked*. This type of investment requires you to commit your money to be invested for a given period of time for which you receive a set rate of return. Usually, the longer you commit the higher the interest rates. If you withdraw your money before the maturity date, you will usually have to pay an early withdrawal penalty. This is a relatively lower risk investment. Examples are certificates of deposit or some government bonds. Other types of Bonds may have higher yields based on the higher risks from the quality of the issuer's "credit rating".

- *Stocks and Mutual Funds*

This is an investment you make in a company, in which you effectively become a part owner. There is usually no time lock on publicly traded stock, however there may be changes in the tax rates you pay on capital gains depending on how long you hold the stock. Thus, stocks are typically quite liquid, you can access your money relatively quickly. This investment is a higher risk, as you have no guarantee on the future price of a stock.

A mutual fund is a group investment mechanism in which you can buy into many stocks simultaneously. For example, a "S&P 500 index fund" is a fund which purchases all 500 stocks listed in the Standard and Poor's index. When you buy a share of this fund, you are really buying a small amount of each of the 500 stocks contained within the fund. Mutual funds are treated exactly like a single stock, both for tax purposes and in accounting.

- *Fixed Assets*

Assets that increase in value over time are another form of investment. Examples include a house, a plot of land, or a valuable painting. This type of investment is very difficult to determine the value of until you sell it. The tax implications of selling these items is varied, depending on the item. For example, you may have tax relief from selling a house if it is your primary residence, but may not receive this tax break on an expensive painting.

Fixed asset investments are discussed in Chapter 11, *Capital Gains* and Chapter 16, *Depreciation*. Typically, there is not much to do in terms of accounting for fixed asset investments except recording the buying and selling transactions.

Setting Up Accounts

To setup investment accounts in GnuCash you can either use the predefined investment account hierarchy or create your own. The minimum you need to do to track investments is to setup an asset account for each

type of investment you own. However, as we have seen in previous chapters, it is usually more logical to create a structured account hierarchy, grouping related investments together. For example, you may want to group all your publicly traded stocks under a parent account named after the brokerage firm you used to buy the stocks.

Note

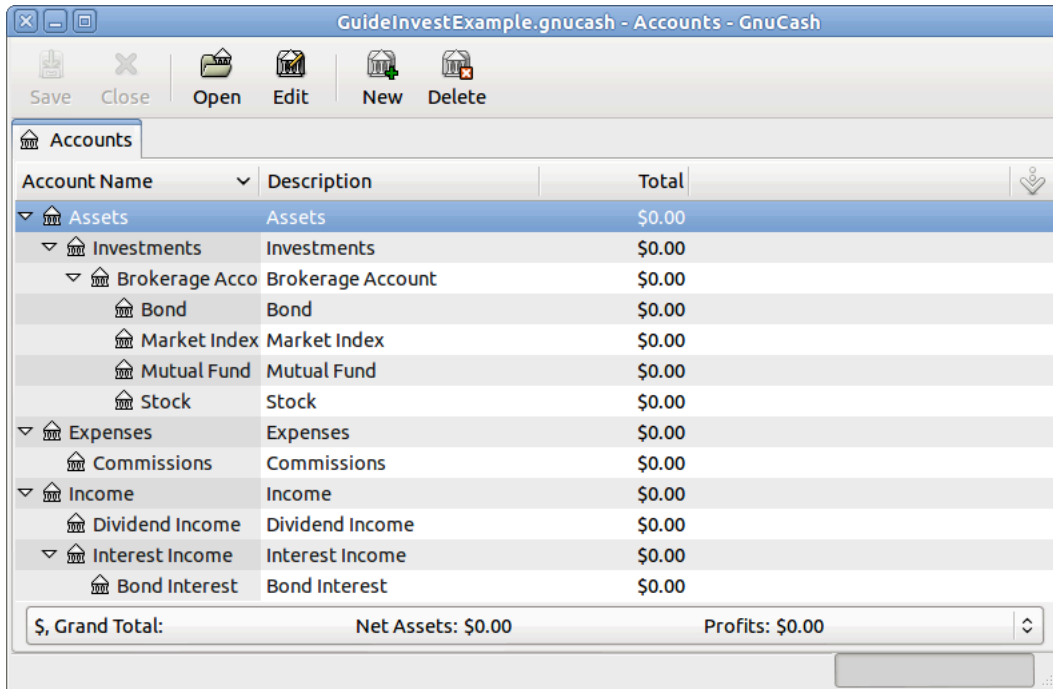
Regardless of how you setup your account hierarchy, remember that you can always move accounts around later (without losing the work you've put into them), so your initial account hierarchy does not have to be perfect.

Using Predefined Investment Accounts

The Investment Accounts option of the New Account Hierarchy Setup assistant will automatically create a basic investment account hierarchy for you. To access the predefined investment accounts hierarchy, you must make sure your GnuCash file is open, switch to the Accounts tab, and choose Actions → New Account Hierarchy. This will run the New Account Hierarchy Setup assistant and allow you to select additional accounts to add to your account hierarchy. Choose the Investment Accounts option (along with any others you are interested in). Assuming only investment accounts were selected, this will create an account hierarchy as shown below.

Tip

You can also run the New Account Hierarchy Setup assistant by creating a new GnuCash file.



The screenshot shows the GnuCash interface with the Accounts tab selected. The window title is "GuideInvestExample.gnucash - Accounts - GnuCash". The menu bar includes Save, Close, Open, Edit, New, and Delete. The Accounts tab displays a tree view of the account hierarchy with the following data:

Account Name	Description	Total
Assets	Assets	\$0.00
Investments	Investments	\$0.00
Brokerage Acco	Brokerage Account	\$0.00
Bond	Bond	\$0.00
Market Index	Market Index	\$0.00
Mutual Fund	Mutual Fund	\$0.00
Stock	Stock	\$0.00
Expenses	Expenses	\$0.00
Commissions	Commissions	\$0.00
Income	Income	\$0.00
Dividend Income	Dividend Income	\$0.00
Interest Income	Interest Income	\$0.00
Bond Interest	Bond Interest	\$0.00
\$, Grand Total:		Net Assets: \$0.00 Profits: \$0.00

This is a screen image of the Accounts tab after creating a new file and selecting only the default investment accounts.

You will probably at least want to add a *Bank* account to the Assets and probably an *Equity:Opening Balances* account, as we have done in previous chapters. Don't forget to save your new account file with a relevant name!

Creating Investment Accounts Manually

If you want to set up your own investment accounts hierarchy, you may of course do so. Investments usually have a number of associated accounts that need to be created: an asset account to track the investment itself; an income account to track dividend transactions; and expense accounts to track investment fees and commissions.

In a typical account structure, security accounts are sub accounts of an asset account representing an account at a brokerage firm. The brokerage account would be denominated in your local currency and it would include sub accounts for each security that you trade there.

Related purchases, sales, income and expense accounts should also be in the same currency as the brokerage account.

The security sub accounts would each be configured to contain units of a single security selected from the master (user defined) security list and they are expected to use the same currency as the brokerage account.

Security prices are kept in a separate area of GnuCash (the Price Database - Tools → Price Editor). This contains prices for individual securities (not security accounts). All prices for an individual security are in a single currency. If a security is traded in multiple currencies, then a separate security and separate accounts should be set up for each currency.

Custom Accounts Example

The following is a somewhat more complicated example of setting up GnuCash to track your investments, which has the advantage that it groups each different investment under the brokerage that deals with the investments. This way it is easier to compare the statements you get from your brokerage with the accounts you have in GnuCash and spot where GnuCash differs from the statement.

```

Assets
  Investments
    Brokerage Accounts
      I*Trade
        Stocks
          ACME Corp
        Money Market Funds
          I*Trade Municipal Fund
        Cash
    My Stockbroker
      Money Market Funds
        Active Assets Fund
      Government Securities
        Treas Bond xxx
        Treas Note yyy
      Mutual Funds
        Fund A
        Fund B
      Cash
Income
  Investments
    Brokerage Accounts
      Capital Gains

```

- I*Trade
 - My Stockbroker
- Dividends
 - I*Trade
 - Taxable
 - Non-taxable
 - My Stockbroker
 - Taxable
 - Non-taxable
- Interest Income
 - I*Trade
 - Taxable
 - Non-taxable
 - My Stockbroker
 - Taxable
 - Non-taxable
- Expenses
 - Investment Expenses
 - Commissions
 - I*Trade
 - My Stockbroker
 - Management Fees
 - I*Trade
 - My Stockbroker

Tip

There really is no standard way to set up your investment account hierarchy. Play around, try different layouts until you find something which divides your investment accounts into logical groups which make sense to you.

Interest Bearing Accounts

Investments which have a fixed or variable rate of interest are one of the simplest and most common form of investments available. Interest bearing investments include your bank account, a certificate of deposit, or any other kind of investment in which you receive interest from the principal. This section will describe how to handle these kinds of investments in GnuCash.

Account Setup

When you purchase the interest bearing investment, you must create an asset account to record the purchase of the investment, an income account to record earnings from interest, and an expense account to record bank charges. Below is an account layout example, in which you have an interest bearing savings account and a certificate of deposit at your bank.

- Assets
 - Bank ABC
 - CD
 - Savings
- Expenses
 - Bank ABC

Charges
 Income
 Interest Income
 CD
 Savings

As usual, this account hierarchy is simply presented as an example, you should create your accounts in a form which best matches your actual situation.

Example

Now let's populate these accounts with real numbers. Let's assume that you start with \$10000 in your bank account, which pays 1% interest and you buy a \$5000 certificate of deposit with a 6 month maturity date and a 2% yield. Clearly, it is much better to keep your money in the CD than in the savings account. After the initial purchase, your accounts should look something like this:

Account Name	Description	Total
Assets	Assets	\$10,000.00
Bank ABC		\$10,000.00
CD	6 month CD @ 2%	\$5,000.00
Savings	Savings @ 1%	\$5,000.00
Investments	Investments	\$0.00
Brokerage Acco	Brokerage Account	\$0.00
Bond	Bond	\$0.00
Market Index	Market Index	\$0.00
Mutual Fund	Mutual Fund	\$0.00
Stock	Stock	\$0.00
Equity		\$10,000.00
Opening balances		\$10,000.00
Expenses	Expenses	\$0.00
Bank ABC		\$0.00
Charges	Bank ABC service charges	\$0.00
Commissions	Commissions	\$0.00
Income	Income	\$0.00
Dividend Income	Dividend Income	\$0.00
Interest Income	Interest Income	\$0.00
Bond Interest	Bond Interest	\$0.00
CD	6 month CD interest	\$0.00
Savings	Interest on savings - Bank ABC	\$0.00
\$, Grand Total:		Net Assets: \$10,000.00 Profits: \$0.00

This is an image of the account register after creating and investing in a CD investment.

Now, during the course of the next 6 months, you receive monthly bank statements which describe the activity of your account. In our fictional example, we do nothing with the money at this bank, so the only activity is income from interest and bank charges. The monthly bank charges are \$2. After 6 months, the register window for the CD and for the savings account should look like these:

Investments

Date	Num	Description	Transfer	R	Increase	Decrease	Balance
01/01/05		Purchase CD	Assets:Bank ABC	n	5,000.00		5,000.00
01/31/05		Interest	Income:Interest Income:CD	n	8.33		5,008.33
02/28/05		Interest	Income:Interest Income:CD	n	8.35		5,016.68
03/31/05		Interest	Income:Interest Income:CD	n	8.36		5,025.04
04/30/05		Interest	Income:Interest Income:CD	n	8.38		5,033.42
05/31/05		Interest	Income:Interest Income:CD	n	8.39		5,041.81
06/30/05		Interest	Income:Interest Income:CD	n	8.40		5,050.21
06/30/05	Num	Description	Transfer	n	Increase	Decrease	Balance

Present: \$5,050.21 Future: \$5,050.21 Cleared: \$0.00 Reconciled: \$0.00 Projected Minimum: \$5,050.21
Thursday 30 June 2005

This is an image of the register of the CD account after 6 months.

Date	Num	Description	Transfer	R	Increase	Decrease	Balance
02/28/05		Charges	Expenses:Bank ABC:Charges	n		2.00	5,004.34
03/31/05		Interest	Income:Interest Income:Savings	n	4.17		5,008.51
03/31/05		Charges	Expenses:Bank ABC:Charges	n		2.00	5,006.51
04/30/05		Interest	Income:Interest Income:Savings	n	4.17		5,010.68
04/30/05		Charges	Expenses:Bank ABC:Charges	n		2.00	5,008.68
05/31/05		Interest	Income:Interest Income:Savings	n	4.17		5,012.85
05/31/05		Charges	Expenses:Bank ABC:Charges	n		2.00	5,010.85
06/30/05		Interest	Income:Interest Income:Savings	n	4.18		5,015.03
06/30/05		Charges	Expenses:Bank ABC:Charges	n		2.00	5,013.03
06/30/05	Num	Description	Transfer	n	Increase	Decrease	Balance

Present: \$5,013.03 Future: \$5,013.03 Cleared: \$0.00 Reconciled: \$0.00 Projected Minimum: \$5,013.03
Enter a description of the transaction

This is an image of the register of the Savings account after 6 months.

And this is the main GnuCash account window:

Account Name	Description	Total
Assets	Assets	\$10,063.24
Bank ABC		\$10,063.24
CD	6 month CD @ 2%	\$5,050.21
Savings	Savings @ 1%	\$5,013.03
Investments	Investments	\$0.00
Brokerage Account	Brokerage Account	\$0.00
Bond	Bond	\$0.00
Market Index	Market Index	\$0.00
Mutual Fund	Mutual Fund	\$0.00
Stock	Stock	\$0.00
Equity		\$10,000.00
Opening balances		\$10,000.00
Expenses	Expenses	\$12.00
Bank ABC		\$12.00
Charges	Bank ABC service charges	\$12.00
Commissions	Commissions	\$0.00
Income	Income	\$75.24
Dividend Income	Dividend Income	\$0.00
Interest Income	Interest Income	\$75.24
Bond Interest	Bond Interest	\$0.00
CD	6 month CD interest	\$50.21
Savings	Interest on savings - Bank ABC	\$25.03
\$, Grand Total:		Profits: \$0.00
Net Assets:		\$10,063.24

This is a screen capture of the accounts after 6 months.

From the above image of the main GnuCash account window you see a nice summary of what happened to these investments over the 6 months. While the yield on the CD is double that of the savings account, the return on the CD was \$50.21 versus \$13.03 for the savings account, or almost 4 times more. Why? Because of the pesky \$2 bank charges that hit the savings account (which counted for \$12 over 6 months).

After this 6 month period, the CD has reached maturity which means you may sell it with no early withdrawal penalty. To do so, simply transfer the \$5050.21 from the CD account into the savings account.

Setup Investment Portfolio

Now that you have built an account hierarchy in the previous section, this section will show you how to create and populate the accounts with your investment portfolio. After this initial setup of your portfolio, you may have shares of stock purchased from before you started using GnuCash. For these stocks, follow the instructions in the *Entering Preexisting Shares* section below. If you have just purchased your stocks, then use the *Buying New Shares* section.

Setup Accounts for Stocks and Mutual Funds

This section will show you how to add stocks and mutual fund accounts to GnuCash. In this section, we will assume you are using the basic account setup introduced in the previous section, but the principles can be applied to any account hierarchy.

You should have within the top level Asset account, a few levels down, an account entitled Stock. Open the account tree to this level by clicking on the “right facing triangle marker” signs next to the account names until the tree is opened to the depth of the new account. You will need to create a sub-account (of type *stock*) under the Stock account for every stock you own. Every stock is a separate account. The naming of these stock accounts is usually done using the stock ticker abbreviation, though account names may be anything that is clear to you and other users. So, for example, you could name your accounts *AMZN*, *IBM* and *NST* for your Amazon, IBM and NSTAR stocks respectively. Below is a schematic model of the layout (only showing the Assets sub-accounts).

```
Assets
  Investments
    Brokerage Accounts
      Bond
      Mutual Funds
      Market Index
      Stock
        AMZN
        IBM
        NST
```

Note

If you want to track income (dividends/interest/capital gains) on a per-stock or fund basis, you will need to create an *Income:Dividends:STOCKSYMBOL*, *Income:Cap Gain (Long):STOCKSYMBOL*, *Income:Cap Gain (Short):STOCKSYMBOL* and *Income:Interest:STOCKSYMBOL* account for each stock you own that pays dividends or interest.

Example Stock Account

As an example, let's assume that you currently own 100 shares of Amazon stock. First, create the stock account *AMZN* by selecting the Stock account and click on the menu Actions+New Account.... The New Account dialog will appear, follow the steps, in the sequence below to setup your new stock account.

New Account Window

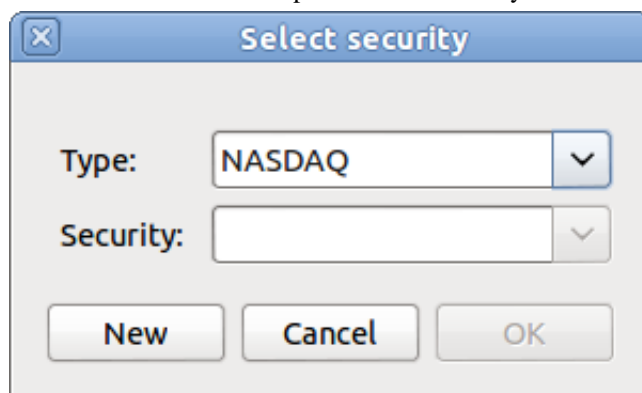
1. *Account Name* - Usually, use the stock ticker abbreviation, IE: “AMZN”
2. *Account Code* - Optional field, use CUSIP, the newspaper listing symbol, mutual fund family ID or code of your own choosing.
3. *Description* - Optional field for detailed description of the commodity/stock. Note this field by default is displayed in the Account tab tree.
4. *Account Type* - Select the type of account you are creating from the lower left-hand list.
5. *Parent Account* - Select the parent account for the new account from the right hand listing. Expand list of accounts if necessary.
6. *Create the New Security* - To use a new stock, you must create the stock as a new commodity

Note

Be sure to first select Account Type *Stock* or *Mutual Fund* so that the Select... button brings up the list of securities rather than currencies.

- *Select Security/Currency* - Click on the Select ... button next to the security/currency line. We must change the security from the default (your default currency) to this specific stock. This will bring up the Select Security dialog.
- *Type* - Select the exchange where the security/commodity is traded (in this example NASDAQ).

Select the New button to open the New Security window.



Select Security Window

- *Create the Security* - Click on the New... button and enter the appropriate information for this stock on the new form New Security.
 - The Full name: is “Amazon.com”.
 - The Symbol/abbreviation: is “AMZN”. The symbol is the stock ticker used in your quote source several lines down on the form. Note that different symbols will be utilized on different price sources for the same stock, an example is Ericsson on the Stockholm Exchange is ERIC-B while on Yahoo it is ERRICB.ST
 - The Type: should already be NASDAQ, because this is what was selected in the security selector, but you can change it here, including adding more categories. More information about this can be found in the Help Manual in section 7.7, “Security Editor”.
 - The ISIN, CUSIP or other code is where you can enter some other coding number or text (leave it blank in this example).
 - The Fraction traded should be adjusted to the smallest fraction of this security which can be traded, usually 1/100 or 1/10000.
 - The checkbox “Get Online Quotes”, the quote source and the timezone should be selected to define the sources for updating prices on-line. See Also “Setting Stock Price Automatically”.

Note

If the Get Online Quotes button is not highlighted, and it is not tickable, then the Finance::Quote package is not installed. See the section on “Installing Finance::Quote”.

Below is what this window should look like when finished:

New security

Security Information

Full name: Amazon.com

Symbol/abbreviation: AMZN

Type: NASDAQ

ISIN, CUSIP or other code:

Fraction traded: 1 / 10000

Quote Source Information

Get Online Quotes

Type of quote source:

Single: Yahoo USA

Multiple: Asia (Yahoo, ...)

Unknown: adig

Timezone: Use local time

Help Cancel OK

New Security Window

- *Save Security* - Click on the OK button to save this new security, this will close the New Security window and return to the New Account window.
7. *Select the Security* - you should now see the newly created security available in the pull down menu for Security/Currency. Select it (it is probably already selected) and click on OK.
 8. *Smallest Fraction* - Specify the smallest fraction of the security/commodity that is traded.
 9. *Notes* - Enter any notes or messages related to this security/commodity.
 10. *Tax Related* - Go to Edit → Tax Report Options to check this box if this account's transactions will relate to Income Taxes.
 11. *Placeholder* - Check box if this account is a "Placeholder", that is it will contain no transactions.
 12. *Finished* - You should now have been automatically returned to the New Account dialog, with the symbol/abbreviation: line set to "AMZN (Amazon.com)". Click on OK to save this new stock account.

You have now created the Amazon stock account, your main account should look something like this (notice that there are a few extra accounts here, a bank account, and an equity account):

Account Name	Description	Total
Assets	Assets	\$10,063.24
Bank ABC		\$10,063.24
CD	6 month CD @ 2%	\$5,050.21
Savings	Savings @ 1%	\$5,013.03
Investments	Investments	\$0.00
Brokerage Acco	Brokerage Account	\$0.00
Bond	Bond	\$0.00
Market Index	Market Index	\$0.00
Mutual Fund	Mutual Fund	\$0.00
Stock	Stock	\$0.00
AMZN	Amazon.com	0 AMZN
Equity		\$10,000.00
Opening balances		\$10,000.00
Expenses	Expenses	\$12.00
Bank ABC		\$12.00
Charges	Bank ABC service charges	\$12.00
\$, Grand Total:		Net Assets: \$10,063.24 Profits: \$0.00

This image is after the creation of the first stock account (AMZN)

Open the account register window for this AMZN stock account (double click on it). Here you see the **Commodity** view. This gives you an overview of the transactions in this commodity including the number of units (shares for a stock or mutual fund) bought or sold, the net price per unit, and the total amount. Obviously, we have not bought or sold any shares of AMZN yet, so the register should not contain any transactions.

Buying Shares

Entering Preexisting Shares

The examples in this section use Transaction Journal view.

To register the initial 100 shares of this stock that you purchased previously, on the first (transaction) line, enter the date of the purchase (eg: Jan. 1 2005) and Description (eg: Opening Balance). On the first split line, enter 100 in Shares , delete the (unit) Price (it will be calculated when you **Tab** out of the split) and enter 2000 in the Buy column.

Note

It is also possible to use GnuCash to calculate Shares or Buy from the other 2 columns but to avoid rounding errors, it is better to automatically calculate Price.

Tab to the second split line, enter transfer from account *Equity:Opening Balances*. For simplicity, this example assumed there were no commissions on this transaction. Your AMZN Commodity view should now appear like this:

Date	Action	Memo	Account	R	Shares	Price	Buy	Sell	Balance
01/01/2005		Opening Balance			100			100	100
	Buy		Assets:Brokerage Account:Stock:AMZN	n	100	20	2,000	Sell	
			Equity:Opening Balances	n					2,000.00
							1		
01/01/2005					0.00				
				n			1		

Shares: 100 AMZN Current Value: \$3,600.00

Enter a description of the split

This image is of the transaction register of the AMZN account after the first stock “purchase”.

Notice that the Balance (last column) is in the units of the commodity (AMZN shares) not in currency units. Thus, the balance is 100 (AMZN units) rather than \$2000. This is how it should be.

Buying New Shares

The main difference between setting up a new stock purchase versus the setup for preexisting stocks as described in the previous section is that instead of transferring the money used to purchase the stock from the *Equity:Opening Balances* account, you transfer from your *Assets:Bank ABC* or *Assets:Brokerage Account* account.

Handling Commissions and Fees

For conciseness, this document will refer to the money you pay to a broker for buying and selling securities as *Commissions*. Government fees may also be payable. Unless otherwise stated, fees are handled in a similar way.

In GnuCash there are 2 alternate ways to handle commissions (for simplicity this document section will refer to these ways as net pricing and gross pricing):

- *Net Pricing*: You enter a net price (adjusted by commissions) when buying and selling securities. You do *not* also record commissions in a specific commissions account in order to later claim it as an expense, as this would be claiming commissions twice. This way *is* compatible with using the section called “Selling Shares with Automatic Calculation of Capital Gain or Loss Using Lots”. This results in a slightly misleading price being added to the price database (the effective price you paid) but is not usually of any concern.

OR

- *Gross Pricing*: You enter the price not adjusted by commissions and enter the commissions expense on a separate split in the transaction. This enables the tracking of commissions but is *not* compatible with using the section called “Selling Shares with Automatic Calculation of Capital Gain or Loss Using Lots”. Scrubbing doesn’t know to deduct commissions and fees from the gains, so capital gains or losses must be manually calculated (see the section called “Selling Shares with Manual Calculation of Capital Gain or Loss”).

Please get professional advice if you are unsure which of these ways are applicable to your jurisdiction.

Example: Buying Shares with Gross Pricing

In this example you will purchase \$5000 of IBM stock, with a commission of \$100. First step will be to create the stock account for IBM. The existing *Expenses:Commission* account will be used. If you wish to track commissions to the individual stock level an additional sub-account would be necessary. E.g. *Expenses:Commission:IBM*.

Now for the transaction, on the first (transaction) line, enter the Date of the purchase (eg: Jan. 3 2005) and Description (eg: Initial IBM Purchase). On the first split line, enter 50 in Shares, delete Price (leave it empty so it will be calculated), and enter 5000 in Buy. You do not need to fill in the Price column, as it will be calculated for you when you **Tab** to the next split. The next line in the split transaction will be *Expenses:Commissions* and fill in Buy (\$100). The third line will be to transfer \$5100 from account *Assets:Bank ABC* to balance the transaction. Your IBM Commodity view should now appear like this:

Actio	Memo	Account	R	Shares	Price	Buy	Sell
01/03/2005	Initial IBM Purchase			50		50	50
	Buy 50 shares @\$100 = \$5000	Assets:Brokerage Account:Stock:IBM	n	50	100	5,000	Sell
		Expenses:Commission:IBM	n			100.00	
		Assets:Bank ABC	n				5,100.00
16/03/2017				0.00		1	

Shares: 50 IBM Current Value: \$5,000.00
50 shares @\$100 = \$5000

This image is of the transaction register of the IBM account after the first stock “purchase” with a commission.

Example: Buying Shares with Net Pricing

Repeating the previous example using Net Pricing instead of Gross Pricing, in Transaction Journal view:

Purchase \$5000 of IBM stock being 50 Shares for \$100.00 each, plus a commission of \$100.

Now for the transaction, on the first (transaction) line, enter the Date of the purchase (eg: Jan. 3 2005) and a Description (eg: Initial IBM Purchase). On the first split line, optionally enter more details in Memo, then 50 in Shares, delete anything in Price (so it will be calculated by dividing Buy by Shares when you **Tab** out of the split), 5100 in Buy ($50 * \$100.00 + \100). Alternatively use GnuCash to calculate Buy by entering the formula $5000+100$ or $(50 * 100) + 100$ in Buy (Buy will be calculated when you **Tab** out of the column. Use the **Tab** key as many times as needed to proceed to the next split.

Do *not* enter a separate split for Commission as it has already been included in the Buy value. The second split line will be to transfer from *Assets:Bank ABC* \$5100 to balance the transaction. After the splits are all correct, use the **Enter** key to save the transaction. Your IBM Commodity view should now appear like this:

Date	Action	Memo	Account	R	Shares	Price	Buy	Sell	Balance
01/03/2005		Initial IBM Purchase			50		50		50
	Buy	50 shares @\$100 = \$5000 + Commission \$100 = \$5100	Assets:Brokerage Account:Stock:IBM	n	50	102	5,100		
			Assets:Bank ABC	n				5,100.00	
							1		
16/03/2017					0.00				

Shares: 50 IBM Current Value: \$5,100.00
50 shares @\$100 = \$5000 + Commission \$100 = \$5100

This image is of the transaction register of the IBM account after the first stock “purchase” with a commission.

Setting Share Price

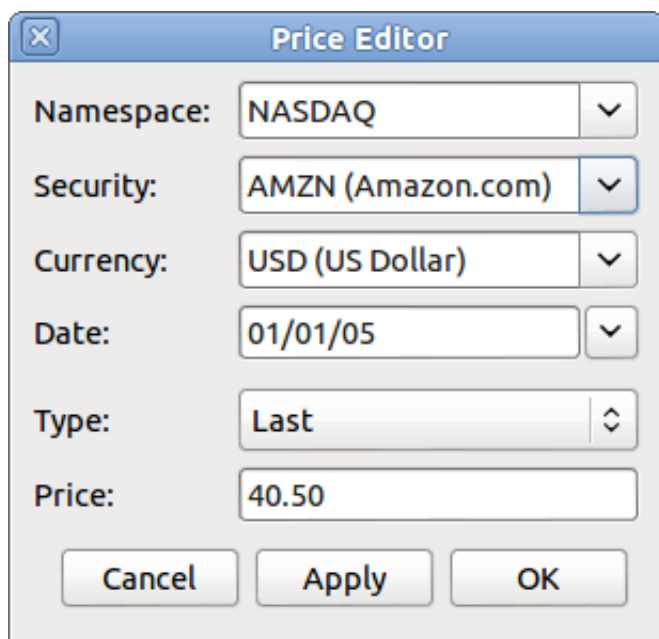
The value of a commodity, such as a stock, must be explicitly set. The stock accounts track the quantity of stocks you own, but the value of the stock is stored in the *Price Editor*. The values set in the Price Editor can be updated manually or automatically.

Initial Price Editor Setup

To use the Price Editor to track a stock value, you must initially insert the stock. To do so, open the Price Editor (Tools → Price Editor) and click on Add button. The first time a Commodity/Stock is entered this window will be blank except for the control buttons on the bottom. Select the appropriate Commodity you want to insert into the Price Editor. At this point, you can input the price of the commodity manually. There are 6 fields in the New Commodity window:

Namespace	The exchange market where the security/commodity is traded (in this example NASDAQ)
Security	The name of the commodity, must be chosen from the Select... list
Currency	The currency in which the Price is expressed.
Date	Date that the price is valid
Type	One of: Bid (the market buying price), Ask (the market selling price), Last (the last transaction price), Net Asset Value (mutual fund price per share), or Unknown. Stocks and currencies will usually give their quotes as one of bid, ask or last. Mutual funds are often given as net asset value. For other commodities, simply choose Unknown. This option is for informational purposes only, it is not used by GnuCash.
Price	The price of one unit of this commodity.

As an example of adding the AMZN commodity to the price editor, with an initial value of \$40.50 per share.



Price Editor

Namespace: NASDAQ

Security: AMZN (Amazon.com)

Currency: USD (US Dollar)

Date: 01/01/05

Type: Last

Price: 40.50

Cancel Apply OK

Adding the AMZN commodity to the price editor, with an initial value of \$40.50 per share.

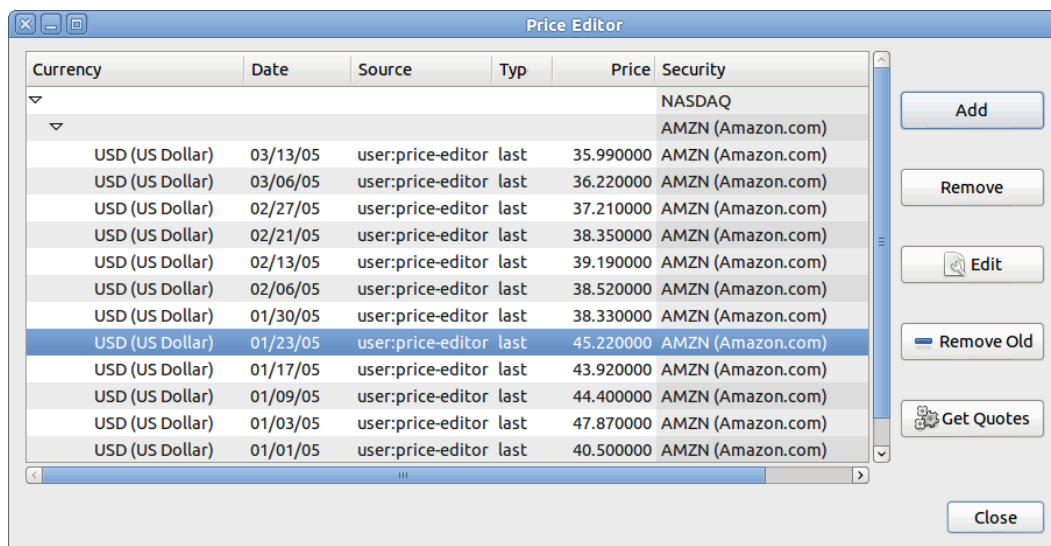
Click OK when finished. Once you have performed this initial placement of the commodity into the Price Editor, you will not have to do it again, even if you use the same commodity in another account.

Note

If you have online retrieval of quotes activated (see the section called “Configuring for Automatic Retrieval of Quotes”), you can initialize a commodity without manually making an entry. When you initially add the security in the Security Editor, check Get Online Quotes and save the security. Then, in the Price Editor, click Get Quotes, and the new security will be inserted into the price list with the retrieved price.

Setting Stock Price Manually

If the value of the commodity (stock) changes, you can adjust the value by entering the Price Editor, selecting the commodity, clicking on Edit and entering the new price.



The main price editor window, showing the list of all known commodities.

Configuring for Automatic Retrieval of Quotes

If you have more than a couple of commodities, you will tire of having to update their prices constantly. GnuCash has the ability to automatically download the most recent price for your commodities using the Internet. This is accomplished through the Perl module `Finance::Quote`, which must be installed in order to activate this feature.

To determine if the Perl module `Finance::Quote` is already installed on your system, type **perldoc Finance::Quote** in a terminal window and check to see if there is any documentation available. If you see the documentation, then the module is installed, if you do not see the documentation, then it has not been installed.

Installing Finance::Quote

Microsoft Windows:

- Close GnuCash.
- Run **Install Online Price Retrieval** which can be found in the GnuCash “Start” menu entry.

MacOS: You need to have XCode installed. XCode is an optional item from your MacOS distribution DVD. Run the **Update Finance Quote** app in the GnuCash dmg. You can run it from the dmg or copy it to the same folder to which you copied GnuCash. It will open a Terminal window and run a script for you which will ask lots of questions. Accept the default for each unless you know what you’re doing.

Linux:

- Close any running GnuCash instances.
- Locate the folder where GnuCash is installed by searching for `gnc-fq-update`
- Change to that directory, open a root shell
- Run the command **gnc-fq-update**

This will launch a Perl CPAN update session that will go out onto the internet and install the Finance::Quote module on your system. The gnc-fq-update program is interactive, however, with most systems you should be able to answer “no” to the first question: “Are you ready for manual configuration? [yes]” and the update will continue automatically from that point.

After installation is complete, you should run the “gnc-fq-dump” test program, in the same directory, distributed with GnuCash to test if Finance::Quote is installed and working properly.

Note

If you feel uncomfortable about performing any of these steps, please either email the GnuCash-user mailing list (<gncash-user@gncash.org>) for help or come to the GnuCash IRC channel on irc.gnome.org. You can also leave out this step and manually update your stock prices.

Configuring Securities for Online Quotes

With Finance::Quote installed and functioning correctly, you must configure your GnuCash securities to use this feature to obtain updated price information automatically. Whether creating new securities or modifying securities that have already been setup, use the Tools → Security Editor, to edit the security and check the Get Online Quotes box. You will now be able to modify the radio buttons for Type of quote source, the pull-down menus to specify the specific source(s) and The timezone for these quotes. When finished editing, Close the Security Editor to return to the Price Editor and click on the Get Quotes button to update your stock prices on the Internet.

The command **gncash --add-price-quotes \$HOME/gncash-filename** can be used to fetch the current prices of your stocks. The file specified `$HOME/gncash-filename` will depend on the name and location of your data file. This can be determined by the name displayed in the top frame of the GnuCash window, before the “-”. The file name can also be found under File in the recently opened file list; the first item, numbered 1, is the name of the currently open file.

This can be automated by creating a crontab entry. For example, to update your file every Friday evening (16:00) after the relevant exchange markets close (modify the time accordingly for your time zone), you could add the following to your personal crontab:

```
0 16 * * 5 gncash --add-price-quotes $HOME/gncash-filename > /dev/null 2>&1
```

Remember that Mutual Fund “prices” are really “Net Asset Value” and require several hours after the exchange closes before being available. If NAVs are downloaded before the current days NAVs are determined, yesterday’s NAVs are retrieved.

Displaying Share Value

The main account window, by default, only shows the quantity of each commodity that you own, under the column heading Total. In the case of stocks, this commodity is the number of shares. Often, however, you will want to see the value of your stocks expressed in terms of some monetary unit. This is easily accomplished by entering the main window, selecting the Accounts tab, by clicking on the *Titlebar* Options button (the small down pointing arrow on the right side of the main account window titles bar), and selecting the option to display the account total field “Total (USD)”. You will see a new column in the main window entitled Total (USD) that will express the value of all commodities in the report currency.

Account Name	Description	Total	Total (USD)
Bond	Bond	\$0.00	\$0.00
Market Index	Market Index	\$0.00	\$0.00
Mutual Fund	Mutual Fund	\$0.00	\$0.00
Stock	Stock	\$12,543.09	\$12,543.09
AMZN	Amazon.com	100 AMZN	\$3,599.00
IBM	IBM stocks	51.7598 IBM	\$8,944.09
Equity		\$12,000.00	\$12,000.00
Opening balances		\$12,000.00	\$12,000.00
Expenses	Expenses	\$112.00	\$112.00
Bank ABC		\$12.00	\$12.00
Charges	Bank ABC service charges	\$12.00	\$12.00
Commissions	Commissions	\$100.00	\$100.00
Income	Income	\$75.24	\$75.24
Dividend Income	Dividend Income	\$0.00	\$0.00
Interest Income	Interest Income	\$75.24	\$75.24
Bond Interest	Bond Interest	\$0.00	\$0.00
\$, Grand Total:		Net Assets: \$17,506.33	Profits: \$0.00

Viewing the value of a stock commodity in the main window using the Total in Report Currency option.

The “Price Source” in Reports

Most GnuCash reports have options to set/modify a number of parameters for the report. The Options dialog box is displayed by selecting the report tab then clicking on either the Options icon in the *Menubar* or selecting Edit → Report Options. Price Source determines how accounts denominated in commodities different from the report currency are converted to the report currency. Depending on the report the selector may appear in either the General, the Commodities, or the Display tab of the Report Options dialog box.

Note

In the example below, the report is a customization of the **Average Balance** report in the Assets & Liabilities reports submenu.

Assets Over Time

Accounts Display **General**

Report name: Assets Over Time

Stylesheet: Default

Start Date: 08/30/2018 Start of accounting period

End Date: 08/30/2018 End of accounting period

Step Size: Month

Report's currency: USD (US Dollar)

Price Source: Weighted Average

- Average Cost
- Weighted Average
- Most recent
- Nearest in time

Reset defaults

Help Cancel Apply OK

Determining the value of a stock commodity or a currency other than the report currency in a report by setting the Price Source option.

- **Weighted Average:** Calculates the price by summing the absolute value of the amount and the absolute value of every split in every account denominated in the commodity, excluding those splits with a zero amount, and dividing the sum of values by the sum of amounts to obtain a price. For example, if you had a buy transaction for 200 shares of XYZ for a total of 2000 and a sell of 100 for 1300 the weighted average would be $3300/300$ or 11/share.

Note

Gain/Loss splits have an amount of 0 and are *not* included in this calculation.

- **Average Cost:** Calculates the price by summing the amounts and values of every split in every account denominated in the commodity, including the zero amount splits. In the example above, with an additional split (either part of the sale transaction or in a separate transaction) booking the gain at 0 shares and a 300 gain, the average cost is $1000/100$ (2000 original cost - 1300 proceeds from the sale + 300 gain)/($200 - 100$) shares or 10/share.

Note

Gain/Loss splits *are* included in this calculation.

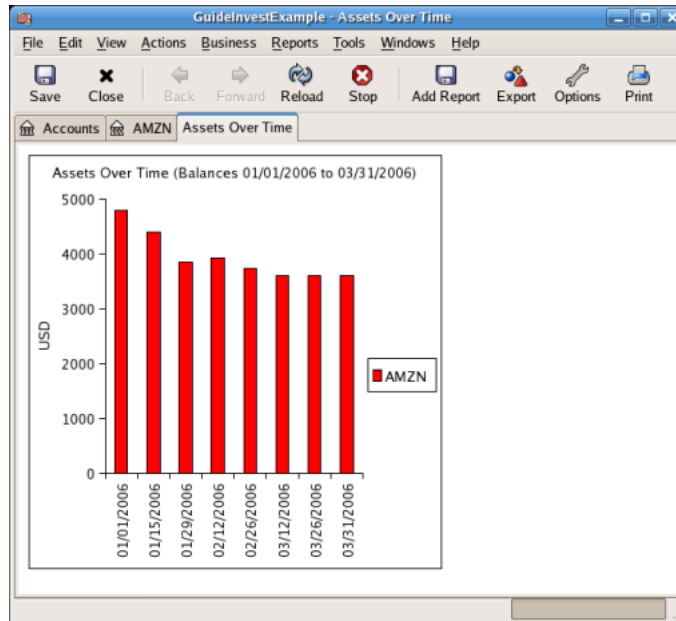
Note

This is the *only* Price Source that will balance the Trial Balance Report and in order for it to balance you *must* correctly book your gains and losses.

- **Most Recent:** Uses the latest price from the price database.
- **Nearest in time:** Uses the price nearest in time to the report date—the datum date for time series reports like Assets Over Time—from the price database.

Note

The nearest date isn't necessarily before the date in question.



Tracking what value your stocks would've had on the stock exchanges.

Selling Shares

Entering an investment sale transaction is done in a similar way to entering a buy transaction (see the section called “Buying New Shares”) except the amount entered in the *Shares* column is negative and the proceeds of the transaction is entered in the *Sell* column. The net proceeds from the sale should be transferred from the shares account to your bank or brokerage account.

For information on handling *commissions* and the use of *Net Pricing* or *Gross Pricing*, please see the section called “Handling Commissions and Fees”.

If you will be recording a capital gain or loss on the sale, please see Chapter 11, *Capital Gains* and Chapter 16, *Depreciation* for more information on this topic.

To use the GnuCash *Automatic Calculation of Capital Gain or Loss Using Lots* feature, please see the section called “Selling Shares with Automatic Calculation of Capital Gain or Loss Using Lots” otherwise continue to the next section.

Selling Shares with Manual Calculation of Capital Gain or Loss

Note

In order for GnuCash to commit the zero-share, zero-price split for account *Assets:Stock:SYMBOL* to the transaction in the following schemes, you ***must*** **Tab** out of that split. If you use the **Enter** key, GnuCash will convert the split into shares of the commodity.

In the schemes of transaction splits presented below, the following symbols are used:

- NUM_SHARES: number of shares you are selling
- COMMISSION: brokerage commissions or fees

- GROSS_SELL_PRICE: unit price for which you sold the shares, not reduced by COMMISSION
- NET_SELL_PRICE: unit price for which you sold the shares, reduced by COMMISSION
- GROSS_BUY_PRICE: unit price for which you bought the shares, not increased by COMMISSION
- NET_BUY_PRICE: unit price for which you bought the shares, increased by COMMISSION
- GROSS_BUY: total price for which you bought shares, excluding COMMISSION, equal to NUM_SHARES * GROSS_BUY_PRICE
- NET_BUY: amount of money for which you bought shares including COMMISSION, equal to GROSS_BUY + COMMISSION.
- GROSS_SALE: total price for which you sold shares, equal to NUM_SHARES * GROSS_SELL_PRICE
- NET_SALE: amount of money received from the sale, equal to GROSS_SALE - COMMISSION
- GROSS_PROFIT: amount of money you made on the sale, not reduced by COMMISSION
- NET_PROFIT: amount of money you made on the sale, reduced by COMMISSION

There are 2 ways of manually recording the capital gain or loss. The capital gain/loss can be combined with the sale in one transaction or it can be entered in a separate transaction.

Combine the Sale and Capital Gain/Loss in One Transaction

This has the advantage that all parts of the sale event are kept together. This is *not* compatible with using *scrubbing* (see the section called “Selling Shares with Automatic Calculation of Capital Gain or Loss Using Lots”). If you may in future use scrubbing on a specific security, save some work later by entering the capital gain/loss splits in a separate transaction now.

When the capital gain/loss splits are combined with the sale splits in one transaction, there are 2 splits for the security account in the same transaction, so the transaction must be entered with the security register in Auto-Split Ledger or Transaction Journal view. One of the splits for the security account is for the sale and the other is for the capital gain or loss. The security account split for the capital gain or loss must be entered with 0 number of shares and 0 price per share to stop the automatic recalculation of these fields.

Account for the profit or loss as coming from an *Income:Capital Gains* or *Expenses:Capital Loss* account.

Combined, Gross Pricing

Table 9.1. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Combined, Gross Pricing

<i>Account</i>	<i>Number of Shares</i>	<i>Share Price</i>	<i>Total Buy</i>	<i>Total Sell</i>
Assets:Bank ABC			NET_SALE	
Assets:Stock:SYMBOL	0	0	GROSS_PROFIT(Loss)	
Expenses:Commission			COMMISSION	
Assets:Stock:SYMBOL	#NUM_SHARES	GROSS_SELL_PRICE		GROSS_SALE
Income:Capital Gains			(Loss)	GROSS_PROFIT

Combined, Net Pricing

Table 9.2. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Combined, Net Pricing

<i>Account</i>	<i>Number of Shares</i>	<i>Share Price</i>	<i>Total Buy</i>	<i>Total Sell</i>
Assets:Bank ABC			NET_SALE	
Assets:Stock:SYMBOL	0	0	NET_PROFIT	(Loss)
Assets:Stock:SYMBOL	#NUM_SHARES	NET_SELL_PRICE		NET_SALE
Income:Capital Gain			(Loss)	NET_PROFIT

Separate the Capital Gain/Loss Transaction from the Sale Transaction.

This is *required* if using *scrubbing* to automatically calculate and create capital gain/loss transactions (otherwise scrubbing will not detect them and will create an incorrectly valued gain/loss transaction).

Separated, Gross Pricing

Table 9.3. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Separate Transactions, Sale Transaction

<i>Account</i>	<i>Number of Shares</i>	<i>Share Price</i>	<i>Total Buy</i>	<i>Total Sell</i>
Assets:Bank ABC			NET_SALE	
Expenses:Commission			COMMISSION	
Assets:Stock:SYMBOL	#NUM_SHARES	GROSS_SELL_PRICE		GROSS_SALE

Table 9.4. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Separate Transactions, Capital Gain/Loss Transaction

<i>Account</i>	<i>Number of Shares</i>	<i>Share Price</i>	<i>Total Buy</i>	<i>Total Sell</i>
Assets:Stock:SYMBOL	0	0	GROSS_PROFIT	(Loss)
Income:Capital Gain			(Loss)	GROSS_PROFIT

Separated, Net Pricing

Table 9.5. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Separate Transactions, Sale Transaction

<i>Account</i>	<i>Number of Shares</i>	<i>Share Price</i>	<i>Total Buy</i>	<i>Total Sell</i>
Assets:Bank ABC			NET_SALE	

Assets:Stock:SYMBOL	#NUM_SHARES	NET_SEL- L_PRICE	NET_SALE
---------------------	-------------	---------------------	----------

Table 9.6. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Separate Transactions, Capital Gain/Loss Transaction

<i>Account</i>	<i>Number of Shares</i>	<i>Share Price</i>	<i>Total Buy</i>	<i>Total Sell</i>
Assets:Stock:SYMBOL	0	0	NET_PROFIT	(Loss)
Income:Capital Gain			(Loss)	NET_PROFIT

Examples of Selling Shares with Manually Entry of Capital Gain or Loss

In these examples we will use the AMZN account created in the previous section.

Example: Sale of Shares with Profit, Manual Profit/Loss Calculation, Sale & Profit Combined, Gross Pricing

In this example you bought 100 shares of AMZN for \$20 per share, then later sell them all for \$36 per share with a commission of \$75. In the split transaction scheme above, GROSS_BUY_PRICE is \$20 (the original buying price), NUM_SHARES is 100, GROSS_BUY is \$2000 (the original buying cost), GROSS_SALE is \$3600, and finally GROSS_PROFIT is \$1600 (GROSS_SALE - GROSS_BUY).

Table 9.7. Selling Shares Split Scheme, Sale & Gain Combined, Gross Pricing

<i>Account</i>	<i>Shares</i>	<i>Price</i>	<i>Buy</i>	<i>Sell</i>
Assets:Bank ABC			3525.00	
Assets:Brokerage Account:Stock:AMZN	0	0	1600.00	
Expenses:Commission			75.00	
Assets:Brokerage Account:Stock:AMZN	-100	36.00		3600.00
Income:Capital Gain (Long Term):AMZN				1600.00

The screenshot shows a GnuCash window titled '*GuideInvestExample.gnucash - AMZN - GnuCash'. The main window displays a split transaction for the date 03/21/2006. The transaction is described as 'Sell stock for profit, Gross Pricing'. The split includes the following entries:

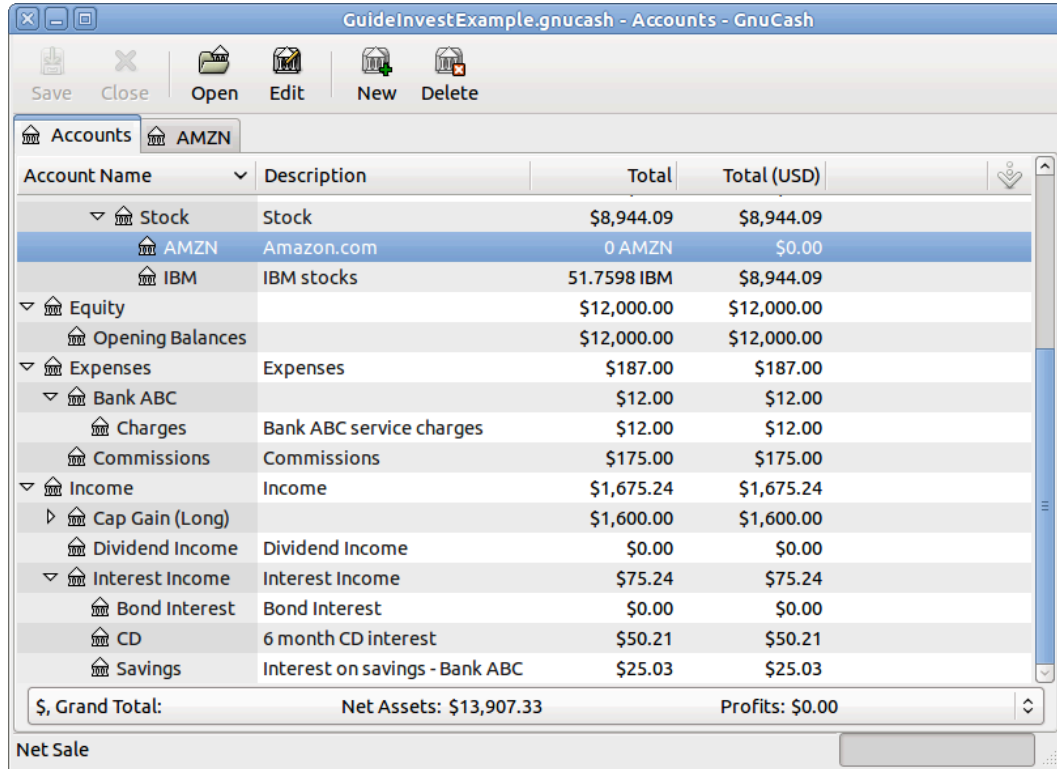
- Equity:Opening Balances (n) 100 20 2,000.00 100
- Split Transaction -- (n) 1,600.00 100
- Assets:Bank ABC (n) 3,525.00
- Assets:Brokerage Account:Stock:AMZN (n) 1,600.00
- Expenses:Commission:AMZN (n) 75.00
- Assets:Brokerage Account:Stock:AMZN (n) -100 36 3,600.00
- Income:Capital Gain (Long Term):AMZN (n) 1,600.00

Summary information at the bottom of the window shows: Shares: 0 AMZN Current Value: \$0.00. A text box below the summary is labeled 'Enter a description of the split'.

An example of selling shares for gain. You bought 100 shares of AMZN for \$20 per share, and sold for \$36.

Note

In the above screenshot, it appears there are 2 transactions for Mar 21st 2006. This is because the register is in Auto-Split Ledger view and there are 2 splits for the register account in the 1 transaction. Transaction Journal view may be clearer. Refer to the section called “Simple vs. Split Transactions”. As there are 2 splits for the register account in the sale transaction, this transaction must be entered in Auto-Split Ledger or Transaction Journal view. It cannot be entered in Basic Ledger view.



An image of the account tree after the example of selling shares for gain.

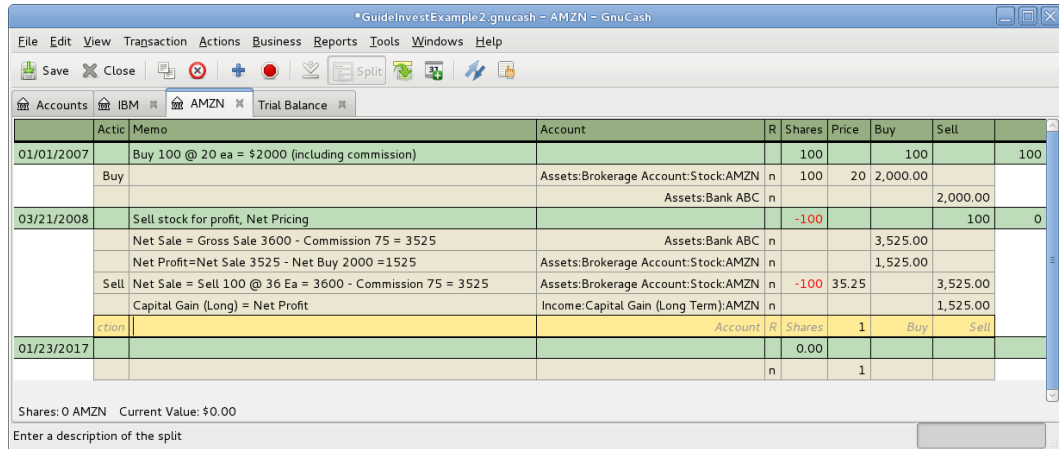
Example: Sale of Shares with Profit, Manual Profit/Loss Calculation, Sale & Profit Combined, Net Pricing

In this example you bought 100 shares of AMZN for \$20 per share (including commissions), then later sell them all for \$36 per share with a commission of \$75. In the split transaction scheme above, NUM_SHARES is 100, NET_BUY_PRICE is \$20 (the original buying price), NET_BUY is \$2000 (the original buying cost), NET_SELL_PRICE is \$35.25 ((\$3600 - \$75) / 100), GROSS_SALE is \$3600, NET_SALE is \$3525, and finally NET_PROFIT is \$1525 (NET_SALE - NET_BUY).

Table 9.8. Selling Shares Split Scheme, Sale & Gain Combined, Net Pricing

Account	Shares	Price	Buy	Sell
Assets:Bank ABC			3525.00	
Assets:Brokerage Account:S- tock:AMZN	0	0	1525.00	

Assets:Brokerage tock:AMZN	Account:S-	-100	35.25		3525.00
Income:Capital Gain (Long Term):AMZN					1525.00



An example of selling shares for gain using net pricing in transaction journal view. You bought 100 shares of AMZN for \$20 per share, and sold for \$36.

Example: Sale of Shares with Profit, Manual Profit/Loss Calculation, Sale & Profit Separated, Gross Pricing

You bought 100 shares of AMZN for \$20 per share and commissions \$20, then later sell them all for \$36 per share with a commission of \$75. In the split transaction scheme above, GROSS_BUY_PRICE is \$20 (the original buying price), NUM_SHARES is 100, GROSS_BUY is \$2000 (the original buying cost), GROSS_SALE is \$3600, and finally GROSS_PROFIT is \$1600 (GROSS_SALE - GROSS_BUY).

Table 9.9. Selling Shares Split Scheme, Sale Transaction, Gross Pricing

Account	Shares	Price	Buy	Sell
Assets:Bank ABC			3525.00	
Expenses:Commission			75.00	
Assets:Brokerage tock:AMZN	Account:S-	-100	36.00	3600.00

Table 9.10. Selling Shares Split Scheme, Gain Transaction, Gross Pricing

Account	Shares	Price	Buy	Sell
Assets:Brokerage tock:AMZN	Account:S-	0	0	1600.00
Income:Capital Gain (Long Term):AMZN				1600.00

Date	Action	Memo	Account	R	Shares	Price	Buy	Sell	Balance
01/01/2005	Buy	Buy 100 @ 20 ea = \$2000 + commission \$20 = \$2020			100			100	100
	Buy		Assets:Brokerage Account:Stock:AMZN	n	100	20	2,000.00		
		Broker Commission	Expenses:Commission:AMZN	n			20.00		
			Assets:Bank ABC	n				2,020.00	
03/21/2006	Sell	Sell stock for profit, Gross Pricing, Sale Transaction			-100			100	0
		Net Sale = Gross Sale 3600 - Commission 75 = \$3525	Assets:Bank ABC	n			3,525.00		
		Broker Commission	Expenses:Commission:AMZN	n			75.00		
	Sell	Gross Sale 100 @ 36 = 3600	Assets:Brokerage Account:Stock:AMZN	n	-100	36	3,600.00		
03/21/2006	Capital Gain Transaction				0				0
		Gross Profit = Gross Sale 3600 - Gross Buy 2000 = \$1600	Assets:Brokerage Account:Stock:AMZN	n			1,600.00		
		Capital Gain (Long) = Gross Profit	Income:Capital Gain (Long Term):AMZN	n				1,600.00	
01/25/2017	Action				0.00				
							1		

Shares: 0 AMZN Current Value: \$0.00
Enter a description of the split

An example of selling shares for gain where the sale and gain are recorded in separate transactions, in Transaction Journal view. You bought 100 shares of AMZN for \$20 per share, and sold for \$36.

Example: Sale of Shares with Profit, Manual Profit/Loss Calculation, Sale & Profit Separated, Net Pricing

You bought 100 shares of AMZN for \$20 per share (including commissions), then later sell them all for \$36 per share with a commission of \$75. In the split transaction scheme above, NUM_SHARES is 100, NET_BUY_PRICE is \$20 (the original buying price), NET_BUY is \$2000 (the original buying cost), NET_SELL_PRICE is \$35.25 (($\$3600 - \75) / 100), GROSS_SALE is \$3600, NET_SALE is \$3525, and finally NET_PROFIT is \$1525 (NET_SALE - NET_BUY).

Table 9.11. Selling Shares Split Scheme, Sale Transaction, Net Pricing

Account	Shares	Price	Buy	Sell
Assets:Bank ABC			3525.00	
Assets:Brokerage Account:Stock:AMZN	-100	35.25		3525.00

Table 9.12. Selling Shares Split Scheme, Gain Transaction, Net Pricing

Account	Shares	Price	Buy	Sell
Assets:Brokerage Account:Stock:AMZN	0	0	1525.00	
Income:Capital Gain (Long Term):AMZN				1525.00

Date	Action	Memo	Account	R	Shares	Price	Buy	Sell	
01/01/2005	Buy	Buy 100 @ 20 ea = \$2000 + commission \$20 = \$2020			100			100	100
	Buy		Assets:Brokerage Account:Stock:AMZN	n	100	20	2,000.00		
		Broker Commission	Expenses:Commission:AMZN	n			20.00		
			Assets:Bank ABC	n				2,020.00	
03/21/2006	Sell	Sell stock for profit, Gross Pricing, Sale Transaction			-100			100	0
		Net Sale = Gross Sale 3600 - Commission 75 = \$3525	Assets:Bank ABC	n			3,525.00		
		Broker Commission	Expenses:Commission:AMZN	n			75.00		
	Sell	Gross Sale 100 @ 36 = 3600	Assets:Brokerage Account:Stock:AMZN	n	-100	36	3,600.00		
03/21/2006	Capital Gain Transaction				0				0
		Gross Profit = Gross Sale 3600 - Gross Buy 2000 = \$1600	Assets:Brokerage Account:Stock:AMZN	n			1,600.00		
		Capital Gain (Long) = Gross Profit	Income:Capital Gain (Long Term):AMZN	n				1,600.00	
01/25/2017	Action								
			Account	R	Shares	1	Buy	Sell	
				n		0.00			
							1		

Shares: 0 AMZN Current Value: \$0.00
Enter a description of the split

An example of selling shares for gain where the sale and gain are recorded in separate transactions, in Transaction Journal view. You bought 100 shares of AMZN for \$20 per share, and sold for \$36.

Selling Shares with Automatic Calculation of Capital Gain or Loss Using Lots

Introduction

Wikipedia [<https://en.wikipedia.org/wiki/Lot>] includes the following definition of a lot

“a set of goods for sale together in an auction; or a quantity of a financial instrument”.

GnuCash has a built-in lot management facility that can be used to keep track of capital gains or losses resulting from security sales. Buy and sell transactions are put into lots for the purpose of calculating the cost of the sale. More specifically, a lot is used to link particular buy and sell transaction splits. Lots can be automatically or manually created and linked. Capital gain or loss can be automatically calculated and transaction(s) created for the difference between the sale value and the cost of the securities sold. GnuCash refers to this process as *scrubbing*.

The term *scrub* is used because security accounts need to be cleaned after sales to ensure the difference between the cost paid for securities, and value received from selling them, is accounted for as capital gain or loss. If the capital gain/loss is not correct, the Trial Balance (Reports → Income & Expense → Trial Balance) bottom line total debits will not balance to total credits.

Note

If you make an error, you can delete the lot(s) and capital gain/loss transaction(s) and retry. Ensure you delete the lot, or at least unlink sale transactions from the lot, before you delete a capital gain/loss transaction. Otherwise, the Lots in Account screen will recreate the capital gain/loss transaction when you select the lot.

If you are not familiar with FIFO, LIFO or Average costing, please see Wikipedia FIFO and LIFO accounting [https://en.wikipedia.org/wiki/FIFO_and_LIFO_accounting] and Average cost method [https://en.wikipedia.org/wiki/Average_cost_method].

If you are not familiar with the difference between GnuCash transactions and splits, please see the section called “Simple vs. Split Transactions”.

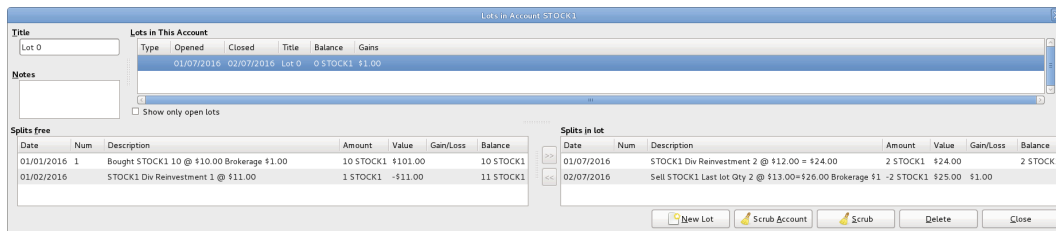
The GnuCash lot management facility can be a useful feature, reducing manual calculation, especially if dividends have been reinvested over years and there are many different costs involved. It can automatically link buy transactions to sell transactions using FIFO cost method and one can manually link specific buy transactions to sell transactions in order to use LIFO. Advanced Portfolio Report basis costs and gains/losses will agree with the costs and gain/loss transactions created by scrubbing if either the FIFO or LIFO cost methods are used.

Lots in Account Window

The Lots in Account SSSS window, where SSSS is a security account, is used to manually or automatically link security transaction splits to lots and create capital gain/loss transactions to account for the difference between the costs of buying a security and the value received by selling it.

To open the Lots in Account window, open the security account register, then select Actions → View Lots.

Figure 9.1. Selling Shares - Capital Gains - Lots in Account window



An image of the *Lots in Account* window.

Refer to the Help Manual, Chapter 8 Tools & Assistants, Lots in Account [<https://www.gnucash.org/docs/v3/C/gnucash-help/tool-lots.html>] for details of the Lots in Account screen elements.

Procedure Summary

Using the lot management facility for the automatic calculation of capital gain or loss typically follows these steps:

1. Record the sale transaction using Net Pricing (but stop short of entering the Capital Gain transaction as it will be created by scrubbing). See the section called “Example: Sale of Shares with Profit, Manual Profit/Loss Calculation, Sale & Profit Separated, Net Pricing”.
2. the section called “Manual Lot Creation and Linking” (Optional depending on cost method)
3. the section called “Automatic Creation of Capital Gain Or Loss Transactions”
4. the section called “Change Orphaned Gains-CCC to Gain/Loss Account”
5. the section called “Run a Trial Balance” report to ensure total debits balance to total credits

Manual Lot Creation and Linking

Before using this feature, ensure you have read the section called “Considerations”.

This functionality allows the manual linking of specific buy and sell transactions. It may be used in the case where a user wishes to use a different cost method than the automatic linking method (FIFO). Effectively, if one wishes the cost basis and capital gains in the Advanced Portfolio Report to be consistent with the capital gains transactions created by scrubbing, manual lot creation only needs to be used when using LIFO

or “sale of designated lots” (the same thing for securities as far as US personal tax law is concerned). This is because the scrub function can automatically do FIFO linking so there is no need to do it manually and scrubbing cannot be used for average costing.

See the section called “Example 1: Manual Lot Creation and Linking”.

Automatic Creation of Capital Gain Or Loss Transactions

Note

Do *NOT* do this unless you are using FIFO or LIFO to cost sales. See the section called “Considerations”

GnuCash can automatically calculate and create security sale capital gain/loss transactions. Lots are used to link buy transaction splits with sell transaction splits so the correct cost of the securities sold can be determined. GnuCash will use any existing lots, and create new lots for any buy transaction splits not already linked to a lot. Buy and sell transaction splits are linked to lots using FIFO method.

See:

the section called “Example 2: Automatic Creation of Capital Gain Or Loss Transactions”

the section called “Example 3: Automatic Creation of Capital Gain Or Loss Transactions, 2 Sales at Once”

the section called “Example 4: Automatic Creation of Capital Gain Or Loss Transactions - After a Simple Stock Split”

Change Orphaned Gains-CCC to Gain/Loss Account

The capital gain/loss transaction(s) created by scrubbing uses an automatically created generic *Orphaned Gains-CCC* account (where CCC is the security currency) because GnuCash doesn't know which capital gain or loss account should be used. After scrubbing, the user should edit the *Orphaned Gains-CCC* transaction split to re-assign the income account to a more meaningful income (or expense) gain or loss account (e.g. *Income:Long Term Capital Gain:IBM*).

See the section called “ Example 5: Changing the Orphaned Gains-CCC to Gain/Loss Account ”.

Run a Trial Balance

Running a Trial Balance report (Reports → Income & Expense → Trial Balance) after creating capital gain/loss transactions, is a basic check that capital gains/losses are correctly accounting for the difference between the cost paid for securities, and value received from selling them. At the end of the report, total debits should equal total credits.

Tip

A Trial Balance may not balance due to some other problem. To determine if the cause of an imbalance is from incorrectly accounting for capital gain/loss:

If necessary, temporarily change the date of the sell transaction and the capital gain/loss transaction, so they are the only transactions for a particular date, then run the Trial Balance as at the day before. If the Trial Balance is still out by the same amount, it is not the capital gain/loss that is causing the problem.

If you find a prior *out of balance* Trial Balance, keep running the Trial Balance report with different dates until you find the date it starts being out of balance. Temporarily change the trans-

action dates for each transaction on the problem date to the following day, then change the dates back to the correct date 1 at a time, running the Trial Balance each time, until you identify the problem transaction. When you change the date of a security sell transaction, you also need to change the date of the corresponding capital gain transaction as it is only the sum of these that will balance in the Trial Balance.

Considerations

There are some points that should be considered before using the lot management facility.

1. GnuCash implements only the First In/ First Out (FIFO) cost method when automatically linking buy transactions to sell transactions. I.e. The oldest securities are always sold first. The Last In First Out (LIFO) cost method may be used by manually linking the most recent buy security splits to the sell split before scrubbing.
2. The Advanced Portfolio Report does not use lot information when calculating costs, just the security transaction splits. It calculates the cost basis and gains or losses using the selected *Basis calculation method* report option (Average, FIFO or LIFO). If one wishes the Advanced Portfolio Report costs and gains/losses to be consistent with the capital gain/loss transactions created by scrubbing, the same cost model must be used in both places.
3. Scrubbing does not recognize commissions or fees so makes no allowance for them in the calculation of gain or loss. Therefore you must use *Net Pricing* rather than *Gross Pricing* if you wish to use scrubbing. See the section called “Handling Commissions and Fees”.
4. Scrubbing does not recognize capital gain/loss transaction splits if they have been manually entered as part of the sale transaction. Therefore ensure previous sales are recorded as 2 transactions:

Table 9.13. Transaction 1 dealing with value received and the reduction of the number of shares

<i>Account</i>	<i>Tot Shares</i>	<i>(Unit) Price</i>	<i>Buy (Debit)</i>	<i>Sell (Credit)</i>
Brokerage or Bank			Debit	
Security	#NumSold	SaleUnitPrice		SaleValue

Table 9.14. Transaction 2 capital gain/loss (loss in this example)

<i>Account</i>	<i>Tot Shares</i>	<i>(Unit) Price</i>	<i>Buy (Debit)</i>	<i>Sell (Credit)</i>
Capital Loss			Debit	
Security	0	0		Credit

5. The automatic capital gains calculations can handle straightforward buy, sell, and return of capital transactions but any transaction that affect the number of shares, even simple splits, will cause it to produce wrong answers so those cases must be handled manually.

Example 1: Manual Lot Creation and Linking

Here is an example of selling part of a security holding using the LIFO method. In this example, the most recent buy transaction (dated 01/07/2016, a reinvested dividend), is linked to a lot, along with the sell transaction, and the GnuCash scrub function is used to calculate capital gain or loss and create the capital gain/loss transaction.

1. Open the security account's register.

Figure 9.2. Selling Shares - Capital Gains - Security register before scrubbing a single lot

Date	Num	Description	Tot Shares	Tot Buy	Tot Sell	Balance
01/01/2016	1	Bought STOCK1 10 @ \$10.00 Brokerage \$1.00	10	10		10
		Buy		10.1	101.00	
		Assets:Investments:Broker1:STOCK1	n			
		Assets:Investments:Broker1	n		101.00	
01/02/2016		STOCK1 Div Reinvestment 1 @ \$11.00	1	1		11
		Buy Div qty 10 @ CPS \$2.00 = \$20.00	1	11	11.00	
		Increase in Residual \$20.00 - \$11.00 = \$9.00			9.00	
		Assets:Investments:DRP Residual:STOCK1	n			
		Income:Dividend:Franked:STOCK1	n		20.00	
01/07/2016		STOCK1 Div Reinvestment 2 @ \$12.00 = \$24.00	2	2		13
		Buy Div qty 11 @ CPS \$2.00 = \$22.00	2	12	24.00	
		Decrease in Residual = (\$9.00 - \$7.00) = \$2.00			2.00	
		Assets:Investments:DRP Residual:STOCK1	n			
		Income:Dividend:Franked:STOCK1	n		22.00	
02/07/2016		Sell STOCK1 Last lot Qty 2 @ \$13.00=\$26.00 Brokerage \$1	-2		2	11
		Net Sale			25.00	
		Assets:Investments:Broker1	n			
		Sell Cost qty 2 @ \$12.00 = \$24.00	-2	12.5	25.00	
		Assets:Investments:Broker1:STOCK1	n			
23/02/2017			0.00			
				1		

An image of the Security Account register in transaction journal view, before lot scrubbing.

2. Ensure all previous capital gain/loss transactions are separate transactions to the sell transactions which record the reduction in the number of shares and the value received.
3. Select Actions → View Lots to open the Lots in Account SSSS window where SSSS is the security account.

Figure 9.3. Selling Shares - Capital Gains - Lots before scrubbing a single lot

Date	Num	Description	Amount	Value	Gain/Loss	Balance
01/01/2016	1	Bought STOCK1 10 @ \$10.00 Brokerage \$1.00	10 STOCK1	\$101.00		10 STOCK1
01/02/2016		STOCK1 Div Reinvestment 1 @ \$11.00	1 STOCK1	-\$11.00		11 STOCK1
01/07/2016		STOCK1 Div Reinvestment 2 @ \$12.00 = \$24.00	2 STOCK1	-\$24.00		13 STOCK1
02/07/2016		Sell STOCK1 Last lot Qty 2 @ \$13.00=\$26.00 Brokerage \$1	-2 STOCK1	\$25.00		11 STOCK1

An image of the *Lots in Account* window before lot scrubbing.

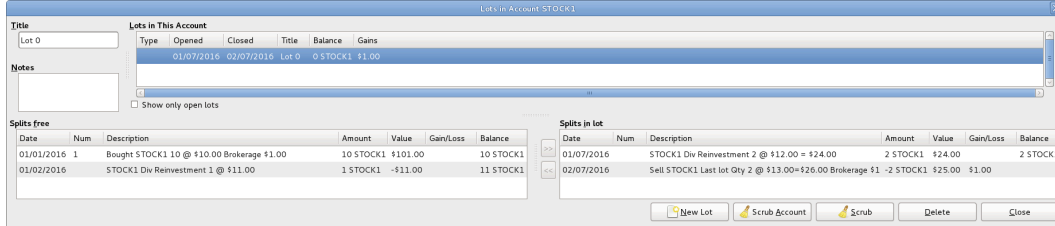
4. Create a new lot using the New Lot button. Initially this lot is not linked to any buy or sell split.
5. Highlight the new lot in the Lots in This Account panel.
6. Highlight the buy split (dated 01/07/2016) of the security to be sold in the Splits free panel.
7. Click the >> button to link the buy split with the highlighted lot. The split moves from the Splits free panel to the Splits in Lot panel.
8. Repeat the previous 2 steps for any other buy splits that should be included in the lot (in this example, there is only 1 buy split in the sale).

9. Highlight the sell split in the Splits free panel.

10. Click the >> button to link the sell split with the highlighted lot.

11. Check the lot Balance is as expected. I.e. in this example the lot balance should be zero as the number of securities sold in the lot, is matched with the same number of security buys.

Figure 9.4. Selling Shares - Capital Gains - Lots before scrubbing a single lot, after manual linking



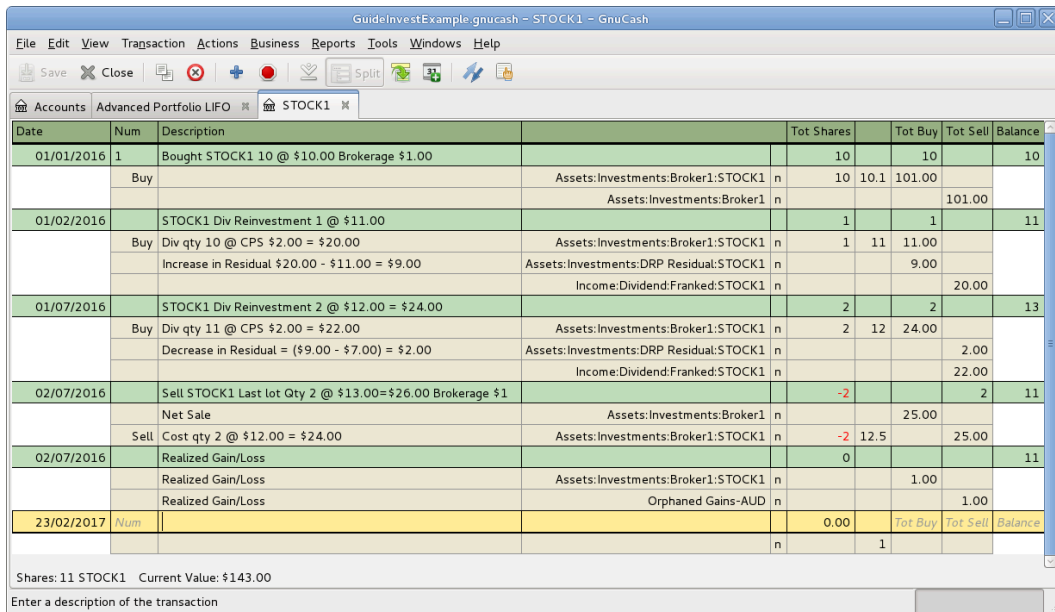
An image of the *Lots in Account* window before scrubbing a single lot.

12. Click the Scrub button (*NOT* the Scrub Account button).

The Lots in Account window has not changed after using the Scrub button so no example screen image is supplied.

13. Close the Lots in Account SSSS window and return to the security account register.

Figure 9.5. Selling Shares - Capital Gains - Register after manual linking and scrubbing a single lot



An image of the Register after scrubbing a single lot.

14. Continue to the section called “Change Orphaned Gains-CCC to Gain/Loss Account”

Example 2: Automatic Creation of Capital Gain Or Loss Transactions

Create the capital gains transaction by following these steps:

1. Open the security account's register.
2. Ensure any previous manually entered capital gain/loss transaction splits have been entered in separate transactions to the the sell transactions.
3. Select Actions → View Lots to open the Lots in Account SSSS window where SSSS is the security account.
4. If using LIFO, use the above procedure the section called “Manual Lot Creation and Linking” to create a lot for each sell transaction, link the lot with the sell transaction and each of the buy transactions that make up the sale.
5. Click the Scrub Account button which:
 - Creates lots for any buy transactions that are not already linked to a lot and links them to sell transactions splits using the FIFO method. As a transaction split can only be linked to 1 lot, if a sell transaction needs to be linked to multiple lots, the sell transaction split is itself split into multiple subsplits. In the case of multiple subsplits, it is possible to have different splits from the same transaction in both the Splits free and Splits in lot panels.
 - Creates a separate transaction per lot for capital gain/loss.
6. Continue to the section called “Change Orphaned Gains-CCC to Gain/Loss Account”

Example 3: Automatic Creation of Capital Gain Or Loss Transactions, 2 Sales at Once

Here is an example of FIFO scrubbing without manual lot creation. In this example, the transactions for 2 sales are scrubbed at once but usually scrubbing would be performed after each sale. One reason for scrubbing 2 sales at once, could be because there were multiple sales on the same day.

Figure 9.6. Selling Shares - Capital Gains - Register before Scrub Account

Date	Num	Description	Tot Sh	Tot Buy	Tot Sell	Balance
01/01/2016		Bought 10 @ \$10.00 Brokerage \$1.00	10	10		10
	Buy		10	10.1	101.00	
		Assets:Investments:Broker1:STK2	n			
		Assets:Investments:Broker1	n		101.00	
01/02/2016		Div Reinvestment 1 @ \$11.00	1	1		11
	Buy	Div qty 10 @ CPS \$2.00 = \$20.00	1	11	11.00	
		Assets:Investments:Broker1:STK2	n			
		Increase in Residual \$20.00 - \$11.00 = \$9.00			9.00	
		Assets:Investments:DRP Residual:STK2	n			
		Income:Dividend:Franked:STK2	n		20.00	
01/07/2016		Div Reinvestment 2 @ \$12.00 = \$24.00	2	2		13
	Buy	Div qty 11 @ CPS \$2.00 = \$22.00	2	12	24.00	
		Assets:Investments:Broker1:STK2	n			
		Decrease in Residual = (\$9.00 - \$7.00) = \$2.00			2.00	
		Assets:Investments:DRP Residual:STK2	n			
		Income:Dividend:Franked:STK2	n		22.00	
02/07/2016		Sell FIFO Qty 11 @ \$13.00=\$143.00	-11		11	2
		Net Sale: \$143.00 - Commission \$1.00 = \$142.00			142.00	
		Assets:Investments:Broker1	n			
	Sell	Cost (10@10.10)+(1@11.00) = \$112.00	-11	12.9091	142.00	
		Assets:Investments:Broker1:STK2	n			
01/08/2016		Div Reinvestment 1 @ \$14.00 = \$14.00	1	1		3
	Buy	Div qty 2 @ CPS \$4.00 = \$8.00	1	14	14.00	
		Assets:Investments:Broker1:STK2	n			
		Decrease in Residual = (\$7.00 - \$1.00) = \$6.00			6.00	
		Assets:Investments:DRP Residual:STK2	n			
		Income:Dividend:Franked:STK2	n		8.00	
02/08/2016		Sell FIFO Qty 3 @ \$15.00=\$45.00	-3		3	0
		Net Sale: \$45.00 - Commission \$1.00 = \$44.00			44.00	
		Assets:Investments:Broker1	n			
	Sell	Cost (2@12.00)+(1@14.00) = \$38.00	-3	14.6667	44.00	
		Assets:Investments:Broker1:STK2	n			
28/02/2017	Num		0.00			
				Tot Buy	Tot Sell	Balance
			n	1		

Shares: 0 STK2 Current Value: \$0.00

An image of the Security Account register in transaction journal view, before Scrub Account is used.

1. Select Actions → View Lots to open the Lots in Account SSSS window where SSSS is the security account.

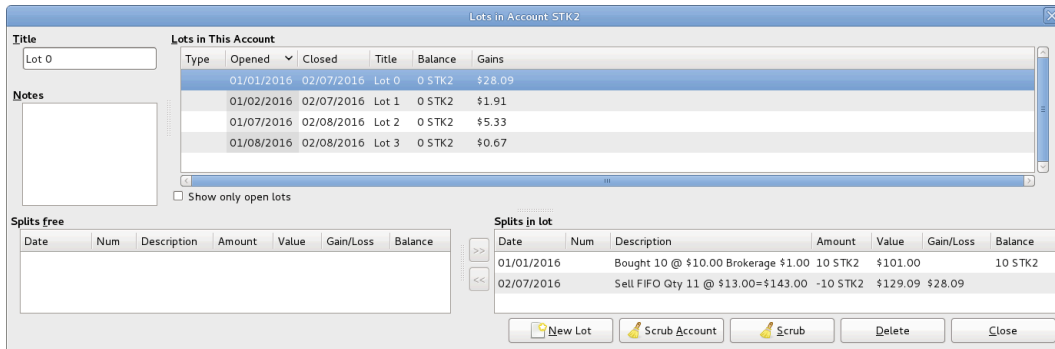
Figure 9.7. Selling Shares - Capital Gains - Lots before Scrub Account

Date	Num	Description	Amount	Value	Gain/Loss	Balance
01/01/2016	10	Bought 10 @ \$10.00 Brokerage \$1.00	10 STK2	\$101.00		10 STK2
01/02/2016	1	Div Reinvestment 1 @ \$11.00	1 STK2	-\$11.00		11 STK2
01/07/2016	2	Div Reinvestment 2 @ \$12.00 = \$24.00	2 STK2	-\$24.00		13 STK2
02/07/2016	-11	Sell FIFO Qty 11 @ \$13.00=\$143.00	-11 STK2	\$142.00		2 STK2
01/08/2016	1	Div Reinvestment 1 @ \$14.00 = \$14.00	1 STK2	-\$14.00		3 STK2
02/08/2016	-3	Sell FIFO Qty 3 @ \$15.00=\$45.00	-3 STK2	\$44.00		

An image of the *Lots in Account* window before Scrub Account is used.

2. Click the Scrub Account button.

Figure 9.8. Selling Shares - Capital Gains - Lots after Scrub Account



An image of the *Lots in Account* window after using Scrub Account.

Note

After using the Scrub Account button only the last lot is shown, so the above image is after the Lots in Account window has been closed and reopened so all the lots show.

3. Close the Lots in Account SSSS window and return to the security account register.

Figure 9.9. Selling Shares - Capital Gains - Register after Scrub Account

Date	Num	Description	Tot Sh	Tot Buy	Tot Sell	Balance
01/01/2016		Bought 10 @ \$10.00 Brokerage \$1.00	10	10		10
	Buy		10	10.1	101.00	
		Assets:Investments:Broker1:STK2 n				
		Assets:Investments:Broker1 n			101.00	
01/02/2016		Div Reinvestment 1 @ \$11.00	1	1		11
	Buy	Div qty 10 @ CPS \$2.00 = \$20.00	1	11	11.00	
		Increase in Residual \$20.00 - \$11.00 = \$9.00			9.00	
		Assets:Investments:DRP Residual:STK2 n				
		Income:Dividend:Franked:STK2 n			20.00	
01/07/2016		Div Reinvestment 2 @ \$12.00 = \$24.00	2	2		13
	Buy	Div qty 11 @ CPS \$2.00 = \$22.00	2	12	24.00	
		Decrease in Residual = (\$9.00 - \$7.00) = \$2.00				
		Assets:Investments:DRP Residual:STK2 n				
		Income:Dividend:Franked:STK2 n			2.00	
02/07/2016		Sell FIFO Qty 11 @ \$13.00=\$143.00	-11		11	2
		Net Sale: \$143.00 - Commission \$1.00 = \$142.00			142.00	
	Sell	Cost (10@10.10)+(1@11.00) = \$112.00	-10	12.909	129.09	
		Assets:Investments:Broker1:STK2 n				
	Sell	Cost (10@10.10)+(1@11.00) = \$112.00	-1	12.91	12.91	
		Assets:Investments:Broker1:STK2 n				
02/07/2016		Realized Gain/Loss	0			2
		Realized Gain/Loss			1.91	
		Assets:Investments:Broker1:STK2 n				
		Orphaned Gains-AUD n			1.91	
02/07/2016		Realized Gain/Loss	0			2
		Realized Gain/Loss			28.09	
		Assets:Investments:Broker1:STK2 n				
		Orphaned Gains-AUD n			28.09	
01/08/2016		Div Reinvestment 1 @ \$14.00 = \$14.00	1	1		3
	Buy	Div qty 2 @ CPS \$4.00 = \$8.00	1	14	14.00	
		Decrease in Residual = (\$7.00 - \$1.00) = \$6.00			6.00	
		Assets:Investments:DRP Residual:STK2 n				
		Income:Dividend:Franked:STK2 n			8.00	
02/08/2016		Sell FIFO Qty 3 @ \$15.00=\$45.00	-3		3	0
		Net Sale: \$45.00 - Commission \$1.00 = \$44.00			44.00	
	Sell	Cost (2@12.00)+(1@14.00) = \$38.00	-2	14.665	29.33	
		Assets:Investments:Broker1:STK2 n				
	Sell	Cost (2@12.00)+(1@14.00) = \$38.00	-1	14.67	14.67	
		Assets:Investments:Broker1:STK2 n				
02/08/2016		Realized Gain/Loss	0			0
		Realized Gain/Loss			5.33	
		Assets:Investments:Broker1:STK2 n				
		Orphaned Gains-AUD n			5.33	
02/08/2016		Realized Gain/Loss	0			0
		Realized Gain/Loss			0.67	
		Assets:Investments:Broker1:STK2 n				
		Orphaned Gains-AUD n			0.67	
28/02/2017	Num		0.00	Tot Buy	Tot Sell	Balance
				1		

Shares: 0 STK2 Current Value: \$0.00

Enter a description of the transaction

An image of the security register after using Scrub Account.

Note

The security splits in the sell transactions have been split into subplits, one subsplit per lot, and a capital gain transaction has been created for each security subsplit of each sell transaction.

- Continue to the section called “Change Orphaned Gains-CCC to Gain/Loss Account”

Example 4: Automatic Creation of Capital Gain Or Loss Transactions - After a Simple Stock Split

Here is an example of FIFO scrubbing without manual lot creation/linking, where the Stock Split Assistant has been used for a simple stock split. In this example, 100 shares of security XYZ were bought for \$10.00

each, there was a simple 2 for 1 stock split for zero cost (so the holding was then 200 shares @ \$5.00 each), then all 200 shares were sold for \$6.00 each.

Figure 9.10. Selling Shares - Capital Gains - Register after Scrub Account

	Action	Memo	Account	R	Shares	Price	Buy	Sell	
01/01/2008	Buy qty 100 @ \$10.00				100		100		100
	Buy		Assets:Investments:Broker1:XYZ	n	100	10	1,000		
			Assets:Current Assets:Bank1	n				1,000.00	
						1			
01/01/2009	Stock Split				100		100		200
	Split		Assets:Investments:Broker1:XYZ	n	100				
01/07/2009	Sell 200 for \$6.00 ea = \$1200.00				-200			200	0
			Assets:Current Assets:Bank1	n			1,200.00		
	Sell		Assets:Investments:Broker1:XYZ	n	-100	6		600.00	
	Sell		Assets:Investments:Broker1:XYZ	n	-100	6		600.00	
01/07/2009	Realized Gain/Loss				0				0
	Realized Gain/Loss		Assets:Investments:Broker1:XYZ	n			600.00		
	Realized Gain/Loss		Orphaned Gains-AUD	n				600.00	
01/07/2009	Realized Gain/Loss				0				0
	Realized Gain/Loss		Orphaned Gains-AUD	n			400.00		
	Realized Gain/Loss		Assets:Investments:Broker1:XYZ	n				400.00	

Shares: 0 XYZ Current Value: \$0.00

An image of the Security Account register in transaction journal view, after Scrub Account is used.

Figure 9.11. Selling Shares - Capital Gains - Lot 0 after Scrub Account

Lots in This Account					
Type	Opened	Closed	Title	Balance	Gains
	01/01/2008	01/07/2009	Lot 0	0 XYZ	-\$400.00
	01/01/2009	01/07/2009	Lot 1	0 XYZ	\$600.00

Splits in lot						
Date	Num	Description	Amount	Value	Gain/Loss	Balance
01/01/2008		Buy qty 100 @ \$10.00	100 XYZ	\$1,000.00		100 XYZ
01/07/2009		Sell 200 for \$6.00 ea = \$1200.00	-100 XYZ	\$600.00	-\$400.00	

An image of the Security Account register in transaction journal view, after Scrub Account is used.

Figure 9.12. Selling Shares - Capital Gains - Lot 1 after Scrub Account

Lots in This Account						
Type	Opened	Closed	Title	Balance	Gains	
	01/01/2008	01/07/2009	Lot 0	0 XYZ	-\$400.00	
	01/01/2009	01/07/2009	Lot 1	0 XYZ	\$600.00	

Splits in lot						
Date	Num	Description	Amount	Value	Gain/Loss	Balance
01/01/2009	100	Stock Split	XYZ	\$0.00		100 XYZ
01/07/2009		Sell 200 for \$6.00 ea = \$1200.00	-100	XYZ \$600.00	\$600.00	

An image of the Security Account register in transaction journal view, after Scrub Account is used.

The above screen shots show that scrubbing created:

2 lots. A separate lot for each buy (it essentially treats the stock split as a buy of 100 for no cost)

2 capital gain transactions (one for each lot) on the date of the sale:

- Lot 0: 1/7/2009 loss \$400 (sale \$600 _ cost \$1000)
- Lot 1: 1/7/2009 gain \$600 (sale \$600 _ cost \$0)

Total gain \$200 is correct. Whether the gain is a single long-term one or one each of long-term and short-term or whether there's even a distinction depends on the user's tax jurisdiction and the way the split is structured. If the user needs help figuring it out they should consult a professional.

Example 5: Changing the Orphaned Gains-CCC to Gain/Loss Account

1. Close the Lots in Account SSSS window if open and return to the security account register.

Figure 9.13. Selling Shares - Capital Gains - Register after scrubbing a single lot

Date	Num	Description	Tot Shares	Tot Buy	Tot Sell	Balance
01/01/2016	1	Bought STOCK1 10 @ \$10.00 Brokerage \$1.00	10	10		10
		Buy		10.1		
		Assets:Investments:Broker1:STOCK1	n	10.1		
		Assets:Investments:Broker1	n		101.00	
01/02/2016		STOCK1 Div Reinvestment 1 @ \$11.00	1	1		11
		Buy Div qty 10 @ CPS \$2.00 = \$20.00	1	11	11.00	
		Increase in Residual \$20.00 - \$11.00 = \$9.00			9.00	
		Assets:Investments:DRP Residual:STOCK1	n			
		Income:Dividend:Franked:STOCK1	n			20.00
01/07/2016		STOCK1 Div Reinvestment 2 @ \$12.00 = \$24.00	2	2		13
		Buy Div qty 11 @ CPS \$2.00 = \$22.00	2	12	24.00	
		Decrease in Residual = (\$9.00 - \$7.00) = \$2.00				2.00
		Assets:Investments:DRP Residual:STOCK1	n			
		Income:Dividend:Franked:STOCK1	n			22.00
02/07/2016		Sell STOCK1 Last lot Qty 2 @ \$13.00=\$26.00 Brokerage \$1	-2		2	11
		Net Sale			25.00	
		Assets:Investments:Broker1	n			
		Sell Cost qty 2 @ \$12.00 = \$24.00	-2	12.5	25.00	
		Assets:Investments:Broker1:STOCK1	n			
02/07/2016		Realized Gain/Loss	0			11
		Realized Gain/Loss			1.00	
		Assets:Investments:Broker1:STOCK1	n			
		Realized Gain/Loss				1.00
		Orphaned Gains-AUD	n			
23/02/2017	Num		0.00	Tot Buy	Tot Sell	Balance
			n	1		

Shares: 11 STOCK1 Current Value: \$143.00
Enter a description of the transaction

An image of the *security register* after scrubbing a single lot.

- Find each new *Realized Gain/Loss* transaction in the security account register (they will have the same date as the sell transactions). Edit the *Orphaned Gains-CCC* transaction split to re-assign the income account to a more meaningful income (or expense) gain or loss account (e.g. *Income:Long Term Capital Gain:IBM*).

Tip

You may like to split the capital gain/loss into taxable and non taxable parts if that is in accord with your tax laws.

Dividends

Some companies or mutual funds pay periodic dividends to shareholders. Dividends are typically given in one of two ways, either they are automatically reinvested into the commodity or they are given as cash. Mutual funds are often setup to automatically reinvest the dividend, while common stock dividends usually pay cash.

Dividends in Cash

If the dividend is presented as cash, you should record the transaction in the asset account that received the money, as income from *Income:Dividends*. Additionally if you want to tie the cash dividend to a particular stock holding then add a dummy transaction split to the stock account with quantity 0 price 1 value 0.

As an example consider the following; the dividends deposited as cash into the *Broker* Account with a tie to the stock account.

Date	Description	Transfer	Tot Re	Tot Sper	Balance
05/06/05	IBM cash dividend	Income:Dividend Income:IBM	10.35		10.35
08/08/05	IBM cash dividend	Assets:Investments:Brokerage Account:Stock:IBM	10.35	10.35	20.70
		Assets:Investments:Brokerage Account	10.35		
		Income:Dividend Income:IBM		10.35	
11/08/05	IBM cash dividend	-- Split Transaction --	10.35		31.05
22/05/14					

Present: USD 31.05 Future: USD 31.05 Cleared: USD 0.00 Reconciled: USD 0.00 Projected Minimum: USD 31.05
IBM cash dividend

An image of the *Brokerage* Account register after a series of cash dividends.

Note

If you want to track dividends on a per-stock basis, you would need to create an *Income:Dividends:STOCKSYMBOL* account for each stock you own that pays dividends.

Dividends Re-Invested

If you receive the dividend in the form of an automatic reinvestment, the transaction for this should be handled within the stock or mutual fund account as income from “Income:Dividend” for the appropriate number of reinvested shares. This type of reinvest account is often referred to as a DRIP (Dividend Re-Investment Program).

As an example consider the following purchase of NSTAR (NST) stock with the dividends reinvested into a DRIP Account. Mutual fund re-investments would be the same.

Starting with the purchase of 100 shares on Jan. 3, 2005, all dividends will be reinvested and an account is created to track the dividend to the specific stock. GnuCash simplifies the entry by allowing calculations within the cells of the transaction. If the first dividend is \$.29/share, enter \$53.28 (purchase price + dividend) in the share Price cell and 100*.29 in the Buy cell. GnuCash will calculate for you the corresponding number of Shares

Date	Num	Description	Transfer	R	Shares	Price	Buy	Sell	Balance
01/03/05		Initial Purchase	Equity:Opening Balances	n	100	52.99	5,299.00		100
01/06/05	Num	Reinvested Dividend	Income:DRIPs:NST	n	0.5443	53.2794	29.00		100.5443
02/24/14				n			1		

Shares: 100.5443 NST Current Value: \$5,417.33
Reinvested Dividend

An image of the NST Stock Account register after a dividend reinvestment.

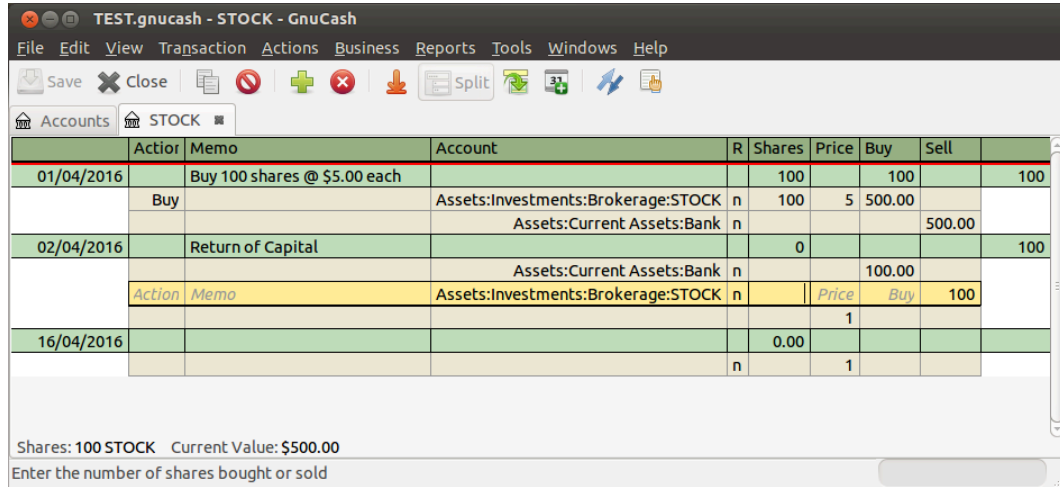
Return of Capital

This refers to a transaction where an investment returns capital to the investor and doesn't have any accounting implications other than reducing the cost basis. The number of shares held is not changed.

A Return of Capital transaction can be entered in the stock register by entering the stock split with

Shares	0
Price	0
Sell	Return of Capital value

The other side of the double entry would usually be a debit to the brokerage bank account.



An image of the Stock Account register after a return of capital.

Note

It is not possible to use the Stock Split Assistant to do this type of transaction.

Tip

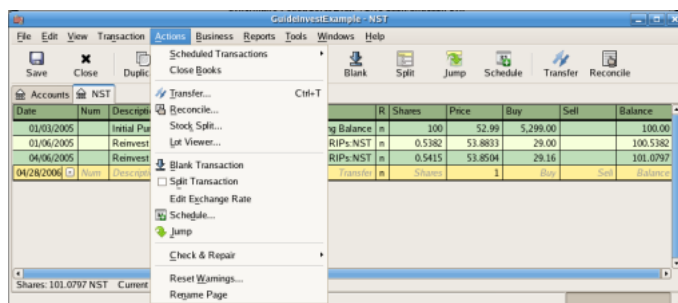
If you accidentally entered a non-zero price in the stock split, GnuCash may have created an unwanted price database entry which could cause reports to be wrong. Check for and remove such an unwanted entry from the price database using Tools → Price Editor.

Splits and Mergers

Companies may split their stock for many reasons but the most common is that the price has risen higher than management thinks is a reasonable price for many investors. Some of these splits are simple exchanges (eg 2 for 1 or 3 for 2) and some are complex exchanges with cash distributions. Splits may also result in fewer shares if the exchange rate is a reverse split (1 for 3 or .75 for 1).

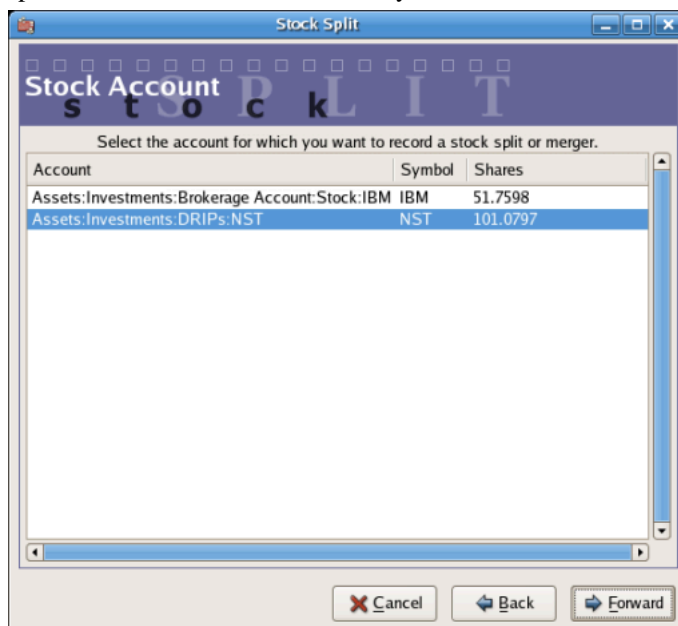
Simple Stock Split

As an example, our holding of NST stock declared a 2 for 1 stock split effective June 6, 2005. The process for entering this transaction is; select Actions → Stock Split to start the assistant.



An image of the selection of the stock split assistant.

The first screen is an Introduction, select Forward to display the selection of the account and stock for the split. You will need to create an entry for each *Account:Stock* combination you hold.



An image of the stock split assistant at step 2 - Selection of Account/Stock.

Select the *Assets:Investments:DRIPs:NST* and click on Forward.

The next screen presents 5 fields in the Stock Splits Details window:

- Date - Enter the date of the split.
- Shares - The number of shares increased (or decreased) in the transaction.

In our example it is a 2 for 1 split so the number of additional shares is the number of shares currently in the register.

- Description - The Description should give a brief explanation of the transaction.
- New Price - If desired the new price of the stock, after the split, may be entered.
- Currency - The currency of the transaction is required. This should be the same as the stock purchase currency.

Click on the Forward button.

An image of the stock split assistant at step 3 - Split Details.

The next screen will be skipped in this example as there was no “Cash in Lieu”.

An image of the stock split assistant at step 4 - Cash in Lieu.

A final Finish screen will give a last option to; Cancel, Back to modify any data entered or Apply to complete the stock split with the data entered.

Date	Num	Description		Tot Shares	Tot Buy	Tot Sell	Balance
01/03/2005		Initial Purchase	Equity:Opening Balance	n 100	52.99	5,299.00	100.00
01/06/2005		Reinvest Dividend	Income:DRIPs:NST	n 0.5382	53.8833	29.00	100.5382
04/06/2005		Reinvest Dividend	Income:DRIPs:NST	n 0.5415	53.8504	29.16	101.0797
06/06/2005	100	2:1 Stock Split		n 101.0797	101.0797	Tot Sell	202.1594
		Split	Assets:Investments:DRIPs:NST	n 101.0797			
05/09/2006				n		1	

Shares: 202.1594 NST Current Value: \$5,613.97
2:1 Stock Split

An image of the *Assets:Investments:DRIPs:NST* register after a simple stock split transaction.

Moderately Complex Stock Merger

As an example, assume you held AT&T stock during the Nov. 18, 2005 merger of SBC with AT&T. For this example you will have purchased AT&T on April 1, 2005, any dividends will have been paid in cash, therefore not entered into the AT&T stock register.

The conditions of the merger were .77942 share of SBC stock were exchanged for each share of AT&T stock. The merged company continued to use the symbol “T” from AT&T.

AT&T paid a “dividend” of \$1.20/share on the transaction date, however this will not appear in the stock account as it was a cash distribution.

The process for entering this transaction is identical to the simple split until the “Details” screen. You will need to create a split entry in each *Investment Account:Stock* account combination that has shares splitting.

Stock Split

Select the account for which you want to record a stock split or merger.

Account	Symbol	Shares
Assets:Investments:Brokerage Account:Stock:IBM	IBM	51.7598
Assets:Investments:Brokerage Account:Stock:T	T	100
Assets:Investments:DRIPs:NST	NST	202.1594

Buttons: Cancel, Back, Forward

An image of the stock split assistant at step 2 - Selection of Account/Stock (*Investment Account:T*).

Select the *Assets:Investments:Brokerage Account:Stock:T* and click on Forward.

The next screen presents 5 fields in the Stock Splits Details window:

- Date - Enter the date of the split. Here we'll enter November 18, 2005.
- Shares - The number of shares increased (or decreased) in the transaction.

In our example it is a .77942 for 1 split so the number of shares will decrease from the number of shares currently in the register. You may use GnuCash's ability to perform calculations on an entry form by entering data directly (E.g. $(.77942*100)\#100$) to calculate the decrease in shares from the split.

- Description - The Description should give a brief explanation of the transaction.
- New Price - If desired the new price of the stock, after the split, may be entered.
- Currency - The currency of the transaction is required. This should be the same as the stock purchase currency.

Click on the Forward button.

An image of the stock split assistant at step 3 - Split Details.

The next screen will be skipped in this example as there was no "Cash in Lieu".

A final "Finish" screen will give a last option to Back to modify any data entered or Apply to complete the stock split with the data entered.

Date	Action	Memo	Account	R	Shares	Price	Buy	Sell	
04/01/2005	Initial Purchase		Equity:Opening Balance	n	100	23.66	2,366.00		100.00
11/18/2005	SBC / AT&T merger			n	-22.058			22.058	77.942
	Split		Assets:Investments Brokerage	n		Price	Buy	Sell	
04/01/2005				n			1		
				n				1	

An image of the *Investment Account:T* register after a stock split transaction that decreases the shares.

Chapter 10. Reports

GnuCash is a powerful double entry accounting software package that allows users to enter and track their money in a reliable manner. However, putting this information into GnuCash is only a part of the process. To be truly helpful, you need to be able to extract this information in meaningful ways. GnuCash's reporting features allow you to just that.

GnuCash's reporting features allow you to display nearly any group of transactions in a wide variety of formats. This makes it easy to answer questions about your finances, such as "How much did I spend on groceries last month?" or "How much did I earn in the previous six months?"

GnuCash includes a number of common report types, which can be modified to meet your specific needs. If these common reports are insufficient, it is possible to modify or even write your own custom reports (although this is not recommended for beginners).

Overview

There are many standard reports pre-built in GnuCash, all available from the Reports pulldown menu in the main account window.

When you select a report from the list of reports, that report is first run with its default settings. Once you have opened the report, you can modify its parameters by clicking on the Options button on the toolbar. Under Options, you will see the different settings that you can change for each report. Note that for different reports, the options will be different.

Saved Reports Configurations Concepts

Once you have modified a report to meet your needs, you may wish to save that report for reuse at a later point. GnuCash allows custom reports to be saved, using the Save Report Configuration command.

To save a report configuration:

- Go to the Reports Menu and choose the desired report.
- Change the settings on the report until it includes what is needed.
- Go to the General tab of the report's options and change the Report Name to something meaningful (Do not confuse this with the Report Title).
- Apply the changes and close the dialog.
- Click the Save Report Configuration or Save Report Configuration As... button

This will store the report options in a file in your home directory.

The first time you save a report with a name that has not already been saved, you can use either the Save Report Configuration or the Save Report Configuration As... button. You can modify the report name before saving it.

Once a report has been saved with the current name, the Save Report Configuration button will immediately update the saved report configuration. Use the Save Report Configuration As button to save the current report configuration with a new name.

Saved report configurations are available for use under the Reports->Saved Report Configurations entry. They will also be available for use on multicolumn reports.

Saved report configurations can be deleted in the Saved Report Configurations dialog by clicking the trashcan icon.

To edit saved report configurations, open the report via Reports->Saved Report Configurations, edit and apply the new options, and click Save Report Configuration.

Standard Reports Overview

The standard reports that are included in GnuCash are presented in this chapter. For each report, a short description is given, which explains what the report is intended to show and its primary purpose. We begin with a description of the Transaction Report, which is an all-purpose report with many features and settings that allow sophisticated examination of the data in a file.

Transaction Report

The Transaction Report is a fundamental report that allows users to retrieve a wide variety of useful information from the financial records. The report includes many features that allow powerful and flexible reporting from the single basic report.

- Debit and Credit subtotals can be displayed, and within a grouping section, if debit totals > credit totals, the group subtotal will be displayed in the debit column.
- Multiple data columns enable display of transaction amounts in report currency and original currency in separate columns.
- Additional sortkeys e.g. sort by reconcile status (unreconciled -> cleared -> reconciled), sort by weeks, allow additional views into the financial records.
- Full text filter enabled for description, notes and memo, and for account full names. This allows easier selection of source account names and tailored reporting. Filters can optionally use full POSIX regular expressions.
- Indenting of columns will indent the report columns for easier understanding of grouping and sorting. (This is now enabled by default for GnuCash 3.0 onwards)
- Subtotal table is useful to understand the relationship in the data. This feature compiles the primary and secondary subtotals into a table view, allowing additional insight into financial records, e.g. account subtotals in different time series.

For further ideas on how to use the Transaction Report to produce common reports, see Using the Transaction Report.

Assets & Liabilities Group

Reports in this group provide general information about assets and liabilities.

Advanced Portfolio

The Advanced Portfolio produces a report on commodity accounts (stock and mutual fund type accounts) using price information stored in the GnuCash price database and within the GnuCash transaction data. If you do not have stock price information in your file, the report will indicate an error. This report includes extended information about commodity holdings, including information about the basis, gain, and return of individual commodities.

Advanced Portfolio Capital Gains

The Advanced Portfolio report doesn't use the capital gain splits to calculate capital gains. It calculates the gains from the various buy and sell transactions in the account without regard to whether the gains and losses are recorded or not. Any realized gain splits are ignored. Realized gain splits are recognized as two splits, one in the stock's account with a zero number of shares and a non-zero value, the other in an income or expense account with a value that is the negative of the split in the stock account. These two splits can be in a separate transaction (as created by scrubbing) or in the same transaction as the sale (this will cause incorrect future scrubbing). The income or expense split can be split into multiple splits, say for taxable/non-taxable or short/long term gains, without affecting this report.

Asset Barchart

The Asset Barchart presents the value of assets on a monthly basis in barchart form. By default, the report displays the eight largest accounts that have specific asset types assigned to them, and it displays bars for the current financial period.

Several settings on this report can greatly affect the information included.

- On the Accounts tab, the "Show Accounts until level" option changes how the report aggregates account totals. Change this value to see information at deeper levels of the account structure.
- On the Display tab, the "Maximum Bars" option will display more bars in the chart, allowing information for more accounts to display. Additionally, the "Show table" option enables the display of chart information in tabular form below the chart.
- On the General tab, the "Price Source" option can significantly affect the reported value of various commodities included in the report.

Asset Piechart

The Asset Piechart presents the value of assets on a monthly basis in piechart form. By default, the report shows the seven largest accounts, that have specific asset types assigned to them, arranged in descending order by value as of the end of the current accounting period.

Several settings on this report can greatly affect the information included.

- On the Accounts tab, the "Show Accounts until level" option changes how the report aggregates account totals. Change this value to see information at deeper levels of the account structure.
- On the Display tab, the "Maximum Slices" option will display more slices in the chart, allowing information for more accounts to display.
- On the General tab, the "Price Source" option can significantly affect the reported value of various commodities included in the report.

Average Balance

The Average Balance report displays monthly averages for the current accounting period.

Balance Sheet

The Balance Sheet lists Asset, Liability, and Equity account balances for all such accounts, and provides totals as of a given date. Balance sheets are commonly run for the last day of each fiscal year to give an overall sense of the financial condition of the entity.

General Journal

The General Journal produces a register of all transactions (beginning to end) in order by date, showing the accounts and the amounts involved, and totals the Net Change by all currencies and assets.

This report is not customizable by date or account, though you can include more or fewer details about the individual transactions, and whether to include running balances and totals for the credits and debits. If you need a report restricted to particular accounts, consider the Transaction Report or open a particular account and choose the Account Transaction Report.

General Ledger

The General Ledger produces information about all transactions for a selected set of accounts. When first run, this report loads no data, and the report options must be changed to retrieve information from the file.

Investment Portfolio

The Investment Portfolio produces a report of commodity accounts (that is, accounts with type "Stock" or "Mutual Fund"), giving holdings, price and value information about commodities in the file.

Liability Barchart

The Liability Barchart presents the value of liabilities on a monthly basis in barchart form. By default, the report displays the eight largest accounts that have specific asset types assigned to them, and it displays bars for the current financial period.

Several settings on this report can greatly affect the information included.

- On the Accounts tab, the "Show Accounts until level" option changes how the report aggregates account totals. Change this value to see information at deeper levels of the account structure.
- On the Display tab, the "Maximum Bars" option will display more bars in the chart, allowing information for more accounts to display. Additionally, the "Show table" option enables the display of chart information in tabular form below the chart.
- On the General tab, the "Price Source" option can significantly affect the reported value of various commodities included in the report.

Liability Piechart

The Liability Piechart presents the value of liabilities on a monthly basis in piechart form. By default, the report shows the seven largest accounts, that have specific asset types assigned to them, arranged in descending order by value as of the end of the current accounting period.

Several settings on this report can greatly affect the information included.

- On the Accounts tab, the "Show Accounts until level" option changes how the report aggregates account totals. Change this value to see information at deeper levels of the account structure.
- On the Display tab, the "Maximum Slices" option will display more slices in the chart, allowing information for more accounts to display.
- On the General tab, the "Price Source" option can significantly affect the reported value of various commodities included in the report.

Net Worth Barchart

The Net Worth Barchart summarizes Asset accounts, Liability accounts, and overall Net Worth as bars on a graph on a monthly basis for the current financial period. This report provides a graphic overview of the file over time.

Net Worth Linechart

The Net Worth Linechart summarizes Asset accounts, Liability accounts, and overall Net Worth as a line graph on a monthly basis for the current financial period. This report provides a graphic overview of the file over time.

Price Scatterplot

The Price Scatterplot displays the value of one commodity relative to another commodity, for example the value of a stock relative to a currency. When first run, this report loads no data, and the report options must be changed to retrieve information from the file. Specifically, the "Price of Commodity" setting on the Price options tab must be changed to a specific commodity.

Budget Group

Budget reports in GnuCash allow you to gather summary information related to budgets you may have created. In order for these reports to work, you must first create a budget. The reports in this group are specifically based on budget information. To use these reports, you need to have a budget saved in your file.

Budget Balance Sheet

Budget Barchart

Budget Flow

Budget Income Statement

Budget Profit & Loss

Budget Report

Business Group

Reports in this group provide general information about activities related to a business.

Customer Report

Customer Summary

Customer Summary is a customer profit report that can help with job analysis by comparing the income and expenses for a specific customer.

All invoices have an Owner in GnuCash, so invoices that are made will show a customer and show in the report. When creating a Bill, the Default Chargeback Customer is blank. To use the profit report, this field needs an entry, since this is the tag that decides the line to which to attach the expense. Left blank, the bill will be assigned to "No Customer." Similarly, when income is entered directly in a register rather than creating an invoice, it will also be assigned to "No Customer."

Thus, if this report includes an entry for "No Customer", this means that the report may be inaccurate, as the results are not all properly labeled.

Possible use scenarios include:

- Tracking retail sales from different cities
- Tracking rental properties
- Tracking types of business
- Tracking commission sales

Each of these scenarios assumes that the account structure includes breakdowns for individual tracked categories. Changing settings on the Income and Expense tabs under Options can hone the information displayed. By default all income and expense accounts are included; however, since GnuCash can't really predict the names and classification of income and expense accounts, it must group them all into the "No Customer" entry.

Note that inventory-based businesses won't benefit from this report because of its nature.

Useful options:

- The Expense Accounts tab allows the selection of one or more expense accounts.
- The Income Accounts tab allows the selection of one or more income accounts.
- The Display tab allows sorting by name, profit percentage, or amount of profit.

Easy Invoice

Employee Report

Fancy Invoice

Payable Aging

Printable Invoice

Receivable Aging

This report provides a listing of all customers, their current balance, and how much they have outstanding from invoices over different time periods—how much they owe from 0-30 days, from 31-60 days, from 61-90 days, and over 90 days. The report also contains links to each customer and to their current customer report.

Vendor Report

Income and Expense Group

Reports in this group provide information about Income and Expense

Cash Flow

This report shows the change in value for a set of accounts (the flow of cash) over a given period of time. By default, this report is based on accounts in Assets and Special Accounts, and covers the current financial period. The report enumerates all money coming in to and going out of the base accounts, broken down by the other account.

Equity Statement

This report can be seen as extension of the Balance Sheet report. The Balance Sheet states the balance of Assets, Liabilities and Equity at a specific point of time. The Equity Statement focuses on the Equity Accounts by showing the cash flow to and from them for a given period of time.

By balancing this cash flow with income, the report shows the available capital at the beginning and end of the selected time period.

Expense Barchart

The Expense Barchart presents the value of expenses on a monthly basis in barchart form. By default, the report displays the eight largest accounts that have specific expense types assigned to them, and it displays bars for the current financial period.

Several settings on this report can greatly affect the information included.

- On the Accounts tab, the "Show Accounts until level" option changes how the report aggregates account totals. Change this value to see information at deeper levels of the account structure.
- On the Display tab, the "Maximum Bars" option will display more bars in the chart, allowing information for more accounts to display. Additionally, the "Show table" option enables the display of chart information in tabular form below the chart.
- On the General tab, the "Price Source" option can significantly affect the reported value of various commodities included in the report.

Expense Piechart

The Expense Piechart presents the value of expenses on a monthly basis in piechart form. By default, the report shows the seven largest accounts, that have specific expense types assigned to them, arranged in descending order by value as of the end of the current accounting period.

Several settings on this report can greatly affect the information included.

- On the Accounts tab, the "Show Accounts until level" option changes how the report aggregates account totals. Change this value to see information at deeper levels of the account structure.
- On the Display tab, the "Maximum Slices" option will display more slices in the chart, allowing information for more accounts to display.
- On the General tab, the "Price Source" option can significantly affect the reported value of various commodities included in the report.

Expenses vs. Day of Week

Expenses vs. Day of Week presents a pie chart showing the totals for selected expense accounts totaled by the day of the week of the transaction. The report options enable you to make some adjustments (such as accounts, display options, and the date range) but the account selector only allows expense accounts to be chosen. The report aggregates expense transactions by day of week, not by any other period or category. Due to these limitations, the report may be considered a demonstration or an example to someone wanting to examine the source code for composing a useful custom report.

Income Barchart

The Income Barchart presents the value of income on a monthly basis in barchart form. By default, the report displays the eight largest accounts that have specific income types assigned to them, and it displays bars for the current financial period.

Several settings on this report can greatly affect the information included.

- On the Accounts tab, the "Show Accounts until level" option changes how the report aggregates account totals. Change this value to see information at deeper levels of the account structure.
- On the Display tab, the "Maximum Bars" option will display more bars in the chart, allowing information for more accounts to display. Additionally, the "Show table" option enables the display of chart information in tabular form below the chart.
- On the General tab, the "Price Source" option can significantly affect the reported value of various commodities included in the report.

Income & Expense Chart

Income Piechart

The Income Piechart presents the value of income on a monthly basis in piechart form. By default, the report shows the seven largest accounts, that have specific income types assigned to them, arranged in descending order by value as of the end of the current accounting period.

Several settings on this report can greatly affect the information included.

- On the Accounts tab, the "Show Accounts until level" option changes how the report aggregates account totals. Change this value to see information at deeper levels of the account structure.
- On the Display tab, the "Maximum Slices" option will display more slices in the chart, allowing information for more accounts to display.
- On the General tab, the "Price Source" option can significantly affect the reported value of various commodities included in the report.

Income Statement

This report lists Income and Expense account totals for a set period. By default, it shows all Expense and Income accounts down to 3 levels of sub-accounts for the current financial period.

An Income Statement is also called a "Profit and Loss" report or "Revenue Statement."

In earlier versions of GnuCash, this report was called "Profit & Loss," but with version 2, the report was renamed "Income Statement" to use more common accounting terminology.

The Income Statement helps show where money is coming from and where it is going for a given time period.

Income vs. Day of Week

Income vs. Day of Week presents a piechart showing the totals for selected income accounts totaled by the day of the week of the transaction. The report options enable you to make some adjustments (such as accounts, display options, and the date range) but the account selector only allows income accounts to be chosen. The report aggregates income transactions by day of week, not by any other period or category. Due to these limitations, the report may be considered a demonstration or an example to someone wanting to examine the source code for composing a useful custom report.

Trial Balance

Trial Balance lists the ending balances in all accounts as of a particular date. It is typically run at the end of an accounting period and is primarily used to ensure that the total of all debits equals the total of all credits.

Income and GST Statement

The Income and GST Statement is a specialised Transaction Report designed to print Business-related Sales and Receipts, as well as their GST or VAT components. This report is designed for use in Australia, but is also usable in any jurisdictions implementing value-added taxes (or goods and services taxes) during regular business sales and receipts; and the business owner is expected to submit periodic reports of total sales, purchases, and taxes collected on sales from clients or paid to a supplier.

This report makes some assumptions upon the accounts used for sales, purchases, and taxes collected on sales, and paid on purchases.

- Net Sales must be an Income-type account
- Net Purchases must be an Expense-type account
- GST/VAT on Sales must be a Liability-type account
- GST/VAT on Purchases must be an Asset-type account
- There may be multiple GST accounts, e.g. reduced GST, standard GST etc. The GST accounts can be printed individually, or summarised for sales and purchases.
- There may be multiple sales and expenses accounts, e.g. Income:Sales, Income:Grants, Expenses:Suppliers, Expenses:Marketing, Expenses:Insurance. These amounts may be reported individually, or summarised for sales and purchases.
- The transactions may be entered manually as a multi-split transaction, or they may be entered via the Business Invoices and Bills tools.

As an example, consider a business has the following transactions: It incurs sales of \$1,000 plus 5% GST, receiving \$1,050. It also incurs GST-exempt sales of \$600. It purchases goods/services worth \$400 plus 5% = \$420. The following transactions will record the business activities:

Table 10.1. Sample Chart of Accounts for Income and GST Statement

Date	Description	Account	Debit	Credit
01/01/2018	Sales \$1,000 + 5% GST	Income:Sales		\$1,000
		GST on Sales [Liability]		\$50
		Asset:Bank	\$1,050	
02/01/2018	GST-Free Sales \$600	Income:Sales		\$600
		Asset:Bank	\$600	
03/01/2018	Purchase \$400 + 5% GST	Expenses:Purchases	\$400	
		Asset:Bank		\$420
		GST on Purchases [Asset]	\$20	

For the Income and GST Statement, the Accounts selected will be the Income and Expense Accounts, and the Tax accounts are used to select the GST accounts. The GST period is selected via the General tab. The resulting report is shown as follows:

Table 10.2. Income and GST Statement

Date	Description	Total Sales	Net Sales	Tax on Sales	Total Purchases	Net Purchases	Tax on Purchases
01/01/2018	Sales \$1,000 + 5%	\$1,050	\$1,000	\$50			
02/01/2018	GST-Free Sales \$600	\$600	\$600				
03/01/2018	Purchase \$400 + 5% GST				\$420	\$400	\$20
Totals		\$1,650	\$1,600	\$50	\$420	\$400	\$20

This report would indicate that there was a total of \$50 GST collected, and \$20 GST on purchases, therefore a \$30 GST liability is payable to the authorities.

Sample & Custom Group

The reports in this group offer examples on how reports can be customized or modified to suit personal need.

Custom Multicolumn Report

This report provides a base that allows several standard and custom reports to be combined into one view. Note that this report opens with an empty window; you must open the options and designate which reports

to include for display. Once the reports have been selected, the settings for individual reports in the multicolumn display can be edited.

Sample Report with Examples

This is a sample report that users can examine to learn how to write their own reports.

Welcome Sample Report

This report demonstrates how the Multicolumn Report can be used to create custom dashboard-type reports.

Other Reports

Several reports are included on the main Reports menu. These are described below.

Account Summary

This lists the balances of all accounts and subaccounts as of a particular date. By default, this report shows accounts and totals down to third-level subaccounts.

This report gives effectively the same information as the Chart of Accounts. You can use this report to export and print the Chart of Accounts.

Note: To generate a report of account totals over a particular time period (especially if you do not close your books at regular intervals), you might consider using the Income Statement, or Cash Flow reports.

Balance Forecast

This creates a balance chart which aims to track asset (or any other account type) balances, including amounts from future scheduled transactions. The balances will include all regular booked amounts and future amounts from numeric scheduled transaction templates.

This report can also add additional data charts to forecast future minimum balances. Reserve line can be displayed to confirm if future minimum will dip below the reserve amount. A target line may also be displayed above the reserve line for financial planning.

Future Scheduled Transactions Summary

Tax Report & TXF Export

Generates a report and a downloadable .txf file of taxable income and deductible expenses for a particular accounting period. To download the report data, choose the Export button on the toolbar and choose between html and .txf downloadable versions.

To use this report, you must use Edit --> Tax Options to identify which form the taxing authority uses for each income or expense account. Note that you can see but not modify the "Tax related" checkbox in Edit --> Edit Account.

Saved Report Configurations

Selecting this will open a dialog with a list of available Saved Report Configurations. "Saved Report Configurations" means sets of customized settings for standard reports.

These sets must be saved by the user before they appear here. See Report Concepts above for instructions on how to save report configurations.

Account Report

The Account Report menu entry only appears when an account register is the active tab. This report produces a list of all transactions in the open register.

Note that if you conduct a search that retrieves several transactions, the results are displayed in a new search register, which can then be used to create a report for just those transactions.

Account Transaction Report

This report also only appears when an account register is the active tab. However, this report only lists transactions that have been selected (e.g. by mouse click) in the current register. If no transactions are selected, an empty report will be generated.

Using the Transaction Report

The Transaction Report can be heavily customised to produce most reports appropriate for personal finance and business bookkeeping purposes. It aims to retrieve and filter information from the database, and present transactions and totals, useful for the user and the accountant.

The following guide to the Transaction Report will assume the user has set up the chart of accounts according to conventional bookkeeping practice. For example, the following describes a typical household book with skeleton accounts. Further accounts will undoubtedly be necessary.

Table 10.3. Sample Chart of Accounts for the Transaction Report

Account Name	Account Type
Asset	ASSET (placeholder)
Asset:Bank	BANK
Asset:Property	ASSET
Liability	LIABILITY (placeholder)
Liability:Credit Card	CREDIT CARD
Liability:Home Loan	LIABILITY
Income	INCOME (placeholder)
Income:Salary	INCOME
Income:Interest	INCOME
Expense	EXPENSE (placeholder)
Expense:Groceries	EXPENSE
Expense:Auto	EXPENSE
Expense:Medical	EXPENSE
Equity	EQUITY (placeholder)
Equity:Opening Balances	EQUITY

Conventionally, the oldest transaction would be equity transfers from Equity:Opening Balances to Asset and Liability Accounts. Most subsequent transactions would be transfers from Income/Expense accounts

to Assets/Liability accounts (representing day-to-day activity e.g. receiving salary, paying utility bill), or transfers between assets and liability accounts (representing movements between loans and assets, e.g. paying credit card bill, receiving a loan).

The following use cases will be illustrated, and the options to be selected explained:

Using the Transaction Report to show previous year expenses

The Transaction Report can show how much was spent on expense accounts last year. This will usually be the most useful basic transaction report format. To create this report:

1. Open the report options, from the Accounts tab, click the Expense placeholder account and Select Children.
2. From the General tab, Choose relative dates “Start of Previous Year” and “End of Previous Year”.
3. From the Sorting tab, set Primary Key to Accounts, and enable Primary Key Subtotal.
4. Set the Secondary Key to Date, and set the Secondary Key Subtotal to None.

Secondary level grouping

The following will modify the above Transaction Report to use a secondary grouping strategy. The first grouping (i.e. Primary Key = Accounts, Subtotal = enabled) will group transactions from the same accounts, whereas the secondary grouping (i.e. Secondary Key = Date, Subtotal = Monthly) will also calculate monthly sums within each account.

1. Select options as above
2. From the Sorting tab, set Secondary Key Subtotal to Monthly

Using secondary grouping for periodic comparison

The Display / Subtotal Table adds a subtotal summary table, which will ease comparison of accounts across date periods. This displays the same subtotal calculations as the main table, presented in a grid structure.

In addition, if there are multiple primary-key groups (e.g. Date grouping with monthly subtotals, across multiple months) the subtotal table will also compute and display the primary-key grouping Average. The average is computed as the total amount *per row*, divided by the *number of columns*. This may cause confusion when computing monthly spend averages, for instance, if a month has no transactions and is not displayed in the table, it will *not* create a corresponding column in the table, therefore the average amount will not reflect a true monthly average.

1. Select options as above
2. From the Display tab, enable the Subtotal Table.

Use filtering to limit accounts and transactions

Accounts and transactions can be filtered for reporting according to account full name (e.g. ":Business:" will select account structure Income:Business:Sales, Income:Business:Grants, Expenses:Business:Rent, Expenses:Business:Utilities) or transaction description/notes/memo (select transactions tagged #gift). The filtering text may be either a standard string, or a POSIX regular expression.

1. From the Filter tab, complete the Account Name Filter, or Transaction Filter. Optionally toggle the regular expression check boxes to toggle full POSIX regex matching. Regular expressions will allow

more complex queries e.g. the transaction filter can be set to (#gift|#travel) which will filter transactions with either #gift or #travel. They can be complicated and are best learned from external guides.

Using the Transaction Report to generate a reconciliation statement.

This sortkey 'reconcile status' will separate reconciled, cleared and unreconciled transactions. This report may be useful in producing a printable reconciliation report.

Alternatively, the Reconciliation Report will preset these defaults and requires only the Accounts selection.

1. From the Accounts tab, select the relevant bank or credit card account
2. From the General tab, choose an appropriate date range e.g. past 3 months
3. From the Sorting tab, set the Primary Key to Reconcile Status, Primary Key Subtotal to enabled, and set the Secondary Key to Date. The Secondary Date Subtotal is left to None

Chapter 11. Capital Gains

This chapter will present some of the techniques used to keep track of the unrealized and realized gains and losses, better known as capital gains and losses.

Basic Concepts

This chapter will present some of the techniques used to keep track of the unrealized and realized gains and losses, better known as capital gains and losses.

Certain resellable assets can change value over time, such as stocks, bonds, houses, or cars. Some assets (eg: a stock) could increase in value, some (eg: a car) could decrease in value. It is important to be able to track some of these time-dependent asset valuations, this chapter will show you how.

Probably everything you own will increase or decrease in value over time. So, the question is for which of these assets should you track this changing value? The simple answer is that you only need to track this for items which could be sold for cash in the future or which relate to taxation.

Consumable and disposable items (eg: food, gas for your car, or printer paper) are obviously not involved. Thus, even though the new clothes you recently bought will certainly depreciate, you would not want to track this depreciation since you have no intention of reselling the clothes and there is no tax implications to the depreciation on clothing. So, for this example, the purchase of new clothes should be recorded as a pure expense... you spent the money, and it is gone.

Asset appreciation occurs when something you own increases in value over time. When you own an asset which has increased in value, the difference between the original purchase price and the new value is known as *unrealized gains*. When you sell the asset, the profit you earn is known as *realized gains* or *capital gains*. An example of an asset from which you could have unrealized gains, and eventually capital gains, is stock in a publicly traded company.

Estimating Valuation

As mentioned in the introduction to this chapter, capital gains are the profits received from the sale of an asset. This section will describe how to record capital gains in GnuCash.

The accounting methods for handling asset appreciation differs somewhat from depreciation because typically you are only concerned with the moment you sell the asset and realize the capital gains. This is opposed to the continuous nature of tracking depreciation. Capital gains are an important subject in the world of taxation, because governments tend to be quite interested in taxing capital gains in one manner or another.

Note

As always, there are exceptions. If you hold a bond that pays all of its interest at maturity, tax authorities often require that you recognize interest each year, and refuse this to be treated as a capital gain. Consult the appropriate tax codes to determine the preferred treatment for each type of asset you have which may be affected by capital gains taxes.

Estimating the increasing value of assets is generally not simple, because often it is difficult to know its exact value until the moment it is sold.

Securities traded daily on open markets such as stock exchanges are possibly the easiest type of asset to predict the value of, and selling the asset at market prices may be as simple as calling a broker and issuing a Market Order. On the other hand, estimating the value of a house is more difficult. Homes are sold less often than stocks, and the sales tend to involve expending considerable effort and negotiations, which means that estimates are likely to be less precise. Similarly, selling a used automobile involves a negotiation process that makes pricing a bit less predictable.

Values of collectible objects such as jewelry, works of art, baseball cards, and “Beanie Babies” are even harder to estimate. The markets for such objects are much less open than the securities markets and less open than the housing market. Worse still are one-of-a-kind assets. Factories often contain presses and dies customized to build a very specific product that cost tens or hundreds of thousands of dollars; this equipment may be worthless outside of that very specific context. In such cases, several conflicting values might be attached to the asset, none of them unambiguously correct.

The general rule of thumb in accounting for estimating unrealized gains (or losses) is that you should only revalue assets such as stocks which are readily sellable and for which there are very good estimates of the value. For all other assets, it is better to simply wait until you sell them, at which time you can exactly determine the capital gains. Of course, there is no hard rule on this, and in fact different accountants may prefer to do this differently.

Account Setup

As with most accounting practices, there are a number of different ways to setup capital gains accounts. We will present here a general method which should be flexible enough to handle most situations. The first account you will need is an *Asset Cost* account (GnuCash account type *Asset*), which is simply a place where you record the original purchase of the asset. Usually this purchase is accomplished by a transaction from your bank account.

In order to keep track of the appreciation of the asset, you will need three accounts. The first is an *Unrealized Gains* asset account in which to collect the sum of all of the appreciation amounts. The *Unrealized Gains* asset account is balanced by a *Unrealized Gains* income account, in which all periodic appreciation income is recorded. Finally, another income account is necessary, called a *Realized Gains* in which you record the actual capital gains upon selling the asset.

Below is a generic account hierarchy for tracking the appreciation of 2 assets, *ITEM1* and *ITEM2*. The *Assets:Fixed Assets:ITEM1:Cost* accounts are balanced by the *Assets:Current Assets:Savings Account* account, the *Assets:Fixed Assets:ITEM1:Unrealized Gains* accounts are balanced by the *Income:Unrealized Gains* account (similar for *ITEM2*).

- Assets
 - Current Assets
 - Savings Account
 - Fixed Assets
 - ITEM1
 - Cost
 - Unrealized Gain
 - ITEM2
 - Cost
 - Unrealized Gain
- Income
 - Realized Gains
 - Unrealized Gains

Example

Let's suppose you buy an asset expected to increase in value, say a Degas painting, and want to track this. (The insurance company will care about this, even if nobody else does.)

Start with an account hierarchy similar to that shown in the section called "Account Setup", but replace "ITEM1" with "Degas" and you can remove the "ITEM2" accounts. We will assume that the Degas painting had an initial value of one hundred thousand dollars. Begin by giving your self \$100,000 in the bank and then transferring that from your bank account to your *Assets:Fixed Assets:Degas:Cost* account (the asset purchase transaction). You should now have a main account window which appears like this:

Account Name	Type	Total
Assets	Asset	USD 100,000.00
Current Assets	Asset	USD 0.00
Fixed Assets	Asset	USD 100,000.00
Degas	Asset	USD 100,000.00
Cost	Asset	USD 100,000.00
Unrealized Gain	Asset	USD 0.00
Equity	Equity	USD 100,000.00
Income	Income	USD 0.00
Realized Gains	Income	USD 0.00
Unrealized Gains	Income	USD 0.00

USD, grand total: Assets: USD 100,000.00 Profits: USD 0.00

The asset appreciation example main window

Unrealized Gains

A month later, you have reason to suspect that the value of your painting has increased by \$10,000 (an unrealized gain). In order to record this you transfer \$10,000 from your *Accrued Gains* income account

(*Income:Unrealized Gains*) to your asset Unrealized Gains account (*Assets:Fixed Assets:Degas:Unrealized Gain*). Your main window will resemble this:

Account Name	Type	Total
Assets	Asset	USD 110,000.00
Current Assets	Asset	USD 0.00
Fixed Assets	Asset	USD 110,000.00
Degas	Asset	USD 110,000.00
Cost	Asset	USD 100,000.00
Unrealized Gain	Asset	USD 10,000.00
Equity	Equity	USD 100,000.00
Income	Income	USD 10,000.00
Realized Gains	Income	USD 0.00
Unrealized Gains	Income	USD 10,000.00

USD, grand total: Assets: USD 110,000.00 Profits: USD 10,000.00

Chart of Accounts after unrealized gain

Selling

Let's suppose another month later prices for Degas paintings have gone up some more, in this case about \$20,000, you estimate. You duly record the \$20,000 as an unrealized income like above, then decide to sell the painting.

Three possibilities arise. You may have *accurately estimated* the unrealized gain, *underestimated* the unrealized gain, or *overestimated* the unrealized gain.

1. Accurate estimation of unrealized gain.

Your optimistic estimate of the painting's value was correct. First you must record that the profits made are now realized gains, not unrealized gains. Do this by transferring the income from the *Income:Unrealized Gains* to the *Income:Realized Gains* account.

Secondly, you must credit your bank account with the selling price of the painting. This money comes directly from your *Assets:Fixed Assets:Degas* sub-accounts. Transfer the full *Assets:Fixed As-*

sets:Degas:Cost value into *Assets:Current Assets:Savings Account*, and the full *Assets:Fixed Assets:Degas:Unrealized Gain* into *Assets:Current Assets:Savings Account*.

These transactions should now appear as follows:

Table 11.1. Turning an Accrued Gain into a Realized Gain - Accurate Estimation

<i>Account</i>	<i>Transfer to</i>	<i>Transaction Amount</i>	<i>Account Total</i>
Income:Unrealized Gains	Income:Realized Gains	\$30,000	\$0
Assets:Fixed Assets:Degas:Cost	Assets:Current Assets:Savings Account	\$100,000	\$0
Assets:Fixed Assets:Degas:Unrealized Gains	Assets:Current Assets:Savings Account	\$30,000	\$0

This leaves the *Assets:Current Assets:Savings Account* account with a total of \$130000 and *Income:Realized Gains* with a total of \$30000.

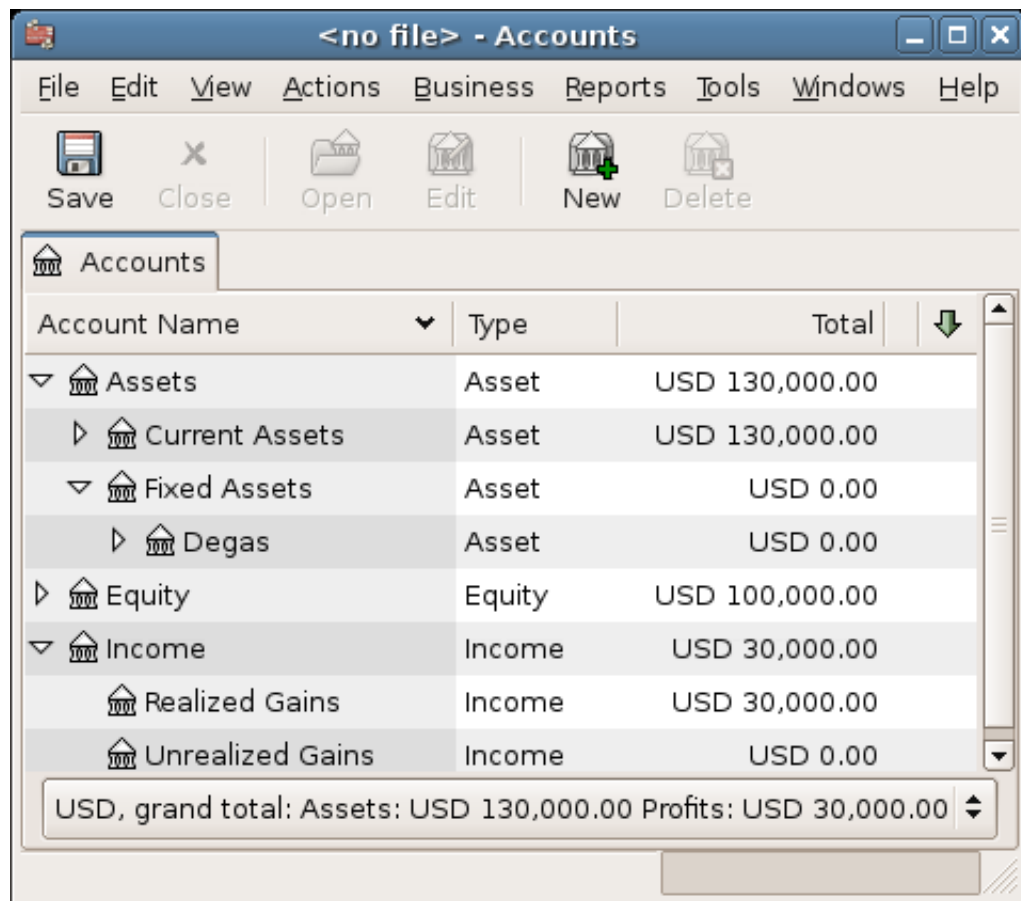


Chart of Accounts after realized gain

2. *Under estimation* of unrealized gain.

You were over-optimistic about the value of the painting. Instead of the \$130000 you thought the painting was worth you are only offered \$120000. But you still decide to sell, because you value \$120000 more than you value the painting. The numbers change a little bit, but not too dramatically.

The transactions should now appear as follows (observe the last transaction which balances the *Unrealized Gains* accounts):

Table 11.2. Turning an Accrued Gain into a Realized Gain - Underestimation

<i>Account</i>	<i>Transfer to</i>	<i>Transaction Amount</i>	<i>Account Total</i>
Income:Unrealized Gains	Income:Realized Gains	\$20,000	\$10,000
Assets:Fixed Assets:De-gas:Cost	Assets:Current Asset-s:Savings Account	\$100,000	\$0
Assets:Fixed Assets:De-gas:Unrealized Gains	Assets:Current Asset-s:Savings Account	\$20,000	\$10,000
Assets:Fixed Assets:De-gas:Unrealized Gains	Income:Unrealized Gains	\$10,000	\$0

This leaves the *Assets:Current Assets:Savings Account* account with a total of \$120000 and *Income:Realized Gains* with a total of \$20000.

3. *Over estimation of unrealized gain.*

You manage to sell your painting for more than you thought in your wildest dreams (\$150,000). The extra value is, again, recorded as a gain, i.e. an income.

The transactions should now appear as follows (observe the last transaction which balances the *Unrealized Gains* accounts):

Table 11.3. Turning an Accrued Gain into a Realized Gain - Overestimation

<i>Account</i>	<i>Transfer to</i>	<i>Transaction Amount</i>	<i>Account Total</i>
Income:Unrealized Gains	Income:Realized Gains	\$50,000	\$-20,000
Assets:Fixed Assets:De-gas:Cost	Assets:Current Asset-s:Savings Account	\$100,000	\$0
Assets:Fixed Assets:De-gas:Unrealized Gains	Assets:Current Asset-s:Savings Account	\$50,000	\$-20,000
Income:Unrealized Gains	Assets:Fixed Assets:De-gas:Unrealized Gains	\$20,000	\$0

This leaves the *Assets:Current Assets:Savings Account* account with a total of \$150,000 and *Income:Realized Gains* with a total of \$50,000.

Taxation

Taxation policies vary considerably between countries, so it is virtually impossible to say anything that will be universally useful. However, it is common for income generated by capital gains to not be subject to taxation until the date that the asset is actually sold, and sometimes not even then. North American home owners usually find that when they sell personal residences, capital gains that occur are exempt from taxation. It appears that other countries treat sale of homes differently, taxing people on such gains. German authorities, for example, tax those gains only if you owned the property for less than ten years.

Chris Browne has a story from his professional tax preparation days where a family sold a farm, and expected a considerable tax bill that turned out to be virtually nil due to having owned the property before 1971 (wherein lies a critical “Valuation Day” date in Canada) and due to it being a dairy farm, with some really peculiar resulting deductions. The point of this story is that while the presentation here is fairly simple, taxation often gets terribly complicated...

Chapter 12. Multiple Currencies

This chapter will show how to set up GnuCash accounts to use multiple currencies.

Basic Concepts

GnuCash supports over a hundred currencies, from the Andorran Franc to the Zimbabwe Dollar. For example, you can have a bank account set up in Euros, and another using Hong Kong Dollars.

Some of the issues which arise when using multiple currencies are, how do you transfer funds between accounts with different currencies? How do you calculate the overall value when you have mixed currency accounts? How do reports deal with mixed currencies?

Note

An alternative way to manage multiple currency accounts from the one presented in the next sections, is to use the trading accounts capabilities of GnuCash. This feature, which was introduced with GnuCash version 2.3.14, can be enabled by going to the Accounts tab under File → Properties.

For a complete guide on trading accounts, see this tutorial by Peter Selinger [<http://www.math-stat.dal.ca/~selinger/accounting/tutorial.html>].

Account Setup

Your default account currency is set in the Account tab under Edit → Preferences (GnuCash → Preferences on MacOS).

Similarly, GnuCash offers an option to set your preferred currency for displaying reports (like the balance sheet and income statement). The option is called Default Report Currency, and is in the Reports tab of the GnuCash Preferences screen. You'll want to set both options when you start using GnuCash because if (for example) your accounts are all in Canadian Dollars but the generated reports are all in US Dollars, the reports will just say that there are "no data/transactions (or only zeroes) for the selected time period".

When you create a new account, you have the option to define the commodity in which that account is denominated. For accounts denominated in a currency, you can specify any of the currencies supported by GnuCash by simply selecting it from the currency commodity list. You will notice that the default currency is the currency that is defined for the parent account of the new account.

As an example, let's set up a bank account scenario where you mostly work in US Dollars, but do also have a European bank account using the Euro currency, as well as one bank account in Hong Kong using Hong Kong Dollars. So, set up 3 bank accounts, one denominated in US Dollars, one using Euros, and the third in Hong Kong Dollars. One possible account structure for this would be:

- Assets (USD)
 - Current Assets (USD)
 - US Bank (USD)
 - European Bank (EUR)
 - HK Bank (HKD)
- Equity (USD)
 - Opening Balances (USD)
 - USD (USD)
 - EUR (EUR)

-HKD (HKD)

Note: the currency of each account is shown in parenthesis.

Since in this example you mostly work in USD, all of the parent accounts are set to USD. Of course, if you mostly work in Euros, you could change the currency of these parent accounts to EUR. The totals shown in the account tree window will always be converted to the currency of each particular account. Notice, we also set up 3 Starting Balances equity accounts, used to initially populate the 3 banks.

Note

You could also set up just a single Starting Balance account and use a currency transfer to populate the “different currency” accounts. However, this is more advanced option, which is explained in a later section (the section called “Purchase of an Asset with Foreign Currency”).

Below you see the result of this example, in which you start with USD 10,000, EUR 10,000 as well as HKD 10,000 in the three bank accounts. Notice that the total of the parent accounts only shows the value of the currency of sub-accounts with matching currencies. In other words, the Total Assets and Total Equity values only reflect USD amounts, because GnuCash has no way of evaluating the value of EUR or HKD yet. Once you set up exchange rates between the currencies, the parent accounts will calculate the converted value of all sub-accounts. See the later section (the section called “Recording and Updating Currency Exchange Rates”) on ways to do this.

Account Name	Type	Total	Total (USD)
Assets	Asset	\$10,000.00	\$10,000.00
Current Assets	Asset	\$10,000.00	\$10,000.00
European Bank	Bank	EUR 10,000.00	\$0.00
Hong Kong Bank	Bank	HKD 10,000.00	\$0.00
US Bank	Bank	\$10,000.00	\$10,000.00
Equity	Equity	\$10,000.00	\$10,000.00
Opening Balances	Equity	\$10,000.00	\$10,000.00
EUR	Equity	EUR 10,000.00	\$0.00
HKD	Equity	HKD 10,000.00	\$0.00
USD	Equity	\$10,000.00	\$10,000.00
\$, Grand Total:		Assets: \$10,000.00	Profits: \$0.00

Initial setup of 3 bank accounts with different currencies.

Notice that the "Total (Report)" column is being displayed. This is configured in the column header row, select Arrow down and select “Total(USD)”.

User-Defined Currencies

Usually when we talk about currencies, we mean government-backed currencies (or more precisely, currencies defined in ISO 4217 [http://en.wikipedia.org/wiki/ISO_4217]). GnuCash does not allow you to create your own currencies. If you want to track non-ISO currencies, you can use either of two workarounds, depending on which fits your needs better.

The **first method** is to treat these as if they were a security—that is, like a stock or mutual fund. The second method is to use one of the “dummy” currencies for them.

Let’s say for example that you want to track loyalty points you’ve earned by buying from a certain group of businesses. The account which tracks your loyalty points will be *Assets:Other:LoyaltyGroupRewardMiles*.

In the first method, you define a new security, of type FUND, called RewardMiles. This is pretty straightforward—when you create the new *LoyaltyGroupRewardMiles* account, just set the account type to Stock or Mutual Fund, click the Select... button next to the Security/currency: box, and click New to define a new security of type FUND.

This is not really what the stock and mutual fund account types are meant for, but GnuCash will allow it. The downside is that you’ll have to enter a “price” for every transaction involving this account, because GnuCash needs the prices to figure out the monetary value of the points and treat them as one of your assets.

In the **second method**, you use one of the dummy currencies to track the loyalty points. These currencies are “XTS (Code for testing purposes)” and “XXX (No currency)”. If you use one of these for your *LoyaltyGroupRewardMiles* account, you can enter transactions into the account without having to enter share prices for every transaction. And, you can keep using the same two dummy currencies to track all sorts of amounts—vacation dollars earned and used so far this year, vacation hours earned and used, health insurance benefits allowance used and remaining, and so on.

The drawback with this second method is that you cannot define exchange rates for the dummy currencies to convert them to ISO currencies. If you want to do that, you really should use the first method.

Recording and Updating Currency Exchange Rates

GnuCash allows you to update the Currency Exchange Rates both manually and automatically. This process is essentially the same as setting share prices for investments (see the section called “Setting Share Price”). In the following two sections we will work through both methods.

Before we start, let’s have a quick look at the Chart of Accounts

The screenshot shows the GnuCash Accounts window. The title bar reads "Unsaved Book - Accounts - GnuCash". The menu bar includes File, Edit, View, Actions, Business, Reports, Tools, Windows, and Help. Below the menu bar are icons for Save, Close, and other functions. The main area displays a tree view of accounts under the "Accounts" tab. The tree is expanded to show the following structure:

- Assets
 - Current Assets
 - European Bank (Bank, EUR 10,000.00, Total USD \$0.00)
 - Hong Kong Bank (Bank, HKD 10,000.00, Total USD \$0.00)
 - US Bank (Bank, \$10,000.00, Total USD \$10,000.00)
 - Equity
 - Opening Balances
 - EUR (Equity, EUR 10,000.00, Total USD \$0.00)
 - HKD (Equity, HKD 10,000.00, Total USD \$0.00)
 - USD (Equity, \$10,000.00, Total USD \$10,000.00)

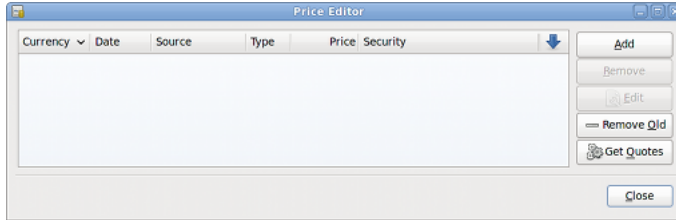
At the bottom of the window, a summary bar shows: \$, Grand Total: Assets: \$10,000.00 Profits: \$0.00

Initial set up of 3 bank accounts with different currencies.

As you see, the overall balances do not yet reflect any value for EUR or HKD holdings. Adding currency exchange rates will fix this.

Manually Updating Exchange Rates

Open the Price Editor by going to Tools → Price Editor.

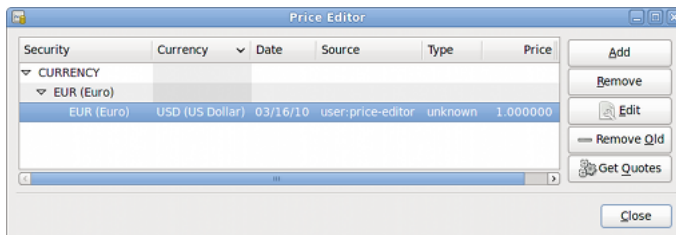


Price Editor Window.

Click on the Add button to add a new currency exchange rate. A window will appear in which you can set up a new exchange rate. This window should appear like this:

Add Price Editor Window

Set the Namespace to Currency and the Security to EUR (Euro). Then set the exchange rate between the selected security and the selected currency. The price box defines how many units of currency are required to purchase one unit of the security. In this case, how many dollars it will take to purchase one Euro. In this example, you will set the exchange rate to 1 EUR for 1 USD.



The Price Editor window after setting the exchange rate between Euros and US Dollars

Account Name	Type	Total	Total (USD)
Assets	Asset	\$20,000.00	\$20,000.00
Current Assets	Asset	\$20,000.00	\$20,000.00
European Bank	Bank	EUR 10,000.00	\$10,000.00
Hong Kong Bank	Bank	HKD 10,000.00	\$0.00
US Bank	Bank	\$10,000.00	\$10,000.00
Equity	Equity	\$20,000.00	\$20,000.00
Opening Balances	Equity	\$20,000.00	\$20,000.00
EUR	Equity	EUR 10,000.00	\$10,000.00
HKD	Equity	HKD 10,000.00	\$0.00
USD	Equity	\$10,000.00	\$10,000.00
\$, Grand Total:		Assets: \$20,000.00	Profits: \$0.00

Chart of Accounts after setting the exchange rate between Euros and US Dollars.

Observe that since you have no exchange rate for HKD, GnuCash doesn't convert the HKD accounts to USD. This will be added in the next section.

Automatic Updating Exchange Rates (How-To)

In the previous section you saw how to manually define a new currency exchange rate, but GnuCash includes an automatic price update feature, which will now be described.

Open the Price Editor by going to Tools → Price Editor.

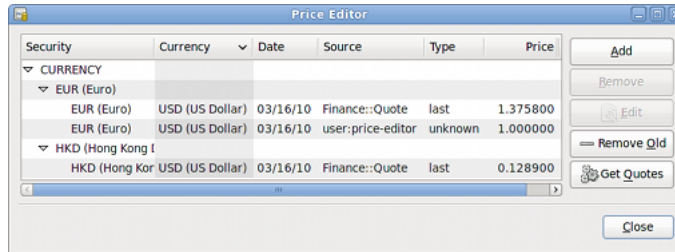
Security	Currency	Date	Source	Type	Price
CURRENCY					
EUR (Euro)					
EUR (Euro)	USD (US Dollar)	03/16/10	user:price-editor	unknown	1.000000

Price Editor Window before you obtain online quotes.

Click on the Get Quotes button to automatically load the various exchange rates you need.

Note

If the Get Quotes button is disabled, that means that the Perl module Finance::Quote is not installed. For information on how to install it, please see the section called “Configuring for Automatic Retrieval of Quotes”



Price Editor Window after we obtained online quotes.

GnuCash downloads exchange rates for all currencies that are in use in your various accounts. This will happen every time you click on Get Quotes or request GnuCash to download quotes as per the section called “Configuring for Automatic Retrieval of Quotes”

Now when you check the main Chart of Accounts you will see that GnuCash has automatically converted the HKD amount to USD amount on the parent accounts that are in USD, as well as on the Total (USD) column. Also the Euro accounts have been updated with the latest exchange rate.

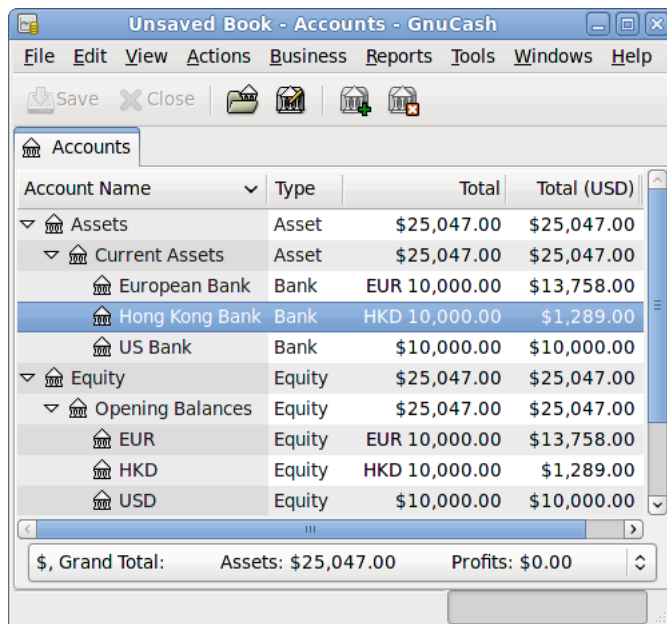


Chart of Accounts after we obtain online quotes.

Disabling Exchange Rate Retrieval

Whenever you create an account that uses a non-default currency, exchange rate retrieval will be automatically enabled for that currency. However, if you later delete that account, GnuCash will not automatically disable exchange rate retrieval for that currency.

If you have deleted the last account for a particular currency, and you do not wish to retrieve exchange rates for that currency anymore, do the following:

- Open the Securities window by selecting Tools → Security Editor.
- Make sure the Show National Currencies box is selected.
- Expand the CURRENCY row.

- Double click on the currency for which you want to disable exchange rate retrieval.
- Deselect the Get Online Quotes box and click OK.

Recording Purchases in a Foreign Currency

Purchases in a foreign currency can be managed in two different ways.

- 1) Use GnuCash's built-in currency exchange functions when you do your transactions. This is mainly used for one-time transactions, and nothing which happens regularly.
- 2) Use separate accounts to track transactions, where all involved accounts use the same currency. This is the recommended method, since it allows much better tracking and follow up. In this way, you do one currency exchange transaction, and after that you do normal transactions in the native currency.

The rest of this section will explain more based upon option 2).

Purchase of an Asset with Foreign Currency

You are using USD as your default currency. But, you decide to purchase a boat in Jamaica. To do this, you opened a bank account in Jamaica, moved some money from the US, and then purchased your boat.

To record this in GnuCash we use the following basic account structure:

- Assets (USD)
 - Current Assets (USD)
 - US Bank (USD)
 - Jamaican Bank (JMD)
 - Fixed Assets (USD)
 - Boat (JMD)
- Equity (USD)
 - Opening Balances (USD)
 - USD (USD)

Note: the currency of each account is shown in parenthesis.

First you need to transfer some money (\$10,000) to Jamaica, and you use your US bank account (with a balance of \$100,000) for that. The bank gives you an exchange rate of USD 1 = JMD 64, but charges you USD 150 to transfer the money.

The screenshot shows a GnuCash window titled 'Currency Exchange Updates - US Bank'. The transaction table is as follows:

Date	Memo	Account	R	Deposit	Withdrawal
2006-01-01	Opening Balance	Equity:Opening Balances:USD	n	100,000.00	100,000.00
2006-02-01	Transfer money to jamaica	Assets:Current Assets:US Bank	n		10,000.00
		Assets:Current Assets:jamaican Bank	n	9,850.00	
		Expenses:Service Charge	n	150.00	
		Assets:Current Assets:jamaican Bank	n	9,850.00	Withdrawal
		Assets:Current Assets:US Bank	n		10,000.00

Summary: Present: USD 90,000.00 Future: USD 90,000.00 Cleared: USD 0.00 Reconciled: USD 0.00 Projected Minimum: USD 90,000.00

Transfer money to Jamaica

Select the Jamaica transaction line (\$9,850.00), right click and select Edit Exchange Rate

A dialog window where the exchange rate in a currency transaction is specified

As Exchange Rate, you enter 1 USD = 64 JMD, since this is the rate your bank gave. Press ok in the Transfer Funds (Edit Exchange Rate) window, and then save this split transaction. Below is how it now looks in the main Chart of Accounts.

Account Name	Type	Total	Total (USD)
Assets	Asset	USD 99,850.00	USD 99,850.00
Current Assets	Asset	USD 99,850.00	USD 99,850.00
Jamaican Bank	Bank	JMD 630,400.00	USD 9,850.00
US Bank	Bank	USD 90,000.00	USD 90,000.00
Fixed Assets	Asset	USD 0.00	USD 0.00
Boat	Asset	JMD 0.00	USD 0.00
Equity	Equity	USD 100,000.00	USD 100,000.00
Opening Balances	Equity	USD 100,000.00	USD 100,000.00
USD	Equity	USD 100,000.00	USD 100,000.00
Expenses	Expens	USD 150.00	USD 150.00
Service Charge	Expens	USD 150.00	USD 150.00
USD, grand total:		Assets: USD 99,850.00	Profits: -USD 150.00

Chart of Accounts before purchasing the boat

You choose to buy a boat for JMD 509,000. To record this transaction in GnuCash, you will need to enter a simple transaction in *Assets:Current Assets:Jamaican Bank* withdrawing JMD 509,000 and transferring it to *Assets:Fixed Assets:Boat*

Account Name	Type	Total	Total (USD)
Assets	Asset	USD 99,850.00	USD 99,850.00
Current Assets	Asset	USD 91,896.88	USD 91,896.88
Jamaican Bank	Bank	JMD 121,400.00	USD 1,896.88
US Bank	Bank	USD 90,000.00	USD 90,000.00
Fixed Assets	Asset	USD 7,953.12	USD 7,953.12
Boat	Asset	JMD 509,000.00	USD 7,953.12
Equity	Equity	USD 100,000.00	USD 100,000.00
Opening Balances	Equity	USD 100,000.00	USD 100,000.00
USD	Equity	USD 100,000.00	USD 100,000.00
Expenses	Expens	USD 150.00	USD 150.00
Service Charge	Expens	USD 150.00	USD 150.00
USD, grand total:		Assets: USD 99,850.00	Profits: -USD 150.00

Chart of Accounts after purchasing the boat

The Chart of Accounts now reflects that your bank account has been reduced by JMD 509,000, and that your Fixed Assets boat account has been increased by the same amount. If you also have turned on the CoA (Column Choice) "Total (USD)" you will see the corresponding value in USD. The USD value will always reflect the latest currency exchange rate you have either automatically or manually retrieved.

Purchasing Foreign Stocks

This example will show how to purchase stocks that are priced in a currency other than your primary currency.

Assume that you live in New York and therefore you have set the default currency to USD. You decide to purchase a stock traded in Hong Kong that is priced in HKD. You would also like to be able to track the various income and expense amounts per stock and broker.

You decide to purchase stock in the Beijing Airport (Hong Kong). The ticker for this stock is 0694.HK on Yahoo! Since you wanted to track all various income and expense amounts, here is the necessary account structure:

Assets:Investments:Brokerage Accounts:Boom:0694.HK (0694.HK)
 Assets:Investments:Brokerage Accounts:Boom:Bank (HKD)
 Equity:Opening Balances:HKD (HKD)
 Expenses:Commissions:Boom.0694.HK (HKD)
 Income:Investments:Dividend:Boom:0694.HK (HKD)

The Chart of Accounts looks like this after creating all the needed accounts:

Account Name	Type	Commodity	Total	Total (USD)
Assets	Asset	US Dollar	USD 0.00	USD 0.00
Investments	Asset	US Dollar	USD 0.00	USD 0.00
Brokerage Account	Bank	US Dollar	USD 0.00	USD 0.00
Boom	Bank	Hong Kong Dollar	HKD 0.00	USD 0.00
0694.HK	Stock	Beijing Airport	0 0694.HK	USD 0.00
Bank	Bank	Hong Kong Dollar	HKD 0.00	USD 0.00
Equity	Equity	US Dollar	USD 0.00	USD 0.00
Opening Balances	Equity	US Dollar	USD 0.00	USD 0.00
HKD	Equity	Hong Kong Dollar	HKD 0.00	USD 0.00
Expenses	Expense	US Dollar	USD 0.00	USD 0.00
Commissions	Expense	US Dollar	USD 0.00	USD 0.00
Boom	Expense	Hong Kong Dollar	HKD 0.00	USD 0.00
0694.HK	Expense	Hong Kong Dollar	HKD 0.00	USD 0.00
Income	Income	US Dollar	USD 0.00	USD 0.00
Investments	Income	US Dollar	USD 0.00	USD 0.00
Dividend	Income	US Dollar	USD 0.00	USD 0.00
Boom	Income	Hong Kong Dollar	HKD 0.00	USD 0.00

USD, grand total: Assets: USD 0.00 Profits: USD 0.00

Chart of Accounts for international stocks

The stock definition can be seen in the Security Editor. (Tools+Security Editor)

Namespace	Symbol	Name	Source	Timezone
CURRENCY				
HK	0694.HK	Beijing Airport	yahoo_asia	Europe/London

Show National Currencies

Buttons: Add, Remove, Edit, Close

International securities

If you have not moved money (HKD 50,000) into the brokerage cash account (*Assets:Investments:Brokerage Account:Boom:Bank*), do so now, either using the Equity (HKD) account, or an existing bank account (Currency Transfer).

There are two ways to enter the actual purchase transaction: you can enter it from the cash account (shown below), or you can enter it from the stock account. *If entered from the stock account, the stock is assumed to be priced in the currency of the parent account.*

Let's assume that the stock price is HKD 3 per share. To record the purchase, open the brokerage's HKD cash account (*Assets:Investments:Brokerage Account:Boom:Bank*), and enter the following:

Buy Stocks

Assets:Investments:Brokerage Account:Boom:Bank	Withdrawal	50,000
--	------------	--------

Expenses:Investments:Commission:Boom_HKD	Deposit	500
Assets:Investments:Brokerage Account:Boom:0694	Deposit	49,500 (16,500 shares)

If the exchange rate dialog box does not appear automatically, right-click on the stock row, and select Edit Exchange Rate. Enter the number of shares (16,500) as the To Amount.

Setting the number of shares in the Transfer Funds dialog

When you return to the Chart of Accounts, you will see the purchased shares reflected in the stock account's total.

Account Name	Type	Commodity	Total	Total (USD)
Assets	Asset	US Dollar	USD 0.00	USD 0.00
Investments	Asset	US Dollar	USD 0.00	USD 0.00
Brokerage Account	Bank	US Dollar	USD 0.00	USD 0.00
Boom	Bank	Hong Kong Dollar	HKD 0.00	USD 0.00
0694.HK	Stock	Beijing Airport	16,500 0694.HK	USD 0.00
Bank	Bank	Hong Kong Dollar	HKD 0.00	USD 0.00
Equity	Equity	US Dollar	USD 0.00	USD 0.00
Opening Balances	Equity	US Dollar	USD 0.00	USD 0.00
HKD	Equity	Hong Kong Dollar	HKD 50,000.00	USD 0.00
Expenses	Expense	US Dollar	USD 0.00	USD 0.00
Commissions	Expense	US Dollar	USD 0.00	USD 0.00
Boom	Expense	Hong Kong Dollar	HKD 500.00	USD 0.00
Income	Income	US Dollar	USD 0.00	USD 0.00
USD, grand total:			Assets: USD 0.00	Profits: USD 0.00

Chart of Accounts with some international stocks

However, as you can see, the USD totals may be zero if GnuCash doesn't have an exchange rate between USD and HKD. To fix this, go to Tools → Price Editor and click the Get Quotes button to automatically retrieve the exchange rates you need.

Note

To reiterate, this example shows how stock can be purchased in any currency by entering the transaction in the register of the cash account used to make payment. It is also possible to enter the purchase in the stock account's register, but be aware that the stock is assumed to be priced in the currency of the stock account's parent.

In this example, the stock account's parent (*Assets:Investments:Brokerage Account:Boom*) is denominated in HKD. Since this is same currency as the stock price, the purchase can be safely entered in the stock account's register.

Tracking Currency Investments

Currency investment is when you decide to invest in a different country's currency, and hope that it will rise in value relative your own currency.

When you enter these transactions into GnuCash, you will have to decide on how much detail you would like to have.

If you are not interested in detail at all, a very simple account structure would suffice:

```
Assets:Investments:Currency:Bank (USD)
Assets:Investments:Currency:XXX (XXX)
```

You would simply enter transfers between the two accounts, noting exchange rates as you went.

But, if you do want to be able to track capital gains or losses, as well as any fees, you do need a more complex account structure, such as:

```
Assets:Investments:Currency:Bank (USD)
Assets:Investments:Currency:Currency Bank:XXX (XXX)
Expenses:Investments:Currency:Currency Bank:XXX (XXX)
Income:Investments:Currency Bank:Capital Gains:XXX (XXX)
```

Purchasing Currency

When purchasing another currency, you will buy a certain number of units of foreign currency with your own currency, at a particular rate. For example, you might buy USD 10,000 worth of Andorran Francs, at 5 Francs to the dollar, with a transaction fee of \$150.

Buy Currency

Assets:Investments:Currency:Bank	Withdrawal	10,000
Expenses:Investments:Currency:Currency Bank:ADF	Deposit	150
Assets:Investments:Currency:ADF	Deposit	49,250

The Exchange Rate window should pop up when you leave the last row in the split above (Currency Transaction). If this window does not pop up, right click on the row or select Actions, and select Edit Exchange Rate. In the Exchange Rate window you specify the exchange rate you got from the bank.

Selling a currency investment

Entering a currency sale is done in the same way as a currency buy except that you are now transferring money from the Currency account to your Savings account (very similar to the section called “Selling Shares”).

The proper recording of the currency sale *must* account for realized gains or losses. This can be done using a split transaction. In the split transaction, you must account for the profit (or loss) as coming from an *Income:Capital Gains* account (or *Expenses:Capital Loss*). To balance this income, you will need to enter the Currency asset twice in the split—once to record the actual sale (using the correct amount and correct exchange rate), and once to balance the income profit (setting the amount to 0).

In short, a selling Currency transaction should look something like below, seen again from the *Assets:Investments:Currency:Bank*.

Table 12.1. Selling a currency with a Split Transaction Scheme

Account	Deposit	Withdrawal
Assets:Investments:Currency:Bank	Sold Amount - Exchange Fee	
Expenses:Investments:Currency:Currency Bank:XXX	Exchange Fee	
Assets:Investments:Currency:XXX		Sold Amount
Income:Investments:Currency Bank:Capital Gains:XXX	[LOSS]	PROFIT
Assets:Investments:Currency:XXX	PROFIT (with To Amount = 0)	[LOSS (with To Amount = 0)]

Reconciling Statements in a Foreign Currency

Reconciling foreign statement are done in the same manner as when you reconcile your local bank statement. If you have created a Chart of Accounts structure which allows you to have the same currency per account as your statement, it is actually exactly the same as reconciling your local bank statement.

If you have different currencies you might have to manually convert the amounts from one currency to another while you reconcile the accounts.

Part III. Managing Business Finances

Table of Contents

13. Business Features	200
Introduction to Business Features	200
Business Setup	200
Account Setup	200
Setting up Sales Tax Tables	201
Enter Company Information	203
Setting Business Preferences	205
Setting Billing Terms	205
Accounts Receivable	206
System Components	207
Customers	207
Invoices	209
Customer Jobs	212
Process Payment	213
Changing the Invoice Appearance	214
Accounts Payable	216
System Components	216
Vendors	217
Bills	218
Vendor Jobs	221
Process Payment	221
Payroll	222
Basic Concepts	222
Account Setup	222
Payroll Protocol Sample	223
Business Payroll Example	225
14. Budgets	229
Basic Concepts	229
Terminology	229
Creating a Budget	229
Choose Which Accounts To Budget For	229
Choosing a Budget Period	230
Getting Started	230
Entering Budget Values	230
Budget Reporting	230
Budgeted Income Statement	231
Budgeted Balance Sheet	231
15. Other Assets	232
General Concepts	232
Other Assets Described	232
Current Assets	232
Long-term (Fixed) Assets	232
Current Assets	232
Short-term Receivables	233
Reimbursable Expenses	233
Travel Advances	234
Prepaid Premiums or Prepaid Rent	234
Suspense or Wash Accounts	235
Short or Long-term Assets	236
Long-term (Fixed) Assets	236
Land	236

Buildings	236
Leasehold Improvements	237
Vehicles or Equipment	237
Intangibles	237
16. Depreciation	238
Basic Concepts	238
Personal Finances	238
Business	238
Estimating Valuation	239
Depreciation Schemes	239
Account Setup	241
Example	242
17. Python Bindings	246
18. Importing Business Data	247
Importing Bills and Invoices	247
General	247
The format of the import file	247
Import your data	249
Feedback and statistics	250
What could go wrong?	250
Not supported invoice functionality	251
Importing Customers and Vendors	252
General	252
The format of the import file	252
Import your data	253
Feedback and statistics	254
What could go wrong?	254
Not supported customer/vendor functionality	255

Chapter 13. Business Features

Introduction to Business Features

The accounting needs of a business are quite different from that of a person. Businesses have customers that owe money, vendors which are owed money, employee payroll, more complex tax laws, etc. GnuCash offers business oriented features to facilitate these needs.

Accounts Receivable (A/R) are used by businesses to record sales for which they are not immediately paid. This is represented on the balance sheet as an asset, because the expectation is that you will receive payment soon.

Accounts Payable (A/P) record bills that businesses have received, but may not pay until later. This is represented on the balance sheet as a liability because you will have to pay for them.

A/R and A/P accounts are used primarily when you have a lot of bills and receipts flowing in and out, and do not want to lose track of them just because you do not pay or get paid right away. For most home users, A/R and A/P are too complicated to be worthwhile.

Business Setup

To set up GnuCash to handle accounts receivable or accounts payable for a company, these preliminary steps must be done.

- Build an appropriate Account Hierarchy.
- Set up Sales Tax Tables.
- Enter the company information in GnuCash.
- Set Business Preferences.
- Set up Billing Terms.

Account Setup

There are many different ways to set up a business account hierarchy. You can start with the Business Accounts setup which is available from the New Account Hierarchy assistant, or you could build one manually. To access the prebuilt Business Accounts, start GnuCash and click on File → New File and proceed until you see the list of available accounts, select Business Accounts.

The prebuilt Business Account hierarchy will not meet your needs exactly. You will need make adjustments to the hierarchy so that it will meet your particular needs. It should be close enough, however, that it is recommended you begin with it.

To use GnuCash's integrated accounts receivable system, you must first set up a special account (usually a sub-account under Assets) to hold transactions for receivables. This account must be defined with account type *A/Receivable*. GnuCash will use this account to place transactions related to the integrated accounts receivable system.

To use GnuCash's integrated accounts payable system, you must first set up an account (usually a sub-account under Liabilities) to hold transactions for payables. This account must be defined with account

type *A/Payable*. GnuCash will use this account to place transactions related to the integrated accounts payable system.

Basic A/R and A/P Account Hierarchy:

- Assets
 - Accounts Receivable
 - Checking
- Expenses
 - ...(as required)
- Income
 - Sales
- Liabilities
 - Accounts Payable
 - Tax
 - Tax on Purchases
 - Tax on Sales

You need to add additional accounts to this hierarchy for it to be useful.

Note

You do not need to create an individual A/R account for each customer. GnuCash keeps track of customers internally and provides per-customer reports based on the internal tracking. The same applies to A/P and vendors.

Note

If you deal with customers in more than one currency you will need a separate *Accounts Receivable* account for each currency.

If you deal with vendors in more than one currency you will need a separate *Accounts Payable* account for each currency.

Note

Transactions involving an Accounts Receivable or Accounts Payable account should not be added, changed or deleted in any way other than by using Post/Unpost Bill/Invoice/Voucher or Process Payment!

Setting up Sales Tax Tables

Sales Tax Tables can be used to determine the tax for customer invoices (or vendor bills).

A tax table entry can be assigned to an invoice line or bill line.

Set up distinct tax tables for customers and vendors.

The default invoice tax table entry can be assigned to each customer and the default bill tax table entry can be assigned to each vendor.

The default tax table entry for new customers or new vendors can be specified in the *Book Options* window which can be accessed by File → Properties → Business tab.

Sales Tax Tables are maintained using the *Sales Tax Table* editor which is accessed via menu Business → Sales Tax Table.

Figure 13.1. Sales Tax Tables Editor

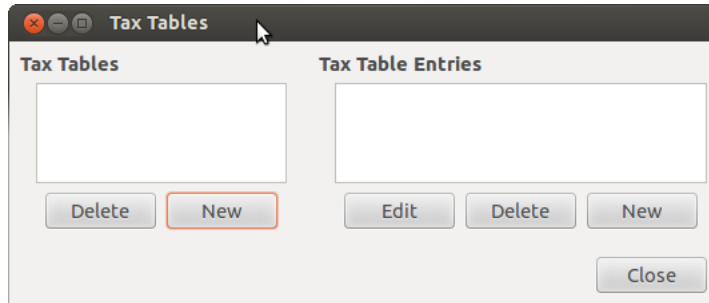
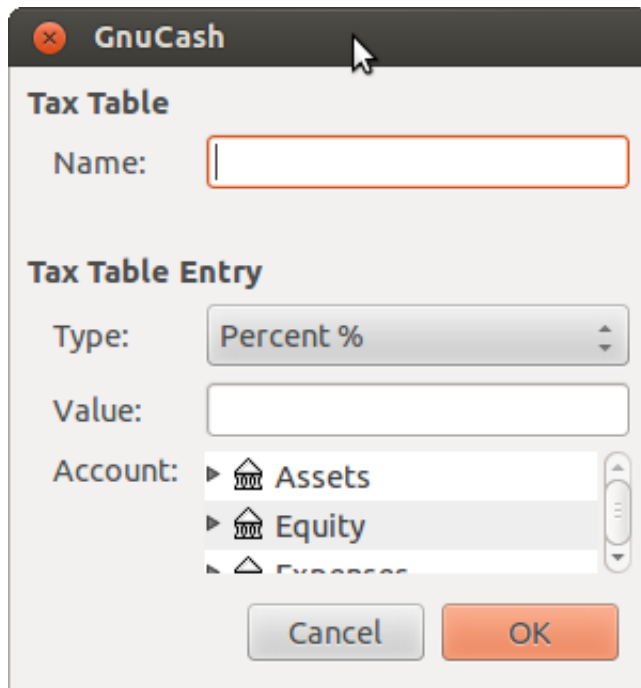


Figure 13.2. New Sales Tax Table Entry



- Name This is the tax table name.
- Type Either Percent % or Value \$.
- Value This is the percentage or value depending on Type.
- Account This is the account to which tax will be posted. For tax collected from customers, this should probably be a Liability account as it must be paid to the government. For tax paid to vendors, if tax laws allow tax paid to vendors to offset tax collected from customers, this should probably also be a Liability account (even though it will usually have a debit balance) so that the net tax owed to the government can be easily observed.

If you set up Tax on Purchases and Tax on Sales as subaccounts of Liabilities:Tax then the net tax will be rolled up and can be seen in the GnuCash Accounts tab.

If unsure about tax law requirements, get professional advice.

The following charts illustrate sample tax tables and may be used as starting points to determine the setup appropriate for a particular jurisdiction.

Table 13.1. Sample Tax Table Entries for EU country (e.g. 21% / 6% / 0% Belgium, 20% / 5% / 0% UK etc.) (2017)

Tax Table	Tax Table Entries [Asset/Liability]	Percentage or Amount
Standard VAT Sales	VAT:Sales:Standard [L]	21%
Reduced VAT Sales	VAT:Sales:Reduced [L]	6%
Zero-Rated VAT Sales	VAT:Sales:Zero [L]	0%
EC Sales	VAT:Sales:EC [L]	21%
	VAT:Sales:Reverse EC [L]	-21%
Standard VAT Purchases	VAT:Purchases:Standard [A]	21%
Reduced VAT Purchases	VAT:Purchases:Reduced [A]	6%
Zero-Rated VAT Purchases	VAT:Purchases:Zero [A]	0%

Table 13.2. Sample Tax Table Entries for Australia (2017)

Tax Table	Tax Table Entries [Asset/Liability]	Percentage or Amount
Standard GST Sales	GST:Sales:Standard [L]	10%
GST-free Sales	GST:Sales:Zero [L]	0%
Standard GST Purchases	GST:Purchases:Standard [A]	10%
GST-free Purchases	GST:Purchases:Zero [A]	0%

Table 13.3. Sample Tax Table Entries for Cook County, Illinois (2017)

Tax Table	Tax Table Entries [Asset/Liability]	Percentage or Amount
Chicago Sales Taxes	Taxes:Sales:State [L]	6.25%
	Taxes:Sales:City [L]	1.25%
	Taxes:Sales:County [L]	1.75%
	Taxes:Sales:Region [L]	1%

Enter Company Information

After you have built the account structure and defined your tax tables, designate your company in the GnuCash file. To do this, select the Business tab in the Book Options window, which can be accessed from File → Properties.

Figure 13.3. Entering Company Information

Book Options

Accounts Budgeting **Business** Counters

Company Name:

Company Address:

Company Contact Person:

Company Phone Number:

Company Fax Number:

Company Email Address:

Company Website URL:

Company ID:

Default Customer TaxTable:

Default Vendor TaxTable:

Fancy Date Format:

Months: Number Abbreviation Name

Years: Include Century

Format:

Sample: 29/08/2015

Here you can:

- Enter the name of your company along with contact information such as your phone number, fax number, e-mail address and website URL.
- Enter your company's tax payer id number in the Company ID field.

- Select default tax tables applicable to your most common customers and vendors.

Setting Business Preferences

Set options on the Business tab of the GnuCash preferences, which is accessed via Edit → Preferences (GnuCash → Preferences on MacOS). See Help manual chapter 10.3.3 Business Book Options Tab.

Setting Billing Terms

Billing Terms can be used to determine the payment due date and be a guide for determining discount for early payment of invoices (or vendor bills).

Note

As of GnuCash 2.6.7, Billing Terms are only partially supported. Date due is calculated using the Billing Terms but discount amount is not.

Discount for early invoice payment is not implemented. There are 2 ways this may be done, although neither is recommended, and professional advice should be used to confirm that regulations are being complied with:

- After creating and posting a payment which pays the invoice in full, manually edit the payment transaction (usually strongly discouraged) and split the payment to reduce it by the amount of the discount and create a compensating split in an income (discount) account.
- Alternatively, after creating and posting a payment for the discounted amount, create a credit note for the discount using a specific negative sales income (discount) account for the transfer account.

You can specify the billing terms on each invoice/bill. Invoice billing terms will default from the customer billing terms. Bill billing terms will default from the vendor billing terms.

Billing Terms are maintained using the Billing Terms Editor which is accessed via menu Business → Billing Terms Editor.

Figure 13.4. Billing Terms Editor

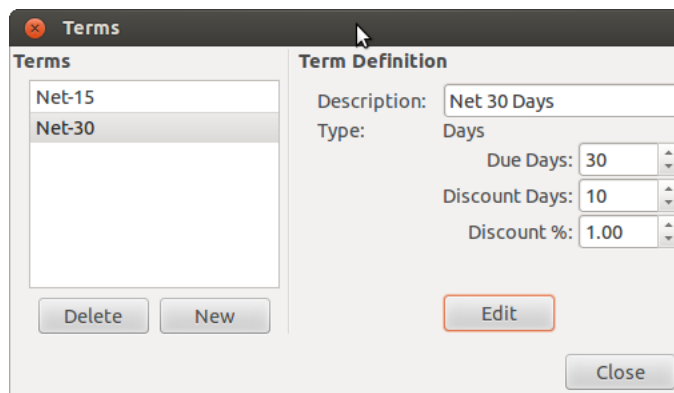


Figure 13.5. New Billing Term

- Name The internal name of the billing term. For some examples of billing term names and descriptions see <http://wiki.gnucash.org/wiki/Terms>.
- Description The description of the billing term, printed on invoices
- There are 2 types of billing terms, with different information to be entered
 - Type Days
 - Due Days The invoice or bill is due to be paid within this number of days after the post date
 - Discount Days The number of days after the post date during which a discount will be applied for early payment
 - Discount % The percentage discount applied for early payment
 - Type Proximo
 - Due Day The day of the month bills are due
 - Discount Day The last day of the month for the early payment discount
 - Discount % The discount percentage applied if paid early
 - Cutoff Day The cutoff day for applying bills to the next month. After the cutoff, bills are applied to the following month. Negative values count backwards from the end of the month.

Accounts Receivable

Accounts Receivable (or A/R) refers to products or services provided by your company for which payment has not yet been received.

System Components

Transactions generated by the A/R system are recorded within the Accounts Receivable account. *You should not work directly with this account.* Instead, you will work with the four integrated GnuCash A/R application components available through the Business → Customer sub-menu. These four components are:

- Customers are people or companies to whom you sell products or services on credit.
- Invoices represent the physical invoice you send to a customer to request payment. This invoice contains an itemized list of things you sold.

In addition, GnuCash also has support for Credit Notes which represent the inverse of Invoices. A credit note is usually handed to a customer to correct items that were incorrectly invoiced or returned.

Both document types will be set up using the same menu items. Credit notes were introduced starting with GnuCash stable release 2.6.0.

- Jobs (optional) is where you register Customer Jobs. Jobs are a mechanism by which you can group multiple invoices to a particular customer.
- Process Payments is used to register payments you received from a customer.

Customers

Customers are people or companies to whom you sell goods or services. They must be registered within the A/R system.

New

To register a new customer, enter the menu Business → Customer → New Customer. Fill in customer information, such as Company Name, Address, Phone, Fax, etc.

Figure 13.6. New Customer Registration Window

New Customer - ABC Inc ()

Customer | Billing Information | Shipping Address

Identification

Customer Number:

Company Name:

Active

Billing Address

Name:

Address:

Phone:

Fax:

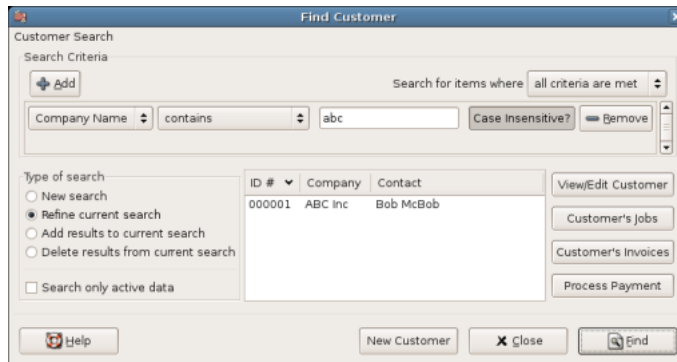
Email:

Notes

Help Cancel OK

Find and Edit

To search for an existing customer, use the Business → Customer → Find Customer window. You select a customer to View/Edit from the results of the search. This window is also used to look up customers when creating invoices and processing payments.

Figure 13.7. Find Customer Window

If many customers match the search criteria you provide, the search can be refined by running an additional search within the current results. The current result set is searched when the Refine Current Search radio button is selected. In fact, GnuCash selects this option for you after you run the initial search.

If the customer you are searching for does not match the supplied search criteria, change the search criteria, click the New Search radio button and then the Find button. The relevant step is the New Search selection. If the customer is not in the result of the original search, and you only search within this set, the customer cannot be found, regardless of new search criteria.

Note

To return a list of all registered active customers, set the search criterion to matches regex, and place a single dot "." in the text field area. Make sure Search only active data is checked, then click Find. The regular expression "." means to match anything.

Invoices

An invoice is the paperwork you send to a customer to request payment for products or services rendered. GnuCash can generate and track invoices.

A credit note is the paperwork you send to a customer to correct products or services rendered that were incorrectly invoiced. GnuCash can generate and track credit notes via the same menu entries as invoices.

Note

This section applies to both invoices and credit notes. In order to avoid repeating everything twice and to keep the text easier to read it will refer only to invoices. You can apply it equally to credit notes. Only where the behavior of credit notes differs from invoices this will be explicitly mentioned.

New

To send an invoice to a customer you must first create the new document. To create an invoice use Business → Customer → New Invoice. The New Invoice window must be filled in appropriately.

Figure 13.8. Creating a New Invoice

New Invoice

Invoice Information

Invoice ID

Date Opened ▼

Billing Information

Customer Select...

Job Select...

Billing ID

Terms ▲▼

Notes

Your personal notes go here.
Notes do not appear on printed invoices.

Help Cancel OK

When you click the OK button, the Edit Invoice window opens.

Edit

From the Edit Invoice window you can enter an itemized list of goods and services you sold on this invoice in a manner similar to how the account register works. For credit notes you enter an itemized list of goods and services you refunded instead.

Figure 13.9. Edit Invoice Window

documentation - Edit Invoice - 000001

File Edit View Actions Business Reports Tools Windows Help

Save Close Edit Invoice Enter Cancel Delete Duplicate Blank Post Unpost

Accounts Edit Invoice - 000001 x

Invoice Information

Invoice ID Edit...

Date Opened ▼

Active

Billing Information

Customer Edit...

Job Edit...

Billing ID

Terms ▼

Notes

Your personal notes go here.
Notes do not appear on printed invoices.

Invoice Entries

Date	Description	Action	Income Account	Quantity	Unit Price	Discount	Ts	Tt	Subtotal	Tax
04/19/06	X Nails	Material	Income:Sales	1,000.00	0.10	% <	X		100.00	0.00
04/19/06	X Hammer	Material	Income:Sales	1.00	500.00	% <	5.00	X	475.00	0.00
04/19/06									0.00	0.00

Total: \$575.00 Subtotal: \$575.00 Tax: \$0.00

Wednesday 19 April 2006

When you have finished entering all the items, you can Post and print the invoice.

Post

When you finish editing an invoice and are ready to print, you must Post the invoice. The invoice does not have to be posted immediately. In fact, you should only post an invoice when you are ready to print it. Posting an invoice places the transactions in an accounts receivable account.

Figure 13.10. Post Invoice Window

The screenshot shows a dialog box titled "Question" with a question mark icon. The text inside asks, "Do you really want to post the invoice?". Below this are several input fields: "Post Date" with the value "04/19/06", "Due Date" with the value "05/19/06", and "Description" which is empty. The "Post to Account" field is set to "Assets:Accounts Receiv:" and has a "New..." button next to it. There is a checked checkbox labeled "Accumulate Splits?". At the bottom of the dialog are two buttons: "Cancel" and "OK".

Find

To find an existing invoice, use the Business → Customer → Find Invoice menu item. From the results of the search, you can select an invoice to edit or view.

Note

Before you can edit a posted invoice, you will need to Unpost it.

One of the design goals in GnuCash's Account Receivable system was to allow different processes to get to the same state, so you can reach an invoice from different directions based on the way you think about the problem:

- You can search for the customer first, then list their invoices.
- You can search for invoices by number or by company name.
- You can list invoices associated with a customer job.

Print

After you post an invoice, you should print it and send it to your customer. To print an invoice use File → Print Invoice menu item.

Figure 13.11. Invoice Print Output

Invoice #000001							
Invoice Date: 04/19/06				My Company			
Due Date: 05/19/06				9876 Second St.			
ABC Inc				Othercity, SS 12345			
123 First Ave.				April 19, 2006			
Somecity, SS 12345							
Reference: ABC Purchase Order # 12988							
Terms: 30 Days - same as cash							
Date	Description	Charge Type	Quantity	Unit Price	Discount	Taxable	Total
04/19/06	Nails	Material	1,000.00	\$0.10	0.00%		\$100.00
04/19/06	Hammer	Material	1.00	\$500.00	5.00%		\$475.00
Subtotal							\$575.00
Tax							\$0.00
Amount Due							\$575.00
Thank you for your patronage							

Note

You can modify the appearance of the invoice, IE: add a company logo, etc. To do so, see the the section called “Changing the Invoice Appearance”.

Invoices can also be printed from the main window by selecting Reports → Business Reports → Printable Invoice from the main menu. The resulting report window states that no valid invoice is selected. To select the invoice to print:

1. Use the Options *Toolbar* button or select Edit → Report Options from the main menu.
2. Select the General tab of the report options dialog.
3. Click the Select button next to the Invoice Number field.
4. Search for the invoice as usual.

You can also print invoices from within the Process Payment dialog. See the the section called “Process Payment” for instructions on how to do so.

Assign Starting Invoice Number

By default, GnuCash starts with invoice number 1 and increments from there. You can manually type an invoice number into the text box each time you create an invoice, but this gets tiring and sooner or later leads to duplicate numbers.

You can change the starting invoice number if it is important you. Use File → Properties, access the Counters tab, change the Invoice number value to be one less than your desired starting invoice number and click the OK button or the Apply button.

Customer Jobs

Customer Jobs are used to group multiple invoices and credit notes to the same customer. Use of the Customer Jobs feature is optional. The feature is useful when you have multiple jobs for the same customer, and would like to view all the invoices and credit notes related to a single job.

Figure 13.12. New Customer Job

The screenshot shows a dialog box titled "New Job - ABC Deck Construction ()". It is divided into three sections:

- Job Information:** Contains two text input fields. "Job Number" is empty. "Job Name" contains the text "ABC Deck Construction".
- Owner Information:** Contains two text input fields. "Customer" contains "ABC Inc" and has a "Select..." button to its right. "Billing ID" contains "ABC Purchase Order # 12988".
- Active:** Contains a checked checkbox labeled "Job Active".

At the bottom of the dialog are three buttons: "Help" (with a question mark icon), "Cancel" (with a red X icon), and "OK" (with a green checkmark icon).

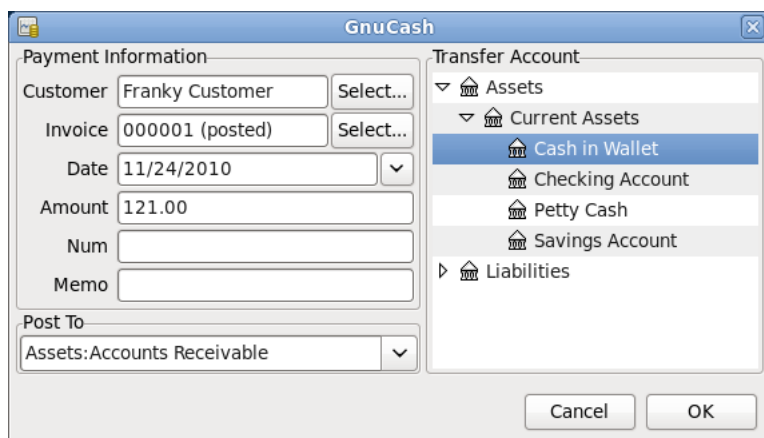
To use customer jobs, you must create them using the Business → Customer → New Job menu item. You will see the New Job window.

To edit an existing customer job, use the Business → Customer → Find Job menu item. Select the desired job in the search results, and click the View/Edit Job button.

To select from the invoices and credit notes associated with a given job, use Business → Customer → Find Job menu item. Select the desired job in the search results and click the View Invoices button. A window listing invoices and credit notes associated with this job appears. Select an invoice or credit note and click the View Invoice button to open an invoice editor in the main application window.

Process Payment

Eventually, you will receive payment from your customers for outstanding invoices. To register these payments, use the Process Payment application found in Business → Customer → Process Payment.

Figure 13.13. Process Customer Payment

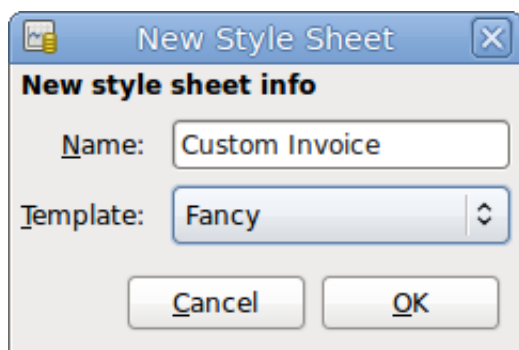
Process Payment from Customer

Changing the Invoice Appearance

The default Invoice style, as shown in the section called “Print”, is fairly barren. The default invoice style leaves the top part of the form blank, so you can print on company letterhead paper. There are some things you can do to change invoice appearance.

Use File → Properties to enter your Company information in the Business tab of the Book Options window. Some of the entered information is printed on the right side of invoices.

To add a customized background, heading banner or logo to invoices, modify the invoice style sheets. To do this, go to Edit → Style Sheets and select the New button in the Select HTML Style Sheet window that will appear. You will then see a window like this:

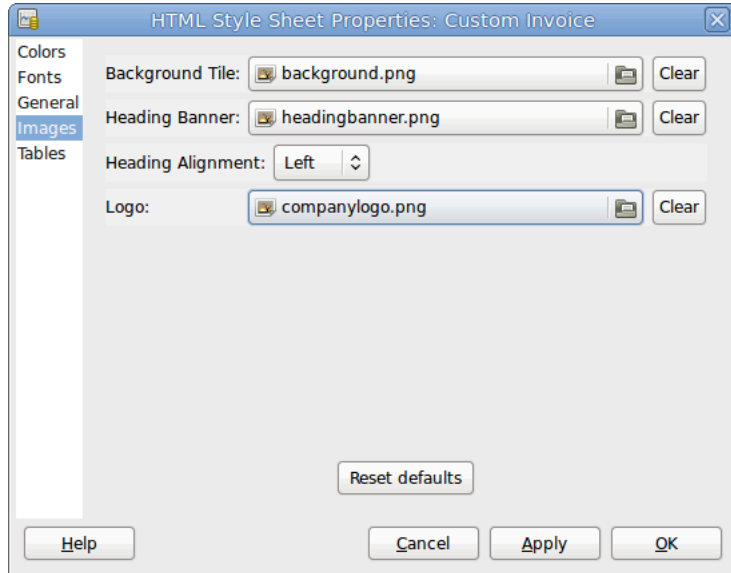
Figure 13.14. The New Style Sheet Window

Give a Name to the new style sheet (e.g. Custom Invoice) and select the Fancy Template. When you click the OK button, the HTML Style Sheet Properties window is displayed. This window presents you five sections listed in the left pane: Colors, Fonts, General, Images, and Tables. The Colors section allows you to change the colors of various items of the invoice. The Fonts section lets you set fonts type and dimensions. The General section allows you to set the Preparer and Prepared for information, and to Enable Links. The Images section allows you to import graphics into the style sheet. The Tables section allows you to adjust the spacing around the tables which make up the invoice.

To include a company logo, banner heading and background image, use your favorite graphics application such as The Gimp or OpenOffice Draw to save the images in either GIF or PNG format. Then import them into the style sheet using the Images section described above.

Below is an example that imports all three types of images.

Figure 13.15. HTML Style Sheets Example Window



The HTML Style Sheets window with an example Background Tile, Heading Banner, and Logo.

Note

The images are placed in the invoice as follows. The Background Tile is tiled to become the background image, the Heading Banner goes to above the invoice text, and the Logo is placed in the upper left corner of the invoice to the left of the Heading Banner. You will probably have to try a few different sized images until you get the invoices to print nicely. Some sizing suggestions are that the Logo should be 1 square cm (~0.5 inch), and the Heading Banner should be 15 cm (~6 inches) wide and 1 cm (~0.5 inch) tall.

With the style sheet configured, when you print the invoice, you select the style sheet to use from the Options menu. Below is the resultant invoice after applying the style sheet demonstrated above.

Figure 13.16. HTML Style Sheets Example Output

My Company Logo **Heading Banner**

Invoice #000001
 Invoice Date: 04/19/06
 Due Date: 05/19/06

My Company
 9876 Second St.
 Othercity, SS 12345
 April 23, 2006

ABC Inc
 123 First Ave.
 Somecity, SS 12345

Reference: ABC Purchase Order # 12988
 Terms: 30 Days - same as cash

Date	Description	Charge Type	Quantity	Unit Price	Discount	Taxable	Total
04/19/06	Nails	Material	1,000.00	\$0.10	0.00%		\$100.00
04/19/06	Hammer	Material	1.00	\$500.00	5.00%		\$475.00
Subtotal							\$575.00
Tax							\$0.00
Amount Due							\$575.00

Thank you for your patronage

The hideous invoice which results from the graphics selected in the style sheet.

Accounts Payable

Accounts Payable (or A/P) refers to the accounting of products or services which a company has bought and needs to pay for.

System Components

GnuCash has an integrated accounts payable system. The transactions generated by the A/P system are placed within the Accounts Payable account, as a record of what occurs. Generally you do not directly work with this account but use the four integrated GnuCash A/P application components. The A/P components are available from the Business → Vendor sub-menu. These A/P components are:

- Vendors are people or companies from which you buy products or services on credit.
- Bills represent the physical bills vendors send to request payment from you. A bill contains an itemized list of things you purchased.

In addition, GnuCash also has support for Credit Notes which represent the inverse of Bills. A credit note is usually received from a vendor to correct items that were erroneously billed or returned.

Both document types will be set up using the same menu items.

- Jobs (optional) is where you register Vendor Jobs. Jobs are mechanism by which you can group multiple bills from a particular vendor.
- Process Payments is where you register payments to a vendor to whom you owe money.

The following sections introduce the individual Accounts Payable application components.

Vendors

A vendor is a company or person from whom you purchase goods or services. Vendors must be registered within the A/P system.

New

To register a new vendor, select the Business → Vendor → New Vendor menu item. Fill in general information about the vendor, such as Company Name, Address, Phone, Fax, etc. Below is a list of the other options:

This is what the New Vendor registration window looks like:

Figure 13.17. New Vendor Registration Window

New Vendor - BCA Corp ()

Vendor | Payment Information

Identification

Vendor Number:

Company Name:

Active

Payment Address

Name:

Address:

Phone:

Fax:

Email:

Notes

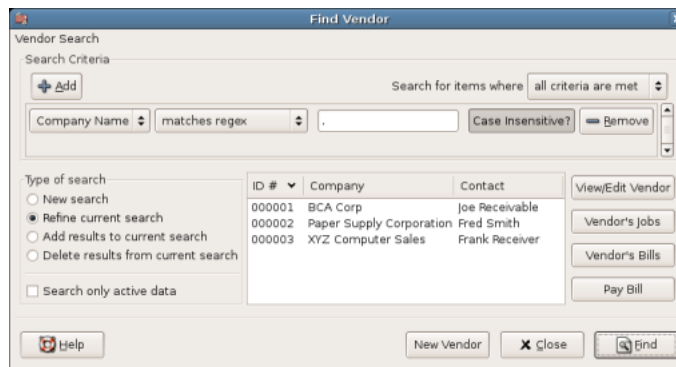
Track any other comments here.

Help Cancel OK

Find and Edit

To search for an existing vendor, use the Business → Vendor → Find Vendor window. You select a vendor to View/Edit from the results of the search. This window is also used to look up a vendor when entering bills and processing payments.

Figure 13.18. Find Vendor Window



If many vendors match the search criteria you provide, the search can be refined by running an additional search within the current results. The current result set is searched when the Refine Current Search radio button is selected. In fact, GnuCash selects this option for you after you run the initial search.

If the vendor you are searching for does not match the supplied search criteria, change the search criteria, click the New Search radio button and then the Find button. The relevant step is the New Search selection. If the vendor is not in the result of the original search, and you only search within this set, the vendor cannot be found, regardless of new search criteria.

Note

To return a list of all registered active vendors, set the search criterion to matches regex, and place a single dot “.” in the text field area. Make sure Search only active data is checked, then click Find. The regular expression “.” means to match anything.

Bills

A bill is a request for payment you receive from a vendor. GnuCash can track bills.

A credit note is the document you receive from a vendor to correct products or services rendered that you were incorrectly charged for on a bill. GnuCash can generate and track credit notes via the same menu entries as bills.

Note

This section applies to both bills and credit notes. In order to avoid repeating everything twice and to keep the text easier to read it will refer only to bills. You can apply it equally to credit notes. Only where the behaviour of credit notes differs from bills this will be explicitly mentioned.

New

When you receive a bill from a vendor and want to enter it into GnuCash, you must create a new bill. To create a new bill use the Business → Vendor → New Bill menu item, and fill in the resulting window appropriately.

Figure 13.19. New Bill Registration Window

The screenshot shows a window titled "New Bill" with the following fields and controls:

- Invoice Information:**
 - Invoice ID:
 - Date Opened:
- Billing Information:**
 - Vendor: - Job: - Billing ID:
 - Terms:
- Default Chargeback Project:**
 - Customer: - Job:
- Notes:**
 - Additional notes about the bill go here. |

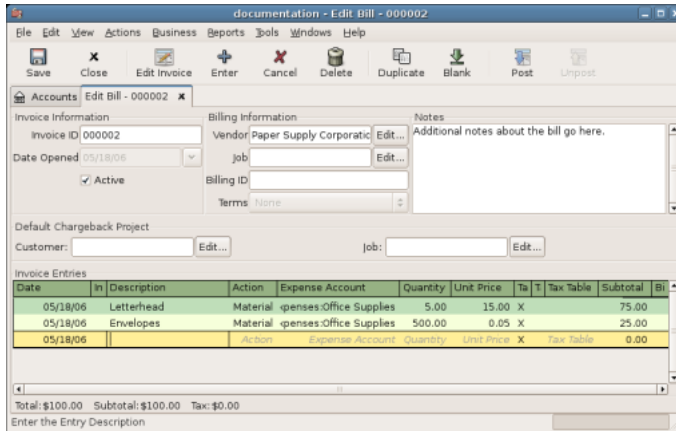
At the bottom of the window are three buttons:

When you click the OK button the Edit Bill window opens.

Edit

From the Edit Bill window you can enter an itemized list of goods and services you purchased, in a manner similar to how the account register works. For credit notes you enter an itemized list of goods and services the vendor refunded instead.

Figure 13.20. Edit Bill Window



When you have finished entering all the items, Post the bill.

Post

When you finish editing a bill, you should Post the bill. You do not have to post the bill, you can close it and return to it later. You have to post the bill eventually. Posting a bill places its transactions into an accounts payable account. The Post Bill window appears and asks you to enter information:

Figure 13.21. Post Bill Window



Find

To find an existing bill, use the Business → Vendor → Find Bill menu item. From the results of the search, you can select a bill to edit, or view.

Note

Before you can edit a posted bill, you will need to Unpost it.

Note

There are other ways to access an existing bill. These are similar to accessing invoices for your customers. See the section called “Find” for more information.

Vendor Jobs

Vendor Jobs are used to group multiple bills and credit notes from a single vendor. Use of the vendor jobs feature is optional. The feature is useful when you have multiple jobs for the same vendor, and would like to view all the bills and credit notes for a single job.

To use vendor jobs, you must create them using the Business → Vendor → New Job menu item. You will see the New Job window.

Figure 13.22. New Vendor Job



To edit an existing vendor job, use the Business → Vendor → Find Job menu item. Select the desired job in the search results, and click the View/Edit Job button.

To select from the bills associated with a given job, use Business → Vendor → Find Job menu item. Select the desired job in the search results and click the View Invoices button. A window listing bills and credit notes associated with this job appears. Select a bill or credit note and click the View Invoice button to open a bill editor in the main application window.

Process Payment

Eventually, you need to pay your bills. To do so, use the Process Payment application found in Business → Vendor → Process Payment.

Below is the GnuCash Accounts Payable payment window.

Figure 13.23. Process Vendor Payment

Process Payment to Vendor

Payroll

Payroll is a financial record of wages, net pay, paid vacations, and deductions for an employee. This section demonstrates how to track payroll using GnuCash.

Basic Concepts

Payroll is a financial record of wages, net pay, paid vacations, and deductions for an employee. Basically, anything that relates to giving money or benefits to an employee. Payroll is one of the more complex tasks in accounting, because there are many different accounts, people, and agencies involved in paying salaries.

Payroll is typically accounted for as an expense. Sometimes accountants “store” some payroll expenses in a short term liability account. This is useful for things such as payroll taxes, which may be paid at a different time than the employee. The employee might get paid biweekly, while taxes are paid quarterly. This chapter presents a methodology which expenses payroll immediately for salaries, but stores taxes in liability accounts.

Note

GnuCash does not have an integrated payroll system. While you can track payroll expenses in GnuCash, the calculation of taxes and deductions has to be done outside of GnuCash.

Account Setup

Local tax law must be considered when setting up accounts. Because there are many different ways payroll taxes are handled throughout the world, this section presents a very simple structure. From this, you should be able to adapt your particular payroll deductions setup.

Assume that you must pay 2 taxes, Tax1 and Tax2, and that each has an employee contribution and an employer contribution.

The employee’s salary and these two taxes are expense accounts. The tax components are liability accounts. The tax liability accounts are where you accumulate the taxes withheld for all of your employees. The taxes are later paid to the appropriate government agency.

Simple Payroll Account Layout:

- Assets
- Checking
- Liabilities
- Tax1 (short term “storage” account)
- Tax2 (short term “storage” account)
- Expenses
- Salaries
- Tax1
- Tax2

Note

Resist the temptation to create per-employee sub-accounts to track individual salaries. Creating a sub-account for each employee leads to unmanageably large lists of accounts. Imagine the account structure after a few years of employees coming and going. It is much simpler to keep all of your employees’ payroll records within a single account (*Expenses:Salaries* for example) and use reports to view per-employee information.

The Transaction report can be used to sort and total by description or memo (but not by part of them).

To report salary transactions for a specific employee where the employee name or code is entered in the transaction description or memo, use the Find Transaction assistant (Edit → Find) to select the transactions, and then report on them using Reports → Account Report . Further formatting or analysis may be done by copying and pasting the report into a spreadsheet. See Find Transaction [ghelp:gnucash-help?tool-find-txn] in the GnuCash Help Manual.

Payroll Protocol Sample

GnuCash does not have an integrated payroll system. GnuCash can track your payroll expenses, but you need to develop a payroll protocol and perform the calculations outside of GnuCash, in a spreadsheet for example. In this section, one such protocol is presented. You can use the sample protocol as a model.

Step 1: Deductions list

The first step to the payroll protocol is to create a list of all the possible taxes and deductions for each employee. Each entry should include definitions and formulas for calculating each value. Once the protocol is established it needs to be changed only when payroll laws or tax rates change.

In the proposed scenario, such a list would look like this:

- *E_GROSS_SALARY* - Employee gross salary
- *E_TAX1* - Employee contribution to tax1 (X% of *E_GROSS_SALARY*)
- *E_TAX2* - Employee contribution to tax2 (X% of *E_GROSS_SALARY*)
- *C_TAX1* - Company contribution to tax1 (X% of *E_GROSS_SALARY*)
- *C_TAX2* - Company contribution to tax2 (X% of *E_GROSS_SALARY*)

Note

The employee’s net salary (*E_NET_SALARY*) is defined as *E_GROSS_SALARY* - *E_TAX1* - *E_TAX2* and need not be placed in this list since it is composed of items that already exist.

Place the actual formulas for calculating each deduction in this list. Sometimes these formulas are quite complex, and sometimes they simply say "look it up in table XYZ of the tax codes".

Notice that you can calculate some interesting values using the above definitions. One such value is the total cost to the company: $E_GROSS_SALARY + C_TAX1 + C_TAX2$.

Step 2: Create the Transaction Map

When you record payroll in GnuCash, do so with a single split transaction. This split transaction populates the appropriate expense and liability accounts. If you need to look the payroll details at a later time, open the split transaction.

With the deductions list from above, an employee split transaction map can be generated. Each of the items in the list is mapped to a GnuCash account.

Table 13.4. Payroll Transaction Map

Account	Increase	Decrease
Assets:Checking		E_NET_SALARY
Expenses:Salaries	E_GROSS_SALARY	
Liabilities:Tax1		E_TAX1
Liabilities:Tax2		E_TAX2
Expenses:Tax1	C_TAX1	
Liabilities:Tax1		C_TAX1
Expenses:Tax2	C_TAX2	
Liabilities:Tax2		C_TAX2

Note that the C_TAX1 and C_TAX2 components have entries in the both the liability and expense accounts. The company component of each tax is expensed at the time of payroll, but remains a liability until taxes are due.

Step 3: Pay the Employee

Go to the account from which the employee will be paid, for example your *Assets:Checking* account. Open a split transaction and enter the real values using the Transaction Map above as a guide. Repeat this for all employees.

Tip

This manual process is tedious, especially if you have a large number of employees.

One GnuCash tool you certainly want use when entering employee payroll is duplicate transaction (use the Duplicate *Toolbar* button). This saves you from having to enter all the transaction splits for each employee. You still need to change the amounts of money to match each employee's real payroll values, but you will not have to build the split for each employee.

If payroll transactions do not change significantly every pay period, you can also use the duplicate transaction feature to duplicate each employee's most recent payroll transaction for the current pay period. If you find you are doing so all the time, read about the Schedule Transactions feature and save even more time!

Step 4: Pay the Government

The final thing to do is to pay the taxes to the government. The liability accounts have been collecting the taxes for various government agencies, and periodically you need to send a check to the government to pay this charge. To do so, you simply enter a 2 account transaction in (for example) your checking account to pay off the tax liability. The transaction is between the checking account and the liability account, no expense account is involved. The expense accounts are charged at the time the tax liability is recorded.

Business Payroll Example

Using the account setup seen previously, let's go through an example. Assume that there are 2 employees (E1 and E2) who each earn \$1000 per month gross salary. The employee contribution to Tax1 and Tax2 are 10% and 5% respectively. The company contribution to Tax1 and Tax2 are 15% and 10% each on top of the employee's gross salary.

Starting with \$50k in the bank, and before doing any payroll, the account hierarchy looks like this:

Figure 13.24. Payroll Example: Initial Setup

Account Name	Type	Total
Assets	Asset	\$50,000.00
Checking	Asset	\$50,000.00
Equity	Equity	\$50,000.00
Starting Balances	Equity	\$50,000.00
Expenses	Expense	\$0.00
Salaries	Expense	\$0.00
Tax1	Expense	\$0.00
Tax2	Expense	\$0.00
Liabilities	Liability	\$0.00
Tax1	Liability	\$0.00
Tax2	Liability	\$0.00

\$. grand total: Assets: \$50,000.00 Profits: \$0.00

The deductions list for employee 1 are:

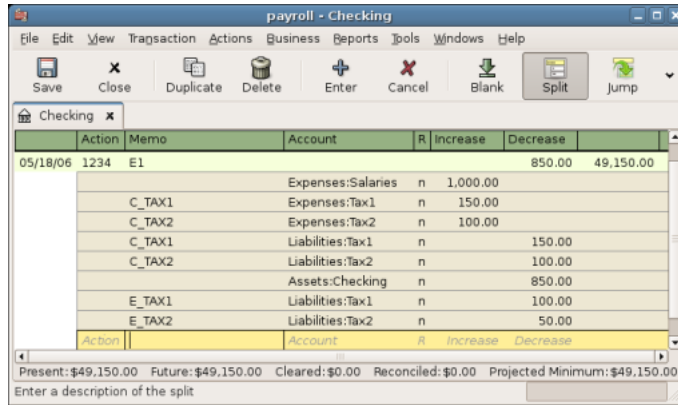
- *E_GROSS_SALARY* - Employee gross salary - \$1000
- *E_TAX1* - Employee contribution to tax1 - \$100 (10% of *E_GROSS_SALARY*)
- *E_TAX2* - Employee contribution to tax2 - \$50 (5% of *E_GROSS_SALARY*)
- *C_TAX1* - Company contribution to tax1 - \$150 (15% of *E_GROSS_SALARY*)
- *C_TAX2* - Company contribution to tax2 - \$100 (10% of *E_GROSS_SALARY*)

Table 13.5. Payroll Transaction Map for Employee 1

Account	Increase	Decrease
Assets:Checking		\$850 (E_NET_SALARY)
Expenses:Salaries	\$1000 (E_GROSS_SALARY)	
Liabilities:Tax1		\$100 (E_TAX1)
Liabilities:Tax2		\$50 (E_TAX2)
Expenses:Tax1	\$150 (C_TAX1)	
Liabilities:Tax1		\$150 (C_TAX1)
Expenses:Tax2	\$100 (C_TAX2)	
Liabilities:Tax2		\$100 (C_TAX2)

From the checking account, enter the split transaction for employee 1. It should look like this:

Figure 13.25. Payroll Example: Employee Split Transaction



The Split Transaction for Employee 1

Tip

When paying employees, enter only the employee name in the Description area. If you decide to use GnuCash’s check printing capabilities, the check is automatically made out to the correct employee. If you want to record other information in the transaction besides the employee name, use the Notes area, available when viewing the Register in double-line mode.

Repeat this for the second employee, which leaves the account hierarchy looking like this:

Figure 13.26. Payroll Example: Accounts After Salaries Paid

Account Name	Type	Total
Assets	Asset	\$48,300.00
Checking	Asset	\$48,300.00
Equity	Equity	\$50,000.00
Starting Balances	Equity	\$50,000.00
Expenses	Expense	\$2,500.00
Salaries	Expense	\$2,000.00
Tax1	Expense	\$300.00
Tax2	Expense	\$200.00
Liabilities	Liability	\$800.00
Tax1	Liability	\$500.00
Tax2	Liability	\$300.00
\$, grand total:		Assets: \$47,500.00 Profits: -\$2,500.00

Now, you will enter the company contributions. The *Liabilities:Tax1* and *Liabilities:Tax2* accounts track how much you must pay to the government for each tax type. When it is time to pay these agencies, you will make a transaction from the checking account to these liability accounts. No expense accounts are involved. The main account will then appear like this:

Figure 13.27. Payroll Example: Accounts After Paying Government

The screenshot shows a software window titled "payroll - Accounts" with a menu bar (File, Edit, View, Actions, Business, Reports, Tools, Windows, Help) and a toolbar (Save, Close, Open, Edit, New, Delete). Below the toolbar is a tab labeled "Accounts". The main area contains a table with columns for Account Name, Type, and Total. The table is organized into categories: Assets, Equity, Expenses, and Liabilities. A summary bar at the bottom shows a grand total for Assets and Profits.

Account Name	Type	Total
Assets	Asset	\$47,500.00
Checking	Asset	\$47,500.00
Equity	Equity	\$50,000.00
Starting Balances	Equity	\$50,000.00
Expenses	Expense	\$2,500.00
Salaries	Expense	\$2,000.00
Tax1	Expense	\$300.00
Tax2	Expense	\$200.00
Liabilities	Liability	\$0.00
Tax1	Liability	\$0.00
Tax2	Liability	\$0.00

Summary bar: \$, grand total: Assets: \$47,500.00 Profits: -\$2,500.00

Chapter 14. Budgets

This chapter explains how to create and use budgets with GnuCash.

Basic Concepts

A budget is a tool for estimating expected income and expenses. You can use it to help you plan how you intend for your finances to change over a period of time, and to examine how your actual financial transactions for the period compare to your planned transactions.

The budgeting concept is quite general, so GnuCash offers a budgeting tool that is both simple and flexible. You, the user, have to decide how complex or simple you want to make your budget. This guide will help you make some of those decisions.

Terminology

There are a few helpful terms listed below that will be used to discuss budgeting.

- *Budget* - A financial plan describing the expected revenues and/or disbursements for a particular time period
- *Cash Budget* - A budget planning for expected cash receipts and cash disbursements. This type of budget tracks cash flow -- where your money comes from, where it goes, and, of course, how much.
- *Expense Budget* - A budget chiefly for planning what you spend your money on. This type of budget tracks your expenses. It is typically not concerned with things like appreciation or repayment of liabilities. However, it would account for interest charges. For example, if you buy \$100 worth of groceries with your credit card, you incur an \$100 expense for groceries, and a \$100 liability to your credit card company. When you pay the credit card bill for \$110, you are incurring an additional interest expense of \$10. An expense budget plans for the transaction of buying the groceries and paying the interest, but not the transaction of repaying the credit card company.
- *Capital Budget* - A budget that describes a plan for paying for a large future expense, often through a combination of saving and borrowing money. Note: Capital budgets can sometimes get quite complex because they can try to answer the question "Can we afford to do such-and-such?" by exploring various hypothetical scenarios that can involve hypothetical accounts.
- *Budget Period* - The period of time during which the plan is expected to take place. The most common budget periods are annual and monthly. Sometimes, you may budget for several consecutive periods at once, for convenience or for finer-grained planning. For example, an annual budget may include 12 monthly budget periods.

Creating a Budget

Even before you begin to make a budget, it's important to have given some thought to your account hierarchy. For example, if you want to budget a certain amount for your electric bill and a certain amount for your water bill, you can't have only an *Expenses:Utilities* account. Your accounts must be at least as specific as your budget.

Choose Which Accounts To Budget For

The first step in creating a budget is to decide what it is you want to plan for. This decision will affect which accounts you include in your budget. For example, if you are only interested in tracking your expenses,

you may create an expense budget by only entering amounts for expense accounts. On the other hand, if you want to track all of your cash flow, you may create a cash flow budget by entering amounts for asset, liability, income and expense accounts.

Before you begin to create your budget, you need to make two decisions: What accounts do I want to budget for? and When do I want my budget to be for? You can always change your mind later, after you've created a budget, but you need to start with something.

Tip

As a rule of thumb, if you mostly care about *what* you spend your money on, you may want to make an expense report. If you're also concerned about having enough money in the right places at the right times, you may want to use a cash-flow budget.

Choosing a Budget Period

Before creating a budget you must also decide what period of time you want to plan for. The most common budget periods are monthly and annual. If you want your budget to plan for changes in financial patterns over time, then you should include multiple budget periods in your budget. For example, if you want to plan on having higher utility expenses in the winter than in the summer, then you might break your annual budget into 4 quarters or even 12 months, and budget a higher value for the winter periods than for the summer periods.

Getting Started

To create your first budget click on Actions → Budget → New Budget. You will immediately see a new budget with the default settings and no entries. Then click on the Options button. The most important options are the budget period and the number of periods. For the budget period, choose the beginning date and the smallest period of time that you want to plan for. Then, for the number of periods, choose how many periods you want to plan for.

The budget page now shows a list of accounts with a column for each budget period. The date shown in the title of each column is the beginning of that budget period.

Entering Budget Values

Now, you must enter the budget values - the amounts that you expect the account balances to change during the budget period. There are two ways to enter budget values. The first way is to simply click on the cell and enter an amount.

If you have past transactions recorded in GnuCash, the second way is to let GnuCash estimate the budget values by looking at those transactions. First, select the accounts you want GnuCash to estimate. Then click on the Estimate *Toolbar* button. In the Estimate Budget Values dialog, select the date past which GnuCash should look for past transactions. GnuCash will start at that date and look forward for the duration of your budget. For example, if you are making an annual budget, and you select Jan. 1, 2005, GnuCash will look at all the transactions in that account from Jan. 1, 2005 through Dec. 31, 2005.

Budget Reporting

You've already done the hardest part - creating your budget. But now you want to know how your actual financial transactions compare to your plan. You need to run the Budget Report.

Click on Reports → Budget → Budget Report. For each account, the Budget Report will show the budgeted and the actual amounts in two adjacent columns for each period in the budget. If you have created multiple budgets, you can use the Budget Report Options to select which budget to use in the report.

Two other types of budget reports are commonly used in the small business setting. They are the *Budgeted Income Statement* and the *Budgeted Balance Sheet*.

Budgeted Income Statement

The budgeted income statement is similar to the income statement. Both show the revenues and expenses for a given period as well as the profit, which is the difference revenue - expenses. The income statement is based on historical data, but the *budgeted* income statement is based on the predictions made in the budget.

Budgeted Balance Sheet

The budgeted balance sheet is similar to the balance sheet. Both show the assets, liabilities, and equity. The difference is that the balance sheet is based on historical data, and the *budgeted* balance sheet is based on the predictions made in the budget.

Chapter 15. Other Assets

General Concepts

This chapter presents many additional accounting treatments for frequently encountered business and less-frequently found personal activities that need recording in accounting books. The explanations below cover both the description and purpose of the activity, and they include also the usual accounting treatments (bookings or recordings) for these transactions.

These concepts have evolved over centuries of experience by those keeping accounting records and will help you maximize your record keeping's utility and meaningfulness.

This section introduces categorization of assets in the balance sheet based on time or the asset's useful life (current and long-term). Sometimes assets are also considered from the standpoint of their *liquidity*, which is regarded as how close or distant the asset is from being turned into cash. Near-cash assets are relatively quickly converted to cash (e.g., accounts receivable), while assets requiring rather a long time to convert to cash are considered to be relatively *fixed* in their non-cash state (e.g., heavy equipment, buildings, land). (Fixed does not mean they were repaired!)

You should find that current assets parallel those with more liquidity, while long-term and fixed assets are those with much less liquidity. Finally, below you will find a few assets that could be either current or long-term based on the nature of the facts constituting them.

Other Assets Described

Current Assets

Current Assets are those activities whose normal expected life would be one year or less. Such activities could be tracking reimbursable expenses, travel advances, short-term loans to a friend or family member, prepaid expenses, annual insurance premium amortization, and so on. The individual entity could have many other kinds of short term activities that reflect what it is doing. (These asset types are explained individually below.)

Long-term (Fixed) Assets

Long-term (Fixed) Assets are those activities whose normal expected life exceeds one or more years. This grouping covers both tangible and intangible assets. Examples of tangible assets are land, buildings, and vehicles (cars, trucks, construction equipment, factory presses, etc.) Intangible assets include such things as patents, copy rights, goodwill, etc. Because the lives of some of these assets show wear and tear and deterioration in value over time, businesses and individuals can allow for that diminution in value by calculating depreciation on such assets. For example, land normally does not depreciate, but buildings do, as do equipment and vehicles. (These asset types are explained individually below.)

Current Assets

This section explains short-term receivables, reimbursable expenses, travel advances, prepaid premiums, prepaid rent, suspense or wash accounts.

Short-term Receivables

This kind of account is useful to reflect an agreement made with someone you trust. Suppose you lent someone \$500 and he agreed to repay you \$50 a month. If he paid on time, the loan you made would be paid off within a year, which is why it is classified as a short-term receivable. So you could record that loan initially in this account tree: *OtherAssets:Current Assets:LoanToJoe*. At the time you give him the money: your entry is debit (increase) *LoanToJoe* \$500 and credit (decrease) *Bank* \$500. Each time you receive Joe's payment you record \$50 debit (increase) to *Bank* and credit (decrease) *LoanToJoe*.

Tip

Don't become confused by the use of the word "Loan". "Loan-To" is the tipoff that you really have a receivable, that is, you will receive from Joe, the money you previously loaned. Until he actually pays the money owed you, you reflect his debt in your books by an account describing your expectation—you will receive the money owed you, hence the word "receivable".

Reimbursable Expenses

This kind of activity is one in which you spend your own money on behalf of someone else (your employer, perhaps) and later you receive repayment of what you spent. The case might be a business trip. The employer has a policy of covering (paying for) all authorized expenses. After the trip is over, the employee submits a report listing dates and amounts spent with receipts for all the expenditures. The employer reviews the report and pays for all items that it considers as having a valid business reason. (Normally, employees know in advance what the employer will reimburse, so only those items are recorded as a reimbursable expense on the employee's books.)

Because a business trip can involve different kinds of expenditures (air travel, lodging, transportation at the destination, etc.), different kinds of expenditures would be recorded in the one account as long as the expenditures all related to the same trip. In other words, if a second trip is made before the first is fully settled, a second account for a different event could be set up. It would make sense to do this, if it would help to keep separate all the details of one trip from those of another. It is up to the person making the trip to decide how much trouble it would be to put separate trips in separate accounts or to put them all in the same account. The trip taker should remember that the account must be reconciled in order to know with certainty that all expenses have been reimbursed.

Recording the expenditures on the trip would be much the same. That is, if you paid trip expenses by cash you would debit (increase) the reimbursable expense account for the money paid in cash, because it is a receivable to you until it has been reimbursed to you. The credit offsetting your expenditure would decrease the account that shows the cash in your pocket or the account from which you drew the cash for the payment made. If you paid by credit card, the debit side would be the same as just described, but the credit would be an increase to the credit card company account on your books.

When you received your reimbursement, then the journal entry (or transaction) to record receipt of the funds from the employer would be: debit (increase) *Bank* for the check amount and credit (decrease) the reimbursable expense account for the check amount.

If it turns out that the reimbursable expense account is not zero balance after processing the employer's payment, then it means that there is a difference between you and the employer in handling the expense, which needs to be investigated. If the balance is a debit (a positive balance), your account has some money that was not reimbursed. If the balance is a credit (a negative balance), you were paid for more than what you recorded as due you. In both of those situations you should reconcile the difference between what you recorded and what was paid. That effort should disclose exactly what is causing the discrepancy. You will need to contact the employer's bookkeeper to know what was paid, if the reimbursement check was not accompanied by a detailed list of the items being paid you.

In the event the employer refused to reimburse you for an expenditure, that effectively makes it your expense. In that case, you would make this entry: debit (increase) your own Expense (appropriately named) and credit (decrease) the Reimbursable Expense account. That entry should result in a zero balance in the Reimbursable Expense account. If not, reconcile until you identify the difference.

Tip

Sometimes there are small differences that don't match an individual entry. In those cases divide the amount by 2 or by 9. If the unresolved amount is divisible by two, it suggests that both you and the employer entered the item in the same manner: both as debits or both as credits. If it is divisible by 9, then likely one of you transposed adjoining numbers; e.g., one entered 69 and the other entered 96. If the difference is divisible neither by 2 or by 9, then it could be that more than one error is present.

Travel Advances

These are very similar to Reimbursable Expenses. The difference is that someone gives you money first; you spend it, and then you give a report accounting for what you spent it on. The report is supported by invoices establishing who, what, where, when, and how much for each expenditure. In the Reimbursable Expense case, you spent your money first and later recovered it.

In the Travel Advance case when you receive the advance, you record on your books this entry: debit (increase) Bank for the travel advance amount received (say, \$500); credit (increase) the short-term liability Travel Advance (\$500). This is a liability, because you are not gifted with the money, but only loaned it for the purpose of having funds to spend when doing the employer's business.

Frequently, the way these monetary arrangements work is that at the beginning of for example a salesperson's employment, he or she receives the advance and monthly (or more frequently) turns in a report about who, what, where, when, and how much he spent. The money in the report is reimbursed if approved.

During the period after receiving the advance and before filing a request for reimbursement report, the salesperson can record his or her expenditures into the advance liability account. In that case, the balance in the account will show how much of the advance has not yet been spent (assuming the Travel Advance balance is a credit). If no mistakes have been made and all expenses are approved, then the sum of the unspent account balance and the reimbursing check amount will equal the original travel advance amount.

It makes sense for the salesperson to record the travel expenses to this advance account (and not to his or her own expense accounts), because the money is being spent on behalf of the employer, for the employer's authorized expenses. It is not the employee's own money, and therefore not his or her own expense.

When the salesperson receives the report reimbursement (say, \$350), he or she debits (increases) Bank, and credits (increases) again the Travel Advance liability account, assuming that previously he or she had been recording expenditures to the travel advance account. Tracking activity in this manner causes the account to always show the amount that is owed the employer.

See the section called "Reimbursable Expenses" above for what to do if the employer does not accept an item the employee put on the travel advance reimbursement request report. The difference resolution effort is essentially the same for both types of accounts.

Prepaid Premiums or Prepaid Rent

Some types of expenses are usually billed as semi-annual or annual amounts. For example, the insurance industry will bill home insurance annually, while car insurance premiums can be annual or semi-annual. For those that pay an amount that covers several months or a full year, the proper accounting treatment is to reflect in each accounting period the amount that expresses the benefit applying to that period.

In the case of someone who pays a full-year's insurance premium at the beginning of the insurance period, the entry to record this is debit (increase) Prepaid Insurance Premium for say, \$1,200, and credit (decrease) Bank for \$1,200.

Then a monthly recurring journal entry (scheduled transaction) is created that debits (increases) Insurance Expense \$100 and credits (decreases) Prepaid Insurance Premium \$100. This technique spreads the cost over the periods that receive the insurance coverage benefit. Businesses following generally accepted accounting practices would normally use this technique, especially if they had to present financial statements to banks or other lenders. Whether individuals do depends on the person and how concerned they are to match cost with benefit across time periods. Another factor influencing use of this technique would be the number of such situations the person encounters. It is relatively easy to remember one or two, but more difficult if having to manage 10 to 20. You would set up as many or as few as proved useful and important to you.

Suspense or Wash Accounts

The purpose of these accounts is to provide a device to track "change of mind" situations. The objective of these accounts is to provide a temporary location to record charges and credits that are not to be included permanently in your books of record. When the transactions reflected in these accounts have been fully completed, Wash/Suspense accounts will normally carry a zero balance.

For example, say in the grocery store you see canned vegetables on sale, so you buy 6 cans at \$1 per can. Say that the total purchases were \$50. When you come home and are putting things in the cupboard you discover you already had 12 cans. You decide to return the 6 you just bought. Some persons in this situation would charge (increase) the whole bill to Grocery Expense; and when they returned the cans, they would credit (decrease) Grocery Expense. That is one way of handling that. The effect of this method is to leave recorded on your books the cost of items that you really did not purchase from a permanent standpoint. It is only when the items have actually been returned and the vendor's return receipt has also been recorded that the distortion this method generates will then be removed.

Actually, there are several treatments, depending on when and how the original transaction was booked/recorded and when you decided to return the items purchased. Basically, did you change your mind before you recorded the transaction or after doing so?

If you decided to return the items after recording the purchase transaction, you may originally have charged Grocery Expense for the full amount (\$50) of all items. In that scenario, what you kept and the amount of the items to be returned were grouped into one account. You could edit the original transaction and restate the amount charged to the Grocery Expense account to be the difference (\$44) between the total paid (\$50) for groceries and the value of the items to be returned. That leaves the returned-item value as the amount (\$6) you should record to the Suspense account.

Obviously, if you decided to return items before you recorded your purchase, then you would book the original entry as a charge to Grocery Expense for the amount kept (\$44) and as a charge to Suspense for the amount returned (\$6). The off-setting credit (\$50) to cash or credit card is not affected by these treatments.

When there are several persons shopping and at different vendors, there can be a case where there are several returns happening at once and in overlapping time frames. In that case the Wash Account is charged (increased) at time of changing the mind, and either Bank or Credit Card is credited. When the return occurs, the reverse happens: Bank or Credit Card is debited for the cash value of the returned items and the Wash/Suspense Account is credited in the same amount.

If the wash account has a non-zero balance, scanning the debit and credit entries in the account will show the non-matched items. That is, debits not matched by offsetting credits indicate items intended to be returned but not actually returned yet. The reverse (credits not matched by offsetting debits) indicates that returns were made but the original charge was not recorded in the Wash Account.

These differences can be cleared up by returning unreturned items or recording charges (debits) for items already returned. The mechanics of doing that likely will be finding the original expense account the item was charged to and making an entry like: debit Wash Account, credit original expense. It also could be as described above where the original recording is adjusted by adding a charge to Wash/Suspense account and decreasing the amount charged to the original account.

Short or Long-term Assets

This section explains why some types of assets may be short or long-term and presents an example.

An example is deposits (e.g., utility, rental, security). If the deposit agreement contains a provision to recover the deposit at the end of a year, the treatment could be that of a short-term asset. However, when the agreement is that the deposit holder returns the funds only upon successful inspection at the end of the relationship, then at the start of the relationship or agreement, the person paying the deposit has to decide whether to write it off as a current expense or to track it for eventual recovery at the end of the agreement (not infrequently, moving to a new location).

Whichever decision is made, the accounting treatment is to debit (increase) expense (assuming the write-off decision) or debit (increase) Deposits Receivable (assuming the intent is to recover the deposit in the future) and credit (decrease) Bank for the amount of the deposit (if paid by cash) or credit (increase) credit card if paid using that payment method.

Long-term (Fixed) Assets

This section illustrates long-term assets (those whose useful lives exceed a year) and discusses these types: land, buildings, leasehold improvements, intangibles, vehicles and other equipment.

Land

Land is not a wasting asset. That is, it does not get used up over time and rarely suffers damage such that it loses value. For that reason, it usually is recorded at cost at the time of purchase. Appreciation in its value over decades is not recorded and is not recognized in any way on the books of the owner. It is only after land has been sold that sale price and purchase cost are compared to calculate gain or loss on sale.

Land is frequently sold/purchased in combination with structures upon it. That means that the cost has to become separated from the cost of structures on it. Land valuation is usually part of the transfer of ownership process and its value is shown on the purchase documents separately from that of any structures it supports.

Land values shown on purchase documents frequently arise from the process of value determination managed by assessors whose job it is to assign values to land for tax purposes. Local and regional areas of a state or province use the values determined by assessors in their tax formulas, which provide revenues for local and regional governing authorities to finance their required community services.

Should land be acquired in a situation not subject to a history of land valuation by a formal valuation system, then the purchaser can appeal to real estate agents and an examination of recent sale transactions for information that would allow calculating a reasonable amount to express the value of the land.

Buildings

Buildings are the man-made “caves” in which much of life’s human interaction occurs. These structures are wasting assets, because in their use they or their components gradually wear. Over time they begin to lose some of their function and they can suffer damage due to planetary elements or human action.

Accepted accounting practice is to record the cost of the building determined at time of ownership transfer (purchase) or at conclusion of all costs of construction. Because buildings are frequently used for decades, and due to the need to be able to calculate gain or loss on sale, accounting practice preserves the original cost by not recording declines in value in the account containing the original purchase or construction cost.

Instead, the depreciation technique is used to show (in the balance sheet) the structure's net book value (original cost reduced by accumulated depreciation). Depreciation is a separate topic treated elsewhere in this Guide.

Leasehold Improvements

When a business does not own the building where it operates, and instead has a long-term lease, it is not uncommon for the business tenant to make improvements to the premises so that the structure obtains both function and appearance that enhances conducting its business activities.

In these cases, the expenditures that the business incurs are recorded in a Leasehold Improvements account: increase (debit) Leasehold Improvements, decrease (credit) Bank or increase (credit) a suitable liability account (which could be a liability to a contractor or a bank or a credit card, etc.).

Vehicles or Equipment

Vehicles or Equipment of all kinds usually last for several years, but their useful lives are much shorter than that of assets that have little movement in their functioning. Because they do wear out over time, common accounting practice in business is to record depreciation using life spans and depreciation methods appropriate to the nature and use of the asset. Frequently, the life and depreciation methods chosen are influenced by what is permitted per national tax regulations for the kind of asset being depreciated.

Usually, businesses depreciate their assets. Individuals can do so as well to the degree that taxing authorities permit. Very wealthy persons employ accountants and attorneys to track and manage their investments and assets holdings to take advantage of all tax benefits permitted by law.

Intangibles

The mechanics of accounting (debiting and crediting appropriate accounts) for these assets are relatively simple, much the same as for any of the above assets. Where the difficulty lies is in their valuation, which is an advanced topic and not something that individual persons and small businesses would likely encounter. For that reason further discussion of items such as patents, copyrights, goodwill, etc. are left out of this Guide.

Chapter 16. Depreciation

This chapter will introduce the concept of depreciation in accounting and give some real life examples for using it.

Basic Concepts

Depreciation is the accounting method for expensing capital purchases over time. There are two reasons that you may want to record depreciation; you are doing bookkeeping for your own personal finances and would like to keep track of your net worth, or you are doing bookkeeping for a small business and need to produce a financial statement from which you will prepare your tax return.

The method of recording depreciation is the same in either case. but the end goal is different. This section will discuss the differences between the two. But first, some terminology.

- *Accumulated depreciation* - the accumulated total of book depreciation taken over the life of the asset. This is accumulated in the depreciation account in the asset section.
- *Book depreciation* - this is the amount of depreciation that you record in your financial statements per accounting period.
- *Fair market value* - the amount for which an asset could be sold at a given time.
- *Net book value* - this is the difference between the original cost and the depreciation taken to date.
- *Original cost* - this is the amount that the asset cost you to purchase. It includes any cost to get the asset into a condition in which you can use it. For example - shipping, installation costs, special training.
- *Salvage value* - this is the value that you estimate the asset can be sold for at the end of its useful life (to you).
- *Tax depreciation* - this is the amount of depreciation that you take for income tax purposes.

Personal Finances

Depreciation is used in personal finances to periodically lower an asset's value to give you an accurate estimation of your current net worth. For example, if you owned a car you could keep track of its current value by recording depreciation every year. To accomplish this, you record the original purchase as an asset, and then record a depreciation expense each year (See the section called "Example" for an example). This would result in the net book value being approximately equal to the fair market value of the asset at the end of the year.

Depreciation for personal finance has no tax implications, it is simply used to help you estimate your net worth. Because of this, there are no rules for how you estimate depreciation, use your best judgement.

For which assets should you estimate depreciation? Since the idea of depreciation for personal finances is to give you an estimate of your personal net worth, you need only track depreciation on assets of notable worth that you could potentially sell, such as a car or boat.

Business

As opposed to personal finance where the goal is tracking personal worth, business is concerned with matching the expense of purchasing capital assets with the revenue generated by them. This is done through

book depreciation. Businesses must also be concerned with local tax laws covering depreciation of assets. This is known as tax depreciation. The business is free to choose whatever scheme it wants to record book depreciation, but the scheme used for tax depreciation is fixed. More often than not this results in differences between book and tax depreciation, but steps can be taken to reduce these differences.

Now, what purchases should be capitalized? If you expect something that you purchase to help you earn income for more than just the current year, then it should be capitalized. This includes things like land, buildings, equipment, automobiles, and computers - as long as they are used for business purposes. It does not include items that would be considered inventory. So if you made a purchase with the intent to resell the item, it should not be capitalized.

In addition to the purchase of the asset itself, any costs associated with getting the asset into a condition so that you can use it should be capitalized. For example, if you buy a piece of equipment and it needs to be shipped from out of town, and then some electrical work needs to be done so you can plug the machine in, and some specialized training is needed so you know how to use the machine, all these costs would be included in the cost of the equipment.

You also need to know the estimated salvage value of the asset. Generally, this is assumed to be zero. The idea behind knowing the salvage value is that the asset will be depreciated until the net book value (cost less depreciation) equals the salvage value. Then, when the asset is written off, you will not have a gain or loss resulting from the disposal of the asset.

The last step is to determine the method of depreciation that you want to use. This will be discussed on the next few pages.

Note

Warning: Be aware that different countries can have substantially different tax policies for depreciation; all that this document can really provide is some of the underlying ideas to help you apply your “favorite” tax/depreciation policies.

Estimating Valuation

A central issue with depreciation is to determine how you will estimate the future value of the asset. Compared to the often uncertain estimates one has to do where appreciation of assets is concerned, we are on somewhat firmer ground here. Using sources listed below should make it fairly straight forward to estimate the future value of your depreciating assets.

- *Tax Codes*: For businesses that want to use depreciation for tax purposes, governments tend to set up precise rules as to how you are required to calculate depreciation. Consult your local tax codes, which should explicitly state how to estimate depreciation.
- *Car Blue Book*: For automobiles, it is easy to look up in references such as “Blue Books” estimates of what an automobile should be worth after some period of time in the future. From this you will be able to develop a model of the depreciation.

Depreciation Schemes

A *depreciation scheme* is a mathematical model of how an asset will be expensed over time. For every asset which undergoes depreciation, you will need to decide on a depreciation scheme. An important point to keep in mind is that, for tax purposes, you will need to depreciate your assets at a certain rate. This is called tax depreciation. For financial statement purposes you are free to choose whatever method you want. This is book depreciation. Most small businesses use the same rate for tax and book depreciation. This way there is less of a difference between your net income on the financial statements and your taxable income.

This section will present 3 of the more popular depreciation schemes: *linear*, *geometric*, and *sum of digits*. To simplify the examples, we will assume the salvage value of the asset being depreciated is zero. If you choose to use a salvage value, you would stop depreciating the asset once the net book value equals the salvage value.

1. *Linear depreciation* diminishes the value of an asset by a fixed amount each period until the net value is zero. This is the simplest calculation, as you estimate a useful lifetime, and simply divide the cost equally across that lifetime.

Example: You have bought a computer for \$1500 and wish to depreciate it over a period of 5 years. Each year the amount of depreciation is \$300, leading to the following calculations:

Table 16.1. Linear Depreciation Scheme Example

<i>Year</i>	<i>Depreciation</i>	<i>Remaining Value</i>
0	-	1500
1	300	1200
2	300	900
3	300	600
4	300	300
5	300	0

2. *Geometric depreciation* is depreciated by a fixed percentage of the asset value in the previous period. This is a front-weighted depreciation scheme, more depreciation being applied early in the period. In this scheme the value of an asset decreases exponentially leaving a value at the end that is larger than zero (i.e.: a resale value).

Example: We take the same example as above, with an annual depreciation of 30%.

Table 16.2. Geometric Depreciation Scheme Example

<i>Year</i>	<i>Depreciation</i>	<i>Remaining Value</i>
0	-	1500
1	450	1050
2	315	735
3	220.50	514.50
4	154.35	360.15
5	108.05	252.10

Note

Beware: Tax authorities may require (or allow) a larger percentage in the first period. On the other hand, in Canada, this is reversed, as they permit only a half share of “Capital Cost Allowance” in the first year. The result of this approach is that asset value decreases more rapidly at the beginning than at the end which is probably more realistic for most assets than a linear scheme. This is certainly true for automobiles.

3. *Sum of digits* is a front-weighted depreciation scheme similar to the geometric depreciation, except that the value of the asset reaches zero at the end of the period. This is a front-weighted depreciation

scheme, more depreciation being applied early in the period. This method is most often employed in Anglo/Saxon countries. Here is an illustration:

Example: First you divide the asset value by the sum of the years of use, e.g. for our example from above with an asset worth \$1500 that is used over a period of five years you get $1500/(1+2+3+4+5)=100$. Depreciation and asset value are then calculated as follows:

Table 16.3. Sum of Digits Depreciation Scheme Example

<i>Year</i>	<i>Depreciation</i>	<i>Remaining Value</i>
0	-	1500
1	$100*5=500$	1000
2	$100*4=400$	600
3	$100*3=300$	300
4	$100*2=200$	100
5	$100*1=100$	0

Account Setup

As with most accounting practices, there are a number of different ways to setup depreciation accounts. We will present here a general method which should be flexible enough to handle most situations. The first account you will need is an *Asset Cost* account (GnuCash account type *Asset*), which is simply a place where you record the original purchase of the asset. Usually this purchase is accomplished by a transaction from your bank account.

In order to keep track of the depreciation of the asset, you will need two depreciation accounts. The first is an *Accumulated Depreciation* account in which to collect the sum of all of the depreciation amounts, and will contain negative values. In GnuCash, this is an account type *asset*. The *Accumulated Depreciation* account is balanced by a *Depreciation Expense* account, in which all periodic depreciation expenses are recorded. In GnuCash, this is an account type *expense*.

Below is a generic account hierarchy for tracking the depreciation of 2 assets, *ITEM1* and *ITEM2*. The *Asset Cost* accounts are balanced by the *Bank* account, the *Accumulated Depreciation* account is balanced by the *Expenses:Depreciation* account.

- Assets
 - Fixed Assets
 - ITEM1
 - Cost (Asset Cost account)
 - Depreciation (Accumulated Depreciation account)
 - ITEM2
 - Cost (Asset Cost account)
 - Depreciation (Accumulated Depreciation account)
 - Current Assets
 - Bank
- Expense
 - Depreciation (Depreciation Expense account)

One of the features of the account hierarchy shown above is that you can readily see some important summary values about your depreciating asset. The *Assets:Fixed Assets:ITEM1* account total shows you

the current estimated value for item1, the *Assets:Fixed Assets:ITEM1:Cost* shows you what you originally paid for item1, *Assets:Fixed Assets:ITEM1:Depreciation* shows you your accrued depreciation for item1, and finally, *Expenses:Depreciation* demonstrates the total accrued depreciation of all your assets.

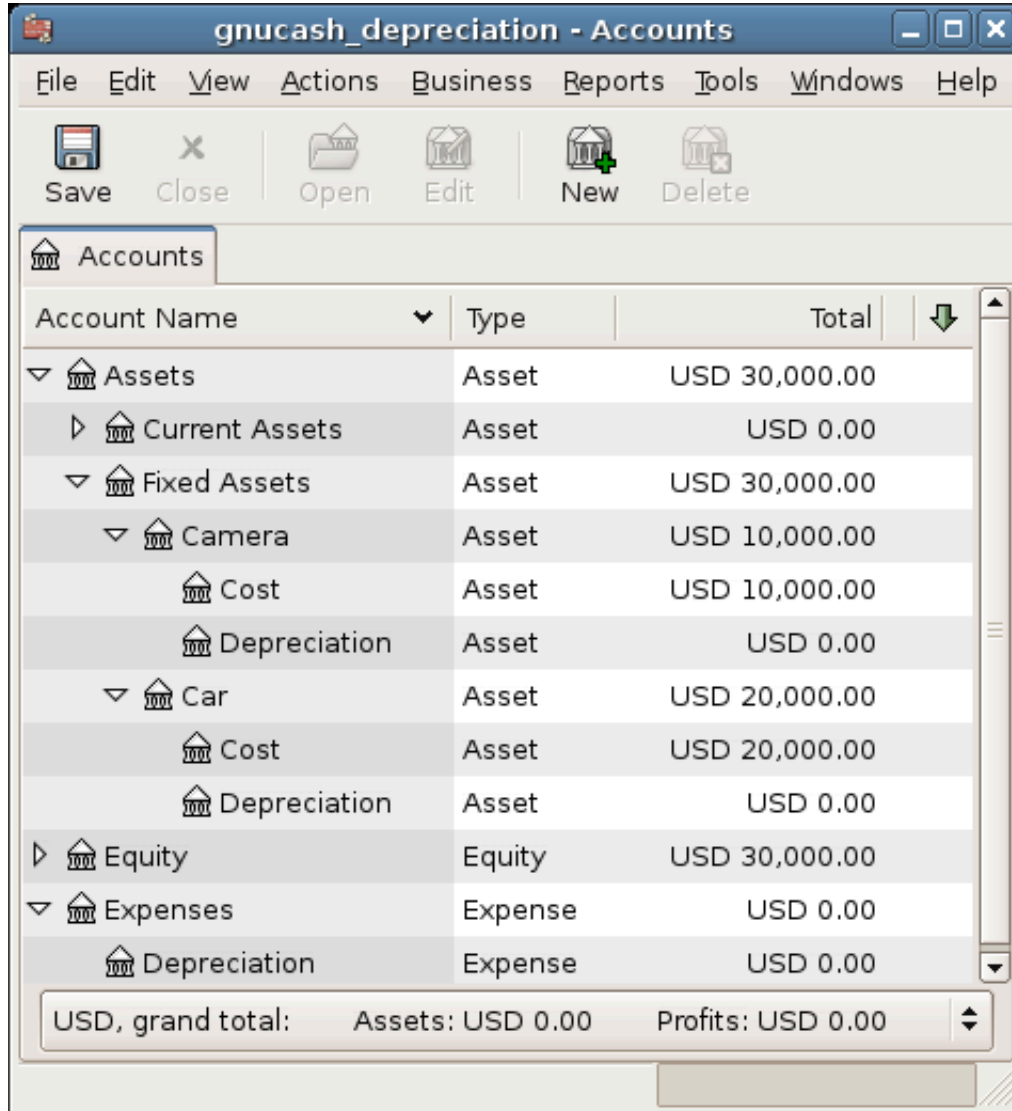
It is certainly possible to use a different account hierarchy. One popular account setup is to combine the *Asset Cost* and *Accrued Depreciation* asset accounts. This has the advantage of having fewer accounts cluttering your account hierarchy, but with the disadvantage that to determine some of the summary details mentioned in the paragraph above you will have to open the account register windows. As with most things, there are many ways to do it, find a way that works best for you.

The actual input of the depreciation amounts is done by hand every accounting period. There is no way in GnuCash (as of yet) to perform the depreciation scheme calculations automatically, or to input the values automatically into the appropriate accounts. However, since an accounting period is typically one year, this really is not much work to do by hand.

Example

Let's go ahead and step through an example. Imagine you are a photographer and you use a car and an expensive camera for your personal business. You will want to track the depreciation on these items, because you can probably deduct the depreciation from your business taxes.

The first step is to build the account hierarchy (as shown in the previous section, replace *ITEM1* and *ITEM2* with "car" and "camera"). Now, record the purchase of your assets by transferring the money from your bank account to the appropriate *Asset Cost* accounts for each item (eg: the *Assets:Fixed Assets:Car:Cost* account for the car). In this example, you start with \$30k in the bank, the car cost \$20k and the camera cost \$10k and were both purchased on January 1, 2000.



The asset depreciation example main window, before depreciation

Looking at the tax codes, we realize that we must report depreciation on these items using the “sum of digits” scheme, over a 5 year period. So, the yearly depreciation amounts for the car come to \$6667, \$5333, \$4000, \$2667, \$1333 for years 1 to 5 respectively, rounded to the nearest dollar. The yearly depreciation amounts for the camera are \$3333, \$2667, \$2000, \$1333, \$667. Consult the previous section on Depreciation Schemes for the formula for calculating these values.

For each accounting period (IE: fiscal year) you record the depreciation as an expense in the appropriate *Accrued Depreciation* account (eg: the *Assets:Fixed Assets:Car:Depreciation* account for the car). The two windows below show your car’s accrued depreciation account and the main window after the third year (IE: three periods) of depreciation using this sum of digits scheme.

Depreciation

Date	Description	Transfer	R	Increase	Decrease	Balance
2001-01-01	Depreciation	Expenses:Depreciation	n	6,666.67	-6,666.67	
2002-01-01	Depreciation	Expenses:Depreciation	n	5,333.33	-12,000.00	
2003-01-01	Depreciation	Expenses:Depreciation	n	4,000.00	-16,000.00	
2020-01-01		Transfer	n	Increase	Decrease	Balance

Present: USD 16,000.00 Future: USD 16,000.00 Cleared: USD 0.00 Reconciled: USD 0.00 Projected Minimum: USD 16,000.00

The asset depreciation register window

Account Name	Type	Total
Assets	Asset	USD 6,000.00
Current Assets	Asset	USD 0.00
Fixed Assets	Asset	USD 6,000.00
Camera	Asset	USD 2,000.00
Cost	Asset	USD 10,000.00
Depreciation	Asset	-USD 8,000.00
Car	Asset	USD 4,000.00
Cost	Asset	USD 20,000.00
Depreciation	Asset	-USD 16,000.00
Equity	Equity	USD 30,000.00
Expenses	Expense	USD 24,000.00
Depreciation	Expense	USD 24,000.00

USD, grand total: Assets: -USD 24,000.00 Profits: USD 0.00

The asset depreciation main window

Note

A Word of Caution: Since depreciation and tax issues are closely related, you may not always be free in choosing your preferred method. Fixing wrong calculations will cost a whole lot more time

and trouble than getting the calculations right the first time, so if you plan to depreciate assets, it is wise to make sure of the schemes you will be permitted or required to use.

Chapter 17. Python Bindings

GnuCash historically has always been a traditional application in the sense that you open it, use it to manipulate your financial data via the windows it presents, save your data and close the windows again. This has the inherent limitation that you can only do whatever the windows, menus and toolbars allow you to do.

Sometimes you might need a little more flexibility. For example, you need a report with just a little different information than what the built-in reports provide, or you want to automate a frequently recurring action. Such custom manipulations are ideal candidates to write in one or the other scripting language.

Starting with GnuCash version 2.4 you can write Python scripts to manipulate your financial data.

Note

The Python extensions are an optional feature in the source code. To be able to use Python scripts, GnuCash must have been compiled with this option enabled, otherwise all what follows won't work. At present this option is not enabled by default, so if you need this, you may have to compile GnuCash from source yourself.

The Python extensions come with a couple of ready to use scripts. This chapter will show you how to use some of these.

Note

This chapter is not about how to write your own Python scripts. Refer to the developer documentation for that instead.

Chapter 18. Importing Business Data

Importing Bills and Invoices

General

This functionality creates invoices or bills from a csv import file containing rows of invoice entry data. The import file may contain rows for new and/or existing invoices. If an invoice already exists, GnuCash adds the imported entries to the invoice (unless the invoice is already posted). If the import file contains posting data for an invoice, then GnuCash will also attempt to post the invoice. If any row of an invoice contains an error, GnuCash will ignore all rows of the same invoice.

The field separator in the csv file must be either a comma or a semicolon; field values may be enclosed in double quotes.

For the sake of readability, in this chapter the term “invoice” by itself is used to refer to both customer invoices and vendor bills.

The format of the import file

The import file should contain rows of invoice entry data, each row marked by an invoice ID. The file should be sorted on invoice ID. Each row contains header and entry fields, but GnuCash takes the invoice header data from the first row of an invoice ID. For informational purposes, the header data may be repeated for each subsequent row of the same invoice.

There is no information in the file to indicate whether it concerns customer invoice or vendor bill data. Instead, a user option in the import dialog makes that distinction.

Each row should contain the fields listed below, in the same sequence, separated by a comma or a semicolon. The fields are listed here by their technical name, which GnuCash uses in the preview of the import data.

- *id* - The invoice ID. Mandatory. Any row without an invoice ID will be ignored. If the invoice ID already exists, GnuCash will add the entries to the existing invoice (unless it is already posted).
- *date_opened* - Use the same date format as defined in Preferences. Defaulted to today's date if left blank, or if the date provided is not valid.
- *owner_id* - Customer or vendor number. Mandatory in the first data row of an invoice. If not provided, all rows of the same invoice will be ignored.
- *billingid* - Billing ID. Optional
- *notes* - Invoice notes. Optional.
- *date* - The date of the entry. Defaulted to date opened if left blank, or if the date provided is not valid.
- *desc* - Description. Optional
- *action* - Action. Optional
- *account* - Account for the entry. Mandatory in each row. If not provided or invalid, all rows of the same invoice will be ignored.

- *quantity* - Quantity. Defaulted to 1 if left blank.
- *price* - Price. Mandatory for each row. If not provided, all rows of the same invoice will be ignored.
- *disc_type* - Type of discount. Optional. Only relevant for invoices, not for bills. Use “%” or blank for percentage value, anything else for monetary value.
- *disc_how* - Discount how. Optional. Only relevant for invoices, not for bills. Use “>” for discount applied after tax, “=” for discount and tax applied before tax, and “<”, blank or anything else for discount applied before tax.
- *discount* - Amount or percentage of discount. Optional. Only relevant for invoices, not for bills
- *taxable* - Is this entry taxable? Optional. Use “Y” or “X” for yes, “N” or blank for no.
- *taxincluded* - Is tax included in the item price? Optional. Use “Y” or “X” for yes, “N” or blank for no.
- *tax_table* - Tax table. Optional. If the tax table provided does not exist, it will be blank in the invoice.
- *date_posted* - Date posted. Optional. Use the same date format as defined in Preferences. If you provide a date posted for the first row of an invoice, GnuCash will attempt to also post the invoice (as opposed to only saving or updating it).
- *due_date* - Due date. Optional. Use the same date format as defined in Preferences. Defaulted to date posted, if left blank. Only relevant in the first row of an invoice, if the invoice is posted.
- *account_posted* - Post to account, for vendor or customer posting. Only mandatory in the first row of an invoice, if the invoice is posted.
- *memo_posted* - Memo. Optional. Only relevant in the first row of an invoice, if the invoice is posted.
- *accu_splits* - Accumulate splits? Optional. Use “Y” or “X” for yes, “N” or blank for no. Only relevant in the first row of an invoice, if the invoice is posted. If you use a spreadsheet program to create the import file, it is advised not to use blank for no, because a final column with only blanks may not be recognized as relevant data when the spreadsheet program creates the csv file.

Note on double quotes

If you use the field separator character within a field, the field value should be enclosed in double quotes. Only for the fields description (desc) and notes, can you also include a double quote within a quoted field value, by doubling the double quote. E.g. "This field value uses the separator, and a "quoted" word", would be imported as This field value uses the separator, and a "quoted" word.

Example content for two bills; one of 2 entries, and one of 3 entries. The first is saved and posted, the second only saved. Using comma field separator, decimal point and dd/mm/yyyy date format.

```
1204;15/12/2018;2001;PO 210220;Special delivery;16/12/2018;Pride and Prejudice;pc;
1204;15/12/2018;2001;PO 210220;Special delivery;16/12/2018;Electronic principles;p
1205;15/12/2018;2044;PO 21099;;16/12/2018;Ultimate Guide;pc;Expenses:Books;1;10.01
1205;15/12/2018;2044;PO 21099;;16/12/2018;Dinner & drinks;pc;Expenses:Dining;1;10.
1205;15/12/2018;2044;PO 21099;;16/12/2018;UG course;pc;Expenses:Education;1;10.01;
```

Example content for one customer invoice, with one entry, including tax and discount. Using comma fields separator, decimal point and dd/mm/yyyy date format. The the value of the description field contains the separator character.

```
20221;16/12/2018;1001;Order 3378;Discount as agreed;4/12/2018;"Accounting part 1,
```

Import your data

To import your invoice data, navigate to File → Import → Import Bills & Invoices... to open a new import dialog, and provide the necessary information.

- 1. Choose the file to import - Select your import file, or manually type the path and file name.
- 2. Select import type - Select the import type, either Bill or Invoice.
- 3. Select import options - Select your csv format. Use the with quotes options if your file contains fields enclosed in double quotes. These options also match fields not enclosed in quotes; except for the fields for description and notes, fields should not contain the quote character itself. See Note on double quotes above. Use one of the other options if your file does not have fields enclosed in quotes; any quote characters in the file will be imported as is.
- 4. Preview - Once you have selected your import file and csv format, GnuCash shows you a preview of the data. You can verify if your data is listed in the correct columns. If you do not see any rows in the preview, then GnuCash was not able to match your import data rows to the selected csv format. See the section called “What could go wrong?” below.
- 5. Afterwards - You can choose if GnuCash should open tabs for the invoices after the import. Either for all invoices, or for the invoices that are saved but not posted, or for none of the invoices. Opening tabs slows down the import process considerably.
- *Start the import* - If you are satisfied with your selections, hit the OK button to start the import.

If your data file contains invoice IDs that already exist, then GnuCash will ask you (once per import session) to confirm that you want to update existing invoices. If not confirmed, all rows for existing invoices will be ignored.

Note

Internally, GnuCash uses so called regular expressions to match the import rows to the data fields. The import option Custom regular expression offers the option to use your own regular expression for this matching process. Obviously, this option requires that you are well versed in regular expressions. When you choose the option Custom regular expression, GnuCash opens a window in which you can edit the GnuCash regular expression, or replace it with your own. Your regular expression should contain a named subpattern for each of the fields of the csv file (using the technical names). A custom regular expression could be useful if the rows of your source data file contain all required fields, but in a different order or format. E.g. if the format of your source data file starts with customer number, followed by invoice ID, followed by the due date, and uses | as separator, your regular expression would start with something like this:

```
^(?<owner_id>[^|]*)\|(?<id>[^|]*)\|(?<due_date>[^|]*)
```

With a custom regular expression, GnuCash could import your source data files, without the need to convert them to the GnuCash import format.

Feedback and statistics

GnuCash executes the import process in three steps:

- *Import* - Imports the data file and attempts to match each row to the data fields.
- *Validation and adjustment* - Validates the data fields and replaces data with defaults if applicable.
- *Processing* - Handles the currency related validations, and creates, updates and posts the invoices.

After all steps have finished, GnuCash issues information about the result of the process. The initial dialog shows the informational or error messages from the validation and processing steps. The second dialog shows the statistics of the process:

- Import - rows ignored: the number of rows that could not be matched to the data fields.
- Import - rows imported: the number of rows that were successfully matched to the data fields.
- Processing and validation - rows fixed: the number of rows for which a default value was used for a field.
- Processing and validation - rows ignored: the number of rows for that were not processed because of a validation error.
- Processing and validation - invoices created: the number of invoices created.
- Processing and validation - invoices updated: the number of invoices that were updated.

If there were unmatched rows in the import step, a final dialog shows the actual rows that could not be matched.

What could go wrong?

Errors in the import step

If the statistics show unmatched rows under “Import - rows ignored”, then there is some issue with the format of your import file. Verify that you use and select the correct separator. Verify that your data rows have exactly 21 separator characters (1 for each field, except for the last). Verify whether you use the separator character within a data field; if so, enclose the field in double quotes.

If you use one of the with quotes import options, verify if you use the double quote character in any of the data field values; if within the description or notes fields, make sure that the field value is quoted, and precede each double quote within the field with an extra double quote; if within any other field, remove the double quote character.

Errors in the validation step

The following errors can occur in the validation step. Any error in a data row will cause all rows of the same invoice to be ignored.

Note

In versions 3.4 and earlier, an error in a data row would cause just that row to be ignored, as opposed all rows of the same invoice.

- The field `ID` is blank. Every row should have an invoice `ID`.
- The field `owner_id` is blank. Every first row of an invoice should have an `owner_id`.
- The customer or vendor number in field `owner_id` does not exist. The `owner_id` in the first row of an invoice should be an existing customer (for invoices) or vendor (for bills).
- The date in field `date_posted` is not a valid date. If you provide a value for `date_posted` in the first row of an invoice, it should be a valid date. Did you use the date format as set in Preferences?
- The account in the field `account_posted` does not exist. If you provide a value for the field `date_posted` in the first row of an invoice, the field `account_posted` should be an existing account.
- The account in the field `account_posted` is not of type Accounts Receivable (for invoices) or Accounts Payable (for bills). If you provide a value for the field `date_posted` in the first row of an invoice, the field `account_posted` should be an account of the correct type.
- The field `price` is blank. Every row should have a value for the field `price`.
- The account in the field `account` does not exist. Every row should have an existing account in the field `account`.

Any error in the validation step is listed after the overall import process completes. Correct your data file accordingly.

Errors in the processing step

The following errors can occur in the processing step.

- The invoice cannot be updated because it is already posted. All rows of the same invoice will be ignored. If you want to update the existing invoice, unpost it first in GnuCash.
- The currency of the invoice differs from the currency of the account posted (“Invoice x NOT posted because currencies don’t match”). GnuCash determines the currency of the invoice either from the customer or vendor master data (for a new invoice) or from the invoice itself (for an existing invoice). The currency of the invoice must agree with the currency of the post to account in the field `account_posted`. GnuCash creates the invoice but cannot post it. Manually correct the invoice in GnuCash.
- The invoice requires currency conversion. (“Invoice x NOT posted because it requires currency conversion”). The invoice contains entries on accounts with different currencies, or the currency of the entries differs from the currency of the post to account. For such an invoice, GnuCash needs exchange rates to translate the currency amounts. GnuCash creates the invoice but cannot post it. Post the invoice manually in GnuCash, and provide the requested exchange rates.

Not supported invoice functionality

Currently the invoice import function does not support (at least) the following:

- Import of billing terms and job.
- Import of customer and job in default chargeback project for bills.
- Application of billing terms from customer or vendor master data.
- Automatic numbering of invoices.

- Credit notes.

Importing Customers and Vendors

General

This functionality creates and updates customers and vendors from a csv import file containing rows of vendor/customer master data. The import file may contain rows for new and/or existing customers/vendors. If a customer/vendor already exists, GnuCash updates the existing customer/vendor.

The format of the import file

The import file should contain rows of customer/vendor data, one row for each customer/vendor. The customer/vendor is identified by the customer/vendor number in the field `id` of the data rows. If the field is blank, GnuCash will use the next number from the relevant counter (set in the Counters tab under File → Properties).

There is no data in the file to indicate whether it concerns customer or vendor master data. Instead, a user option in the import dialog makes that distinction.

Each row should contain the fields listed below, in the same sequence, separated by a comma or a semi-colon. The fields are listed here by their technical name, which GnuCash uses in the preview of the import data.

- `id` - The customer/vendor number. If it is for an existing customer/vendor, GnuCash will update the customer/vendor. Note that in GnuCash e.g. '000010' is a different customer number than '10'. If the field is empty, GnuCash will use the next number from the relevant counter.
- `company` - The company name. If it is left blank, it is defaulted to the value of field `name`. If that is also blank, then the row is ignored.
- `name` - Billing address - Name. Optional.
- `addr1` - Billing address - Address line 1. At least one of the four address lines of the billing address must be filled. If not, then the row is ignored.
- `addr2` - Billing address - Address line 2.
- `addr3` - Billing address - Address line 3.
- `addr4` - Billing address - Address line 4.
- `phone` - Billing address - Phone. Optional
- `fax` - Billing address - Fax. Optional
- `email` - Billing address - Email. Optional
- `notes` - Notes. Optional
- `shipname` - Shipping information - Name. Optional. Not relevant for vendors.
- `shipaddr1` - Shipping information - Address line 1. Optional. Not relevant for vendors.
- `shipaddr2` - Shipping information - Address line 2. Optional. Not relevant for vendors.

- *shipaddr3* - Shipping information - Address line 3. Optional. Not relevant for vendors.
- *shipaddr4* - Shipping information - Address line 4. Optional. Not relevant for vendors.
- *shipphone* - Shipping information - Phone. Optional. Not relevant for vendors.
- *shipfax* - Shipping information - Fax. Optional. Not relevant for vendors.
- *shipmail* - Shipping information - Email. Optional. Not relevant for vendors.

Example content for a customer with a separate shipping address. Using a semicolon for separator.

```
2201;All Star Company;All Star Company;Union Avenue
776;San Juan;CA;;0482938838;;contact@allstar.com;Last contacted on
4/4/2018.;All Star Company; John Alderman, Office 456;Union Avenue
777;San Juan;CA;78998766;;alderman@allstar.com
```

Example content for a vendor; no ID given, so GnuCash will take the next number from the counter. Using a comma for separator.

```
,Johnson Supplies,Johnson Supplies,Electric Park 56,Plain-
s,VA,,0482986538,,jack@johnson.com,Discount negotiated,,,,,,,,
```

All fields by technical name in the required sequence.

```
id, company, name, addr1, addr2, addr3, addr4, phone, fax, email, notes,
shipname, shipaddr1, shipaddr2, shipaddr3, shipaddr4, shipphone, shipfax,
shipmail
```

Import your data

To import your customer or vendor data, navigate to File → Import → Import Customer & Vendors... to open a new import dialog, and provide the necessary information.

1. Choose the file to import - Select your import file, or manually type the path and file name.
 2. Select import type - Select the import type, either Customer or Vendor.
 3. Select import options - Select your csv format. Use the with quotes options if your file contains fields enclosed in double quotes. These options also match fields not enclosed in double quotes, but fields should not contain the double quote character itself. Use one of the other options if your file does not have fields enclosed in quotes; any double quote characters in the file will then be imported as is.
 4. Preview - Once you have selected your import file and csv format, GnuCash shows you a preview of the data. You can verify if your data is listed in the correct columns. If you do not see any rows in the preview, then GnuCash was not able to match your import data rows to the selected csv format. See the section called “What could go wrong?” below.
- *Start the import* - If you are satisfied with your selections, hit the OK button to start the import.

Note

Internally, GnuCash uses so called regular expressions to match the import rows to the data fields. The import option Custom regular expression offers the option to use your own regular expression for this matching process. Obviously, this option requires that you are well versed in regular

expressions. When you choose the option Custom regular expression, GnuCash opens a window in which you can edit the GnuCash regular expression, or replace it with your own. Your regular expression should contain a named subpattern for each of the fields of the csv file (using the technical names). A custom regular expression could be useful if the rows of your source data file contain all necessary fields, but in a different order or format. E.g. if the format of your source data file starts with customer number, followed by company name, name, and one address field, and that is all you want to import, then your custom regular expression would be something like this (using comma as a separator):

```
^(?<company>[^\,]*),(?<id>[^\,]*),(?<name>[^\,]*),(?<addr1>[^\,]*),(?<addr2>[^\,]*)
```

With a custom regular expression, GnuCash could import your source data files, without the need to convert them to the GnuCash import format.

Feedback and statistics

GnuCash executes the import process in three steps:

- *Import* - Imports the data file and attempts to match each row to the data fields.
- *Validation and adjustment* - Validates the data fields and replaces data with defaults if applicable.
- *Processing* - Creates or updates the vendor or customer master data.

After all steps have finished, GnuCash issues information about the result of the process. The initial dialog shows the statistics of the process:

- Import results - lines ignored: the number of rows that could not be matched to the data fields.
- Import results - lines imported: the number of rows that were successfully matched to the data fields.
- Import results - customers/vendors fixed: the number of rows for which a default value was used for a field.
- Import results - customers/vendors ignored: the number of rows for that were not processed because of a validation error.
- Import results - customers/vendors created: the number of customers/vendors created.
- Import results - customers/vendors updated: the number of customers/vendors that were updated.

If there were unmatched rows in the import step, a final dialog shows the actual rows that could not be matched.

What could go wrong?

Errors in the import step

If the statistics show unmatched rows under “Import results - lines ignored”, then there is some issue with the format of your import file. Verify that you use and select the correct separator. Verify that your data rows have exactly 18 separator characters (1 for each field, except for the last). Verify whether you use the separator character within a data field; if so, enclose the field in double quotes.

If you use one of the with quotes import options, verify if you use the double quote character in any of the data field values. If so, remove them; importing double quotes as is, is not supported when using the with quotes import options.

Errors in the validation step

If the statistics show rows under “Import results - customers/vendors ignored”, then data rows were ignored because of one of the errors below:

- The field `company` and the field `name` are both blank. The field `company` is mandatory; if it is blank, then it is defaulted to the value of the field `name`, but if both are blank, then the data row cannot be processed.
- The fields `addr1`, `addr2`, `addr3` and `addr4` are all blank. At least one of these fields must have a value, otherwise the data row cannot be processed.

Not supported customer/vendor functionality

Currently the customer/vendor import function does not support (at least) the following:

- Import of any of the fields in the customer tab for billing information: currency, terms, discount, credit limit, tax included and tax table.
- Import of any of the fields in the vendor tab for payment information: currency, terms, tax included and tax table.

Part IV. Appendices

Table of Contents

GnuCash Glossary	259
A. Migration Guide	263
Using Accounts vs. Categories	263
Organization of QIF Files (Discussion)	263
Common Duplication Issues (Discussion)	263
Checking QIF Data (Discussion)	263
Converting XML GnuCash File	263
B. Frequently Asked Questions	265
Sources of Information	265
Q: Where's the FAQ?	265
Q: Are there mailing lists for GnuCash?	265
Q: Is there a searchable archive for the mailing lists?	265
Q: Are there other means of obtaining support for GnuCash?	265
General Information	265
Q: Can I run GnuCash on Windows?	265
Q: I heard it is too hard to compile GnuCash!	265
Q: Is there a batch mode (non-interactive) available for GnuCash, for building reports, etc?	266
Q: Can multiple people access the same datafile in GnuCash?	266
Q: Why is GnuCash written in C?	266
Q: Why don't you rewrite GnuCash in programming language xyz so that I can con- tribute easily?	266
Q: I really want feature XYZ but GnuCash doesn't have it. How do I get it added?	266
Q: Is there a web interface available for GnuCash?	267
Q: How can I provide security for GnuCash data using CFS, etc.)	267
Q: How can I contribute to the GnuCash project?	267
Q: I think I found a bug. How do I report it?	267
Using GnuCash	267
Q: How can I move the transactions from account "A" into account "B", thus combin- ing them?	267
Q: Is it possible to merge two GnuCash files?	267
Q: How can I save a template of my account structure?	268
Q: When I search for customers (or anything else for that matter), how can I return a list of everything?	268
Q: How can I record a transaction on different dates (actual date and bank date)?	268
Accounting	268
Q: How do I treat taxes? As an account payable or as an expense?	268
C. Contributed Account Trees	269
UK Vat	269
D. Auxiliary File Formats	272
Check Format Files (*.chk)	272
Overview	272
Example file	272
Field Descriptions	273
Creating Check Format Files	281
E. GNU Free Documentation License	283
0. PREAMBLE	283
1. APPLICABILITY AND DEFINITIONS	283
2. VERBATIM COPYING	284
3. COPYING IN QUANTITY	284
4. MODIFICATIONS	285

5. COMBINING DOCUMENTS	286
6. COLLECTIONS OF DOCUMENTS	286
7. AGGREGATION WITH INDEPENDENT WORKS	286
8. TRANSLATION	287
9. TERMINATION	287
10. FUTURE REVISIONS OF THIS LICENSE	287
Addendum	287

GnuCash Glossary

This is a glossary of common terms used in GnuCash. Some entries here are taken from Wikipedia (<http://en.wikipedia.org>).

Account	An account keeps track of what you own, owe, spend or receive.
Accounting Period	An accounting period is the period with reference to which accounting books of an entity are prepared. Common accounting periods include month, quarter, and year.
AqBanking	A library which implements the German Home Banking Computer Interface (HBCI) and Electronic Banking Internet Communication Standard (EBICS), OFX Direct Connect and Paypal. It is the successor of openHBCI.
Asset	An asset is something you own. Anything tangible or intangible that can be owned or controlled to produce value and that is held to have positive economic value is considered an asset.
Balance Sheet	A Balance Sheet is a summary of the financial balances of an individual or organization. It summarizes a company's assets, liabilities and ownership equity at a specific point in time.
Book	A book is a record of all transactions for an individual or organization. In GnuCash, each file contains a book.
Capital Gain/Loss	The difference between the purchase and selling prices of an investment at the time the investment is sold. Also known as <i>Realized Gain/Loss</i> . Before an investment is sold, the difference in value is referred to as <i>Unrealized Gain/Loss</i> . See Also Realized Gain/Loss, Unrealized Gain/Loss.
Capital stock	See Stock.
Chart of Accounts	A listing of all the accounts available in the data file. The chart of accounts consists of balance sheet accounts (assets, liabilities, stockholders' equity) and income statement accounts (revenues, expenses, gains, losses).
Commission	The fee paid to a broker to buy or sell securities.
Commodity	A commodity is something of value that is easily tradeable or sellable; for example, currencies, stocks, bonds, grain, copper, and oil are all commodities.
Common stock	See Stock.
Compounding	The concept that the reinvested interest can later earn interest of its own (interest on interest). This is often referred to as <i>compound interest</i> .
Cost Basis	Cost basis is the original cost of property, adjusted for various factors. Its primary use is for tax purposes. Factors that affect the cost basis include: stock splits, dividends, depreciation and return of capital distributions. Cost basis is used to determine the <i>capital gain</i> .
CSV	Stands for Comma Separated Values. CSV files are used to store data in plain text. Each line of the file is a record and each record can be comprised of multiple fields separated by commas. CSV is one import format that GnuCash supports.

Dividends	Dividends are cash payments a company makes to shareholders. The amount of this payment is usually determined as some amount of the profits of the company. Not all common stocks give dividends.
Equities	Equities are investments in which the investor becomes part (or whole) owner in something.
Financial Transaction Services (FinTS)	A banking protocol used by German banks. Developed by the German Central Banking Committee ZKA (Zentraler Kredit-Ausschuss). The standard is used only by German banks. Prior 2002, it was called Home Banking Computer Interface (HBCI). FinTS is one import format that GnuCash supports. See Also Home Computer Banking Interface (HBCI).
GSettings	Since version 2.5 the tool that stores user configuration data. It uses the native data store of the operating system: <i>Linux</i> DConf since Gnome 3.0 dropped GConf <i>MacOS</i> Defaults. Use the command-line defaults(1) to modify prefs when GnuCash isn't running. <i>Windows</i> Registry.
Home Computer Banking Interface (HBCI)	A bank-independent online banking protocol used by German banks. Home Banking Computer Interface (HBCI) was developed by the German Central Banking Committee ZKA (Zentraler Kredit-Ausschuss). Since 2002, it has been called Financial Transaction Services (FinTS). HBCI is one import format that GnuCash supports. See Also Financial Transaction Services (FinTS).
Interest	What a borrower pays a lender for the use of their money. Normally, this is expressed in terms of a percentage of the principal per year. For example, a savings account with 1% interest will pay you \$1 for every \$100 you keep deposited per year.
Liability	A liability is a debt or obligation that an individual or organization owes.
LibOFX	An open source library for <i>OFX</i> . It was created by one of the GnuCash developers, originally to be the <i>OFX</i> interface for GnuCash. See Also <i>OFX</i> .
Liquidity	A measure of how easily convertible an investment is to cash. Money in a savings account is very liquid, while money invested in a house has low liquidity because it takes time to sell a house.
Lot	A lot is a means of grouping a commodity so that you later identify that the item bought in one transaction is the same as one sold in a different transaction. Lots are often implemented with stocks, where capital gain can depend on which item is being sold at a given time.
MT940	A financial information standard defined by SWIFT and used by several European banks. It is also used internally in HBCI. Unfortunately, you can't download the MT940 standard, but some banks publish it on their websites. MT940 is one import format that GnuCash supports.
OFX	The Open Financial eXchange format. This is a financial information exchange standard used by many institutions. <i>OFX</i> is one import format that GnuCash supports.

Price Database	The price database contains a store of price quotes for stocks, mutual funds, and currencies.
Principal	The original amount of money invested or borrowed.
QFX	The Quicken Financial eXchange format is a proprietary financial information exchange standard promoted by Quicken and used by many institutions. QFX is one import format that GnuCash supports.
QIF	The Quicken Interchange Format (QIF) is an open specification for reading and writing financial data to files. This is an older format that is still used by many institutions. QIF is one import format that GnuCash supports.
Realized Gain/Loss	The difference between the purchase and selling prices of an investment at the time the investment is sold. Also known as <i>Capital Gain/Loss</i> . Before an investment is sold, the difference in value is referred to as <i>Unrealized Gain/Loss</i> . See Also Capital Gain/Loss, Unrealized Gain/Loss.
Reconciliation	Reconciliation is a verification process in which the user compares their records with those of the financial institution to ensure that the records in each system agree at some particular point in time. During reconciliation, the user checks individual transactions in their file against the institution's statement; upon completion, the reported balances of the institution and the reconciled account will match at that point in the register.
Return	The total income plus capital gains or losses of an investment. See Also Yield.
Reversing Transaction	In formal accounting, a transaction is never deleted. Therefore, when a mistake is made, the original transaction remains in the ledger, and a transaction is added to the ledger that reverses the original. This <i>reversing transaction</i> duplicates the original transaction, but with debit and credit amounts reversed. This removes the effect of the erroneous transaction from the books. After entering the reversing transaction, a corrected transaction can then be entered. Reversing transactions are not commonly used in personal accounting.
Risk	The probability that the return on investment is different from what was expected. Investments are often grouped on a scale from low risk (e.g., savings accounts or government bonds) to high risk (e.g., common stocks or junk bonds). As a general rule of thumb, the higher the risk, the higher the possible return.
Scheduled Transaction	Scheduled transactions provide a framework for remembering information about transactions that are set to occur in the future, either once or periodically. See Also Yield.
Scheme	Scheme is a functional programming language based on a dialect of LISP. Reports in GnuCash use the Scheme programming language; thus, users wishing to customize reports must write Scheme.
Shareholder	A shareholder is a person who holds common stock in a company.
Split	A split, or Ledger Entry, is the fundamental accounting unit. Each split consists of an amount, the value of that amount expressed in a (possibly) different currency, a Memo, a pointer to the parent Transaction, a pointer to the debited Account, a reconciled flag and timestamp, an action field, and a key-value frame which can store arbitrary data.

Stock	A security that represents a certain fractional ownership of a company. This is what you buy when you “buy stock” in a company on the open market. This is also sometimes known as <i>capital stock</i> , or <i>common stock</i> .
Stock split	Occurs when a company offers to issue some additional multiple of shares for each existing stock. For example, a “2 for 1” stock split means that if you own 100 shares of a stock, you will receive an additional 100 shares at no cost to you. The unit price of the shares will usually be adjusted so there is no net change in the value, so in this example the price per share will be halved. Note that such transactions affect the cost basis per share owned.
Transaction	A transaction consists of a date, a description, an ID number, a list of two or more splits, and a key-value frame. Transactions embody the notion of "double entry" accounting.
Unrealized Gain/Loss	Unrealized gain or loss is the difference in value between a purchase price and the current value of a given asset. These gains remain unrealized until the asset is sold, at which point they become <i>Realized gains or losses</i> . See Also Capital Gain/Loss, Realized Gain/Loss.
Valuation	The process of determining the market value or the price the investment would sell at in a “reasonable time frame”.
XML	The eXtensible Markup Language is an international markup standard. GnuCash stores its data by default in an XML data structure.
Yield	A measure of the amount of money you earn from an investment (i.e., how much income you receive from the investment). Typically, this is reported as a percentage of the principal amount. Yield does not include capital gains or losses (see Return). For example, a stock that sells for \$100 and gives \$2 in dividends per year has a yield of 2%.

Appendix A. Migration Guide

This appendix is to help current users of other financial software packages in their migration to GnuCash. We address the conceptual differences between the layout of GnuCash accounts versus other software packages.

Using Accounts vs. Categories

If you are familiar with other personal finance programs, you are already accustomed to tracking your income and expenses as categories. Since GnuCash is a double-entry system (refer to section 2.1), income and expenses are tracked in accounts. The basic concept is the same, but the account structure allows more consistency with accepted business practices. So, if you are a business user as well as a home user, GnuCash makes it easy to keep track of your business as well as your personal accounts.

Income and expense accounts give you the same information you would get with categories, but they also give you more flexibility in entering your transactions. In GnuCash, you have the option to enter transactions directly into income and expense accounts through their account registers. Other programs that use categories do not offer this option, because there is no “account register” for a category.

You also have the option in GnuCash to treat income and expense accounts exactly as you would treat categories, if you are more comfortable with that method. In Quicken® and similar programs, transactions require an account and a category. Substitute an income or expense account name in GnuCash where you would normally enter a category name in the other programs, and the result should be the same. We will discuss transaction entry in Chapter 4 in greater detail.

Organization of QIF Files (Discussion)

Common Duplication Issues (Discussion)

Checking QIF Data (Discussion)

Converting XML GnuCash File

The GnuCash XML data file can be transformed to almost any other data format (e.g., QIF, CSV...) quite easily if one is familiar with XSLT. The GnuCash data file is well-formed XML, and it can therefore be run through an XSLT parser with an associated stylesheet. This allows one to transform the file to just about any format that can be designed, given a properly written stylesheet.

A few steps need to be followed. The writing of a stylesheet is a task for a different time, but if you can get one written, here’s what you need to do:

1. Copy the GnuCash XML data file to a working file.

Note

If the file was last modified by a version of GnuCash older than 2.0, then before to continue to the next step you will need to modify the working file’s `<gnc-v2>` tag to read something like this:

```
<gnc-v2 xmlns:cd="http://www.gnucash.org/XML/cd"
  xmlns:book="http://www.gnucash.org/XML/book"
  xmlns:gnc="http://www.gnucash.org/XML/gnc"
  xmlns:cmdty="http://www.gnucash.org/XML/cmdty"
  xmlns:trn="http://www.gnucash.org/XML/trn"
  xmlns:split="http://www.gnucash.org/XML/split"
  xmlns:act="http://www.gnucash.org/XML/act"
  xmlns:price="http://www.gnucash.org/XML/price"
  xmlns:ts="http://www.gnucash.org/XML/ts"
  xmlns:slot="http://www.gnucash.org/XML/kvpslot"
  xmlns:cust="http://www.gnucash.org/XML/cust"
  xmlns:entry="http://www.gnucash.org/XML/entry"
  xmlns:lot="http://www.gnucash.org/XML/lot"
  xmlns:invoice="http://www.gnucash.org/XML/invoice"
  xmlns:owner="http://www.gnucash.org/XML/owner"
  xmlns:job="http://www.gnucash.org/XML/job"
  xmlns:billterm="http://www.gnucash.org/XML/billterm"
  xmlns:bt-days="http://www.gnucash.org/XML/bt-days"
  xmlns:sx="http://www.gnucash.org/XML/sx"
  xmlns:fs="http://www.gnucash.org/XML/fs"
  xmlns:addr="http://www.gnucash.org/XML/custaddr">
```

You can put pretty much anything you want behind the equal signs, but a URL is what is typically used.

2. Create an XSLT stylesheet containing the transformation your desire, or obtain one that's already written (AFAIK, there aren't any, but I'm working on a CSV one).
3. Install an XSLT processor such as Saxon (<http://saxon.sourceforge.net/>) or Xalan-J (<http://xml.apache.org/>). Any conforming processor will do, really...
4. Run the work file and the stylesheet through the processor according to the processor's instructions.
5. You will now have a file in the desired output format. An enterprising individual could go so far as to write a stylesheet to transform the GnuCash data file to an OpenOffice spreadsheet (or vice-versa, for that matter). Such things as QIF ought to be a little less work.

Benefits are that you don't need to write a Scheme module or a new C routine to do this transformation. Anyone who knows or can learn XML and XSLT can perform this task. Not much harder, really, than writing a Web page....

Anyhow, I just wanted this tidbit to be captured somewhere permanently. The process works on 3.7 datafiles, and ought to work on earlier versions, too.

Appendix B. Frequently Asked Questions

This is a list of questions asked on the mailing lists for which there really is no section in the documentation covering the subject.

Sources of Information

Q: Where's the FAQ?

A: You're looking at it. The most up-to-date copy can be found within the GnuCash Wiki [<http://wiki.gnucash.org/wiki/FAQ>].

Q: Are there mailing lists for GnuCash?

A: Yes. Go to <http://lists.gnucash.org/mailman/listinfo/gnucash-user> and <http://lists.gnucash.org/mailman/listinfo/gnucash-devel> to subscribe.

Q: Is there a searchable archive for the mailing lists?

A: Yes, you can search the mail list archives at <http://news.gmane.org/gmane.comp.gnome.apps.gnucash.devel> and <http://news.gmane.org/gmane.comp.gnome.apps.gnucash.user> (and <http://news.gmane.org/gmane.comp.gnome.apps.gnucash.german> if you speak German).

Q: Are there other means of obtaining support for GnuCash?

A: Yes. Many of the developers hang out on icq in the #gnucash discussion on irc.gnome.org. Also, there is a wiki online at <http://wiki.gnucash.org/wiki/GnuCash>.

General Information

Q: Can I run GnuCash on Windows?

A: Yes. Starting with release 2.2.0, GnuCash is also available on Windows.

Other related options would be colinux, VMWare and a windows-based X-server hosting a remote GnuCash session.

Q: I heard it is too hard to compile GnuCash!

A: This was probably true at the time when 1.6.0 was released. It is no longer true today, as almost every distribution ships with all the necessary libraries (except g-wrap, which means there is in fact "one" extra library to be installed before compiling GnuCash). However, by default, distributions won't install the development packages of the required libraries, so you might need to start your distribution's installer program and tell it to install not only the library packages but also the -devel packages. In general, it was

noted that this problem concerns many applications in the gnome domain, and this also boils down to the fact that there is no such thing as “one monolithic gnome package”.

Q: Is there a batch mode (non-interactive) available for GnuCash, for building reports, etc?

A: No, for now GnuCash must be run interactively.

Q: Can multiple people access the same datafile in GnuCash?

A: You can have multiple people with access to the same datafile, but they cannot use the data file simultaneously.

To setup multi-person access, all the people must have read/write access to the directory containing the file (to read the other’s created files, and to create new files). One way to do this is by creating a user group and setting the data directory to be owned by the shared group and set to mode 2775. The “2” makes the directory setgid which copies the permissions to all files.

Q: Why is GnuCash written in C?

A: The core functionality of GnuCash is written in C, but do not forget that much of this can be accessed through Guile (scheme). There are a number of reasons for why GnuCash is written in C. The first is historical, GnuCash was started in 1996 (or maybe even earlier!) and many of the OOP (C++, Java, Python) compilers were not yet mature and standardized enough on the variety of platforms considered at that time, so C was the only option at that time. A second reason is because the standard GUI GnuCash uses is GTK, which is written in C.

Q: Why don’t you rewrite GnuCash in programming language xyz so that I can contribute easily?

A: The quick answer is “We won’t”. The longer answer is complex but still amounts to “We won’t”. GnuCash is a large body of code maintained by a small group of developers who are comfortable in C and Scheme (Guile). Actually, 80% of it is in C and approx. 13% is in Scheme/Lisp. There is no valid reason that would justify rewriting this amount of existing code in a newer language. Also, creating language bindings to recent languages such as Python or Ruby or (insert your favourite language here) is labor intensive, and we’re already stretched pretty thin maintaining and developing the existing code.

Having said that, this is an open source project and you’re free to do with it or contribute what you want. Just don’t expect much support if the reason for your changes is that you’re not willing to learn C or Scheme. Also, GnuCash used to have SWIG bindings (<http://www.swig.org>) which have been used for some perl programming code. According to a list discussion, these SWIG bindings might still be a way to include other languages into GnuCash, but currently they are unused and unmaintained.

Q: I really want feature XYZ but GnuCash doesn’t have it. How do I get it added?

A: Ask nicely. :-) You can file an enhancement request at http://bugs.gnucash.org/enter_bug.cgi?product=GnuCash. Please bear in mind to describe your proposed enhancement as verbosely as possible. The trick here is to learn how to give the best information to the programmers about what your proposed new

feature should do. If you want to speed up development significantly, consider donating some money as described on [GnuCashDevelopment](#).

Q: Is there a web interface available for GnuCash?

A: No

Q: How can I provide security for GnuCash data using CFS, etc.)

A: Unanswered

Q: How can I contribute to the GnuCash project?

A: We're working on a more formal process, but for now you should subscribe to the mailing list at <http://lists.gnucash.org/mailman/listinfo/gnucash-user> and <http://lists.gnucash.org/mailman/listinfo/gnucash-devel> and discuss what you can contribute with the participants on the lists. Please be aware that GnuCash is a large body of code written in C and Scheme (see the FAQ above, "Why is GnuCash written in C?" if you want to know why). If these are languages that you are not willing to work with, consider contributing in other ways.

Q: I think I found a bug. How do I report it?

A: First of all, try to verify that it is indeed a bug and that it has not been reported before. Search the mail list archives (see FAQ above). Then search the GnuCash Bugzilla [<http://bugs.gnucash.org>] database.

If you feel you have indeed found a bug, you can then report it at http://bugs.gnucash.org/enter_bug.cgi?product=GnuCash. Please bear in mind to report your bug as verbosely as possible. The trick here is to learn how to give the best information to the programmers about how to reproduce bugs. A Programmer will usually only be able to fix a bug they can see, if you can't make the programmer see your bug, it won't get fixed!

Using GnuCash

Q: How can I move the transactions from account "A" into account "B", thus combining them?

A: At present, GnuCash does not offer a way to move groups of splits from one account to another. You will need to move them one at a time. Open the register for account "A" and select the pulldown menu item View → Transaction Journal to expose all the splits. For every split where the "Account" field shows account "A" reset it to account "B". To do this quickly and safely, first use **Ctrl+C** to copy the destination account name ("account B") to the clipboard. Then highlight each reference to account "A" by double clicking on it and use **Ctrl+V** to paste the destination account name. Pressing **Enter** after each paste, silently moves the transaction out of the register.

Be careful! If you inadvertently set the "Account" field to an unintended location, you will need to search through all your accounts to find the lost transaction to correct your mistake.

Q: Is it possible to merge two GnuCash files?

A: At present this is not possible.

Q: How can I save a template of my account structure?

A: This is available from the menu: File → Export → Export Accounts

Q: When I search for customers (or anything else for that matter), how can I return a list of everything?

A: Enter a search criteria of matches regex, and place a single dot “.” in the text field area. Then, click Find. The regular expression “.” means to match anything.

Q: How can I record a transaction on different dates (actual date and bank date)?

A: You record the transaction on the date you write the check or initiate the transaction. When it “clears” the bank, you can click in the “Reconciled” field to “clear” the transaction (change the “n”on-reconciled to “c”leared).

Accounting

Q: How do I treat taxes? As an account payable or as an expense?

A: This is a loaded question, and you should really talk to your accountant. How you treat taxes really depends on what kind of taxes they are, and how you WANT to treat them.. In some cases they are expenses, in some cases they are liabilities.

Appendix C. Contributed Account Trees

UK Vat

Account types (only shown if different to parent type)

- [E] Expense
- [I] Income
- [A] Asset
- [L] Liability
- [Q] Equity
- [B] Bank accounts
- [C] Credit Cards
- [R] Accounts Receivable
- [P] Accounts Payable

(Box n) refers to VAT form box number (I actually have these as descriptions to the account to remind me)

Add all the (Box n -part) together to get the whole (Box n) The VAT shows you liability - if its negative they owe you.

Capital Equipment (Box 7 - part) and (Box 6 - part) is the value of all *additions* (purchases) made over the VAT return period - not the absolute value, nor the difference in value unless that difference is wholly due to new purchases. Depreciation, losses (e.g a write off of faulty item) and other reductions in capital value are not included. If you sell a capital item then that sale and its VAT is recorded under Income. The asset is “converted to cash”, so the “net of VAT” increase in your bank account, when the invoice is payed, is matched by a decrease in capital.

Bank Accounts [B]

- Main Account
- Reserve Account

Cash [A]

Assets [A]

- Capital Equipment (Box 7 - Part) - additions only, not absolute value
- Computers Can be depreciated to zero this year
- EEC reverse VAT purchase (Box 6 - Part) create sub-accounts if needed
- Other

Receivable [R] Customers to whom you give credit - (business section)

Cards [C]

Card 1

Liabilities [L]

Owed Corp Tax

Owed Fees

Owed Tax / NI

Other

VAT [L] Net (Box 5)

i/p [A] purchases (Box4)

o/p [L] (Box3)

EEC on reverse VAT purchases (Box 2)

Sales all including zero rate UK/ EEC and World (Box1)

Payable [P] Suppliers who give you credit (business section)

Equity [Q]

Corp Tax

Director's Loan

Dividends

Director1

Director2

Shareholder 1

Grants (and stuff that does not count as income)

Opening Balances

Income [I] (Box 6 - part)

Interest

Misc

Sales

EEC

goods (Box 8) (sub accounts as needed)

services includes software (sub accounts as needed)

UK

World

Expenses [E]

Depreciation

Emoluments

Directors Fees

NI Employer

Employee 1

NI

Net Salary

Stakeholder

Tax

Other Non VAT Expenses

VAT Purchases (Box 7 - part)

Accountancy

Bank Charges

Consumables

EEC reverse VAT purchases (Box 6 - Part)

Contributed Account Trees

- | |___ goods (Box 9) (sub accounts as needed)
- | |___ services includes software (sub accounts as needed)
- |___ Office
- |___ Phone and Internet
- |___ Software
- |___ Subscriptions
- |___ Sundry
- |___ Travel / Accom

Appendix D. Auxiliary File Formats

These are the formats of some auxiliary files used by GnuCash.

Check Format Files (* .chk)

Overview

The check format file is used to tell GnuCash how to print a check or checks onto a page of paper. This file first describes the overall layout of a page (number of checks, orientation, etc) and then describes the layout of the specific items on a single check. The file is organized as a typical Key/Value file used by many Linux applications. Keys/values pairs are grouped into sections that begin with the group name enclosed in square brackets.

GnuCash looks for check format files in two different locations when you bring up the check printing dialog. The first location is typically `/usr/share/gnucash/checks`, where check files distributed with the application can be found. The second location is the user private `~/ .gnucash/checks` directory. Users may add check formats at any time (even while GnuCash is running) simply by dropping a new `* .chk` file in this directory. The next time the check printing dialog is opened the new check format will appear in the list of available check formats.

Note

Printing functions differently depending on the version of GTK that is installed on your system. When GnuCash is using a version of GTK prior to 2.10 all offsets are measured from the lower left corner of the page or check. When using GTK 2.10 or later, all offsets are measured from the upper left corner of the page or check.

Example file

A typical GnuCash check file is presented below. The contents of this file will be described in the next sections.

```
[Top]
Guid = 67b144d1-96a5-48d5-9337-0e1083bbf229
Title = Quicken/QuickBooks (tm) US-Letter
Rotation = 0.0
Translation = 0.0;4.0
Show_Grid = false
Show_Boxes = false

[Check Positions]
Height = 252.0
Names = Top;Middle;Bottom

[Check Items]
Type_1 = PAYEE
Coords_1 = 90.0;102.0;400.0;20.0

Type_2 = AMOUNT_WORDS
Coords_2 = 90.0;132.0
```

```
Type_3 = AMOUNT_NUMBER
Blocking_Chars_3 = true
Coords_3 = 500.0;102.0
```

```
Type_4 = DATE
Coords_4 = 500.0;67.0
```

```
Type_5 = NOTES
Coords_5 = 50.0;212.0
```

Field Descriptions

Top Group

This section of the check file describes the overall layout of a page of checks (or check) that goes into the printer.

Table D.1. Overall Page Description Fields

Name	Type	Required	Description
Guid	string	mandatory	The guid is used to uniquely identify a check format to GnuCash. It must be unique across the entire set of application supplied and user supplied check formats. If you copy an application check file as the basis of your own check format, you must change this value. The <i>uuidgen</i> program may be used to generate these identifiers.
Title	string	mandatory	The title is used to uniquely identify a check format to the user. This value is presented verbatim in the check format list of the check printing dialog. If you copy an application check file as the basis of your own check format, you should change this value. The title may be any utf-8 string.
Font	string	optional	If supplied, this is the default font used to print all text items on this check. This field can contain

Name	Type	Required	Description
			any string that is acceptable by gtk as a font specifier. If this field is omitted, the default font is the font specified in the GnuCash preferences dialog. A typical string would be "sans 12".
Blocking_Chars	boolean	optional	If supplied, this is the default used when printing all <i>TEXT</i> items on this check. When set to true, will print *** before and after each text field on the check. Blocking characters are printed to protect check fields from alteration. For example, the amount field may be printed as ***100.00***
DateFormat	boolean	optional	If supplied, this is the default used when printing all <i>DATE</i> items on this check. When set to true, will print the format of the DATE in 8 point type, centered and below the actual DATE. For example DDMMYYYY.
Rotation	double	optional	This value specified the rotation of the entire page (in degrees) around the origin point. For gtk versions prior to 2.10, the origin point is in the lower left corner of the page and rotation values increase in the counter-clockwise direction. For gtk version 2.10 and later, the origin point is in the upper left corner of the page and rotation values increase in the clockwise direction. Rotation of the page is applied before translation.
Translation	list of 2 doubles	optional	These values specify the x and y translation of the entire page (in points) relative to the origin

Name	Type	Required	Description
			point. For gtk versions prior to 2.10, the origin point is in the lower left corner of the page and translation values increase moving up and to the right. For gtk version 2.10 and later, the origin point is in the upper left corner of the page and translation values increase moving down and to the right. Rotation of the page is applied before translation.
Show_Grid	boolean	optional	If this value is set to <i>true</i> then GnuCash will draw a grid on the page, starting at the origin with the lines spaced every 50 points. This can be helpful when creating a check format file.
Show_Boxes	boolean	optional	If this value is set to <i>true</i> then for each item where the width and height have been specified, GnuCash will draw a box showing location and maximum size of that item . This can be helpful when creating a check format file.

Note

The Blocking_Chars and DateFormat options are defined for all check formats in Edit->Preferences->Printing. It is recommended that these global options be set to false (the default), and that the options be set for individual Check Items as described below.

Check Positions Group

This group of items specifies how multiple checks are laid out on the same sheet of paper, and gives names to each of these check locations so that a user can specify which check location that GnuCash should print. This entire group of key/value pairs is optional, and should be omitted if the format file only specifies a single check per page of paper.

Table D.2. Multiple Checks Per Page Fields

Name	Type	Required	Description
Height	double	mandatory	This field specifies the height of a single check

Name	Type	Required	Description
			on the page. If there are multiple checks per page then this item is mandatory. If there is only a single check per page, this entire section should be omitted.
Names	list of strings	mandatory	This field specifies the names of the check locations that can be printed on each page. These names represent the check positions starting from the top of the page and moving downward. The names are presented verbatim in the check position list of the check printing dialog. A typical value for this field is "Top;Middle;Bottom", but it could also be "First;Second;Third" or any other set of strings that clearly identify the check locations. If there are multiple checks per page then this item is mandatory. If there is only a single check per page, this entire section should be omitted.

Check Items Group

This section specifies the individual items that are printed on the check. There is no limit to the number of items that may be present in this section, and any given type of item can be repeated multiple times. This allows for the printing of checks that have a side stub, or for the one-per-page business checks that have both the check and multiple check stubs on the same page. For example, to print the payee name on a business check and on both stubs, simply specify three payee items with differing print coordinates.

Each key names in this section explicitly includes the item number to which it applies. E.G. The key named Type_1 applies to the first item to be printed, and the key Coords_3 applies to the third item to be printed. Item numbers start at one and increase sequentially. Any gap in the numbering sequence is interpreted by GnuCash as the end of the item list. Items are printed in the order of their item numbers, not in the order in which they appear in the file.

Each item specified must include a type declaration. The rest of the parameters for that item depend upon the particular type of that item. See Table D.4, "Individual Check Item Types" for a list of valid item types and their required parameters.

Table D.3. Individual Check Item Fields

Name	Type	Required	Description
Type_ <i>n</i>	string	mandatory	This field specifies the type of a single item to be printed on a check. See Table D.4, “Individual Check Item Types” for a list of valid item types.
Coords_ <i>n</i>	list of 2 or 4 doubles	mandatory	<p>This field specifies the coordinates where the item should be placed on a check, and optionally also specifies the width and height of the item. The numbers in order are the X and Y offset of the lower left corner of the item, and optionally the width and height of the item. If the width is supplied then the height must also be supplied, so this field will always contain two or four numbers. For gtk versions prior to 2.10, the origin point is in the lower left corner of the page and translation values increase moving up and to the right. For gtk version 2.10 and later, the origin point is in the upper left corner of the page and translation values increase moving down and to the right.</p> <p>Note</p> <p>Regardless of whether the origin is at the top or the bottom of the page, the coordinates always specify the lower left point of the item.</p>

Name	Type	Required	Description
Font_ <i>n</i>	string	optional	If supplied, this is the font used to print this specific text item. This field can contain any string that is acceptable by gtk as a font specifier. If this field is omitted, the default font is the font specified in the <i>Top</i> section of the check description file, or if that was omitted the font specified in the GnuCash preferences dialog. This field is only recognized when using gtk version 2.10 or later.
Align_ <i>n</i>	string	optional	If supplied, this is the alignment used to print this specific text item. This field must contain one of the strings “left”, “center” or “right”. If this field is omitted, the text will be left aligned. This field is only recognized when using gtk version 2.10 or later.
Text_ <i>n</i>	string	optional	This field is only used when the item type is <i>TEXT</i> . It specifies the utf-8 text that should be printed on the check.
Filename_ <i>n</i>	string	optional	This field is only used when the item type is <i>PICTURE</i> . It specifies the filename of the image that should be printed on the check. The string may specify either an absolute path name or as a relative path name. If a relative path name is specified, GnuCash first looks in in the application check format folder (typically <code>/usr/share/gnu-cash/checks</code>) for the image file, and if it isn't found there then it looks in the

Name	Type	Required	Description
			user private ~/.gnu-cash/checks directory for the image. This field is only recognized when using gtk version 2.10 or later.
Blocking_Chars_n	boolean	optional	If supplied, this will set the print <i>Blocking_Chars</i> option for this item.
DateFormat_n	boolean	optional	If supplied, this will set the print <i>DateFormat</i> option for this item.

These are the individual items that can be printed on a check. All items require the coordinates on the page where the item should be printed. The majority of these items result in text being printed on the page, and these items may have individual font and alignments specified. For example, the numerical amount of a check could be printed right justified while everything else is printed left justified. Other types may have unique parameters.

Table D.4. Individual Check Item Types

Name	Required Fields	Optional Fields	Description
PAYEE	Coords	Font Align Blocking_Chars	This type value tells GnuCash to print the check payee name at the specified coordinates.
DATE	Coords	Font Align Blocking_Chars DateFormat	This type value tells GnuCash to print the check date at the specified coordinates.
NOTES	Coords	Font Align Blocking_Chars	This type value tells GnuCash to print the transaction notes field at the specified coordinates.
CHECK_NUMBER	Coords	Font Align Blocking_Chars	This type value tells GnuCash to print the check number at the specified coordinates. The check number reflects the book option selection under File → Properties for number source (transaction number or anchor-split action - see Use Split Action Field for Number [ghelp:gnu-cash-help?num-action-book-option] in

Name	Required Fields	Optional Fields	Description
			the Book Options section of the GnuCash Help Manual).
MEMO	Coords	Font Align Blocking_Chars	This type value tells GnuCash to print the split memo field at the specified coordinates.
ACTION	Coords	Font Align Blocking_Chars	This type value tells GnuCash to print the split action field at the specified coordinates. However, the printed field reflects the book option selection under File → Properties for number source (transaction number or anchor-split action - see Use Split Action Field for Number [ghelp:gnu-cash-help?num-action-book-option] in the Book Options section of the GnuCash Help Manual). If number source for the book is specified as anchor-split action, this field will instead print the transaction number field.
AMOUNT_WORDS	Coords	Font Align Blocking_Chars	This type value tells GnuCash to print the check amount in words at the specified coordinates. The amount will appear similar to the string "One thousand, two hundred thirty four and 56/100".
AMOUNT_NUMBER	Coords	Font Align Blocking_Chars	This type value tells GnuCash to print the check amount in numbers at the specified coordinates. The amount will appear similar to the number "\$1,234.56".
ADDRESS	Coords	Font Align Blocking_Chars	This type value tells GnuCash to print the address at the specified coordinates.

Name	Required Fields	Optional Fields	Description
SPLITS_ACCOUNT	Coords	Font Align Blocking_Chars	This type value tells GnuCash to print the account names for each split entry stating at the specified coordinates. See the note on splits printing.
SPLITS_AMOUNT	Coords	Font Align Blocking_Chars	This type value tells GnuCash to print the amount for each split entry stating at the specified coordinates. Amounts are printed with currency symbols. See the note on splits printing.
SPLITS_MEMO	Coords	Font Align Blocking_Chars	This type value tells GnuCash to print the memo text for each split entry stating at the specified coordinates. See the note on splits printing.
TEXT	Coords, Text	Font Align Blocking_Chars	This type value tells GnuCash to print an arbitrary string at the specified coordinates. The string to be printed is specified with the <i>Text_n</i> key.
PICTURE	Coords, Filename	(none)	This type value tells GnuCash to print an image at the specified coordinates. The image to be printed is specified with the <i>Filename_n</i> key. This type is only recognized when using gtk version 2.10 or later.

Note

SPLIT items include all split entries for the transaction except for the split that applies to the current account register (referred to as the anchor-split). This is usually the last split listed when splits are displayed in the register. The coordinate location defines the lower left location for the split information.

Creating Check Format Files

Creating your own check format file is a fairly simple task. The easiest way to start is to copy an existing check format file from the application directory (typically `/usr/share/gnucash/checks`) to the directory `~/ .gnucash/checks`. Make sure to change the guid so the new file will be accepted

by gnucash, and change the title to something descriptive. Then change or add individual item fields as necessary. You can also create a new check file by clicking the Save Format button on the Custom format page of the check printing dialog.

Note

Key names are case sensitive. If you're having problems with a check format file, ensure that all key names have capital letters as documented above.

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GnuCash Help Manual

The GnuCash Documentation Team

GnuCash Help Manual

by The GnuCash Documentation Team

This manual describes how to use the GnuCash Financial software.

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Table of Contents

About the Authors	xii
1. Introduction to GnuCash	1
2. Using This Document & Getting Help	2
Accessing Help	2
GnuCash Tutorial and Concepts Guide	2
GnuCash Wiki	3
GnuCash On-line Assistance	3
GnuCash Website	3
3. Getting Started	4
Welcome to GnuCash! Screen	4
New Account Hierarchy Setup	4
Import QIF Files	4
Tip of The Day	8
4. GnuCash Windows & Menus Options Overview	9
GnuCash Windows and Menus	9
Main GnuCash Window	9
Account Tree Display	10
Account Tree - Menus	11
Account Tree - <i>Toolbar</i> Icons/Buttons	19
Tab bar	20
Main pane - Account tree	20
Summarybar	21
Statusbar	21
Account Register/General Journal	21
Account Register & General Journal Window	21
Account Register Menus	22
Account Register - <i>Toolbar</i> Icons/Buttons	27
Tab Bar	28
List of Transactions	28
Summarybar	28
Statusbar	29
Report Window	29
Report Display Window	29
Report Menus	29
Reports - <i>Toolbar</i> Icons/Buttons	33
Tab Bar	34
Report Main Display	34
Summarybar	34
Statusbar	34
Reconcile Window	34
Reconcile Display Window	34
Schedule Transaction Window	36
Scheduled Transactions Main Display Window	36
Budget Window	38
Budget Window Menus	38
Budget Window <i>Toolbar</i> Buttons	39
Budget Window Main Display	39
Budget Options	40
Business Windows	40
Customers Overview	40
Vendors Overview	40

Employees Overview	41
5. Setting Up, Editing & Working with Accounts	42
Types of GnuCash Accounts	42
Creating a Chart of Accounts	44
Editing a Chart of Accounts	45
Creating a New Account	45
General Information Tab	45
Opening Balance tab	49
Editing an Account	49
Renumbering Subaccounts	50
Deleting an Account	50
Reconciling an Account to a Statement	51
Reconciling Information	51
Reconcile	52
6. Common Transaction Operations	54
Transfer Funds Dialog Box	54
Basic Information	54
Transfer Accounts	55
Currency Transfer	55
Finishing Up	55
Enter Transaction via register	56
Entering Directly in the Register Window	56
Multiple Split Transactions	57
Multiple Currency/Commodity Transactions	58
Editing a Transaction	59
Deleting a Transaction	59
Add Reversing Transaction	59
Removing Transaction Splits	60
Copying a Transaction	60
Setting the reconcile status (R field) of a transaction	60
Jump to another Account Register	61
Scheduling Transactions	61
Scheduled Transactions Window	62
Edit Scheduled Transaction Window	62
Printing Checks	63
Importing Transactions from Files	64
Import Formats	64
Import QIF	65
Import OFX/QFX	67
Import CSV	67
Import MT940 and MT942 SWIFT and DTAUS format files	71
Generic Transaction Import Matcher	72
Match Picker	76
Import Match Editor	77
Exporting Transactions	79
Choose Export Settings	80
Account Selection	81
Choose File Name for export	81
Export Now...	81
Export Summary	81
Online Actions	82
Get Balance	82
Get Transactions	82
Issue Transaction	82

Direct Debit	82
General Journal	82
7. Business Features	83
Initial Setup	83
Account Setup	83
Tax Tables	83
Company Registration	84
Counters	84
Business Preferences	84
Billing Terms	84
Accounts Receivable	85
Customers	86
New	86
Find and Edit	87
Invoices	88
New	88
Edit	88
Post	90
Find	90
Print	91
Assign Starting Invoice Number	91
Customer Jobs	91
Process Payment	92
Over Payments or Pre-Payments	93
Partial Payments	93
Writing Off a Bad Debt	93
Changing the Invoice Appearance	94
Accounts Payable	95
Vendors	95
New	95
Find and Edit	96
Bills	96
New	96
Edit	97
Post	98
Find	98
Vendor Jobs	99
Process Payment	99
Over Payments or Pre-Payments	100
Partial Payments	100
Employees	100
New Employee	100
Find and Edit	101
New Expense Voucher/Credit Note	102
Find and Edit Expense Voucher/Credit Note	103
8. Tools & Assistants	104
Find	104
Find Transaction	104
Find Customer, Invoice, Job, Vendor, Bill, Employee, Expense Voucher	108
Since Last Run Assistant	116
Mortgage & Loan Repayment Assistant	117
Recording a Stock Split	119
Stock Split Assistant	120
The Online Banking Setup Assistant	121

Price Editor	121
Adding a stock price manually	122
Configuring for use of the Get Quotes button	122
Security Editor	122
Adding or Editing a Commodity	123
Configuring Securities/Currencies for On-Line Retrieval of Prices	123
Loan Repayment Calculator	124
Close Book	124
Dialog Box Details	125
How It Works	125
What It Doesn't Do	125
Necessity	125
Conclusion	125
Lots in Account	125
Lots for Security Capital Gains	126
Lots for Business Features	129
9. Reports And Charts	131
Introduction	131
Saving a Report Configuration	131
Working with Saved Report Configurations	132
Configuring Reports and Charts	132
Report Options Buttons	132
Common Report Options	133
Reports Listed By Class	134
General Reports	134
Assets & Liabilities	141
Business Reports	145
Income & Expense	149
Sample & Custom	149
Budget	150
Printing or Exporting Reports and Charts	151
Creating Reports and Charts	152
Accessing the GnuCash API	152
Report Rendering	152
10. Customizing GnuCash	153
Account Display Options	153
Setting Preferences	153
Accounting Period	154
Accounts	155
Business	156
Date/Time	158
General	159
Online Banking	161
Online Quotes	163
Printing	164
Register	165
Register Defaults	166
Reports	167
Scheduled Transactions	168
Windows	169
Book Options	170
Accounts Book Options Tab	171
Budgeting Book Options Tab	173
Business Book Options Tab	173

Counters Book Options Tab	175
Changing Style Sheets	176
Default Style Sheet	176
Easy Style Sheet	177
Footer Style Sheet	178
Technicolor Style Sheet	179
Setting Tax Report Options	181
TXF Export - Known Anomalies and Limitations	182
Detailed TXF Category Descriptions	183
Reset Warnings...	212
Changing the Language	213
A. GnuCash Tips and tidbits	214
Finance::Quote Sources	214
Finance::Quote Sources - Currency source	214
Quote Sources - Individual sources	214
Finance::Quote Sources - Multiple sources	217
Yahoo Specifics	218
TIAA-CREF Specifics	220
B. GNU Free Documentation License	231
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3. COPYING IN QUANTITY	232
4. MODIFICATIONS	233
5. COMBINING DOCUMENTS	234
6. COLLECTIONS OF DOCUMENTS	234
7. AGGREGATION WITH INDEPENDENT WORKS	234
8. TRANSLATION	235
9. TERMINATION	235
10. FUTURE REVISIONS OF THIS LICENSE	235
Addendum	235

List of Figures

4.1. The Main GnuCash Window	9
4.2. The <i>Account Tree</i> Display.	10
4.3. The <i>Account Register</i> Display.	21
4.4. The <i>Report Window</i>	29
6.1. The Import QIF Files Assistent	65
6.2. The CSV Transaction Import Assistant - Introduction	67
6.3. The CSV Import Preview Pane	68
6.4. The Generic Transaction Import Matcher Window	72
6.5. The Match Picker Dialog	76
6.6. The Import Map Editor	77
6.7. The Export Transactions Wizard.	79
8.1. Lots in Account window for Security Capital Gains	126
8.2. Lots in Account window for business features	130
9.1. <i>Transaction Report, Report Options</i>	135
10.1. The Preferences window, Accounting Period tab	154
10.2. The Preferences window, Accounts tab	155
10.3. The Preferences window, Business tab	156
10.4. The Preferences window, Date/Time tab	158
10.5. The Preferences window, General tab	159
10.6. The Preferences window, Online Banking tab	161
10.7. The Preferences window, Online Quotes tab	163
10.8. The Preferences window, Printing tab	164
10.9. The Preferences window, Register tab	165
10.10. The Preferences window, Register Defaults tab	166
10.11. The Preferences window, Reports tab	167
10.12. The Preferences window, Scheduled Transactions tab	168
10.13. The Preferences window, Windows tab	169
10.14. The Book Options window, Accounts tab	171
10.15. The Book Options window, Budgeting tab	173
10.16. The Book Options window, Business tab	173
10.17. The Book Options window, Counters tab	175

List of Tables

4.1. Account Tree - File Menu - Access to file, account operations and printing.	11
4.2. Account Tree - Edit Menu - Access to file and account editing operations and preferences.	12
4.3. Account Tree - View Menu - Changes display window view.	13
4.4. Account Tree - Actions Menu - Setup scheduled transactions, repair accounts, perform stock splits, transfer and reconcile transactions.	13
4.5. Account Tree - Business Menu - Access small business features of GnuCash.	15
4.6. Account Tree - Reports Menu - Access GnuCash Reports and Charts.	17
4.7. Account Tree - Tools Menu - Access to miscellaneous tools and editors.	19
4.8. Account Tree - Windows Menu.	19
4.9. Account Tree - Help Menu - Access to this help and the Tutorial and Concepts Guide.	19
4.10. Account Tree - Window <i>Toolbar</i>	20
4.11. Account Register - File Menu - Access to file and account operations and printing.	22
4.12. Account Register - Edit Menu - Access to file and account editing operations and preferences.	23
4.13. Account Register - View Menu - Changes GnuCash display window characteristics.	24
4.14. Account Register - Transaction Menu - access to transaction tools.	25
4.15. Account Register - Actions Menu - Setup scheduled transactions, repair accounts, perform stock splits, transfer and reconcile transactions.	25
4.16. Account Register (Transaction Register) Window <i>Toolbar</i>	28
4.17. Report - File Menu - Access to file and account operations and printing.	30
4.18. Reports - Edit Menu - Access to file and account editing operations and preferences.	31
4.19. Reports - Actions Menu - Setup scheduled transactions.	32
4.20. Report - Reports Menu.	33
4.21. Reports - <i>Toolbar</i> Buttons.	33
4.22. Components of the Reconcile Window.	35
4.23. Reconcile Menu - Access to Reconcile Information and finishing or postponing.	35
4.24. Account Menu - Access to account operations.	35
4.25. Transaction Menu - Access to transaction editing operations.	35
4.26. Help Menu - Access to help.	36
4.27. Reconcile Window <i>Toolbar</i>	36
4.28. Components of the Schedule Transactions Window.	36
4.29. Scheduled Menu - Access to scheduled transaction editing operations.	37
4.30. Scheduled Transactions Window <i>Toolbar</i>	37
4.31. Edit Menu - Special items for the budget window.	38
4.32. Actions Menu - Items in the standard menu that relate to budgets.	38
4.33. Reports Menu - Items in the standard menu that relate to budgets.	39
4.34. Budget Window <i>Toolbar</i>	39
4.35. Budget options.	40
4.36. Customers Overview - <i>Toolbar</i> Buttons.	40
4.37. Customer context menu.	40
4.38. Vendors Overview - <i>Toolbar</i> Buttons.	41
4.39. Vendor context menu.	41
4.40. Employees Overview - <i>Toolbar</i> Buttons.	41
4.41. Employee context menu.	41
5.1. Types of GnuCash Accounts.	42
5.2. Starting account numbers.	50
5.3. Renumbered account numbers.	50
5.4. Final account numbers.	50
6.1. Import Status of Transactions.	73
8.1. Search criteria buttons - Split Search.	105
8.2. Search criteria buttons - Customer Search.	109

8.3. Search criteria buttons - Invoice Search	110
8.4. Search criteria buttons - Job Search	111
8.5. Search criteria buttons - Vendor Search	112
8.6. Search criteria buttons - Bill Search	112
8.7. Search criteria buttons - Employee Search	114
8.8. Search criteria buttons - Expense Voucher Search	114
10.1. Detailed TXF Category Descriptions	184
A.1. Currency source for Finance::Quote	214
A.2. Individual sources for quotes	214
A.3. Multiple sources for quotes	217
A.4. Yahoo Codes for Exchanges and Markets	218
A.5. Pseudo-symbols that can be used for TIAA-CREF quotes	221

List of Examples

A.1. Environment variable in <code>.bashrc</code>	214
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About the Authors

The GnuCash Documentation Team is a self-designated group of GnuCash users and developers who have volunteered to write this documentation for the benefit of the broader user base. People who are interested in joining this group are encouraged to express their interest on the GnuCash lists (gnucash-users and gnucash-devel) for further direction.

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Chapter 1. Introduction to GnuCash

What is GnuCash?

GnuCash is a personal and small business finance application. It's designed to be easy to use, yet powerful and flexible. GnuCash allows you to track your income and expenses, reconcile bank accounts, monitor stock portfolios and manage your small business finances. It is based on professional accounting principles to ensure balanced books and accurate reports.

Chapter 2. Using This Document & Getting Help

This document is organized in two dimensions:

- From the GUI (Graphical User Interface) explaining the available options and their functions, with links to deeper descriptions and usage. Chapter 4, *GnuCash Windows & Menus Options Overview*
- By classifying Operations, Tasks, or Functions based on whether it is an Account, Transaction, Reporting or other oriented operation. Examples are:
 - Account Actions - Chapter 5, *Setting Up, Editing & Working with Accounts*
 - Transaction/Register Actions - Chapter 6, *Common Transaction Operations*
 - Tools and Assistants - Chapter 8, *Tools & Assistants*
 - Reporting & Charting - Chapter 9, *Reports And Charts*
 - Customization - Chapter 10, *Customizing GnuCash*

Accessing Help

When GnuCash is running and this documentation is installed, this window is accessed by

- pressing the **F1** key or
- selecting from the menu Help → Contents.
- Help → Tutorial and Concepts Guide (**Ctrl+H**) will open the other part of this documentation.
- In most dialogs the Help button will lead you directly to the page which describes that dialog.

The complete help menu is explained in the section called “Account Tree - Help Menu”.

Operating System and Help Viewer

Depending on your operating system we use different programs to display this help document:

Linux	Gnome Yelp
MacOS	default web browser
Windows	Windows help viewer

See their respective manuals to get help about help.

GnuCash Tutorial and Concepts Guide

The guide is the counterpart to this help. It explains the concepts used in GnuCash and has a tutorial that takes you through using GnuCash to manage your accounts. It will appear if you choose Open the new user tutorial in the Welcome to GnuCash! menu.

To open this Guide manually go to Help → Tutorial and Concepts Guide or press **Ctrl+H**.

Important

It is strongly recommended to read this guide if you are new to GnuCash or unfamiliar with accounting concepts.

GnuCash Wiki

An immense amount of less-formal, but often *more recent* documentation, both of GnuCash itself and its maintenance and development may be found in the GnuCash Wiki [<https://wiki.gnucash.org/wiki/>] ; the Frequently Asked Questions [<https://wiki.gnucash.org/wiki/FAQ>] page should be a first stop whenever you encounter difficulty using GnuCash.

Tip

You should also try its search page [<https://wiki.gnucash.org/wiki/Special:Search>].

GnuCash On-line Assistance

Mailing Lists

The primary source of user support is the user mailing list [<mailto:gnucash-user@gnucash.org>]. If English is not your primary language, see wiki:user mailing lists [https://wiki.gnucash.org/wiki/Mailing_Lists#User_Lists] for local lists. If you prefer a web forum-like presentation, you can use it via Nabble [<http://gnucash.1415818.n4.nabble.com/GnuCash-User-f1415819.html>]. One must subscribe [<https://lists.gnucash.org/mailman/listinfo/gnucash-user>] before posting, even if using Nabble.

IRC

Several of the developers and experienced users monitor the #gnucash channel at irc.gnome.org [<irc://irc.gnome.org/gnucash>]. They're usually doing something else, too, and of course aren't always at their computers. Log in, ask your question, and stay logged in; it may be several hours before your question is noticed and responded to. To see if you missed anything check the IRC logs [<https://lists.gnucash.org/logs/>]. Requirements, netiquette and other details are explained in the IRC wiki page [<https://wiki.gnucash.org/wiki/IRC>].

GnuCash Website

The GnuCash website [<https://www.gnucash.org/>] has more details on these channels. You will also find pointers there to additional useful resources such as the bug tracking system.

Chapter 3. Getting Started

Welcome to GnuCash! Screen

This screen is intended for you to use to get up and running quickly. The Cancel button is used to exit the screen. It will then prompt you with Display Welcome Dialog Again?. If you do not want to see the Welcome to GnuCash! menu again click the No button. Click the Yes button or press the keyboard **Enter** key for the default which is to have the Welcome to GnuCash! screen run again.

Note

Selecting either of these options will leave you with a minimum GnuCash main window. Operations in this window are described in Chapter 4, *GnuCash Windows & Menu Options Overview*.

New Account Hierarchy Setup

This assistant helps you to create a set of GnuCash accounts. It will appear if you choose Create a new set of accounts in the Welcome to GnuCash! menu, or if you select File → New .

Import QIF Files

This Assistant helps you import Quicken QIF files. It will appear if you choose Import my QIF files in the Welcome to GnuCash! menu.

To start this assistant manually go to File → Import ... → Import QIF...

In the following all the screens that you can see in this assistant are described in order of appearance.

1. The Import QIF files assistant opens with a screen that briefly describes what this assistant does and requests the file(s) to import. The three buttons at the very bottom of the screen will not change while using the assistant.

- Cancel: exit the process and cancel importing QIF files.

Warning

If you click this button, any selections you have made up to this point will be lost.

- Back: brings up the previous screen so that you can change a previous selection until the first screen.
 - Forward: brings up the next screen so you can continue through the assistant.
2. The next screen allows you to Select a QIF file to load. The Select... button on this screen is used to access the list of files. The Select... button brings up the Select QIF File dialog.

Navigate to where you have stored your QIF files and select the first one then click Import. The next screen will display it in the Select a QIF File to Load field.

Note

If the file you are loading does not have an QIF date listed in it you will see the Set a date format for this QIF file screen. Select the proper format from the pull down list and continue.

Note

If the file you are loading does not have an account name listed in it you will see the Set the default QIF account name screen. Otherwise you will skip this screen and go on to the screen in the next section that shows loaded QIF files.

- The Account name: field is used to set an account name for this QIF file.
3. The next screen shows you the QIF files you have loaded. You can use this screen to return to the previous screen and load more QIF files. It will also let you unload any files you have loaded by mistake.
- The top panel shows the list of QIF Files you have loaded.
 - The Load another file button takes you back to the previous screen to load another QIF file.
 - The Unload selected file button allows you to select a file from the top panel and remove it from the list.

When you have selected all the QIF files to be imported, click the Forward button.

4. Depending on the type of data contained in the QIF files to be imported, you may see only one or all of the following screens:

Accounts and
stock holdings

This screen gives a description of the Accounts and stock holdings matching process on the following Match QIF accounts with GnuCash accounts screen.

Tip

This and other informational screens in the Import QIF files assistant can be turned off in the Online Banking tab (see the section called “Online Banking”) under GnuCash Preferences.

The next screen lets you Match QIF accounts with GnuCash accounts. You will see a list of QIF account names on the left and suggested GnuCash account names on the right. The New? column indicates if the GnuCash account name will be created by the QIF Import.

To change the GnuCash account to a different one select the QIF account. A screen will pop up to select another account or create a new one.

- Select an account from the list to choose a already existing account.
- The New Account button allows you to add a new account name as a sub-account (child of selected) of the selected account.
- The OK button is used to confirm your selection.
- The Cancel button is used to exit the dialog without using any changes you have made.

Income and
Expense
categories

This screen gives a description of the Income and Expense categories matching process on the following Match QIF categories with GnuCash accounts screen.

Tip

This and other informational screens in the Import QIF files assistant can be turned off in the Online Banking tab (see the section called “Online Banking”) under GnuCash Preferences.

The next screen lets you Match QIF categories with GnuCash accounts. You will see a list of QIF category names on the left and suggested GnuCash account names on the right. The New? column indicates if the GnuCash account name will be created by the QIF Import.

To change the GnuCash account to a different one select the QIF category. A dialog will pop up to select another account or create a new one.

- Select an account from the list to choose a already existing account.
- The New Account button allows you to add a new account name as a sub-account (child of selected) of the selected account.
- The OK button is used to confirm your selection.
- The Cancel button is used to exit the dialog without using any changes you have made.

Payees and memos

This screen gives a description of the Payees and memos matching process on the following Match payees/memos to GnuCash accounts screen.

Tip

This and other informational screens in the Import QIF files assistant can be turned off in the Online Banking tab (see the section called “Online Banking”) under GnuCash Preferences.

The next screen lets you Match payees/memos to GnuCash accounts. You will see a list of QIF payee/memo names on the left and suggested GnuCash account names on the right. The default GnuCash account used is called Unspecified. The New? column indicates if the GnuCash account name will be created by the QIF Import.

To change the GnuCash account to a different one select the QIF payee/memo. A dialog will pop up to select another account or create a new one.

- Select an account from the list to choose a already existing account.
- The New Account button allows you to add a new account name as a sub-account of the selected account.
- The OK button is used to confirm your selection.
- The Cancel button is used to exit the dialog without using any changes you have made.

5. The next screen allows you to Enter the QIF file currency. The drop down list defaults to the currency configured in the Accounts tab (see the section called “Accounts”) under GnuCash Preferences. If you wish the new accounts to use a different currency, select one from the list.

When you have selected the currency, click the Forward button.

6. Depending on the type of data contained in the QIF files to be imported, you may or may not see one or more of the following screens:

Tradable Commodities This screen gives a description of the Tradable Commodities process on the screen.

Tip

This and other informational screens in the Import QIF files assistant can be turned off in the Online Banking tab (see the section called “Online Banking”) under GnuCash Preferences.

A series of screens, one for each of the stock, mutual fund, or commodity, displays the exchange, full name, and symbol for each of the commodities listed in the QIF file you are importing so that you can check them before proceeding.

Match duplicate transactions This screen gives a description of the Match duplicate transactions process on the following Select possible duplicates screen.

Tip

This and other informational screens in the Import QIF files assistant can be turned off in the Online Banking tab (see the section called “Online Banking”) under GnuCash Preferences.

The next screen lets you Select possible duplicate transactions. Imported transactions are shown on the left panel and possible matches to each selected transaction are shown on the right.

- The left panel shows the list of Imported transactions to select from for matching duplicates
- The right panel shows the list of *possible* duplicates for the selected imported transaction. Select the one that most closely matches

7. The last screen, Update your GnuCash accounts, gives you a list of three choices to finish the assistant.

- Cancel: exit the process and cancel importing QIF files.

Warning

If you click this button, any selections you have made up to this point will be lost.

- Back: brings up the previous screen so that you can change a previous selection until the first screen.
- Forward: imports the data and creates the accounts you have specified.

You should now have successfully imported your accounts.

Tip

Imported transactions might need to be **reconciled**. This process is described in the GnuCash Tutorial and Concepts guide.

Tip of The Day

The Tip of the Day screen starts whenever you start GnuCash unless it has been disabled in the GnuCash Preferences. It gives tips on features and using GnuCash. You can use the three buttons at the bottom of the screen to look through the tips.

Close Dismiss the Tip of the Day screen

Prev Shows the previous tip

Forward Shows the next tip

The Show tips at startup check-box is used to enable or disable the Tip of the Day from running at GnuCash start-up.

It is also possible to configure the Tip of the Day to run at start-up under the General tab in GnuCash Preferences. The Tip of the Day can also be manually run by going to Help → Tip of the Day.

Chapter 4. GnuCash Windows & Menus Options Overview

The main GnuCash window displays the accounts, reports, menu selections and tools you may use to process your financial data. This section gives you an overview of the different windows and sections of windows that you will see in GnuCash.

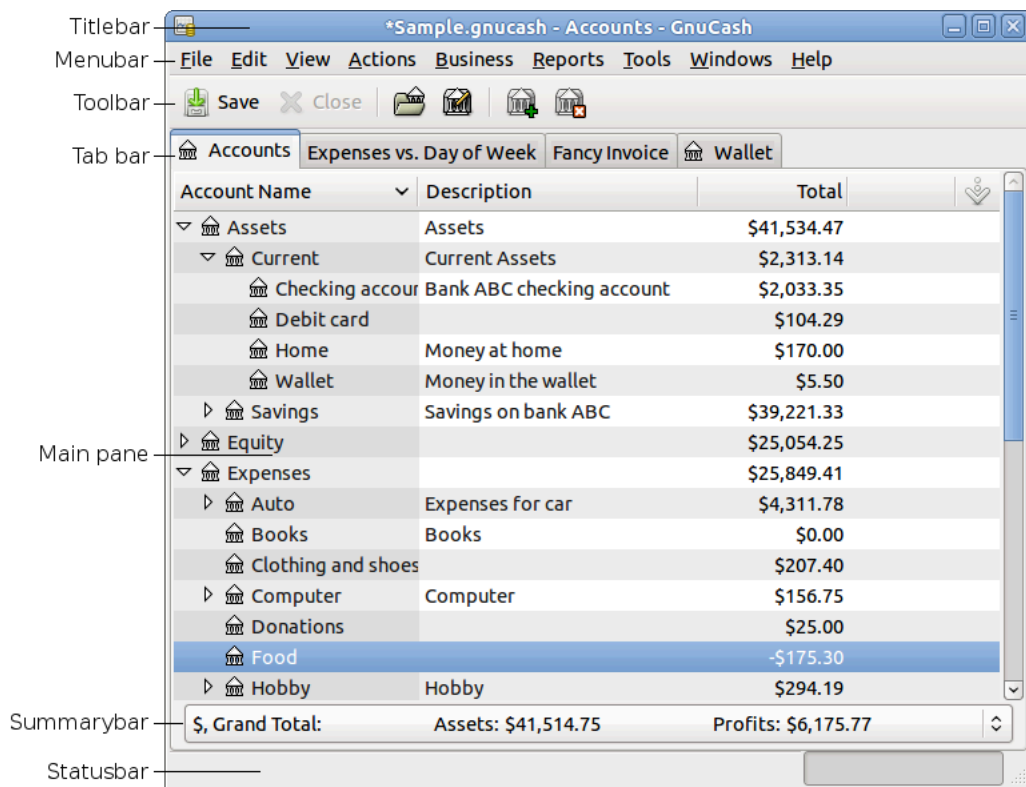
Links in the various tables will lead to additional details on the topic.

GnuCash Windows and Menus

Main GnuCash Window

You can access commonly used sub-windows and tools through this window.

Figure 4.1. The Main GnuCash Window



The parts in which the main GnuCash window is divided.

When you start GnuCash, after a couple of windows (Splash screen, Tip of the Day) the main window will be displayed. This window is divided into the following sections (see Figure 4.1, “The Main GnuCash Window” for reference):

Titlebar Displays the name of the currently opened file and the active tab’s name

Menubar	Displays the available menu entries
Toolbar	Displays the available <i>Toolbar</i> buttons
Tab bar	Lists the open reports, registers and tree of accounts
Main pane	The major display space showing the content of the currently selected tab
Summarybar	Displays a financial summary
Statusbar	Gives a description of the active menu item and shows a progress bar

Note

The contents and options within the various sub-menus of the different sections of the main GnuCash window will vary upon the active display window.

The tree of accounts is labeled *Accounts* in the *Tab bar*, and displays all your accounts and their balances, grouped according to standard accounting practice.

Tip

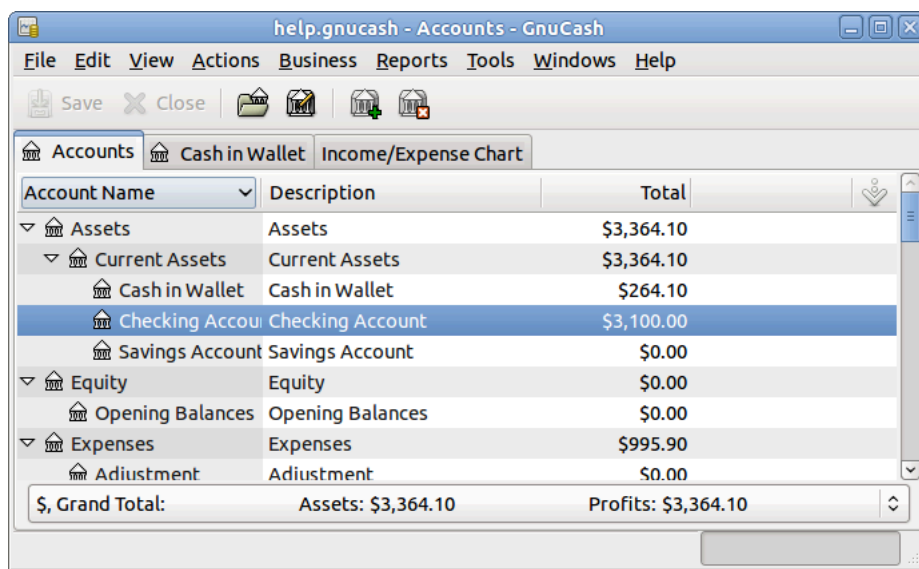
To open an additional view of the tree of accounts go to *View* → *New Accounts Page*. This will open the account tree in the existing window.

Tip

To open a new window with a tree of accounts view, go to *Windows* → *New Window with Page*.

Account Tree Display

Figure 4.2. The *Account Tree Display*.



This is an image of the Accounts tab.

Account Tree - Menus

The *Menubar* for the Accounts Tree window contains the following options.

Account Tree - File Menu

The following table describes the options in the File Menu.

Clicking on the File option of the *Menubar* will “pull down” a menu of options described in Table 4.1, “Account Tree - File Menu - Access to file, account operations and printing.”.

Table 4.1. Account Tree - File Menu - Access to file, account operations and printing.

Menu Item	Description	
New File (Ctrl+N)	Creates a new data file (starts with new accounts and data.)	
Open... (Ctrl+O)	Opens an already existing GnuCash data file.	
Import →	Opens the Import sub-menu to import files from other financial programs.	
	Import QIF...	Starts the QIF file Import process.
	Import OFX/QFX...	Starts the OFX/QFX file Import process.
	Import Accounts from CSV...	Starts the CSV Account file import process. The file to import must be in the same format as the one exported by GnuCash.
	Import Transactions from CSV...	Starts the CSV Transactions file import process. The file to import must be a delimited file.
	Replay GnuCash .log file...	Starts the replaying of a GnuCash log file. Used for data recovery from "crashes".
	Import MT940	Import an end-of-day account statement in SWIFT MT940 format into GnuCash.
	Import MT942	Import an interim account statement in SWIFT MT942 format into GnuCash.
	Import DTAUS	Import a traditional german DTAUS file into GnuCash.
	Import DTAUS and send	Import a DTAUS file into GnuCash and transmit its orders by Online Banking.
	Import Bills & Invoices...	Open the Import Transactions from text file window.
	Import Customers and Vendors ...	Open the Import Customers and Vendors from text file window.

Menu Item	Description	
Save (Ctrl+S)	Saves the currently open file.	
Save As... (Shift+Ctrl+S)	Saves the currently opened file with a different name.	
	<p>Warning</p> <p>Do NOT store your data file in ~/ .gnucash/books.</p>	
Revert	Reload the last saved version of the currently opened file. Useful if you need to discard changes made to the data and not yet saved.	
Print	<i>This entry is only activated if a printable item like a report or an invoice is selected.</i>	
Page Setup... (Shift+Ctrl+P)	Lets you choose the paper size, layout and margins for printing.	
Export →	Opens the Export sub-menu.	
	Export Account Tree to CSV	Exports your account hierarchy to a delimited CSV file. Does not export data.
	Export Transactions to CSV	Exports transactions to a delimited CSV file.
	Export Active Register to CSV...	Export the active Register to a CSV file.
	Export Accounts	Exports your account hierarchy to a new GnuCashfile. Does not export data.
Properties (Alt+Enter)	Sets options for this GnuCash data file.	
Recently opened files	Numbered list of most recently opened GnuCash data files.	
Close (Ctrl+W)	Close the current tab.	
	<p>Note</p> <p>In the initial Account tree this item is not available - it will be grayed out.</p>	
Quit (Ctrl+Q)	Exits GnuCash.	

Account Tree - Edit Menu

Table 4.2. Account Tree - Edit Menu - Access to file and account editing operations and preferences.

Menu Item	Description
Cut (Ctrl+X)	Performs a standard <i>Cut</i> operation.
Copy (Ctrl+C)	Performs a standard <i>Copy</i> operation.
Paste (Ctrl+V)	Performs a standard <i>Paste</i> operation.
Edit Account (Ctrl+E)	Modify name or characteristic of selected account. the section called "Editing an Account"
Delete Account... (Delete)	Remove an account. See the section called "Deleting an Account"

Menu Item	Description
ReNUMBER Subaccounts...	Starts the ReNUMBER Account assistant. See the section called "ReNUMBERing Subaccounts". Note This item is selectable only if you have highlighted an account with at least one subaccount in the accounts tree.
Open Account	Opens the register window for the currently selected account.
Open Subaccount	Opens a register window that displays all the transactions for the selected account and for all its subaccounts.
Find... (Ctrl+F)	Set criteria for a search for a specific transaction. See the section called "Find" for specifics on searches.
Preferences (GnuCash → Preferences on MacOS).	Customize GnuCash for location, style, and numerous other preferences. See the section called "Setting Preferences".
Style Sheets	Modify/customize Style Sheets. See the section called "Changing Style Sheets".
Tax Report Options	Set tax characteristics on account(s) (US). Assign tax form and line to account. See the section called "Setting Tax Report Options"

Account Tree - View Menu

Table 4.3. Account Tree - View Menu - Changes display window view.

Menu Item	Description
Toolbar	Check-box to enable/disable display of <i>Toolbar</i> .
Summarybar	Check-box to enable/disable display of <i>Summarybar</i> .
Statusbar	Check-box to enable/disable display of <i>Statusbar</i> .
Filter by ...	Set filter for accounts displayed in the Account Tree display.
Refresh (Ctrl+R)	Repaint the display screen.
New Accounts Page	Open a new tab that displays the account tree.

Account Tree - Actions Menu

Table 4.4. Account Tree - Actions Menu - Setup scheduled transactions, repair accounts, perform stock splits, transfer and reconcile transactions.

Menu Item	Description
Online Actions →	Online Banking Submenu

GnuCash Windows &
Menus Options Overview

Menu Item	Description	
	<p>Note</p> <p>This is shown only if WITH_AQBANKING was set while building GnuCash.</p> <p>Important</p> <p>The menu entries will be enabled by the successful completion of Tools → Online Banking Setup....</p> <p>Note</p> <p>Not all options are for all institutions available.</p>	
	Get Balance	Get the balance for the selected account.
	Get Transactions...	Get the transactions online through Online Banking.
	Issue SEPA Transaction...	Issue a new international European (SEPA) transaction online through Online Banking.
	Internal Transaction...	Issue a new bank-internal transaction online through Online Banking.
	Issue SEPA Direct Debit...	Issue a new international European (SEPA) direct debit note online through Online Banking.
	Show log window...	Open the Online Banking Connection Window
Scheduled Transactions →	Scheduled Transactions sub-menus	
	Scheduled Transaction Editor	Invoke tool to edit scheduled transactions. See the section called “Edit Scheduled Transaction Window”
	Since Last Run...	Display Scheduled transactions since last running of GnuCash. the section called “Since Last Run Assistant”
	Mortgage & Loan Repayment...	Starts the Mortgage & Loan Repayment assistant for setting up repayments. the section called “Mortgage & Loan Repayment Assistant”
Budget →	Budget sub-menus	
	New Budget	Opens the window to create a new budget.

Menu Item	Description	
	Open Budget	Opens an existing budget.
	Copy Budget	Copy a budget.
New Account...	Creates a new account and opens the account properties window.	
New Account Hierarchy...	Starts the New Account Hierarchy Setup assistant.	
Transfer... (Ctrl+T)	Starts the Transfer assistant for transfer between accounts.	
Reconcile...	Open the Reconcile window. the section called "Reconciling an Account to a Statement"	
Auto clear...	Opens the auto-clear screen where you can fill up the automatic clear information.	
Stock Split...	Starts the Stock Split assistant. Additional details the section called "Recording a Stock Split"	
View Lots...	Opens the Lots in Account form.	
Check & Repair →	Check & Repair Submenus	
	Check & Repair Account	Check for and repair unbalanced transactions and orphan splits in this account.
	Check & Repair Subaccounts	Check for and repair unbalanced transactions and orphan splits in this account and its subaccounts.
	Check & Repair All	Check for and repair unbalanced transactions and orphan splits in all accounts.
Reset Warnings...	<p>GnuCash gives warnings when certain operations are attempted, such as removing a transaction or removing the splits of a transaction. The warning message gives you the option to not give you these warnings when attempting the operation. Check-boxes labeled Remember and don't ask me again and Remember and don't ask me again this session allow disabling the warnings. This option resets the warnings to the default, i.e. display all warnings.</p> <p style="text-align: center;">Tip</p> <p style="text-align: center;">Warnings may be selectively enabled.</p>	
Rename Page	Open the form to rename the current page/tab.	

Account Tree - Business Menu

Table 4.5. Account Tree - Business Menu - Access small business features of GnuCash.

Menu Item	Description	
Customer →	Select customer related activities.	
	Customers Overview	Open a customers overview page.
	New Customer...	Start the form to create a new customer.

GnuCash Windows &
Menus Options Overview

Menu Item	Description	
	Find Customer...	Start the assistant to search for a customer.
	New Invoice...	Start the form to create a new invoice.
	Find Invoice...	Start the assistant to search for an invoice.
	New Job...	Start the form to create a new job.
	Find Job...	Start the assistant to search for a job.
	Process Payment...	Starts the Process Payment assistant. Requires an account of type "A/Payable" before running assistant.
Vendor →	Select vendor related activities.	
	Vendors Overview	Open a vendors overview page.
	New Vendor...	Start the form to create a new vendor.
	Find Vendor...	Start the assistant to search for a vendor.
	New Bill...	Start the form to create a new bill.
	Find Bill...	Start the assistant to search for a bill.
	New Job...	Start the form to create a new job.
	Find Job...	Start the assistant to search for a job.
	Process Payment...	Starts the Process Payment assistant. Requires an account of type "A/Payable" before running assistant.
Employee →	Select employee related activities.	
	Employees Overview	Open an employees overview page.
	New Employee...	Start the form to create a new employee.
	Find Employee...	Start the assistant to search for an employee.
	New Expense Voucher...	Start the form to create a new expense voucher.
	Find Expense Voucher...	Start the assistant to search for an expense voucher.

GnuCash Windows &
Menus Options Overview

Menu Item	Description	
	Process Payment...	Starts the Process Payment assistant. Requires an account of type "A/Payable" before running assistant.
Sales Tax Table	View and edit the list of tax tables.	
Billing Terms Editor	View and edit the list of Billing Terms.	
Bills Due Reminder	View and edit the list of Bills Due Reminder.	

Account Tree - Reports Menu

This is a brief listing of each of the available reports and graphs. See the section called "Reports Listed By Class" for specific report details. Each report or graph may be customized by selecting a different *Stylesheet* or by pressing the Options button in the *Toolbar*.

Table 4.6. Account Tree - Reports Menu - Access GnuCash Reports and Charts.

Menu Item	Description	
Assets & Liabilities →		
	Advanced Portfolio	
	Asset Barchart	
	Asset Piechart	
	Average Balance	
	Balance Sheet	
	Balance Sheet using eguile-gnc	
	General Journal	
	General Ledger	
	Investment Portfolio	
	Liability Barchart	
	Liability Piechart	
	Net Worth Barchart	
	Net Worth Linechart	
	Price Scatterplot	
Business Reports →		
	Customer Report	
	Customer Summary	
	Easy Invoice	
	Employee Report	
	Fancy Invoice	
	Job Report	
	Payable Aging	
	Printable Invoice	
	Receivable Aging	

GnuCash Windows &
Menus Options Overview

Menu Item	Description	
	Tax Invoice	
	Vendor Report	
Income & Expense →		
	Cash Flow	
	Equity Statement	
	Expense Barchart	
	Expense Piechart	
	Expenses vs. Day of Week	
	Income & Expense Chart	
	Income Barchart	
	Income Piechart	
	Income Statement	
	Income vs. Day of Week	
	Profit & loss	
	Trial Balance	
Sample & Custom →		
	Welcome Sample Report	
	Custom Multicolumn Report	
	Sample Report With Examples	
Budget →		
	Budget Balance Sheet	
	Budget Barchart	
	Budget Flow	
	Budget Income Statement	
	Budget Profit & Loss	
	Budget Report	
Account Summary	Report showing the balance of selected accounts.	
Future Scheduled Transactions Summary	Report showing a summary of future transactions.	
Tax Schedule Report & TXF Export	Create a Tax report (US) and/or export data for tax preparation software. (TXF)	
Transaction Report		
Saved Report Configurations	Open the screen to manage saved user configured reports.	

Account Tree - Tools Menu

Table 4.7. Account Tree - Tools Menu - Access to miscellaneous tools and editors

Menu Item	Description
Online Banking Setup...	Performs the initial setup of an account for Online Banking access (FinTs, OFX DirectConnect, ...) by AqBanking, if GnuCash was built with the option WITH_AQBANKING. the section called "The Online Banking Setup Assistant"
Price Editor	Tool to enter or modify Stock/Fund prices. Details at the section called "Price Editor"
Security Editor	Tool to enter or modify Stock or commodities. Details at the section called "Security Editor"
Loan Repayment Calculator	Details at the section called "Loan Repayment Calculator"
Close Book	Open a screen where you can enter the required information to close the current accounting period. See the section called "Close Book".
General Journal	See the section called "General Journal"

Account Tree - Windows Menu

Table 4.8. Account Tree - Windows Menu

Menu Item	Description
New Window	Opens a new GnuCash empty window.
New Window with Page	Moves the current tab into a new window.
Opened windows	A numbered list of open windows.

Account Tree - Help Menu

Table 4.9. Account Tree - Help Menu - Access to this help and the Tutorial and Concepts Guide.

Menu Item	Description
Tutorial & Concepts Guide	Explanation of accounting principles and how to apply them in GnuCash
Tips Of The Day	Shows short notes about features you might otherwise miss.
Contents	Open this document.
About	Show the information screen with GnuCash version, license and credits

Account Tree - *Toolbar* Icons/Buttons

The GnuCash main Window has a number of buttons in the *Toolbar* to quickly access some common functions used with the specific active tab. The *Toolbar* can be hidden or shown by selecting View → Toolbar. The specific options displayed in the *Toolbar* vary with the functions available to the "active tab".

A brief description of the function of a *Toolbar* button is displayed when the mouse pointer is placed over the icon for a couple of seconds.

Table 4.10. Account Tree - Window *Toolbar*

<i>Toolbar</i> Buttons	Description
Save (Ctrl+S)	Perform a save on the data file, commit all transactions to the data file.
Close (Ctrl+W)	Close the currently active account page Note This icon is not available for the first accounts tab. It is available for additional account tree displays.
Open	Open a transaction register of the selected account.
Edit	Edit the characteristics for the selected account. the section called "Editing an Account"
New	Start the assistant for creating a new account. the section called "Creating a New Account"
Delete	Remove the selected account. the section called "Deleting an Account"

Tab bar

The *Tab bar* displays "file/notebook folder" style tabs for open transaction registers, reports and the account tree.

Main pane - Account tree

The account tree displays the list of your accounts in hierarchical format. This enables you to organize your accounts by type.

Tip

The triangle shape (or plus sign) beside the account name is used to open and close the account tree. When you click on the triangle (plus sign), it changes from a rightward-pointing into a downward-pointing sign (minus sign) to indicate that the tree is opened. You will then see offset below the account name either a list of the sub account(s) or another triangle (plus sign) to the left of an account. This indicates another lower level of the account tree.

In the main pane are also shown, by default, four columns: Account Name, Type, Description and Total. For each account, this informations, if available, is displayed in the same row of the account.

Tip

The columns shown for each account in the Account Tree can be customized to suit your needs. Click on the arrow icon on the far right of the Account Tree window to display a drop down list

of column options. Click on a column description to add it to the Account Tree window. Click again on the column description to hide it.

The default display for the account tree window is in Notebook mode. This is indicated by the tab in the tab row of the main window. Other tabs will appear beside this one when you open reports, account registers or additional account trees.

Summarybar

The *Summarybar* displays balances appropriate for the opened account type at a glance. Usually accounts display today's account balance, any balance for future dates, a balance for cleared items and a reconciled balance. Stock accounts, however, display shares totals and their value. The *Summarybar* can be hidden or shown by selecting View → Summarybar.

Statusbar

The *Statusbar* displays informations about the currently highlighted menu item. It also shows a progress bar when opening or saving a GnuCash data file or generating reports. The *Statusbar* can be hidden or shown by selecting the Statusbar item on the View menu.

Account Register/General Journal

Account Register & General Journal Window

This window is used to enter and edit your account data. It also provides tools for scheduling future transactions, finding and reporting on transactions and printing checks.

To open the Account Register Window for an account, select the account in the Account Tree then go to File → Open Account or press **Ctrl+O**. This will open a new window with the Account Register. Pressing the Open button on the *Toolbar* in the Account Tree Window or the Jump button in the Account Register Window are alternate methods.

Figure 4.3. The Account Register Display.

The screenshot shows the GnuCash interface with the 'Account Register' window open for the 'Cash in Wallet' account. The window title is 'help.gnucash - Cash in Wallet - GnuCash'. The menu bar includes File, Edit, View, Transaction, Actions, Business, Reports, Tools, Windows, and Help. The toolbar contains icons for Save, Close, Copy, Paste, Add, Delete, Download, Split, and other functions. The main area displays a table of transactions with columns for Date, Num, Description, Tot Receive, Tot Spend, and Balance. The current date is Sunday 26 September 2010. The status bar at the bottom shows: Present: \$264.10, Future: \$264.10, Cleared: \$0.00, Reconciled: \$0.00, Projected Minimum: \$264.10.

Date	Num	Description	Tot Receive	Tot Spend	Balance
08/05/10		Gas Expenses:Auto:Gas	n	35.00	165.00
08/26/10		Salary - Split Transaction -	n 100.00		265.00
09/26/10		Dining Expenses:Dining	n	23.45	241.55
09/26/10	Num	Salary	100.00	Tot Spend	341.55
		sets:Current Assets:Cash in Wallet	n 100.00		
		:Current Assets:Checking Account	n 1,000.00		
		Expenses:Taxes:Federal	n	10.00	
		Income:Salary	n	1,090.00	
09/26/10		Gas Expenses:Auto:Gas	n	50.00	291.55

Present: \$264.10 Future: \$264.10 Cleared: \$0.00 Reconciled: \$0.00 Projected Minimum: \$264.10
Sunday 26 September 2010

This is an image of the *Account Register* tab.

Tip

Appearance of the Account Register Display is highly customizable (see Tutorial and Concepts Guide, Choosing a Register Style [<https://www.gnucash.org/docs/v3/C/gnucash-guide/txns-register-oview.html#txns-regstyle1>]).

Note

The methods to enter transactions are described in detail in Chapter 6, *Common Transaction Operations*.

Account Register Menus

The *Menubar* for the Transaction Register window contains the following options.

Account Register - File Menu

The following table describes the options in the File.

Clicking on File in the *Menubar* will “pull down” a menu of choices described in Table 4.11, “Account Register - File Menu - Access to file and account operations and printing.”.

Table 4.11. Account Register - File Menu - Access to file and account operations and printing.

Menu Item	Description	
New File (Ctrl+N)	Creates a new data file (starts with new accounts and data.)	
Open... (Ctrl+O)	Opens an already existing GnuCash data file.	
Import →	Opens the Import sub-menu to import files from other financial programs.	
	Import QIF ...	Starts the QIF file Import process.
	Import OFX/QFX ...	Starts the OFX/QFX file Import process.
	Import Accounts from CSV...	Starts the CSV Account file import process. The file to import must be in the same format as the one exported by GnuCash.
	Import Transactions from CSV...	Starts the CSV Transactions file import process. The file to import must be a delimited file.
	Replay GnuCash .log file...	Starts the replaying of a GnuCash log file. Used for data recovery from "crashes".
	Import MT940	Import an end-of-day account statement in SWIFT MT940 format into GnuCash.
	Import MT942	Import an interim account statement in SWIFT MT942 format into GnuCash.

Menu Item	Description	
	Import DTAUS	Import a traditional german DTAUS file into GnuCash.
	Import DTAUS and send	Import a DTAUS file into GnuCash and transmit its orders by Online Banking.
	Import Bills & Invoices...	Open the Import Transactions from text file window.
	Import Customers and Vendors ...	Open the Import Customers and Vendors from text file window.
Save (Ctrl+S)	Saves the currently open file.	
Save As... (Shift+Ctrl+S)	Saves the currently opened file with a different name.	
	<p>Warning</p> <p>Do NOT store your data file in ~/ .gnucash/books.</p>	
Print Checks... (Ctrl+P)	Starts the Print Checks assistant. See the section called "Printing Checks".	
Page Setup... (Shift+Ctrl+P)	Let you choose the paper size, layout and margins for printing.	
Export →	Exports ...	
	Export Accounts Tree to CSV	Exports your account hierarchy to a delimited CSV file. Does not export data.
	Export Transactions to CSV	Exports transactions to a delimited CSV file.
	Export Accounts	Exports your account hierarchy to a new GnuCashfile. Does not export data.
Properties (Alt+Enter)	Sets options for this GnuCash data file.	
Recently opened files	Numbered list of most recently opened GnuCash data files.	
Close (Ctrl+W)	Closes the currently opened transaction register.	
Quit (Ctrl+Q)	Exits GnuCash.	

Account Register - Edit Menu

Table 4.12. Account Register - Edit Menu - Access to file and account editing operations and preferences.

Menu Item	Description
Cut (Ctrl+X)	Performs a standard <i>Cut</i> operation.
Copy (Ctrl+C)	Performs a standard <i>Copy</i> operation.
Paste (Ctrl+V)	Performs a standard <i>Paste</i> operation.
Assign as payment...	Assign as payment the selected transaction.
Edit Account	Open form to edit/modify account characteristics and parameters.

Menu Item	Description
Find... (Ctrl+F)	Set criteria for a search for a specific transaction. See the section called “Find” for specifics on searches.
Preferences (GnuCash → Preferences on MacOS).	Customize GnuCash for location, style, and numerous other preferences. See the section called “Setting Preferences”.
Style Sheets	Modify/customize Style Sheets.
Tax Report Options	Set tax characteristics on account(s) (US). Assign tax form and line to account. See the section called “Setting Tax Report Options”.

Account Register - View Menu

Table 4.13. Account Register - View Menu - Changes GnuCash display window characteristics.

Menu Item	Description	
Toolbar	Check-box to enable/disable display of <i>Toolbar</i> .	
Summarybar	Check-box to enable/disable display of Summary Bar.	
Statusbar	Check-box to enable/disable display of Status Bar.	
Basic Ledger	Radio button to select register display mode. See Tutorial and Concepts Guide, Choosing a Register Style [https://www.gnucash.org/docs/v3/C/gnucash-guide/txns-register-oview.html#txns-regstyle1].	
Auto-Split Ledger	Radio button to select register display mode.	
Transaction Journal	Radio button to select register display mode.	
Double Line	Check-box to enable/disable display of Double Line display.	
Sort by...	Set the sort order of the transactions display. Requires a click to start options form. Option form requires Cancel/OK to close.	
	Standard Order	Keep normal account order
	Date	Sort by date
	Date of Entry	Sort by date of entry.
	Statement Date	Sort by the statement date (unreconciled items last).
	Number	Sort by number.
	Amount	Sort by amount.
	Memo	Sort by memo.
	Description	Sort by Description.
	Action	Sort by action field.
	Notes	Sort by notes field.
	Reverse Order	Reverse the sort order.
	Save Sort Order	Save the sort order between sessions.

Menu Item	Description
Filter by ...	Set filtering for accounts displayed in the Account Tree or transactions in Register display.
Refresh (Ctrl+R)	Repaint the display screen.
New Accounts Page	Open a new tab that displays the account tree.

Account Register - Transaction Menu

Table 4.14. Account Register - Transaction Menu - access to transaction tools.

Menu Item	Description
Cut Transaction	Cut the selected transaction into the clipboard.
Copy Transaction	Copy the selected transaction into the clipboard.
Paste Transaction	Paste the selected transaction from the clipboard.
Duplicate Transaction	Insert in the register a copy of the selected transaction.
Delete Transaction	Delete the selected transaction.
Remove Other Splits	Remove all splits from the selected transaction.
Enter Transaction	Enter in the register the transaction you are currently working on.
Cancel Transaction	Blanks all fields in the selected transaction if it has not yet been recorded.
Void Transaction	Void the selected transaction.
Unvoid Transaction	Unvoid the selected transaction.
Add Reversing Transaction	Add a copy of the selected transaction with an inverted amount.
Associate File with Transaction	Associate a file with the selected transaction.
Associate Location with Transaction	Associate a URL with the selected transaction.
Open Associated File/Location	Open the file or location associated with the transaction. Available if a file or location was associated with the currently selected transaction.

Account Register - Actions Menu

Table 4.15. Account Register - Actions Menu - Setup scheduled transactions, repair accounts, perform stock splits, transfer and reconcile transactions.

Menu Item	Description
Online Actions →	This menu item (and sub-menu) is shown only if Online Banking was enabled for GnuCash
	Get Balance
	Get Transactions
	Download transactions from online accounts

GnuCash Windows &
Menus Options Overview

Menu Item	Description	
	Issue Transaction...	Upload transaction(s) to online account ??
	Issue SEPA Transaction...	
	Internal Transaction...	
	Direct Debit...	
	Show log window...	Open the Online Banking Connection Window
Scheduled Transactions →	Scheduled Transactions sub-menus	
	Scheduled Transaction Editor	Invoke tool to edit scheduled transactions. See the section called "Edit Scheduled Transaction Window"
	Since Last Run...	Display Scheduled transactions since last running of GnuCash. the section called "Since Last Run Assistant"
	Mortgage & Loan Repayment...	Starts the Mortgage & Loan Repayment assistant for setting up repayments. the section called "Mortgage & Loan Repayment Assistant"
Budget →	Budget sub-menus	
	New Budget	Opens the window to create a new budget.
	Open Budget	Opens an existing budget.
	Copy Budget	Copy a budget.
Transfer... (Ctrl+T)	Starts the Transfer assistant for transfer between accounts.	
Reconcile...	Start the Reconcile process for the selected account. the section called "Reconciling an Account to a Statement"	
Stock Split...	Starts the Stock Split assistant. Additional details the section called "Recording a Stock Split"	
View Lots...	Opens the Lots in Account form.	
Blank Transaction	Move to the blank transaction at the bottom of the register	
Split Transaction	Expand the currently selected transaction to show splits.	
Edit Exchange Rate	Edit the exchange rate for the current transaction.	
Schedule...	Create a Scheduled Transaction with the current transaction as a template.	
Jump	Jump to the corresponding transaction in the other account.	
Check & Repair →	Check & Repair Submenus	
	All Transactions	Check for and repair unbalanced transactions and orphan splits in this account.

Menu Item	Description	
	This Transaction	Check for and repair splits in this transaction.
Reset Warnings...	<p>GnuCash gives warnings when certain operations are attempted, such as removing a transaction or removing the splits of a transaction. The warning message gives you the option to not give you these warnings when attempting the operation. Check-boxes labeled Remember and don't ask me again and Remember and don't ask me again this session allow disabling the warnings. This option resets the warnings to the default, i.e. display all warnings.</p> <p style="text-align: center;">Tip</p> <p style="text-align: center;">Warnings may be selectively enabled.</p>	
Rename Page	Open the form to rename the current page/tab.	

Account Register - Business Menu

The items shown in the Business menu are the same as listed in Table 4.5, “Account Tree - Business Menu - Access small business features of GnuCash.”.

Account Register - Reports Menu

The items shown in the Reports menu are the same as listed in Table 4.6, “Account Tree - Reports Menu - Access GnuCash Reports and Charts.” plus the two types of report listed in the following.

- Account report
- Account Transaction Report

Account Register - Tools Menu

The items shown in the Tools menu are the same as listed in Table 4.7, “Account Tree - Tools Menu - Access to miscellaneous tools and editors”.

Account Register - Windows Menu

The items shown in the Windows menu are the same as listed in Table 4.8, “Account Tree - Windows Menu”.

Account Register - Help Menu

The items shown in the Help menu are the same as listed in Table 4.9, “Account Tree - Help Menu - Access to this help and the Tutorial and Concepts Guide.”.

Account Register - *Toolbar* Icons/Buttons

The GnuCash main Window has a number of icons/buttons in the *Toolbar* to quickly access some common functions used with the specific active tab. The *Toolbar* can be hidden or shown by selecting the *Toolbar* item on the View menu.

Note

The specific options displayed in the *Toolbar* varies by the functions available to the active tab.

A brief description of the function of a button is displayed when the mouse pointer is placed over the button for a couple of seconds.

Table 4.16. Account Register (Transaction Register) Window *Toolbar*

Toolbar Buttons	Description
Save (Ctrl+S)	Perform a save on the data file, commit all transactions to the data file.
Close	Close this register.
Duplicate	Make a copy of the current transaction.
Delete	Delete the current transaction in this register.
Enter	Record the current transaction.
Cancel	Cancel the current transaction.
Blank	Move to a blank transaction at bottom of register.
Split	Show all splits in the current transaction. Not highlighted if View → Auto-Split Ledger is enabled.
Jump	Jump to the corresponding transaction in the other account
Schedule	Create a Scheduled Transaction with the current transaction as a template.
Transfer	Start the transfer assistant to transfer funds from one account to another.
Reconcile	Start the Reconcile process for the selected account. the section called “Reconciling an Account to a Statement”

Tab Bar

The *Tab bar* displays “notebook/file folder” style tabs for open transaction registers, account trees and reports.

List of Transactions

The List of Transactions displays transactions you have entered and a running balance. It also provides a blank transaction to enter new transactions. The column headings vary according to what type of account you have opened. Common headings are Date, Description, Transfer and Balance.

The View menu can be used to alter the appearance of the List of Transactions. Possible changes are limiting the number of transactions shown, using a different sort order and changing the style to more easily see transactions. The Split button also provides quick access to view all the parts of a transaction.

Summarybar

The *Summarybar* displays balances appropriate for the opened account type at a glance. Usually accounts display Present (today’s) account balance, any balance for Future dates, a balance for Cleared items, a Reconciled balance and a Projected Minimum balance. Stock accounts, however, display shares totals and their value. The *Summarybar* can be hidden or shown by selecting the View → Summarybar item.

Statusbar

The *Statusbar* works the same as described in the section called “Statusbar”.

Report Window

Report Display Window

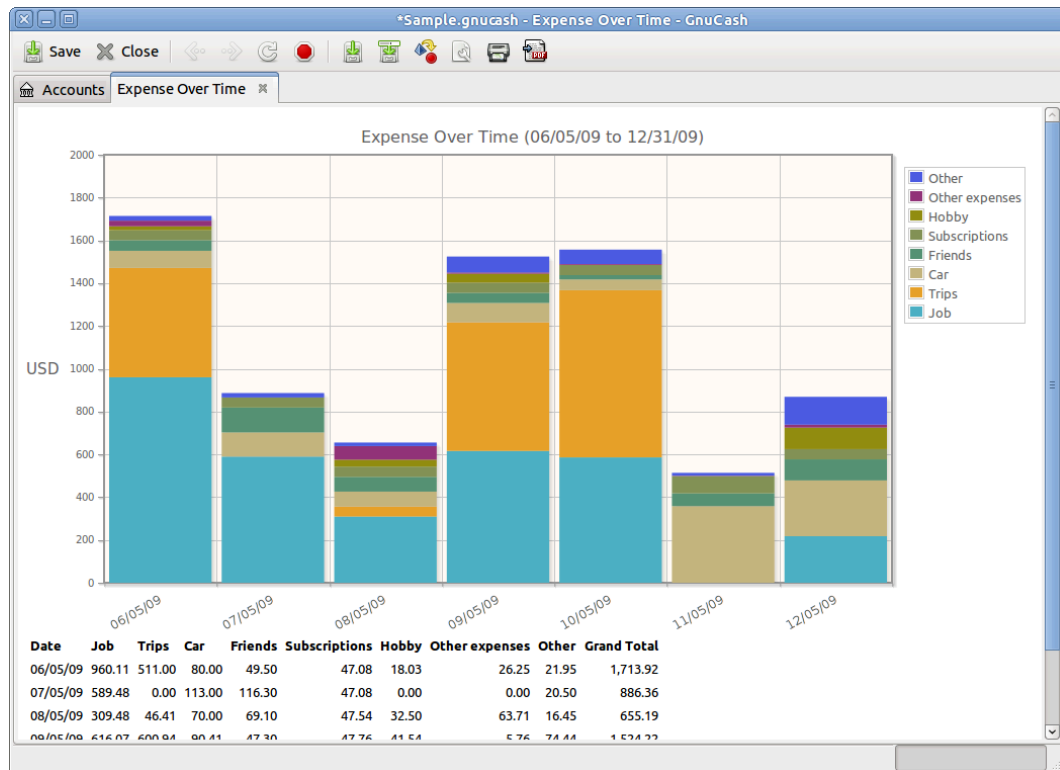
This window is shown whenever a report or chart is selected from the Reports menu.

To open the report window, select a report from the Reports item in the *Menubar*. This will open a new window with the report displayed. It provides a web browser type display with active links to account data.

Note

Depending on the report there may be a delay while the report is generated. An approximation of the progress to completion is displayed in the *Statusbar*, if has not been opted out of displaying.

Figure 4.4. The Report Window



This is an image of the Income/Expense Chart.

Report Menus

The *Menubar* for the report window contains the following options.

Reports - File Menu

The following table describes the options in the File Menu.

Clicking on the File option of the *Menubar* will “pull down” a menu of options described in Table 4.17, “Report - File Menu - Access to file and account operations and printing.”.

Table 4.17. Report - File Menu - Access to file and account operations and printing.

Menu Item	Description	
New File (Ctrl+N)	Creates a new data file (starts with new accounts and data.)	
Open... (Ctrl+O)	Opens an already existing GnuCash data file.	
Import →	Opens the Import sub-menu to import files from other financial programs.	
	Import QIF ...	Starts the QIF file Import process.
	Import OFX/QFX ...	Starts the OFX/QFX file Import process.
	Import Accounts from CSV...	Starts the CSV Account file import process. The file to import must be in the same format as the one exported by GnuCash.
	Import Transactions from CSV...	Starts the CSV Transactions file import process. The file to import must be a delimited file.
	Replay GnuCash .log file...	Starts the replaying of a GnuCash log file. Used for data recovery from "crashes".
	Import MT940	Import an end-of-day account statement in SWIFT MT940 format into GnuCash.
	Import MT942	Import an interim account statement in SWIFT MT942 format into GnuCash.
	Import DTAUS	Import a traditional german DTAUS file into GnuCash.
	Import DTAUS and send	Import a DTAUS file into GnuCash and transmit its orders by Online Banking.
	Import Bills & Invoices...	Open the Import Transactions from text file window.
	Import Customers and Vendors ...	Open the Import Customers and Vendors from text file window.
Save (Ctrl+S)	Saves the currently open file.	
Save As... (Shift+Ctrl+S)	Saves the currently opened file with a different name.	
	Warning	
	Do NOT store your data file in ~/ .gnucash/books.	
Revert	Reload the last saved version of the currently opened file. Useful if you need to discard changes made to the data and not yet saved.	

Menu Item	Description	
Print Report... (Ctrl+P)	Print the selected report.	
Page Setup... (Shift+Ctrl+P)	Let you choose the paper size, layout and margins for printing.	
Export as PDF →	Exports the displayed report as a PDF file.	
Export →	Opens the Export sub-menu.	
	Export Accounts Tree to CSV	Exports your account hierarchy to a delimited CSV file. Does not export data.
	Export Transactions to CSV	Exports transactions to a delimited CSV file.
	Export Report	Export the current report in an HTML formatted file.
	Export Accounts	Exports your account hierarchy to a new GnuCashfile. Does not export data.
Properties (Alt+Enter)	Sets options for this GnuCash data file.	
Recently opened files	Numbered list of most recently opened GnuCash data files.	
Close (Ctrl+W)	Closes the current report.	
Quit (Ctrl+Q)	Exits GnuCash.	

Report - Edit Menu

Table 4.18. Reports - Edit Menu - Access to file and account editing operations and preferences.

Menu Item	Description
Cut (Ctrl+X)	Performs a standard <i>Cut</i> operation.
Copy (Ctrl+C)	Performs a standard <i>Copy</i> operation.
Paste (Ctrl+V)	Performs a standard <i>Paste</i> operation.
Find... (Ctrl+F)	Set criteria for a search for a specific transaction. See the section called “Find” for specifics on searches.
Preferences (GnuCash → Preferences on MacOS).	Customize GnuCash for location, style, and numerous other preferences. See the section called “Setting Preferences”.
Style Sheets	Modify/customize Style Sheets.
Report Options	Open form to edit/modify report selection criteria, stylesheets, date ranges, and many other parameters.
Tax Report Options	Set tax characteristics on account(s) (US). Assign tax form and line to account. See the section called “Setting Tax Report Options”.

Report - View Menu

Except Filter By..., the items shown in the View menu are the same as listed in Table 4.3, “Account Tree - View Menu - Changes display window view.”

Report - Actions Menu

Table 4.19. Reports - Actions Menu - Setup scheduled transactions.

Menu Item	Description	
Online Actions →	This menu item (and sub-menu) is shown only if Online Banking was enabled for GnuCash	
	Show log window...	Open the Online Banking Connection Window
Scheduled Transactions →	Scheduled Transactions sub-menus	
	Scheduled Transaction Editor	Invoke tool to edit scheduled transactions. See the section called “Edit Scheduled Transaction Window”
	Since Last Run...	Display Scheduled transactions since last running of GnuCash. the section called “Since Last Run Assistant”
	Mortgage & Loan Repayment...	Starts the Mortgage & Loan Repayment assistant for setting up repayments. the section called “Mortgage & Loan Repayment Assistant”
Budget →	Budget sub-menus	
	New Budget	Opens the window to create a new budget.
	Open Budget	Opens an existing budget.
	Copy Budget	Copy a budget.
Reset Warnings...	<p>GnuCash gives warnings when certain operations are attempted, such as removing a transaction or removing the splits of a transaction. The warning message gives you the option to not give you these warnings when attempting the operation. Check-boxes labeled Remember and don’t ask me again and Remember and don’t ask me again this session allow disabling the warnings. This option resets the warnings to the default, This option resets the warnings to the default, i.e. display all warnings.</p> <p style="text-align: center;">Tip</p> <p style="text-align: center;">Warnings may be selectively enabled.</p>	
Rename Page	Lets you type a new name for the current page or tab.	

Report - Business Menu

The items shown in the Business menu are the same as listed in Table 4.5, “Account Tree - Business Menu - Access small business features of GnuCash.”.

Report - Reports Menu

The items shown in the Reports menu are the same as listed in Table 4.6, “Account Tree - Reports Menu - Access GnuCash Reports and Charts.” with the addition of:

Table 4.20. Report - Reports Menu.

Menu Item	Description
Save Report Configuration	Save the current report configuration. If you are not working with a saved report configuration, you will be asked to give it a name. You will be able to run the exact same report again by using the Reports → Saved Report Configurations menu item.
Save Report Configuration As...	Save the current report configuration with a new name.

Report - Tools Menu

The items shown in the Tools menu are the same as listed in Table 4.7, “Account Tree - Tools Menu - Access to miscellaneous tools and editors”.

Report - Windows Menu

The items shown in the Windows menu are the same as listed in Table 4.8, “Account Tree - Windows Menu”.

Report - Help Menu

The items shown in the Help menu are the same as listed in Table 4.9, “Account Tree - Help Menu - Access to this help and the Tutorial and Concepts Guide.”.

Reports - *Toolbar* Icons/Buttons

The Report Window has a *Toolbar* to quickly access the functions used with reports. The *Toolbar* can be hidden or shown by selecting View → *Toolbar*.

Table 4.21. Reports - *Toolbar* Buttons

<i>Toolbar</i> Button	Description
Save (Ctrl+S)	
Close (Ctrl+W)	Closes the displayed report.
Back	Move back one step in the history.
Forward	Move forward one step in the history.
Reload	Reload (rerun) current report.
Stop	Stops the HTML requests.
Save Report Configuration	Saves the displayed report. You will be able to run the exact same report again by using the Reports → Saved Report Configurations menu item.

Toolbar Button	Description
Save Report Configuration As...	Saves the displayed report in a configuration file with a given name. You will then be able to run the exact same report again by using the Reports → Saved Report Configurations menu item.
Export	Exports HTML formatted report to a file.
Options	Edit options specific to selected report.
Print (Ctrl+P)	Queues the current report for printing.
Export as PDF	Exports the selected report as a PDF file.

Tab Bar

The *Tab bar* displays “notebook/file folder”-style tabs for open transaction registers, account trees and reports.

Report Main Display

This is where the report or chart you have selected is shown. The properties of this window are editable in two ways. Selecting the Options button on the *Toolbar* lets you edit what the report is showing and which accounts the information is drawn from. Selecting Edit → Style Sheets... lets you select the properties of the page that displays your report.

The report is able to act like a web browser if your report contains links to external web pages. The *Toolbar* buttons allow you to move Back and Forward through web pages. It will also open account registers when you click on links to accounts contained in the report.

You can also Export your report to a file and Print the report through the *Toolbar* buttons.

Summarybar

The *Summarybar* is not displayed when viewing a report window.

Statusbar

The *Statusbar* works the same as described in the section called “Statusbar”.

Reconcile Window

To simplify navigation the following are the topics covered in this section; the section called “Reconcile Display Window”, the section called “Menus”, the section called “*Toolbar* Buttons”.

The detailed explanation of reconciling an account is described in the section called “Reconciling an Account to a Statement”.

Reconcile Display Window

To open the Reconcile window, click Actions → Reconcile... from the *Menubar* or the Reconcile button from the *Toolbar* in a register window. This will open a Reconcile screen in which you need to enter the Statement Date and the Ending Balance. If you select the Include subaccounts option, all transactions in the subaccounts of the selected account will also be counted for the reconcile operation. Pressing the OK

button will open a Reconcile window allowing you to compare deposit and withdrawal transactions to your statement.

Table 4.22. Components of the Reconcile Window.

Component	Description
Menubar	Contains the Menus used in the Reconcile Window.
<i>Toolbar</i> (Icons and/or Text)	Contains buttons used to access common Reconcile Account Window tasks.
Funds In	This pane in the left contains a list of funds deposited in the account.
Funds Out	This pane in the right contains a list of funds withdrawn from the account.
Balance Pane	This pane in the lower right contains a list of balances useful for reconciling.

Menus

The following tables describe menus in the Reconcile Window.

Table 4.23. Reconcile Menu - Access to Reconcile Information and finishing or postponing.

Menu Item	Description
Reconcile Information...	Opens the Reconciling Information Window.
Finish (Ctrl+F)	Complete the reconciliation of this account.
Postpone (Ctrl+P)	Postpone the reconciliation of this account.
Cancel	Cancel the reconciliation of this account.

Table 4.24. Account Menu - Access to account operations.

Menu Item	Description
Open Account	Opens a transaction register for the accounts
Edit Account	Modify name or characteristic of selected account. the section called "Editing an Account"
Transfer... (Ctrl+T)	Opens a Transfer assistant for entering a transfer transaction between any two accounts.
Check & Repair	Verify and repair this account if necessary.

Table 4.25. Transaction Menu - Access to transaction editing operations.

Menu Item	Description
New	Add a new transaction to the account.
Balance	Opens the account's register window with a pre-compiled balancing transaction.
Edit	Edit the currently selected transaction.
Delete	Remove the currently selected transaction.

Table 4.26. Help Menu - Access to help.

Menu Item	Description
Help	Open this Help text file.

Toolbar Buttons

The Reconcile window has a *Toolbar* to quickly access some common functions used with reconciliation.

Table 4.27. Reconcile Window Toolbar

Toolbar Button	Description
New	Add a new transaction to the account.
Balance	Opens the account's register window with a pre-compiled balancing transaction.
Edit	Edit the currently selected transaction.
Delete	Remove the currently selected transaction.
Open	Open an Account transaction window.
Finish	Complete the reconciliation of this account.
	Note
	This button is not active (grayed out) until the Difference value in the balance pane (lower right) is 0.
Postpone	Postpone the reconciliation of this account.
Cancel	Cancel the reconciliation of this account.

Schedule Transaction Window

To simplify navigation the following are the topics covered in this section; the section called "Scheduled Menu", the section called "Scheduled Transactions *Toolbar* Buttons", the section called "Scheduled Transactions Window". the section called "Edit Scheduled Transaction Window",

The detailed explanation of scheduling transactions is described in the section called "Scheduling Transactions".

Scheduled Transactions Main Display Window

This window is shown when Actions → Scheduled Transactions → Scheduled Transactions Editor is selected from the *Menubar*. This will open a new tab window with the Scheduled Transactions displayed.

Scheduled Transaction Main Window Components

Table 4.28. Components of the Schedule Transactions Window.

Component	Description
Menubar	Contains the Menus used in the Schedule Transactions Window. It provides the standard

Component	Description
	list of <i>Menubar</i> options and an additional option, Scheduled, which presents options; New, Edit or Delete. If no transaction is highlighted Edit and Delete will be "grayed out".
<i>Toolbar</i> (Icons and/or Text)	Contains buttons used to access Schedule Transitions tasks.
Tabs	Tabs to switch between open displays.
Transactions	The Transactions pane contains a list of transactions scheduled and related characteristics.
Upcoming	<p>The Upcoming pane contains a calendar of the next months In this calendar the days in which one or more transactions are scheduled, are highlighted with a circle.</p> <p>You can change the time interval displayed in the calendar by selecting a different period from the View: drop down list on the right.</p> <p style="text-align: center;">Tip</p> <p>Click on a date in the pane and the details about the scheduled transactions on that date will be displayed.</p>

Scheduled Menu

The following table describe the Scheduled menu options available in the *Menubar* when you are in the Scheduled Transaction window.

Table 4.29. Scheduled Menu - Access to scheduled transaction editing operations.

Menu Item	Description
New	Add a new scheduled transaction.
Edit	Edit the currently selected transaction.
Delete	Remove the currently selected transaction.

Scheduled Transactions *Toolbar* Buttons

The Scheduled Transactions window has a *Toolbar* to quickly access some common functions used with scheduling.

Table 4.30. Scheduled Transactions Window *Toolbar*

<i>Toolbar</i> Button	Description
Save (Ctrl+S)	Save the current schedule of transactions.
Close (Ctrl+W)	Close the Scheduled Transactions window.
New	Add a new scheduled transaction.
Edit	Edit the currently selected transaction.

Toolbar Button	Description
Delete	Remove the currently selected transaction.

Budget Window

Actions → Budget → Open Budget will open the default budget or offer you a choice if there is more than one budget. A new tab will open with the budget displayed.

Budget Window Menus

Here are some menu items that are particularly useful to working with budgets.

Budget Window - Edit menu

Table 4.31. Edit Menu - Special items for the budget window.

Menu Item	Description
Estimate Budget	Estimate a budget value for the selected accounts from past transactions.
Delete Budget	Delete this budget.
Budget Options	Edit this budget's options.

Budget Window - Actions menu

Table 4.32. Actions Menu - Items in the standard menu that relate to budgets.

Menu Item	Description	
Budget →	Opens the Budget sub-menu to select budget actions.	
	New Budget	Create a new budget and open it in a new tab.
	Open Budget	If no budget exists, create a new budget and open it. If only one budget exists, open it; otherwise user selects one to open.
	Copy Budget	If no budgets exist yet, just open a new budget. If only one budget exists, create a copy of it; otherwise user selects one to copy. If a copy is made, then the copy is opened in a new tab.

Budget Window - Reports menu

Using more than one budget

When there is more than one budget, the reports will use the budget selected in book options by default. See the section called “Book Options” and the section called “Budgeting Book Options Tab” for more details. After the report is displayed, the budget it uses can be changed in the report options General tab.

Table 4.33. Reports Menu - Items in the standard menu that relate to budgets.

Menu Item	Description	
Budget →	Opens the Budget sub-menu to select a budget report.	
	Budget Balance Sheet	
	Budget Barchart	
	Budget Flow	This report includes information from one budget period at a time. The left column of numbers shows the budgeted amounts, and the right column of numbers shows the actual amounts. It only shows certain accounts, those that have no sub-accounts.
	Budget Income Statement	
	Budget Profit & Loss	This report is identical to the Budget Income Statement report.
	Budget Report	The budget report shows all accounts and all periods. For each period it gives the budgeted amount and the actual amount. There is an option to add another column showing the difference (budgeted - actual).

Budget Window Toolbar Buttons

The Budget window has a *Toolbar* to quickly access common functions used with budgeting.

Table 4.34. Budget Window *Toolbar*

<i>Toolbar</i> Button	Description
Save (Ctrl+S)	Save the current budget.
Close (Ctrl+W)	Close the Budget window.
Options	Edit this budget's options.
Estimate	Estimate a budget value for the selected accounts from past transactions.
Delete	Delete this budget.

Budget Window Main Display

The budget window contains a list of accounts down the left hand side, and a set of columns down the right hand side that represent budget values. Each column corresponds to a budget *period*. The number of periods for a budget can be changed using the Budget Options dialog.

Procedure 4.1. Entering a budget value

1. *Click* the row corresponding to the account you wish to budget

2. Choose the period this value is for, and *click* in the cell corresponding to that period
3. Type the value in the cell
4. Press **Enter** to finish editing the value.

Budget Options

Table 4.35. Budget options

Option	Description
Budget Name	The budget name is used in the tab's name and also in any reports you create with the budget.
Notes	A description of the budget.
Budget Period	The budget period includes when the budget starts (start date) and how long each budget period lasts.
Number of Periods	The number of periods in the budget.

Business Windows

Customers Overview

To open the Customers Overview window, click Business → Customer → Customers Overview.

Table 4.36. Customers Overview - Toolbar Buttons

Toolbar Buttons	Description
New	Create a new customer
Edit	Edit the selected customer
New Invoice	Create a new invoice (by default it is for the selected customer)
Customer Listing	Show customer aging overview for all customers

Table 4.37. Customer context menu

Context menu item	Description
Rename Page	
Edit Customer	Edit the selected customer
New Invoice	Create a new invoice
Customer Report	Show customer report

Note

The customer context menu appears if you right click on a customer in the list.

Vendors Overview

To open the Vendors Overview window, click Business → Vendor → Vendors Overview.

Table 4.38. Vendors Overview - Toolbar Buttons

Toolbar Buttons	Description
New	Create a new vendor
Edit	Edit the selected vendor
New Bill	Create a new bill (by default it is for the selected vendor)
Vendor Listing	Show vendor aging overview for all vendors

Table 4.39. Vendor context menu

Context menu item	Description
Rename Page	
Edit Vendor	Edit the selected vendor
New Bill	Create a new bill
Vendor Report	Show vendor report

Note

The vendor context menu appears if you right click on a vendor in the list.

Employees Overview

To open the Employees Overview window, click Business → Employee → Employees Overview.

Table 4.40. Employees Overview - Toolbar Buttons

Toolbar Buttons	Description
New	Create a new employee
Edit	Edit the selected employee
New Voucher	Create a new voucher (by default it is for the selected employee)

Table 4.41. Employee context menu

Context menu item	Description
Rename Page	
Edit Employee	Edit the selected employee
New Voucher	Create a new voucher
Employee Report	Show employee report

Note

The employee context menu appears if you right click on an employee in the list.

Chapter 5. Setting Up, Editing & Working with Accounts

This section describes the process of setting up, editing and working with GnuCash Accounts. In GnuCash an Account is used as the basic tool to organize the recording of where money comes from and goes to. GnuCash also extends the concept of real world accounts such as a bank account or loan account to grouping income and expense accounts. This allows you to quickly see where you spent your money and what your major income and expenses are. GnuCash sets Account Types (as described in the next section) to help in organizing and grouping accounts. Account Types can be used to create a Chart of Accounts.

Types of GnuCash Accounts

GnuCash supports a number of different account types. It is recommended to choose an appropriate account type based on the list of account types described below.

Warning

The Accounts Payable and Accounts Receivable types are used internally by GnuCash's business features. Transactions involving these accounts should not be added, changed or deleted in any way other than by using

- post/unpost bill/invoice/voucher or
- process payment

Table 5.1. Types of GnuCash Accounts.

Account Type	Description
Accounts Payable	Accounts Payable are used by businesses to record amounts that must be paid. Example: The business has bought something, but the business has not paid the bill until later. Note Previous versions of this help defined A/P and A/R the other way round.
Accounts Receivable	Accounts Receivable records amounts for which money has not yet been received. Example: A business has sold something and issued a bill, but the client has not payed until later. Note Previous versions of this help defined A/P and A/R the other way round.
Asset	Asset accounts are used for tracking things that are of value and can be used or sold to pay debts. (Normally a placeholder account)

Account Type	Description
Bank	The Bank account type denotes savings or checking accounts held at a bank or other financial institution. Some of these accounts may bear interest. This is also the appropriate account type for check (debit) cards, which directly withdraw payments from a checking account.
Cash	The Cash account type is used to denote the cash that you store in your wallet, shoe box, piggyback, or mattress.
Credit Card	The Credit Card account type is used to denote credit card accounts, both for cards that allow floating lines of credit (e.g. VISA, MasterCard, or Discover) and with cards that do not permit continuing balances (e.g. American Express)
Currency	Currency Accounts were used for trading currencies, but have been replaced by the Currency Transfer pane on the Transfer Funds Window (the section called "Transfer Funds Dialog Box").
Equity	Equity accounts are used to store the opening balances when you first start using GnuCash or start a new accounting period.
Expense	Any expense such as food, clothing, taxes, etc. This type is called a category in Quicken.
Income	Any income received from sources such as salary, interest, dividends, etc. This type is called a category in Quicken.
Liability	Liability accounts are used for tracking debts or financial obligations. (Normally a placeholder account)
Mutual Fund	A professionally managed portfolio of stocks and bonds or other investments divided up into shares.
Stock	A share of ownership in a corporation, which entitles its owner to all the risks and rewards that go with it.

The **New Account Hierarchy Setup** assistant described in the first section of this help is a convenient way of setting up a set of accounts to use as a framework of account types.

When new accounts are created the available choices of account types are grayed out according to what type the parent account is. The following list contains the possible choices.

- Accounts Payable: All accounts except Equity, Expense and Income can be child accounts.
- Accounts Receivable: All accounts except Equity, Expense and Income can be child accounts.
- Asset: All accounts except Equity, Expense and Income can be child accounts.
- Bank: All accounts except Equity, Expense and Income can be child accounts.
- Cash: All accounts except Equity, Expense and Income can be child accounts.

- Credit Card: All accounts except Equity, Expense and Income can be child accounts.
- Currency: All accounts except Equity, Expense and Income can be child accounts.
- Equity: Only Equity accounts can be child accounts.
- Expense: Only Expense or Income accounts can be child accounts.
- Income: Only Expense or Income accounts can be child accounts.
- Liability: All accounts except Equity, Expense and Income can be child accounts.
- Mutual Fund: All accounts except Equity, Expense and Income can be child accounts.
- Stock: All accounts except Equity, Expense and Income can be child accounts.

Creating a Chart of Accounts

The Chart of Accounts is like a table of contents for your finances. The best way to conceptualize a chart of accounts is as a tree. The main branches represent entire categories or groups, while the leaves of the tree denote individual bank accounts or expense categories. When a summary report is requested, typically only the main branches are shown in the report, rather than the individual accounts. For example, a chart of accounts might look like the following:

```
300           Expenses
|
+--310        Living Expenses
|  |
|  +--311     Beer
|  |
|  +--312     Cable
|
+--320        Business Expenses
|  |
|  +--321     8-inch Floppies
|  |
|  +--322     Blue Ray RW DVDs
|  |
:  :
```

Accounts codes

Note that accounts not only have names; they may have codes, to order the accounts. When a report is generated, the sort order is determined by the numbering. It's customary to have the leaf accounts end in non-zero digits, while parent nodes have increasing numbers of zeros.

Warning

GnuCash does not prevent duplicate numbering, although we would encourage you to avoid this. Account codes are treated as numbers in base-36, thus, if you run out of numbers, you can use the letters, a through z.

Editing a Chart of Accounts

Editing the Chart of Accounts is done within the Parent Account pane of the Edit Account dialog. It is possible to move an account to any part of the Chart of Accounts. It is recommended to keep accounts generally under the related types of accounts as described in the section called “Types of GnuCash Accounts”. This helps to preserve the Chart of Accounts structure.

To move the selected account to a different parent account just select the account in the Parent Account pane. If New top level account is selected then the account will be moved to the top level.

Creating a New Account

To create a new account go to Actions → New Account... or click the New *Toolbar* icon in the Account Tree Window. The New Account dialog will be opened.

The New Account properties dialog consists of two tabs, the General tab and the Opening Balance tab.

Creating a New Account involves planning in advance several details that are used in the New Account dialog.

- What type of account is needed.
- Where it fits in the structure of the Chart of Accounts.
- If there is an Opening Balance.
- If there is a Commodity (security/currency) needed for the account.
- If online updating of the commodity price is needed.

These details are described below.

General Information Tab

The General tab is used to access the basic information about the account. It provides a way of connecting the account to stock information if it is one of the currency, mutual fund or stock account types. It can also be flagged as a Placeholder account. It displays if it is flagged as a Tax Related account (which is set through the Edit → Tax Report Options dialog).

There are seven fields in the Identification section of this tab.

1. Account Name: The name for the account such as First Bank Checking.
2. Account Code: The optional number code as described in Accounts codes.
3. Description: Optional description for the account.
4. Security/Currency:

Note

The Type field in the Select Security is determined by the selection of Account Type panel in the New Account screen.

- For accounts other than *Stock* or *Mutual Fund* this should be the default currency, USD (US Dollar) or your local currency symbol. If this account is for a foreign currency then use the Select... button to choose a different currency from the currencies pull-down list.

- For Accounts containing a *Stock* and *Mutual Fund*; first select stock or mutual fund in the Account Type panel, then the Parent Account, then use the Select... button, to choose the Type (usually the exchange the security is traded on) and security from the Select Security window.

If the required security/fund is not on the list, and you have the correct Type you will need to create the security/fund. To create a commodity for mutual fund and stock accounts select the New... button in the Select Security screen, to bring up the New Security: screen. The options are described in detail in the Security Editor the section called “Security Editor” section. Fill in a name, symbol and type and Close to create the security. After the security is created select the Type: (usually the exchange the security is traded on) and the name in the Currency/security: drop down list and Close the screen.

5. Smallest Fraction: The smallest fraction that will be tracked.
6. Account Color: The color to assign to the account’s register tab. Click on the color button to open the Pick a Color screen. To reset the account color click the Default button.
7. Notes: This is a free form text box that can be used for any additional notes about the account.

Below the panes are 3 check-boxes: one to show if the account is Tax Related, one to mark the account as a Placeholder, and one to mark an account Hidden.

The Tax Related check-box means that an account has been flagged to be included in the Tax Schedule Report. This flag is only displayed on the Edit Account dialog and is set in the Income Tax Information dialog (Edit → Tax Report Options). See the Tax Schedule Report and TXF Export section in Reports Chapter (the section called “General Reports”).

The Placeholder check-box sets an account to read-only status and prevents the addition of transaction data to the account.

Note

Setting an account to Placeholder will also hide that account in the pop-up account list in a register. Sub-accounts to the placeholder account will still display in the pop-up, however.

The Hidden check box hides an account (and any sub-accounts) in the account tree. To reset this option, you will first need to open the View → Filter By... dialog for the account tree and check the Show hidden accounts option. Doing so will allow you to select the account and reopen this dialog.

Note

Hidden accounts still appear in the pop-up account list in a register. To remove an account from this pop-up account list as well, check the Placeholder check box.

Below these checkboxes is a pane that contains a list of Account Types. Select a type from the descriptions in the section called “Types of GnuCash Accounts”.

The next pane contains an account tree to choose a Parent Account. To create a new account tree select New top level account.

Note

The available choices in the Account Type pane depends on the selected account in the Parent Account pane. For example if the Parent Account is *Assets* you will see only *Equity* in the Account Type pane. This is to help maintain a proper account structure for the Chart of Accounts.

Steps to enable Online price updating

1. GnuCash relies on an external tool to retrieve online quotes. This tool is a Perl module named “Finance::Quote” and has to be installed on your computer independently from GnuCash. The first step in enabling online price updating should thus be to ensure Finance::Quote is properly installed.

To determine if the Perl module Finance::Quote is already installed on your system, type “perldoc Finance::Quote” in a terminal window and check to see if there is any documentation available. If you see the documentation, then the module is installed, if you do not see the documentation, then it has not been installed.

Installing Finance::Quote differs from one operating system to another. For the various supported systems, you can follow these guidelines:

- **Linux:** Most linux distributions (like Fedora, openSuse, Mandriva, Ubuntu, and so on) have a package in their software repositories for the Finance::Quote perl module. So in most cases, you can simply use your preferred package manager (yum, apt, rpm, synaptic, yast,...) to install the module. The name of the package may vary from one distribution to another. It's often called something like “perl-Finance-Quote”.
- **Windows:** Finance::Quote on Windows requires perl to be installed already. If you haven't done so, you should first install ActivePerl, or more recently, Strawberry Perl.

The Windows installer from the GnuCash home page comes with a small helper program to install Finance::Quote for you. You can find it in the Start Menu under the GnuCash group and is called “Install Online Price Retrieval”.

- **MacOS:** If you have installed GnuCash from the installer found on the GnuCash home page, Finance::Quote is already installed for you.
- If none of the above applies to your setup, you can try these alternative, more generic instructions:
 - a. Close any GnuCash applications you have running.
 - b. Locate the folder where GnuCash is installed by searching for “gnc-fq-update” (without the quotes).
 - c. Change to that directory, open a root shell and run the command **gnc-fq-update**. This will launch a Perl CPAN update session that will go out onto the Internet and install the Finance::Quote module and its dependencies on your system. The gnc-fq-update program is interactive, however, with most systems you should be able to answer “no” to the first question: “Are you ready for manual configuration? [yes]” and the update will continue automatically from that point.

After installation is complete, you should run the “gnc-fq-check” test program, in the same directory, distributed with GnuCash to test if Finance::Quote is installed and working properly.

Note

If you feel uncomfortable about performing any of these steps, please either email the GnuCash-user mailing list (<gncash-user@gncash.org>) for help or come to the GnuCash IRC channel on irc.gnome.org. More information is available on the GnuCash Wiki FAQ for example http://wiki.gncash.org/wiki/FAQ#Q:_How_do_I_fix_a_22system_error.22_or_.22unknown_error.22_when_getting_stock_quotes.3F You can also leave out this step and manually update your stock prices.

2. Create the Account for the mutual fund or stock with it listed in the Security/Currency field, as described above.

Tip

When creating these accounts it is a good time to create income accounts to track dividends, capital gains (long and short) and expense account(s) for tracking commissions and losses (if you track losses as expenses).

3. Create the mutual fund or stock with either the Security Editor for existing stock/funds or the New Security/Currency dialog for a new stock/fund.

Select Get Online Quotes, Type of Quote Source and Timezone.

Online currency quotes require that the check-box for Online quotes and the timezone be selected in the Security screen and the Security Editor check-box for "get quote" box is checked for those currencies that are to be downloaded.

- Get Online Quotes This check-box is to enable this security/fund to have quotes downloaded from an online source.
- Type of Quote Source use the radio buttons to select the type of source for the Online quotes. Multiple: quote sources like "Europe" should be used if fail-over to multiple sites are desirable. Single: selections will only return information from the specified source.

After selecting the type of source for price quotes, select a quote source from the pull-down menu. For details on currently supported sources see the section called "Finance::Quote Sources".

Note

Note that Yahoo will provide price quotes for many mutual funds including Fidelity, T.Rowe Price and Vanguard, and that the quoted prices at Yahoo should be identical to those that may be found at the source sites.

If you are outside the US and use one of the different Yahoo sources or multiple sources containing Yahoo, you should append the market code for the security such as PA for Paris, BE for Berlin, etc. Example: 12150.PA (a Peugeot security in the Paris market). Table A.4, "Yahoo Codes for Exchanges and Markets" below lists suffixes for various markets around the world.

Pseudo-symbols for TIAA-CREF funds are listed in table Table A.5, "Pseudo-symbols that can be used for TIAA-CREF quotes".

- Timezone for these quotes: Select the timezone for the source of the online quotes you are receiving. For example, Yahoo normally quotes Eastern timezone, so choose America/New York if you use that quote source.
4. Select a commodity to the Price Editor.
 5. Select Get Quotes in the Price Editor.
 6. Check the latest price for the selected security.

If you wish to update price quotes from the command line, you can do so by the following command:

```
gnucash --add-price-quotes <gnucash-file-name>
```

The command `gnucash --add-price-quotes <gnucash-file-name>` can be used to fetch the current prices of your stocks. The file specified “<gnucash-file-name>” will depend on the name and location of your data file. This can be determined by the name displayed in the top frame of the GnuCash window, before the “-”. The file name can also be found under File in the list of recently opened file; the first item, numbered 1, is the name of the currently open file.

This can be automated in Mac OSX by creating a crontab entry. For example, to update your file every Friday evening (18:00) after markets close (modify the time accordingly for your time zone), you could add the following to your personal crontab:

```
0 18 * * 5 /path/to/gnucash --add-price-quotes /path/to/gnucash-filename  
> /dev/null 2>&1'
```

For Linux, which needs dbus, usually started by the desktop manager, to communicate with dconf or gconf:

```
0 18 * * 5 env `dbus-launch` sh -c 'trap "kill $DBUS_SESSION_BUS_PID"  
EXIT; /path/to/gnucash --add-price-quotes /path/to/gnucash-filename > /  
dev/null 2>&1'
```

Remember that Mutual Fund “prices” are really “Net Asset Value” and require several hours after the exchange closes before being available. If NAVs are downloaded before the current days NAVs are determined, yesterday’s NAVs are retrieved.

Opening Balance tab

The Opening Balance tab is visible only when creating a new account, and is disabled for Stock and Mutual Fund accounts. In the latter case, opening balances must be created by hand. Please see Section 8.5.1 in the *Tutorial and Concepts Guide* for instructions if you need to create an opening balance in a Stock or Mutual Fund account. It is used to record the beginning balance for an account. This allows it to be used for two different scenarios. If using GnuCash for the first time to record transactions, it can be used as a beginning balance. If the accounts in use are closed at the end of a period and new accounts are created, it is used to close and carry balances forward.

There are three panes in this tab. The top pane contains the Balance Information.

- Balance: The balance to start the account with.
- Date: The date the opening balance should be recorded.

The next pane is the Transfer Type pane.

- Use Opening Balances Equity account: This transfers the opening balance for the account from a standard Equity account called Opening Balances.
- Select Transfer Account: This enables the pane below so a different account can be used to transfer the opening balance.

The last pane is the Transfer Account pane. Select the account to use for opening balances from the list of accounts in this pane.

Editing an Account

The Edit Account dialog consists of just the General tab. This tab has the same information that was described in the section called “Creating a New Account”. To access the Edit Account dialog go to Edit → Edit Account (menu shortcut **Ctrl+E**) or click the Edit *Toolbar* icon in the Account Tree Window.

Renumbering Subaccounts

Use Renumber Subaccounts to rewrite the account codes for all children of the current account. For example, you have the following account structure:

Table 5.2. Starting account numbers.

Code	Name
10	Colors
10-1	Red
10-2	Orange
10-3	Yellow.
10-4	Blue
10-5	Violet

You now need to add the “Green” account, but you want it to sort between the Yellow and Blue accounts. Instead of having to manually renumber all the accounts starting with Blue, you can use the Renumber subaccount command on the Colors account. In the pop-up dialog the prefix value should default to “10”, the account code for the colors account. If you set an interval value of “5” and click Renumber you will end up with the following account structure:

Table 5.3. Renumbered account numbers

Code	Name
10	Colors
10-05	Red
10-10	Orange
10-15	Yellow.
10-20	Blue
10-25	Violet

Now you have room in the account code numbering space to add the Green account with an account code to force the proper ordering.

Table 5.4. Final account numbers.

Code	Name
10	Colors
10-05	Red
10-10	Orange
10-15	Yellow.
10-18	Green
10-20	Blue
10-25	Violet

Deleting an Account

Deleting an Account means removing all transaction information and information about this account from the file. This cannot be undone. You will be prompted to verify that you wish to remove the account. If the account still contains transaction information you will be warned that this account contains transactions.

A side effect of removing an account that contains transactions is that you will end up with unbalanced accounts. This will be indicated in the account by a gray check-box next to the debit and credit amounts. You can automatically repair these unbalanced accounts by using the Actions → Check & Repair menu. This will automatically assign the unbalanced amounts to a new account named **Imbalance**.

Reconciling an Account to a Statement

Reconciliation of Accounts in GnuCash with statements from a bank or other institution is a way of double checking the accuracy of your (and your banks) transactions and the balance of your accounts. It also is useful to track uncleared checks and other outstanding transactions.

The reconciling process in GnuCash involves two dialogs: the the section called “Reconciling Information” dialog followed by the the section called “Reconcile” window. They provide access to various GnuCash functions to make it easy to enter and update account information during the reconciliation.

Tip

The Reconcile window is accessed from the account tree window or the account register window by going to Actions → Reconcile... or using the menu shortcut **Alt+A, R**.

The *Summary Bar* at the bottom of the Account Register Window indicates the amounts of Present (Balance), Future (Balance), Cleared (Transactions), Reconciled (Transactions) and Projected Minimum. Online account information can be used to mark which transactions the bank has processed by changing the R (reconciliation status) column in the register from n (new) to c (cleared). The bank statement is then used with the Reconcile window to reconcile the account which changes the R field to y (reconciled).

Reconciling Information

The Reconcile Information dialog is used to indicate the closing Statement Date and the Starting Balance (fixed from last reconciliation) and Ending Balance from the statement. The Include Sub-accounts check-box is used if one or more subaccounts are used to track the account you are reconciling. The Enter Interest Payment button is used to add a transfer to the accounts for an interest payment. If selected a dialog will be displayed to add the the section called “Interest Payment” to the account.

Note

The Enter Interest Payment button is shown only if you are reconciling an account of *Bank* type.

When you have entered all relevant data, press Ok to proceed to the the section called “Reconcile” dialog or Cancel to discard the reconciliation process.

Interest Payment

There are three panes in the Interest Payment dialog. At the bottom is a button called No Auto Interest Payments for this Account which will cancel the dialog. The top pane contains the Payment Information.

- Amount: Enter the amount of the interest payment.
- Date: Select the date for the interest payment.

- Num: Enter a number for the transaction (optional).
- Description: Enter an informational description for the transaction.
- Memo: Enter a note about the transaction (optional).

The Reconcile Account pane highlights in the tree the account that the interest payment will be transferred to or from.

The Payment From pane contains a list of accounts where you can select the source account.

Note

If the payment is for a credit or loan account then usually the payment would be from an *Expense* account. If the payment is for a checking or savings account then usually this would be from an *Income* account.

Tip

The Show Income/Expense check-box shows or hides the *Income* and *Expense* accounts.

Select OK to enter the interest transaction (or Cancel the payment) and return to the initial reconciliation screen.

Reconcile

Note

For a detailed description of menu items and buttons on the reconcile window, see the section called “Reconcile Window”.

The Reconcile dialog is where the actual process of matching your statement to GnuCash data takes place on a per transaction basis.

The Reconcile dialog is composed of a *toolbar* and three panes; Funds In on the left, Funds out on the right and a balance pane.

Note

If you enabled the option Use formal accounting labels in the Accounts section of the GnuCash preferences, you will see Debits and Credits panes instead of Funds In and Funds Out panes.

The Funds In and Funds Out pane shows all unreconciled deposits to the account. Both panes are composed of five columns.

Tip

To order the listed transactions with a preferred criteria, click on the relevant column header. To reverse the selected order click a second time on the column header.

Date	The date of the unreconciled transaction.
Num	The number of the unreconciled transaction.
Description	The Description of the unreconciled transaction.

Amount	The Amount of the unreconciled transaction.
R	Shows a check if the transaction will be reconciled when done.

To mark a transaction as reconciled just click on it and a checkmark will appear on the relevant R column.

Tip

You can check or uncheck the reconcile status of all transactions in either pane by clicking on a transaction in the required pane then clicking **Ctrl-A** followed by **space**. This will toggle the reconcile status of all transactions in the pane to either checked or unchecked state. This procedure can be repeated to achieve the desired status for the transactions in the pane.

Note

Under each pane a Total for reconciled transactions is shown.

The balance pane shows a summary of the balances used in reconciliation.

Statement Date	The date on the statement set on the the section called “Reconciling Information”.
Starting Balance	The balance at the end of the last reconciliation.
Ending Balance	The balance entered from the statement.
Reconciled Balance	The balance of selected transactions.
Difference	The difference between the Reconciled and Ending balances.

The set of unreconciled transactions in the Funds In and Funds Out panes can be changed by using the menus and *Toolbar* to access the account and transaction information. You can create a New transaction, Edit a selected transaction, add a Balance transaction (of the same amount as listed under Difference in the balance pane), and delete the selected transaction.

Tip

To modify a listed transaction, double click on it.

By pressing the Open icon the register of the account to reconcile will be opened.

If you wish to postpone the reconciliation until later use the Reconcile → Postpone menu item (menu shortcut **Ctrl+P**) or pressing the Postpone icon. If you wish to cancel the reconciliation use the Reconcile → Cancel menu item or press the Cancel icon.

All previous commands are also available in the Reconcile dialog menu.

Select each unreconciled transaction matching a transaction on the statement so a green tick appears in the R column. The Balance pane changes to reflect each selected transaction until the Ending Balance *equals* the Reconciled Balance and the Difference is *zero*. Once this is done select the Finish button or Reconcile → Finish (menu shortcut **Ctrl+F**) to finish the reconcile process.

Chapter 6. Common Transaction Operations

A *transaction* represents the movement of money from one account to another account. Whenever you spend or receive money, or transfer money between accounts, that is a transaction. In GnuCash transactions always involve at least two accounts.

GnuCash uses accounts as a way of grouping or organizing the recording of transactions. This section describes the methods GnuCash has to help enter transactions quickly into the register.

GnuCash has several methods available for entering transactions.

- Entering directly into the register window is the most common way of entering transactions.
- Using the Transfer Funds window .
- Importing transactions either from a file or via on-line banking.

Transfer Funds Dialog Box

The Transfer Funds Dialog Box, accessed via Actions → Transfer... or its shortcut or by pressing the Transfer icon from the account register tab, serves two purposes in GnuCash:

- A way to create a simple (i.e. two-split) transaction between arbitrary accounts.
- Collect exchange rate or amount information in a multi-currency transaction (see the section called “Multiple Currency/Commodity Transactions”).

Note

The Basic Information and Transfer Accounts panes will be disabled in the Transfer Funds dialog when it is being used only to collect exchange rate or amount information.

Basic Information

The Basic Information section collects the entries for constructing a transaction: Date, description, amount, etc.

- Amount: The amount of the transaction in the Transfer Fromaccount's commodity.
- Date: The posting date for the transaction, i.e. the date that you want to record it in your book.
- Num: A reference number for the transaction, often a check number.
- Description: The description of the transaction, often the payer or payee.
- Memo: Additional information you might want to note about the transaction. Anything entered here will be added to the Memo fields of *both* splits.

Transfer Accounts

The Transfer From and Transfer To tree views are used to select the accounts which will participate in the transaction. They normally show only Asset and Liability accounts. If you need to use an Income or Expense account in one of them, check the Show Income/Expense checkbox below the appropriate view.

- Choose the Transfer From account.
- Choose the Transfer To account.

Currency Transfer

The Currency Transfer pane is used to collect the needed information to enter the amount of the Transfer To split. You may enter either a price or an amount and GnuCash will compute the other. If you have Online Price Retrieval installed (see the section called “Steps to enable Online price updating”) you can use the Fetch Rate button to retrieve a current quote.

The Currency Transfer pane is enabled only if the selected accounts use different commodities or the Transfer Funds dialog was launched to collect price or amount information from editing a transaction in the register.

The Currency Transfer pane is organized as a radio group with two selections, Exchange Rate and To Amount. Each consists of a radio button and a numeric entry.

If a relevant price is available in the price database (see the section called “Adding a stock price manually”) the Exchange Rate will have that as a default entry.

- Select the Exchange Rate radio button if you want to enter a price or use the Fetch Rate button.
- Select the To Amount radio button if you want to enter the amount of the *To Account* split.
- Enter the price/exchange rate or the amount in the numeric entry corresponding to radio button you selected. GnuCash will calculate the other amount for you when you exit the field. If it's enabled you can use the Fetch Rate button to retrieve a current quote.

Note

If you have created a price in the Price Editor (see the section called “Adding a stock price manually”) for the current date quote retrieval will not update that price. You must first delete the manually-created price in the Price Editor before you Button1 on the Fetch Rate button.

Note

The Fetch Rate button will immediately create or replace a price in the Price Editor unless there is an existing manually-created price for today.

Finishing Up

Select OK to commit the transaction (or confirm the price/amount) or Cancel to dismiss the dialog without entering the transaction.

Note

When committing a transaction or confirming an exchange rate the price on the transaction date in the Price Editor may be updated. See the section called “Price Editor” for details.

Enter Transaction via register

When the Account Register Window for an account is opened the list of transactions for that account is shown. This window has the name of the account on its tab. The menus contain several functions that alter the display of transactions. The *Toolbar* also contains several functions that are often used when entering or manipulating transactions. These are described in the section called “Account Register & General Journal Window” section of this document.

Entering Directly in the Register Window

The register window will look slightly different depending on the style options you have chosen. The following describes entering simple transactions in the basic ledger style. The cursor is placed in the date field by default when the register window is opened.

Note

When working on transactions in GnuCash, be aware that the **Enter** key and the **Tab** key behave differently, and perform different actions.

The **Enter** key moves to the first field of the next split, regardless of which field you are in. If there is no next split, proceeds to the next transaction. In any case, **Enter** finishes the transaction edit, and any imbalance is posted to *Imbalance-CUR*, where *CUR* is the currency of the transaction.

The **Tab** key moves to the next field in the current split. If it's the last field, moves to the next split, creating a new one if there isn't one. If the split is blank, the **Tab** key finishes the transaction and posts any imbalance to *Imbalance-CUR*, as above.

1. Selecting the small icon on the right of the date field drops down a date selection calendar. Use the arrows to select the correct month and year for the transaction then select the date. Selecting the icon once more will close the date selection calendar. It is also possible to type in the date or part of the date and let GnuCash fill the rest.
2. Press **Tab** to move to or select the Num field. Here you can enter a check or transaction number. Pressing + (plus) will automatically advance the number by one from the last transaction to have a number.
3. Press **Tab** to move or select the Description field. This field is used to enter either a payee or other description for the transaction. It will automatically attempt to fill the payee name as you type.
4. At this stage one of two things will happen if tab is pressed. If GnuCash matches an existing transaction the cursor will jump to one of the amount fields, automatically filling in the transfer account. Selecting any field with the mouse instead of tabbing will not automatically fill the transferring account field. If there is no matching (existing) transaction, GnuCash will move the cursor to the Transfer field with only one line of the transaction supplied.
5. Accounts may be selected either by typing them in or by pressing the small button on the right of the Transfer field, which will display a pick list of all non-placeholder accounts. Note that this pick list will still display hidden accounts. If you have hidden an account in your chart of accounts, you may want to set the account also to be a placeholder account so that it doesn't display here.

When typing, GnuCash will fill in available accounts as you type. For example, if you have *Equity* and *Expenses* top-level accounts, typing **E** will fill in **Equity** because it sorts before **Expenses**. Continuing to type **x** will present **Expenses** the account separator (: by default, see the section called

“Accounts” Account Preferences about changing it) will accept the currently offered account so that you can start typing the name of a child account.

6. The next field R is used for reconciliation. This is described in the Reconcile an Account to a Statement section. the section called “Reconciling an Account to a Statement”
7. Press the **Tab** key to move to the first of the amount fields. The names of the next two columns are different according to what type of account is opened. For example, *Bank* accounts show Deposit and Withdrawal here, *Credit Card* accounts show Payment and Charge, and *Stock* accounts show Shares, Price, Buy and Sell.
8. Enter an amount for the transaction in the correct fields. When the transaction is "balanced" pressing the **Enter** key, selecting the Enter icon or going to Transaction → Enter Transaction will finish the transaction. Selecting the Cancel icon or going to Transaction → Cancel Transaction will erase the transaction.
9. Transactions with just one transfer account will show the name of that account in the Transfer field in completed transactions. (The Transfer field is the fourth (4) from the left in the register display.)
10. To move to the blank transaction at the bottom of the register, press the Blank *Toolbar* icon or go to Actions → Blank Transaction.

Multiple Split Transactions

The register window will look slightly different depending on the style options you have chosen. The following describes entering transactions with multiple splits in the basic ledger style. GnuCash describes as a “Split” when money is transferred to or from more than two accounts in a transaction. The cursor is placed in the date field by default when the register window is opened.

The multiple account lines will not be displayed in the Basic Ledger unless the Split icon or the Action → Split Transaction option have been selected.

1. Selecting the triangle icon on the right of the date field drops down a date selection dialog. Use the arrows to select the correct month and year for the transaction then select the date. Selecting the icon once more will close the date selection calendar. It is also possible to type in the date or part of the date and let GnuCash fill the rest.
2. Press **Tab** to move to or select the Num field. Here you can enter a check or transaction number. Pressing + (plus) will automatically advance the number by one from the last transaction to have a number.
3. Press **Tab** to move to or select the Description field. This field is used to enter either a payee or other description for the transaction. It will automatically attempt to fill the payee name as you type.
4. At this stage one of two things will happen if tab is pressed. If GnuCash matches an existing transaction the cursor will jump to one of the amount fields, automatically filling in the transfer account. Selecting any field with the mouse instead of tabbing will not automatically fill the transferring account field. If there is no matching (existing) transaction, GnuCash will move the cursor to the Transfer field with only one line of the transaction supplied.
5. When typing in the Transfer field GnuCash will also attempt to automatically match the account. It does this alphabetically, so typing **Ex** will match the **Expenses** section of the account list. When the section is matched, it is possible to move to a child account by pressing : (colon). If after typing *Ex* you press : then the cursor will move to the first child account in the list. Typing combinations of letters and

- : will allow movement down the tree of accounts quickly. The small icon on the right of the Transfer field can be used as an alternate way of selecting accounts.
6. The next field is used for reconciliation. This is described in the section called “Reconciling an Account to a Statement”
 7. Press **Tab** to move to the first of the amount fields. The names of the next two columns are different according to what type of account is opened. For example, Bank accounts show Deposit and Withdrawal here, Credit Card accounts show Payment and Charge, and Stock accounts show Shares, Price, Buy and Sell.
 8. Enter the total amount for the transaction in the correct field. Before pressing **Tab** or **Enter** read next step.
 9. To enter the additional splits, press the Split button on the *Toolbar* or select Actions → Split Transaction. Transactions with more than one split show the text --*Split Transaction*-- and the Split button will need to be used to show the details.
 10. The display will expand, the titles of the amount columns will be renamed and the Transfer column name will be blank. The first line contains the description and the amount of the transaction. The second line contains the currently opened account name in the Account field and the amount of the transaction. The third line contains the transfer account name in the Account field. If the amount is not balanced, GnuCash will indicate this by placing gray check-boxes in the amount columns with the unbalanced amount in a blank last row.
 11. When one of the short lines is selected, the column titles will change. The very first and last (Date and Balance) columns will have blank titles. Num will change to Action, Description to Memo, the now blank Transfer column will change to Account. The last two amount columns will show the name described in step seven.
 12. The Action and Memo columns are optional to fill out at this stage. Action is used to describe what kind of account transfer is involved. Memo is an additional description of the transfer.
 13. Move to the missing amount field on the third line and fill in the amount. Pressing the **Enter** key, selecting the Enter icon or going to Actions → Enter will now move the cursor to the next line.
 14. The Account column contains the list of transfer accounts. This column is the one that is used to add splits. The method described in step five can be used to select another account on a blank line. Add as many additional splits as needed.
 15. When the transaction is balanced the gray check-boxes will disappear and the last blank line will not have an amount.
 16. Pressing **Enter** as described above will jump to the next transaction. Selecting the next transaction will close the split or it can be manually closed by pressing the Split icon or selecting Actions → Split Transaction.

Multiple Currency/Commodity Transactions

Any transaction that has splits whose accounts are denominated in different commodities (currencies are a subset of commodities) requires an exchange rate to convert between the two. For more information please see Chapter 10 of the *Tutorial and Concepts Guide*.

Registers for accounts of type STOCK or FUND display four columns, Shares, Price, Buy, and Sell (the last two will be Credit and Debit respectively if you've enabled Use formal accounting labels in the Accounts

tab of Preferences). Enter any two and GnuCash will calculate the other for you; if you enter 3 and the result doesn't balance GnuCash will ask which one to change to make the split balance.

Registers of other types have only Credit and Debit (the names will be different depending on the account type if you haven't enabled Use formal accounting labels) and so use the Transfer Dialog with most of the fields disabled to collect either an Exchange Rate or a To Amount (the amount in the other currency/commodity). Please see (the section called "Currency Transfer") for details of using this dialog.

Note

When committing a transaction or confirming an exchange rate the price on the transaction date in the Price Editor may be updated. See the section called "Price Editor" for details.

Editing a Transaction

Editing a transaction involves just selecting the part of the transaction that needs to be changed. Once the changes are complete pressing the **Enter** key, selecting the Enter icon or going to Transaction → Enter Transaction will now move the cursor to the next line or transaction.

To see a more detailed view of a transaction for editing in Basic Ledger, press the Split button on the *Toolbar* or select Actions → Split Transaction.

Deleting a Transaction

If a transaction needs to be removed from the register, select the transaction and press either the Delete icon on the *Toolbar* or go to Transaction → Delete Transaction. A window will appear to confirm the delete, unless the preference has been changed. The window presents two options; "Remember and don't ask again", and "Remember and don't ask again this session". The response will be set according to the selected checkbox. The preference can also be reset via Actions → Reset Warnings. the section called "Reset Warnings...".

Parts of a transaction can also be removed by pressing the Split button on the *Toolbar* or selecting Actions → Split Transaction. The part of the transaction that needs to be deleted can be then selected for deletion.

Add Reversing Transaction

In formal accounting, transactions should never be deleted or altered. Instead, when a mistake is made, the original transaction remains in the ledger, and a reversing transaction is added to the ledger. This *reversing transaction* restores the ledger to its state before the error, allowing the user to enter the transaction again correctly.

While a user can certainly enter reversing transactions manually, GnuCash includes a menu option (Transaction → Add Reversing Transaction) that can quickly create the reversing transaction for you. This option only appears when you are in an account register. When you are in the transaction that needs to be reversed, all you need to do is select this menu item, and a duplicate transaction that reverses the active transaction is immediately created.

Note

Once you choose the menu item, a reversing transaction is immediately created in the account using the current date. You may wish to locate the new transaction at the end of the register, and add explanatory notes to it.

Removing Transaction Splits

Removing Transaction Splits involves erasing all splits except the one for the account that is opened. This is a useful way of reusing a previous transaction that has multiple splits that need to be changed. (Note this can be done without opening the split, but doing so makes the effect more visible)

1. If in Basic Ledger, press the Split button on the *Toolbar* or select Actions → Split Transaction to open the transaction. If in other modes select transaction.
2. Select Transaction → Remove Transaction Splits.

A window will appear to confirm the delete, unless the preference has been changed. The window presents two options; "Remember and don't ask again", and "Remember and don't ask again this session". The response will be set according to the selected checkbox. The preference can also be reset via Actions → Reset Warnings. the section called "Reset Warnings...".

3. All Accounts and their related details will be removed except for the currently opened account.
4. The amount is not balanced and GnuCash will indicate this by placing gray check-boxes in the amount columns with the unbalanced amount in the blank last row.
5. Edit the transaction to fill in the new details.

Copying a Transaction

Copying Transactions is available from the Transaction menu. The Transaction menu has Cut Transaction, Copy Transaction and Paste Transaction which allows a whole transaction to be cut or copied and pasted to a new transaction line. This way of copying a transaction will use the date showing in the new transaction blank line.

The Transaction → Duplicate Transaction... or the *Toolbar* Duplicate which, unlike the Copy method, allows for choosing a different date.

- Select the transaction to duplicate.
- Go to Transaction → Duplicate Transaction...
- A dialog called **Duplicate Transaction** will prompt for a new Date and Num for the transaction.
- Press OK to add the transaction to the register.

Setting the reconcile status (R field) of a transaction

In the GnuCash register there is a column labeled R. This field indicates the status of a transaction. Possible values are:

- n No. This is the default status when a transaction is created.
- c Cleared. Status may be assigned either manually or by an import process.

- y Yes, reconciled. This status is solely assigned by the reconciliation process (see the section called “Reconciling an Account to a Statement”). Places limits optionally requiring confirmation on editing fields in that line of a transaction.
- f Frozen. Not implemented at this time
- v Voided. Status is assigned or released manually through the transaction menu (the section called “Account Register - Transaction Menu”) to a transaction and applies to every line in the transaction. It hides most of the transaction details but does not delete them. When a transaction is voided a reason entry is required that appears to the right of the transaction notes. The notes and void reason will only be visible when you have enabled View → Double Line.

Jump to another Account Register

When using the Account Register Window it is frequently useful to be able to view another account and also the transfer account at the same time. GnuCash allows you to do this quickly by using the Jump button available in the *Toolbar* or the Actions → Jump menu item in the Account Register Window.

Select the transaction in the Account Register Window and either click the Jump icon or select Actions → Jump to open the Account Register Window target. If the transaction is split between more than one transfer account then you will need to show all the split transfer accounts first and select the transfer account to jump to.

Scheduling Transactions

Scheduled Transactions provide the ability to have reminders scheduled or transactions scheduled to be entered at a specified date. This is combined with the Since Last Run assistant (the section called “Since Last Run Assistant”) to review and enter the transactions. The Mortgage & Loan Repayment assistant (the section called “Mortgage & Loan Repayment Assistant”) is used to setup a scheduled transaction to repay a compounding interest loan. The Scheduled Transaction Editor (the section called “Edit Scheduled Transaction Window”) is used to create and edit transactions that are to be added to the register in an automated way.

The easiest way to setup a scheduled transaction is to use an existing transaction in an account register as a template. Select the transaction you wish to use as a template and then either select the Schedule icon on the *Toolbar* or go to Actions → Schedule.... This will bring up the **Make Scheduled Transaction** dialog.

- Name: Enter a name to use for the scheduled transaction. This will be used in the Description field of the transaction.
- Frequency: Choose the time period you want between scheduled entries. The dates that the transactions will be entered will show in the mini calendar pane to the right.
- Start Date: Choose a date for the scheduled transaction to start.
- Never End: This scheduled transaction has no finish date.
- End Date: Choose a date for the scheduled transaction to end.
- Number of Occurrences: Enter the number of times you wish the scheduled transaction to be added to the register.

The Advanced... button brings up the Scheduled Transaction Editor’s dialog to Edit the Scheduled Transaction. This is described in the section Scheduled Transaction Editor. the section called “Edit Scheduled Transaction Window”

Scheduled Transactions Window

The Scheduled Transactions Window is used to access the list of scheduled transactions and create, edit or remove them. It also provides a calendar which displays upcoming scheduled transactions. Clicking on the calendar view and hovering over any date will pop up a small dialog that shows the transactions scheduled for that day. The yellow highlight in the calendar indicates which days have scheduled transactions. To dismiss the hover dialog click once more.

The top pane of the Scheduled Transaction Window contains the list of scheduled transactions that are currently setup. This window lists the Name of the transaction, if the transaction is enabled for scheduling, the Frequency (month and day) that the transaction is to be entered, the last time the transaction was entered and the next time the transaction will be entered.

The right side of this pane contains a down arrow button that when clicked will pull-down a window to allow selection of the characteristics displayed in the list. Unchecking the appropriate box will remove the characteristic from the display.

The *Toolbar* of this window contains three buttons to create, delete and edit scheduled transactions. New and Edit buttons opens the Edit Scheduled Transaction dialog. Delete removes the selected scheduled transaction. The same options are available thru Schedule → New/Edit/Delete, from the Scheduled Transaction Tab.

Below the list of scheduled transactions is the Upcoming calendar. This calendar displays up to the next year and highlights the dates that the scheduled transactions are scheduled to occur so it is easy to see when the transactions are scheduled. Clicking on a date in the calendar brings up a list of scheduled transactions for that date. Moving the mouse over other dates changes to the list of transactions on those dates. Clicking once more on the calendar removes the transaction list.

The Scheduled Transaction Window is activated from the Account tab or the Transaction Register via Actions → Scheduled Transaction → Scheduled Transaction Editor....

Edit Scheduled Transaction Window

The Edit Scheduled Transaction Window is divided into a Name area, Options area, Occurrences area, Recurrence Frequency area, mini calendar and Template Transaction pane.

The Name field is used to enter the name for the scheduled transaction. This will be used in the Description of the transaction.

The Options area contains check-boxes to set if the transaction is automatically created and how many days in advance the transaction is created and/or a reminder posted.

The Occurrences area contains selections to set for dates limits on transactions to be entered or the number of transactions to be entered.

The Recurrence Frequency area contains selections to set how often the transaction is scheduled to be added and on what dates this occurs.

The mini calendar provides a visual indication of what transactions are already scheduled.

The Template Transaction pane allows you to setup the transaction as you would like it to be entered into the register.

These options are described in more detail in the section called “Scheduling Transactions”

- From the Scheduled Transaction tab selecting a transaction from the list and pressing the Edit or New buttons will bring up the Edit Scheduled Transaction Editor.

Printing Checks

Checks are printed in GnuCash from the account register. GnuCash provides the ability to print to several standard Quicken Checks (including US Letter) or to make a custom check format. Check position and Date formats are also customizable.

To print a single check in GnuCash, select the transaction to print a check for and go to File → Print Checks. This will open the Print Checks properties dialog to print the selected transaction.

To print multiple checks in GnuCash execute a search to find the transactions you wish to print. With the search results window as the front window go to File → Print Checks. This will open the Print Checks properties dialog to print all the transactions in the search results window.

The Print Checks dialog has two tabs. The first tab, Options, is used to setup the most common options to print a check. The second tab, Custom format, is used to setup the position of various fields on the check. It is useful to print a test check to a plain piece of paper first and use that to make any adjustments needed.

The default selection in Options is for Quicken/Quickbooks (tm) US-Letter checks.

- Check format: Test with Quicken first then use custom if the position is incorrect.
- Check position: This sets if the Top, Middle or Bottom check is printed. Custom is used if the position of the checks on the page is incorrect.
- Date format: The default here is set in the Preferences International section. Choose a date format. This can also be adjusted by the Use of the Months: and Years: lines. Custom allows the date format to be set in the Format: box (%m means month, %d means day, %Y means year) A Sample of the format chosen is displayed below.
- Address: This sets the address of the Payee, if the check format includes a space for it and you are printing a single check.

The Custom format tab has two sections. The top half of the window (above the dividing line) allows you to position the fields in each check. It contains two columns to enter in the X and Y co-ordinates of the field position on the check. Positions in the Custom Check Format entry area are specified with $x = 0$ at the left edge of the check with x increasing to the right, and $y = 0$ at the top edge of the check with y increasing as you travel down. (If you are using a version of GTK prior to 2.10, then $y = 0$ is at the bottom of the page and y increases as you travel up.)

- Payee:
- Date:
- Amount (words):
- Amount (numbers):
- Address:
- Notes:
- Memo:

- Splits Amount:
- Splits Memo:
- Splits Account:

The part of the custom format tab below the dividing line contains fields to position the entire check correctly on the page. The Translation field is the distance from the top left corner and the Rotation field rotates the check clockwise by the indicated amount.

The Units field in the bottom half of the window specifies the units used in all the fields in both halves of the window.

Once OK is pressed on the Print Check dialog the Print GnuCash Document dialog is presented. Press OK to print the check.

Importing Transactions from Files

Imported transactions will generally be to a specific account in your account tree. In the following this will be referred to as the **import** or **base** account. It may or may not be specified in the data being imported depending on the import format. It is usually the first split of a transaction being imported.

All transactions will also need to have a **destination** account for any other splits associated with the transaction. These may or may not be supplied in the imported data, depending upon the data source and the format of the data. If it is not, GnuCash may be able to assign an account on the basis of the previous import history by matching information in the imported data to data associated with previous account assignments in the importer. The user may always over-ride this automatic assignment or where no assignment can be made automatically assign an account manually.

Multi-split data exported from GnuCash in CSV format will normally have both the import and destination accounts for transaction splits specified in the data file.

Import Formats

GnuCash allows transactions to be imported in a number of structured formats for the exchange of financial data as well as in the unstructured CSV format, a plain text tabular format commonly used for the import and export of data to and from spreadsheets:

- **QIF** (.qif) Quicken Interchange format - import data from Quicken financial software;
- **OFX/QFX** (.ofx,.qfx) Open Financial eXchange format (QXF is an Intuit/Quicken proprietary version of OFX);
- **CSV** (.csv) Comma Separated Values;
- **MT940** SWIFT MT940 Customer End of Day Statement Message;
- **MT942** SWIFT MT942 Customer Intra-day Transaction Report;
- **DTAUS** (.DTAUS) Banking data Exchange File;

These import methods can be accessed from the Import submenu of the main menu File entry, along with methods for importing other types of data. Select the appropriate entry in the Import sub menu to initiate importing transactions.

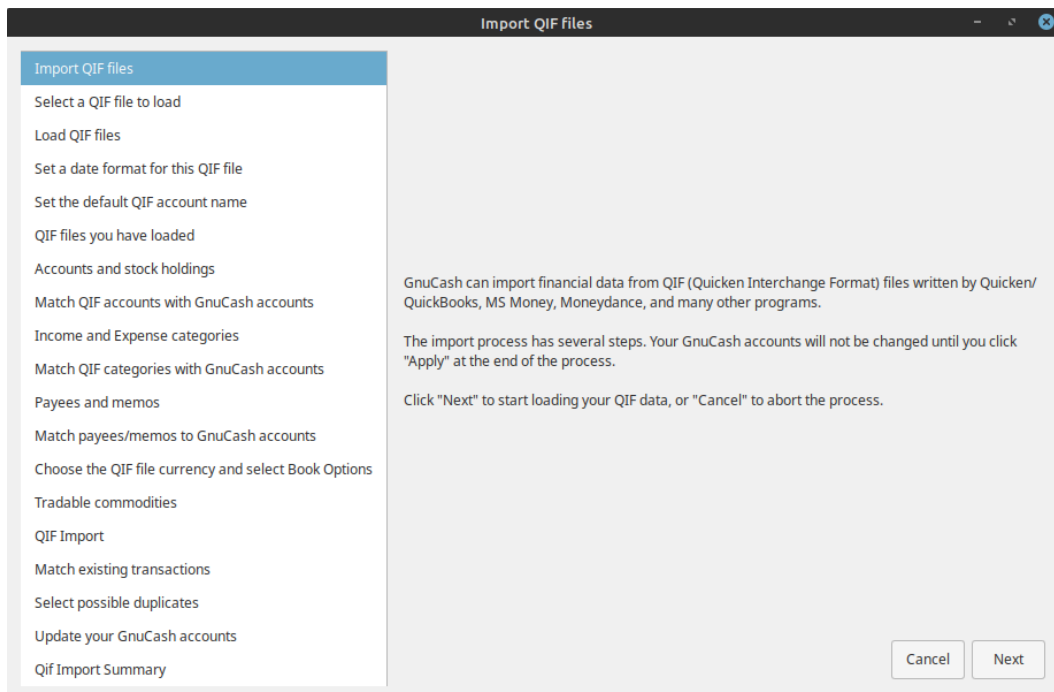
Import QIF

To import data from Quicken®, MS Money®, or other programs that use QIF(Quicken® Interchange Format), you must first export your data to a QIF file. One way to do this is to export each account as a separate QIF file. An easier way, available in Quicken® 98 and beyond, is to export all accounts at once into a single QIF file. Check your program's manual to determine if this option is available.

To import QIF files:

Select File → Import → Import QIF... from the menu to open the QIF Import dialog box illustrated below.

Figure 6.1. The Import QIF Files Assistent



Dialog Navigation. The right hand pane will display some or all of the following navigation buttons:

- **Cancel:** Exit the dialog;
- **Back:** Go back to the previous step;
- **Next:** Proceed to the next step.

The buttons displayed are determined by whether navigation to the destination step is valid from the current step.

Import Dialog Steps. The left hand pane lists the steps in the import dialog process. The right hand pane contains instructions and/or controls for performing the operations in the step selected and highlighted in the left hand pane. The import process steps are:

- **Import of QIF files:** Initial informational panel. Click **Next** to proceed;
- **Select a QIF file to load:** Open a file selection dialog. Navigate to and select the file you wish to import and click **Import**. Then click **Next**;

- **Load QIF files:** Click the **Start** button to load the file. The file will be parsed and loaded. If errors or warnings occur you may have to remove the file, edit it and reimport it. If there are no errors click **Next**;
- **Set a date format for the file:** Select a date format (m-d-y or d-m-y) appropriate to the locale of the source of your QIF file. In the US this is generally m-d-y and in Europe d-m-y;
- **Set the default QIF account name:** If the QIF file does not specify an account name, enter an account name. If importing data from another accounting program you should use the name used in that program;
- **QIF files you have loaded:** This step allows you to edit the list of files to be imported and to load additional files. To remove a file, click on the row and then click on **Unload selected file**. To load another file click the **Load another file**. When you have all the files you wish to import loaded, click **Next**;
- **Accounts and stock holdings:** Information panel. Click **Next** to proceed;
- **Match QIF accounts with GnuCash accounts:** QIF account names are matched to GnuCash accounts if possible. New GnuCash accounts are created if no matching accounts are found. For stock, the required account structures are also created. Created accounts are indicated by checking the checkbox in the New column. Assigned accounts may be edited by selecting the appropriate the row and clicking on the **Change GnuCash Account** button to to run the account selection dialog;
- **Income and Expense categories:** Information panel. Click **Next** to proceed;
- **Match QIF categories to GnuCash accounts:** QIF categories are matched to GnuCash accounts where possible. New GnuCash accounts are created where no matching GnuCash account is found. Created accounts are indicated by the checkbox in the New column being checked. If you are not sure what changes are needed, it is safe to accept the GnuCash account names. These may be changed later in GnuCash. Assigned accounts may be edited by selecting the appropriate row and clicking on the **Change GnuCash Account** button to run the account selection dialog;
- **Payees and Memos:** Information page. Click **Next** to proceed;
- **Match payees/memos to GnuCash accounts:** QIF payees and memos are matched to GnuCash accounts where possible and new accounts are created where this is not possible again indicated by the checkbox in the New column. The assigned account may be changed by selecting a row and clicking on the **Change GnuCash Account** button to to run the account selection dialog;
- **Choose the QIF file currency:** Select the required currency from the dropdown list and click on **Next** to continue;
- **Tradable commodities:** Not yet implemented;
- **QIF Import:** Click on **Start** to begin the import. GnuCash currently proceeds to the Update your GnuCash accounts tab if the import is successful;
- **Match existing transactions:** Not yet implemented;
- **Select possible duplicates:** Not yet implemented;
- **Update your GnuCash accounts:** Click **Apply** to complete the import. Depending upon the size of your file, the import might take a few minutes to complete, so a progress bar displays the percentage finished. When the import process is complete, GnuCash will return you to the main window, which should now display the names of the accounts you imported.

Other features are not currently implemented;
- **QIF Import Summary:** Click on **Close** to exit the wizard.

Import OFX/QFX

File->Import->Import OFX/QFX transactions opens a file selection dialog. Navigate to the file you wish to import, select a file with the appropriate extension (.ofx or .qfx), then press the **Import** button.

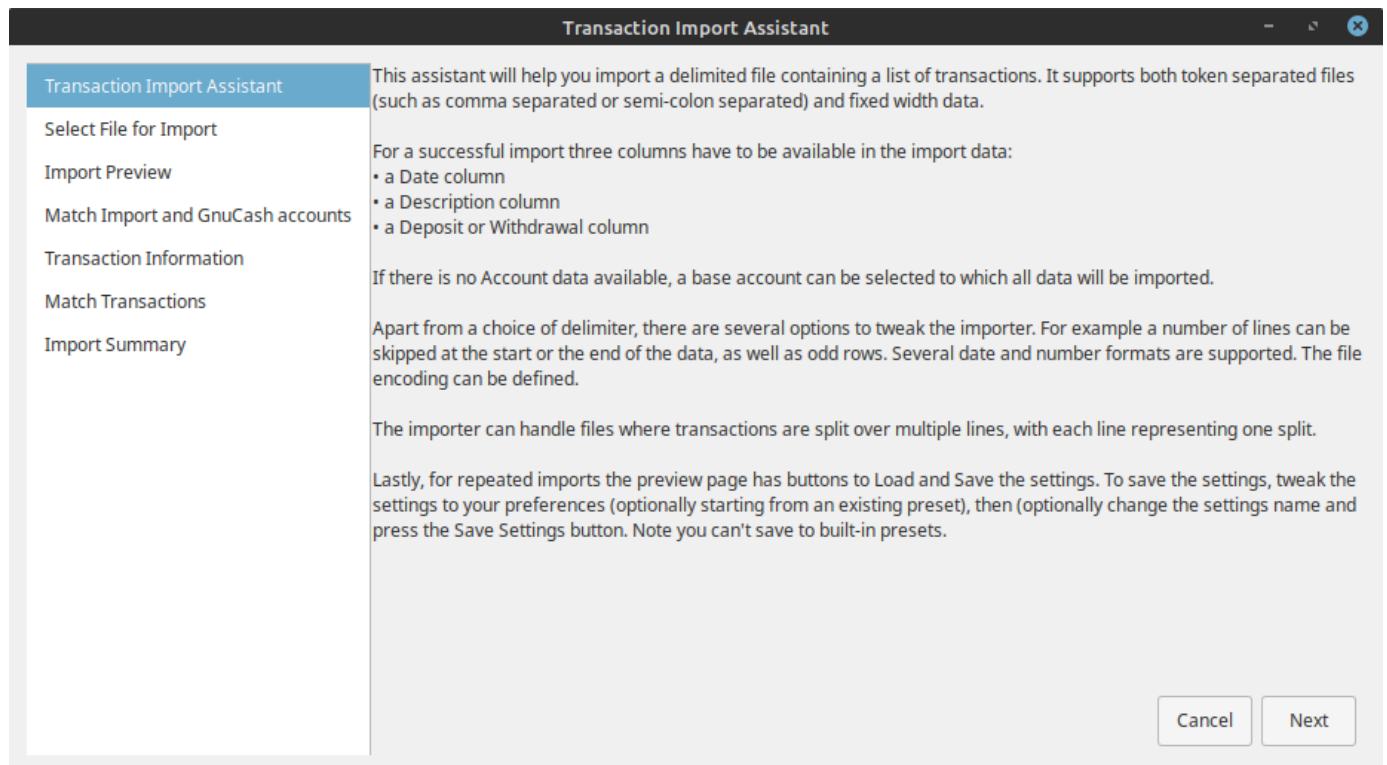
GnuCash then opens an Account Selection dialog to select an account in your CoA to match to an account name in the import file. Select the appropriate account from the account tree and press the **OK** button. On subsequent import of files from the same source account, the mapped GnuCash account is remembered and the account selection dialog is not displayed.

The generic import transaction matcher dialog is opened next. See the Import Matcher section (common to both OFX/QFX and CSV import formats) following the Import CSV section to continue the import process.

Import CSV

Clicking on **File->Import->Import Transactions from CSV** will bring up the CSV Transaction Import Assistant dialog illustrated below.

Figure 6.2. The CSV Transaction Import Assistant - Introduction



The CSV Transaction import Assistant is largely self explanatory with information panes which describe the functionality.

Dialog Navigation. Each pane displays a selection of the following navigation buttons at the bottom right:

- **Cancel** Exit the CSV Transaction Import Assistant;

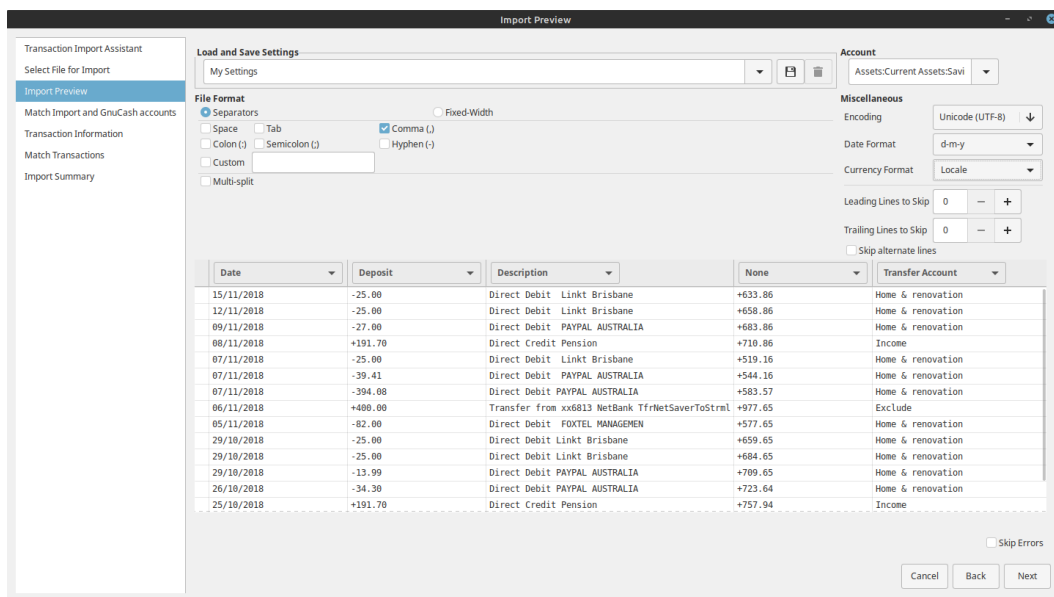
- **Back** Return to the previous step in the assistant;
- **Next** Proceed to the next step in the assistant.

The buttons displayed are determined by the validity of the target step from the current step.

CSV Import Process Steps. The steps in the CSV import process are listed in the left hand pane with the current step highlighted. Explanatory text and the widgets to setup and carry out the step are displayed in the right hand pane. The function of the controls in each step is explained below, in the explanatory information in the panes or in tooltips on some controls. The steps in the CSV import process are:

- **Transaction Import Assistant:** Introductory information panel. Click **Next** to continue;
- **Select File for Import:** Display the File selection dialog. Navigate to the file you wish to import then click the **Next** button;
- **Import Preview:** The Import Preview pane controls set options for the import of CSV data and provides a preview of the data to be imported.

Figure 6.3. The CSV Import Preview Pane



The CSV Import Preview Pane with settings to import the shown data.

Import preview Controls

- **Load and Save Settings:** Once you have set all the import parameters, you can save these settings by typing in a setting a unique name in the Load and Save Settings Entry combo box and clicking the Save icon just to the right of the box. A previously defined settings group can be retrieved by selecting the appropriate setting group name from the dropdown list activated by the down arrow at the right end of the text box. This will set all other settings to the stored values.

The delete/trashcan icon to the right of the Save icon can be used to remove the saved settings group selected from the drop down list for the box.

The settings group **GnuCash Export Settings** defines a setting group for used for the export and reimport of GnuCash transaction data - use this if importing data previously exported from GnuCash;

- **Account:** If the data you are importing does not specify the source account for the transaction an account can be selected from the drop down list will import all transactions to the selected account. Leave blank if your imported data specifies a source account;
- **File Format:**
 - **Separators:** Selecting this radio button will allow you to define characters which will be used to distinguish columns in the input file. The default is comma separated. In countries using the comma as decimal separator the semicolon is common as column separator. However spaces, tabs, colons or semicolons or any combination of them may be used to separate columns in the input file by selecting the appropriate check boxes. You may also define custom separators by typing the required characters into the text box and selecting the Custom checkbox. This may be used in combination with any of the predefined separators;
 - **Fixed-Width:** Selecting this radio button will allow you to define column boundaries by double clicking at the appropriate positions in the sample records displayed in the panel below. Single clicking in a column will narrow, widen or merge the column.
 - **Multi-split:** Selecting this check box allows the splits for a single transaction to be defined on consecutive lines within the file with each line defining a single split. If not selected each line is assumed to contain the information for a single transaction including one or two splits;
- **Miscellaneous:** The miscellaneous settings allow you to set:
 - **Encoding:** This is usually UTF-8, but may differ for files from other sources;
 - **Date Format:** This does not default to the Locale setting so check it matches the data you are importing;
 - **Currency Format:** Select the format of the decimal separator (full stop or comma or other) for the currency if the correct value is not supplied by Locale;
 - **Leading Lines to Skip:** Select the number of header lines to skip in the imported file;
 - **Trailing Lines to Skip:** Select the number of trailing lines to skip in the import file;
 - **Skip alternate lines:** Use to skip every second line in the import file.
to match the settings for the file you are importing. Tooltips may also contain information on the setting and options.

The import panel shows the data being imported as it is interpreted using the settings chosen to define columns and formats. The dropdown lists in the headers for each column of the import allow you to associate a specific column in the imported data with a specific field in the display of a transaction in an account register. At a minimum to import data, columns in the imported data containing the following information *must* be specified:

- Date: of transaction;
- Account: into which transaction is to be imported (or alternatively set the base account as above);
- Description: of the transaction;
- Deposit or Withdrawal: column.

The dropdown list of GnuCash transaction data fields which may be associated with a column of the imported data contains the following:

- **None:** The column is not assigned to a transaction data field and is not imported;
- **Date:** Ensure the date format in the column matches the Miscellaneous date Format Setting;
- **Num:** Transaction Num field - Use for check numbers etc.;
- **Description;**
- **Notes;**
- **Transaction Commodity;**
- **Void Reason;**
- **Action;**
- **Account:** This header should be matched to a column specifying the source account for a transaction if it is present. Otherwise, set the source account in the **Account** combo box;
- **Deposit:** Apply this header to a column containing the amount of the transaction. Positive amounts in the column generally represent an increase in the account balance and negative amounts a decrease in the balance (asset accounts: Checking, Savings). In external statements supplied by a bank for a check or savings account, a credit (Cr) is normally an increase in the account balance and a debit (Dr) a decrease in the account balance. In the banks eyes, your savings or checking account is a Liability to them;

If the amount data is in separate columns for debits and credits you will have to apply both this heading and the Withdrawal heading.

- **Withdrawal:** Apply this header to a column with the amount of the transaction where positive amounts in the column represent a decrease in the account balance and negative amounts an increase in the balance (e.g. Liability account: credit card).

Where separate columns are used for debits and credit to the account apply it to the opposite to the column to which Deposits is applied;

Note

Some experimentation may be necessary to determine the correct allocation of the Deposit and Withdrawal headings.

- **Price:** The price for commodity transactions and/or transactions involving currency exchange;
- **Memo:** Additional column containing descriptive information relevant to one split of a transaction. If in the first line of a multi-split import it will apply to the source account. In subsequent lines/splits it is applied to the transfer account defined in that line or allocated to it in the matcher;
- **Reconciled:** Apply to a column indicating the reconciliation status of the transaction. This generally only applies to data exported from GnuCash;
- **Reconcile Date:** Apply to a column which specifies the date of reconciliation, generally only for GnuCash exported data;
- **Transfer Action;**

- **Transfer Account:** This header should be applied to a column which specifies the transfer account for the second split of a single line import and/or for subsequent splits in multiline exported transactions;
- **Transfer Memo:** Apply to a column with descriptive information relevant to a split to a transfer account specified by **Transfer Account**;
- **Transfer Reconciled:** Apply to a column with reconciliation status information relevant to a split to a transfer account specified by **Transfer Account**;
- **Transfer Reconcile Date:** Apply to a column containing a reconciliation date relevant to a split to a transfer account previously specified in **Transfer Account**.

The Skip Errors check box will skip trying to import any rows with errors in matching the columns.

When you are happy with all the import settings, save them if you will use the same settings again, then press the **Next** button.

- **Match Import and GnuCash accounts:** This window allows you to map the accounts identified in the account columns (Account and Transfer Account) with accounts in the GnuCash account tree (Account name). Double click on a row to bring up a dialog to select the matching GnuCash account. If you have previously imported transactions to this account and account mappings can be matched automatically, this window will not be displayed. When you have selected a match for all accounts, click on the **Next** button;
- **Transaction Information:** The Transaction Information panel allows review of data entry settings so far. Clicking Next will perform checks on the data. If there are errors you will be returned to the **Import Preview** pane to edit the settings. For no errors you proceed to the next step;
- **Match Transactions:** Clicking on Match Transactions will then bring up the main Import Matcher window. The Import Matcher is described in a separate section;
- **Import Summary:** GnuCash displays a summary of the imported data. Click on the **Close** to exit the wizard.

Caution

Multi-split imports of multicurrency transactions and commodity transactions are experimental and may currently experience some errors. Please experiment and report any bugs encountered.

Import MT940 and MT942 SWIFT and DTAUS format files

The SWIFT MT940 format is used for an end of day statement by banks using the SWIFT network for data exchange. MT942 is used for an intra-day statement in the same system. DTAUS is a format used with 9 track magnetic tapes since 1976 and later with other removable media (floppy disks). DTAUS has not been supported by banks since 1 February 2016.

When you select **File->Import->**

- **Import MT940** or;
- **Import MT942** or;
- **Import DTAUS**.

from the menu, GnuCash opens a file selection dialog. Navigate to the MT940, MT942 or DTAUS format file you wish to import and then click on the **Import** button. On the first import of data to a given account specification in the import file, GnuCash will bring up an account selection dialog to select an appropriate

account into which to import the transactions in the file. GnuCash will map the account description in the import file onto the selected account and use it for future imports from the same account. The imported transactions will then be displayed in the **Generic Import Transaction Matcher** for review.

Generic Transaction Import Matcher

Figure 6.4. The Generic Transaction Import Matcher Window

Date	Account	Amount	Description	Memo	A	U+R	R	Info
21/06/2018	Savings Account	\$225.60	Direct Credit Salary 678956345678x	Direct Credit Salary 678956345678x	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New, UNBALANCED (need acct to transfer -\$225.60)!
22/06/2018	Savings Account	-\$10.40	Belmont Hotel Value Date: 20/06/2018	Belmont Hotel Value Date: 20/06/2018	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New, UNBALANCED (need acct to transfer \$10.40)!
22/06/2018	Savings Account	-\$12.40	Belmont Hotel Value Date: 20/06/2018	Belmont Hotel Value Date: 20/06/2018	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New, UNBALANCED (need acct to transfer \$12.40)!
29/06/2018	Savings Account	-\$19.00	ST VINCENT DE PAUL Value Date: 28/06/2018	ST VINCENT DE PAUL Value Date: 28/06/2018	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New, UNBALANCED (need acct to transfer \$19.00)!
05/07/2018	Savings Account	\$228.85	Direct Credit Salary 678956345678x	Direct Credit Salary 678956345678x	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New, UNBALANCED (need acct to transfer -\$228.85)!
13/07/2018	Savings Account	-\$60.00	Wd ATM Red	Wd ATM Red	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New, UNBALANCED (need acct to transfer \$60.00)!
13/07/2018	Savings Account	-\$6.40	WP PHARMACY Value Date: 12/07/2018	WP PHARMACY Value Date: 12/07/2018	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New, UNBALANCED (need acct to transfer \$6.40)!
17/07/2018	Savings Account	-\$16.00	BUTCHER BKR CFMR Value Date: 12/07/2018	BUTCHER BKR CFMR Value Date: 12/07/2018	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New, UNBALANCED (need acct to transfer \$16.00)!
20/07/2018	Savings Account	-\$10.40	Belmont Hotel Value Date: 18/07/2018	Belmont Hotel Value Date: 18/07/2018	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New, UNBALANCED (need acct to transfer \$10.40)!
24/07/2018	Savings Account	-\$25.00	BELONG MOBILE Value Date: 20/07/2018	BELONG MOBILE Value Date: 20/07/2018	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New, UNBALANCED (need acct to transfer \$25.00)!
24/07/2018	Savings Account	-\$12.50	BUTCHER BKR CFMR Value Date: 20/07/2018	BUTCHER BKR CFMR Value Date: 20/07/2018	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New, UNBALANCED (need acct to transfer \$12.50)!
25/07/2018	Savings Account	-\$18.40	Belmont Hotel Waffle Point Value Date: 25/07/2018	Belmont Hotel Waffle Point Value Date: 25/07/2018	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New, UNBALANCED (need acct to transfer \$18.40)!
25/07/2018	Savings Account	-\$16.00	LIFELINE ROTHWELL Value Date: 21/07/2018	LIFELINE ROTHWELL Value Date: 21/07/2018	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New, UNBALANCED (need acct to transfer \$16.00)!
27/07/2018	Savings Account	-\$10.40	Belmont Hotel Waffle Point Value Date: 25/07/2018	Belmont Hotel Waffle Point Value Date: 25/07/2018	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New, UNBALANCED (need acct to transfer \$10.40)!
30/07/2018	Savings Account	-\$35.00	Direct Debit 085236 MISSION AU	Direct Debit 085236 MISSION AU	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New, UNBALANCED (need acct to transfer \$35.00)!

Show the Source Account column

Help Cancel OK

This is an image of the import transaction matcher window after opening a file to import.

The Import Matcher checks whether an imported transaction matches an existing transaction already recorded in GnuCash within a predefined time window ($\sim \pm 42$ days) for the account into which the transactions are being imported. A match probability is calculated based on the Date, Amount, Transaction ID's (if present), Check numbers (if present) and the Description and split Memo fields. Exact matches will generate a high match probability and flag a transaction as matching an existing transaction and therefore not to be imported. If there is a lower quality match to an existing transaction, the imported transaction may be flagged for updating of non-matching information in the GnuCash record of the matching transaction. These decisions can be overridden by the user.

If no matching transaction can be identified the transaction will be flagged for import. The matcher will attempt to assign a transfer account based on matches between tokenized information for previously imported transactions stored in lists associated with the transfer accounts which were assigned to them on import.

- If a good match is obtained, the transfer account is assigned and the transaction is flagged as ready to import.
- If a transfer account cannot be assigned, the transaction will be flagged for import and manual assignment of the transfer account by the user. By default, if no transfer account is assigned, transactions will be assigned to an Imbalance account on import. This is to indicate that they need an appropriate account assigned to them.

The generic import transaction matcher is invoked when transaction data is imported using any of the following import formats:

- QIF;
- OFX/QXF;
- CSV;
- MT940;
- MT942;
- DTAUS.

This window has the following

Controls:

- **List of downloaded transactions:** Table containing information from the imported transactions.
- **Show the Source Account column:** Checkbox to displays the account into which the transactions are being imported. This is the second column labelled Account in the screenshot;
- **Help:** Display a popup help window;
- **Cancel:** Close this window without importing transaction data;
- **OK:** Close this window importing transaction data;

The List of downloaded transactions has the following columns which display the following information for each of the downloaded transactions:

Columns in “List of Downloaded Transactions”

- **Date** - The date supplied with the downloaded transaction;
- **Account** - The import or base account to which the transactions will be imported (optional see above);
- **Amount** - The amount of the transaction (split to the import or base account);
- **Description** - The description of the transaction;
- **Memo** - The memo for the split to the import or base account of the transaction;
- **A** - Checkbox which indicates that the transaction is to be imported as a new transaction;
- **U+C** - Checkbox which indicates that the transaction matches an existing transaction but has some differences and the existing transaction will be updated with the different information
- **C** - Checkbox which indicates that the transaction matches an existing transaction and will not be imported;
- **Info** - For transactions which have been matched to an existing transaction displays a bar indicating the quality of the match and text indicating whether the transaction is to be imported.

In addition to the checkboxes, the import status of each transaction is indicated by the background color of the transaction row. The checkbox state, background colors and their meaning are described in Table 6.1, “Import Status of Transactions”.

Table 6.1. Import Status of Transactions

Checked Box	Background	Meaning
A	Gold	No matches, flagged for input and no transfer account matched – Import as a new transaction. Intervention required to select a transfer account.
	DarkSeaGreen1	No matches detected, flagged for input and a transfer account is matched – Import as a new transaction. Reconciliation status will be set as cleared (c) on import. Intervention is not required.
U+C	DarkSeaGreen1	Matches an existing transaction but not exactly on date and/or amount – Intervention not required, import and update. Reconciliation status will be set as cleared (n) on import.

Checked Box	Background	Meaning
C	DarkSeaGreen1	Matches an existing transaction: – Not to be imported. The existing transaction reconciliation status will be as cleared (c) on import. Intervention is not required
	Brown1	Transaction has poor matches and no action was set: – Not to be imported. Intervention required.
	Cornflower Blue	Row is selected

Note

The colors illustrated here are the defaults for GnuCash specified in `gnucash-fallback-310.css` [<https://github.com/Gnucash/gnucash/blob/maint/gnucash/gnucash-fallback-310.css>]. You may experience different colors if the `gtk-3.0` CSS files have been modified

You may always intervene manually to

- change the import action by selecting another checkbox (or none) and/or
- manually assign a different transfer account

after reviewing the matched transactions and accounts and the automatically selected actions.

Multi row selection is enabled for the list of downloaded transactions. The following operations can be performed on the list of downloaded transactions:

- **Click Button1 on a row:** Select this row (row is displayed with a blue background);
- **Double-click Button1 on a row:** If the transactions is flagged for import (see below) this will open an account selection dialog to select a destination/transfer account to be used in the second split of the imported transaction. You may create a new account if necessary in this dialog using the **New Account** button. If the transaction is flagged as matching an existing transaction either for import or updating, the match picker dialog is opened to allow the matched transactions to be examined and a correct match selected;
- **Ctrl+Button1 on a row:** Add the row to a selection of rows (displayed with a blue background) to which a single destination/transfer account may be applied;
- **Shift+Button1 on a row:** Select all rows between the last selected row and this row and add them to the current selection of rows;
- **Click Button2 in the window:** Display a popup menu which when clicked in turn opens a dialog to select a single destination/transfer account which will be applied to all rows currently selected.

Important

It is important to assign a transfer account to each transaction prior to import of the transactions. Otherwise the tokenized information from the imported transaction will not be appended to the list of tokens for an assigned account for use in future matching of transactions to transfer accounts.

Note

Note that "reconciled" in this context does not mean the same as "reconciled" in the process of reconciling an account to an external statement. The reconciliation status of an imported transaction is set to cleared (c) on import of a new transaction

Where a row has been matched to an existing transaction or is to update an existing transaction it will have a DarkSeaGreen background. **Double-clicking Button1** on the row will bring up the Match Picker dialog which displays detail of the imported. If you, feel the wrong transfer account has been assigned or the matcher has not produced a valid result, you may change the checkbox selection if you disagree with the matcher decisions and you may reassign an assigned transfer account (see below).

Double-clicking Button1 on a row marked as New with a DarkSeaGreen1 background and a transfer account assigned to it will bring up the account selection dialog to allow you to choose a different transfer account for the second split.

Double-clicking Button1 on a row marked New with no transfer account matched with a Gold background will also bring up the account selection dialog to allow you to assign a suitable transfer account to the transaction.

Assign a Destination Account to a Single Transaction

The currently selected row is selected by left clicking it. It is displayed with a Cornflower Blue background color.

Double left clicking on a row will select it and open an Account Selection dialog to allow you to assign a transfer account. Select the desired transfer account in the dialog and click **OK**. The dialog has a **New Account** button which will allow you to create a suitable account if there is no existing account which can be applied as the transfer account. The row background will change to a DarkSeaGreen1 and the assigned destination account will be displayed in the Info column.

or alternatively, left click on a row to select it followed by a right click to bring up a popup menu then select Assign a transfer account to display the Account Selection dialog, select the destination account and click the **OK** button.

Assign a Destination Account to Multiple Transactions

Sometimes you will have several transactions which can have the same destination account. GnuCash allows you to select multiple transactions and apply the same destination account to all transactions in the selection.

Rows in a selection are displayed with a Cornflower Blue background.

Only rows which have the **A** checkbox checked and either a DarkSeaGreen1 or Gold background colour can be selected for inclusion in a multiple selection. Rows with a Brown1 background or with the **U+C** or **C** checkboxes checked cannot be selected in a multiple selection.

To select rows and add rows to a selection either:

- **Click Button1** on first row and then **Ctrl+Button1** on other rows to add to the selection; or
- **Click Button1** on first row and then **Shift+Button1** on another row to select all rows between them.
- Rubber banding is also enabled so you may also **hold Button1 and drag** over rows to create a selection. To add more rows, **Ctrl-Button1 and drag** over more rows.

then **Button2** to display a popup menu and then select Assign a transfer account to open the Account Selection dialog. Select the desired destination account (create a new account if necessary) and click the **OK** button in the Account Selection dialog.

Completing the Import

Once you have assigned destination accounts for all the imported transactions using the above methods (all row backgrounds will be a light green colour), check that the assigned destination accounts are correct and

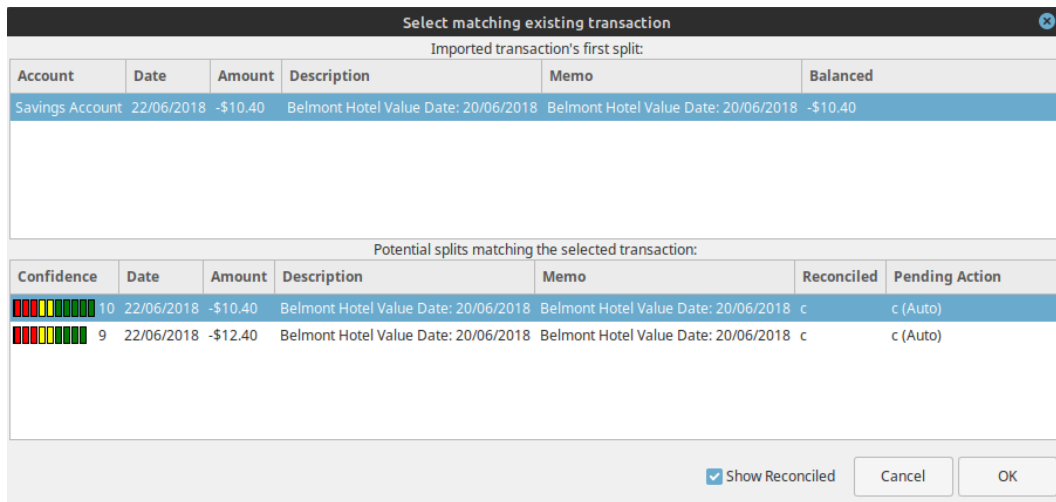
then press the OK button at the bottom of Figure 6.4, “The Generic Transaction Import Matcher Window”. The transactions selected for import will have their splits added to the selected source and destination accounts.

The tokenized data from the transactions assigned to a given transfer account is stored on exiting from the matcher and is used to match transactions to the appropriate transfer account in future imports.

Match Picker

The Match Picker allows you to review and edit existing GnuCash transactions which have been matched to a transaction being imported. Button1 on a row with the C checkbox checked to bring this dialog up.

Figure 6.5. The Match Picker Dialog



The Match Picker dialog window showing existing GnuCash transactions matching an imported transaction.

The top pane of the Match Picker displays details of the first split of the transaction to be imported. The column labels:

- **Account**
- **Date**
- **Amount**
- **Description**
- **Memo**
- **Balanced**

are the same and have the same meaning as in Columns in “List of Downloaded Transactions” with the exception of the Balanced column which gives the amount of the balancing split for the transaction.

The lower pane displays the details of existing GnuCash transactions which match this transaction. If no transactions are displayed check the **Show Reconciled** checkbox at the bottom of the panel. The first row in this pane will normally be the auto-matched transaction with the best match score. Other rows will display other existing transactions which might also be matches for the transaction being imported. The columns in this pane are:

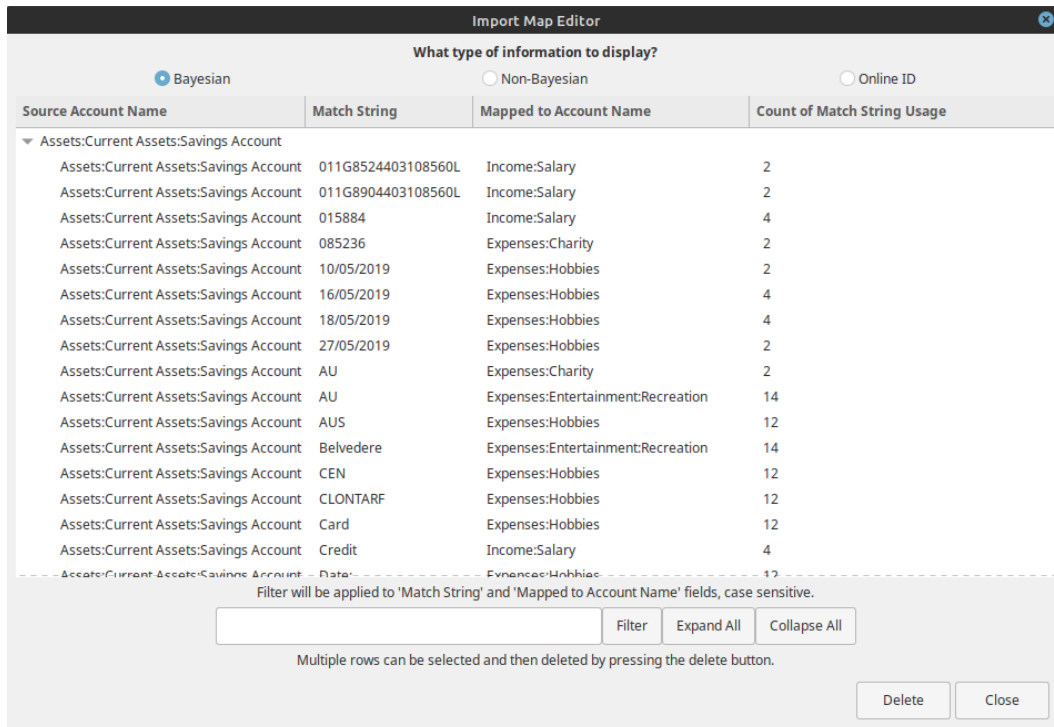
- **Confidence:** This column indicates the confidence of the individual match as both a bar chart and a numerical value. Where the bar extends into the green, the match is good. If the bar only extend to the red or yellow setions the quality of match is more doubtful.
- **Date**
- **Amount:** If this does not match exactly the amount of the transaction being imported but otherwise the match is good, the amount of the imported transactions is used to update the existing transaction matching it.
- **Description**
- **Memo**
- **Reconciled:** Indicates the reconciliation status of a matching existing transaction.
- **Pending Action**

If you are not happy with the existing transaction that was auto-matched, Button1 on your preferred match to select it and then Button1 the **OK**. The transaction will then be marked as a (manual) match in the Info column of the Import Matcher. To exit the dialog without changing the auto-match Button1 on the **Cancel**.

Import Match Editor

The Import Match Editor allows you to edit the data used by GnuCash to automatically assign a transfer account in the Import Matcher. It can be used to edit the data used by the Bayesian matcher, the Non-Bayesian matcher and online ID's. To open it select **Tools->Import Map Editor** from the menu.

Figure 6.6. The Import Map Editor



The Import Map Editor illustrating typical entries for the Bayesian matcher.

The three radio buttons at the top of the dialog select the type of data being displayed and edited:

- **Bayesian:** The Bayesian matcher matches a transfer or destination account using the frequency of association of a token string with an assigned transfer/destination account in the Import matcher for a specific source account (the account that the first split of the imported transaction is directed to);
- **Non-Bayesian:** The Non Bayesian matcher matches the transfer account on the basis of the occurrence of a token string in transactions assigned to a transfer/destination account and does not record the frequency of association. This was the original GnuCash matching process and has now been superseded by the Bayesian matcher in more recent versions;
- **OnlineID:** Online ids are specific strings which identify specific accounts in information downloaded from online sources. they may include account numbers and specific institution identifiers.

The **Bayesian** matcher data columns are:

- **Source Account:** This is the account into which a transaction has been imported and is normally the first split in an imported record. It may either be specified in the record itself or during the import setup for all transactions to be imported. The arrow control at the left of each entry in this column may be used to display all the data used in matching a transfer or destination account for transactions which have this account as their source split;
- **Match String:** This column displays a specific token string that has been associated with the allocation of the account in the **Mapped to Account Name** column as a transfer/destination account for transfers to the Source Account;
- **Mapped to Account Name:** The account name in this column is a GnuCash account name which has been allocated as a transfer/destination account in association with the token string in the **Match String** column;
- **Count of Match String Usage:** This is the number of times the token string in the **Match String** column has occurred in association with the transfer/destination account specified in the **Mapped to Account Name** column for transactions imported to GnuCash.

The **Non-Bayesian** matcher displays the same first three columns as the Bayesian matcher having the same usage. It does not store data on the frequency with which a particular token is associated with the assignment of a given transfer/destination account. It has an additional column which specifies the type of the imported data process in which the assignment occurred. It has the following columns:

- **Source Account;**
- **Based on:** This identifies the import process in which the **Match String** was associated with the transfer destination account in the **Mapped to Account Name** column;
- **Match String;**
- **Mapped to Account Name.**

Online ID displays the same columns with the same data as the Non-Bayesian matcher.

The **Filter** textbox at the bottom of the dialog allows filtering of the displayed data matching the entered string in either the **Match String** column or the **Mapped to Account Name** column.

The **Expand All** and **Collapse All** buttons expand or collapse the data in the other columns for the accounts in the **Source Account** column.

The **Delete** button will delete any selected rows in the displayed matcher data.

The **Close** button closes the Import Match Editor dialog.

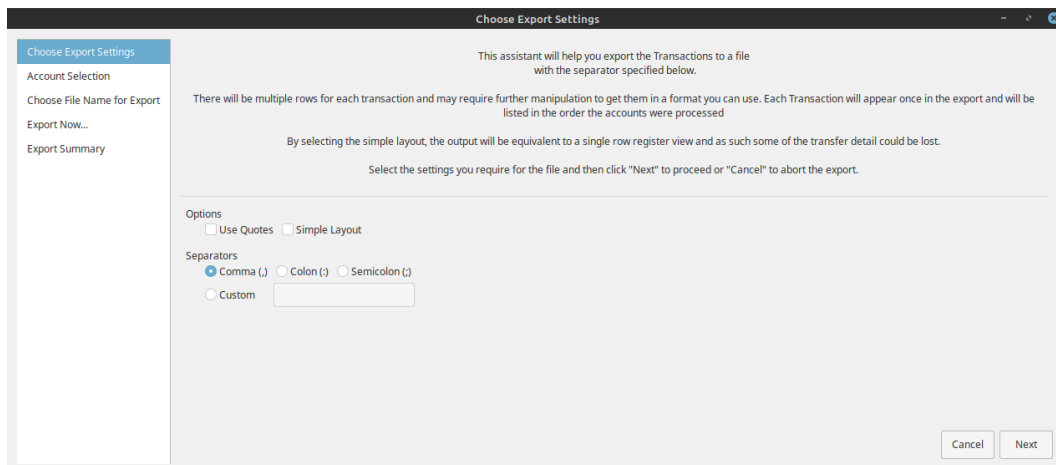
Exporting Transactions

GnuCash allows transaction data to be exported in CSV format with the optional use of alternative column separators. Transactions can be exported in either a single line format (simple layout) which can only be used for transactions with two splits and may not allow all the data associated with a transaction to be exported or in a multiline format where two or more lines are used for transactions with two or more splits with each splits information on separate lines. Transaction data can be exported either from the currently selected active register or from selected accounts. The menu commands to export transactions are:

- **File->Export->Export Transactions to CSV;**
- **File->Export->Export Active Register to CSV.**

These commands start the wizard illustrated in to setup the export. They differ only in that in the latter case the **Account Selection** step is not available in the left hand pane.

Figure 6.7. The Export Transactions Wizard.



The Export transaction wizard opens at the first step and performs the steps listed in the left hand pane:

- **Choose Export Settings;**
- **Account Selection;**
- **Choose File Name for export;**
- **Export Now...;**
- **Export Summary.**

Navigation between the steps uses the buttons displayed in the right hand lower corner of the wizard. Which of the following buttons are displayed will depend on what is permissible from the step:

- **Cancel:** Exit the wizard without exporting any transactions;

- **Back:** Return to the previous step in the wizard;
- **Next:** Proceed to the next step.

Choose Export Settings

This step allows you to choose various options in the formatting of the transactions being exported.

The **Options** checkboxes may be selected singly or both may be selected together:

- **Quotes:** Surround each data field in quotes;
- **Simple layout:** If checked, the output transaction data will be as displayed in the single row register view option and some of the transfer detail may be lost.

The column headers for data exported in **Simple layout** format are:

1. **Date**
2. **Account Name:** name of the source account;
3. **Number**
4. **Description**
5. **Full Category Path:** full account name for transfer/destination account;
6. **Reconcile**
7. **Amount with Sym**
8. **Amount NUM**
9. **Rate/Price**

If **Simple layout** is not checked the transaction data will be exported in a multi-line format.

The column headers for a multiline output for a transaction are:

1. **Date:** first line only;
2. **Transaction ID:** first line only;
3. **Number:** first line only;
4. **Description:** first line only
5. **Notes:** first line only;
6. **Commodity/Currency:** first line only;
7. **Void Reason:** first line only;
8. **Action:** first line and subsequent lines;
9. **Memo:** first line and subsequent lines;
10. **Full Account Name:** first line and subsequent lines;

- 11. **Account Name**: first line and subsequent lines;
- 12. **Amount with SYm**: first line and subsequent lines;
- 13. **Amount Num**: first line and subsequent lines;
- 14. **Reconcile**: first line and subsequent lines;
- 15. **Reconcile Date**: first line and subsequent lines;
- 16. **Rate/Price**: first line and subsequent lines;

Each line contains the data relevant to a single split with the first line also having transaction data relevant to all splits in the first 7 columns.

The **Separators** radio buttons allow the choice of an alternative column separator:

- **Comma(,)**: This is the default separator;
- **Colon(:)**: Use a colon to separate the columns;
- **Semicolon(,)**: Use a semicolon to separate the columns;
- **Custom**: Define a custom character to separate the columns by entering it in the textbox.

Button1 on Next to go to the next step.

Account Selection

This step allows selection of one or more accounts and the specification of the date range containing the transactions to be exported.

The **Accounts** panel displays an account tree which allows one or more accounts to be selected for export. (**Ctrl-Button1**> and **Shift-Button1** may be used to select accounts). The **Select Subaccounts** button will select all subaccounts of a selected account. The **Select All** button will select all accounts in the account tree for export. The number of accounts which have been selected is indicated.

The **Dates** panel allows selection of either all transactions or only those within a selected date range in the selected accounts to be exported.

Choose File Name for export

A file selection dialog is presented allowing specification of a file name and a path to the directory/folder in which it is to be stored.

Export Now...

The filename and path of the file to be exported and the number of accounts to be exported is displayed. To continue with the export **Button1** the **Apply** button.

Export Summary

Displays a message if the file is successfully exported or an error message and debugging suggestions if not.

Online Actions ...

Note

This section is "under construction - any input will be welcome !!".

Get Balance

Get Transactions ...

Issue Transaction

Direct Debit

General Journal

The General Journal is an advanced register used to enter transactions without needing to open individual accounts. The General Journal shows the transaction entries for all accounts on one register.

Entering transactions in the General Journal is more complicated than entering them in the individual account registers. The advantage is the General Journal provides a more comprehensive view of the transactions you have entered in all your accounts.

The General Journal defaults to showing only the previous month of transactions. This is changeable by using the "Filter By..." on the View menu.

Chapter 7. Business Features

The accounting needs of a business are quite different from that of a person. Businesses have customers that owe money, vendors which are owed money, employee payroll, more complex tax laws, etc. GnuCash offers business oriented features to facilitate these needs.

Accounts Receivable (A/R) are used by businesses to record sales for which they are not immediately paid. Accounts Payable (A/P) record bills that they have received, but might not pay until later. These types of accounts are used primarily when you have a lot of bills and receipts flowing in and out, and do not want to lose track of them just because you do not pay or get paid right away. For most home users, A/R and A/P are too complicated to be worth the effort.

Accounts Receivable (or A/R) refers to products or services provided by your company for which payment has not yet been received. This is represented on the balance sheet as an asset, because the expectation is that you will receive payment soon.

Accounts Payable (or A/P) refers to products or services bought by your company for which payment has not yet been sent. This is represented on the balance sheet as a liability because you will have to pay for them.

Initial Setup

To set up GnuCash to handle accounts receivable and accounts payable for a company the following preliminary steps must be done.

Account Setup

There are many different ways to set up a business account hierarchy. You can start with the Business Accounts setup which is available from the New Account Hierarchy assistant, or you could build one manually. To access the prebuilt Business Accounts, start GnuCash and click on File → New File and proceed until you see the list of available accounts, select *Business Accounts*.

Note

The prebuilt Business Account hierarchy will not meet your needs exactly. You will need to make adjustments for the hierarchy to function well with your particular situation. It should be close enough that it is recommended you begin with it.

Tax Tables

Tax Tables can used to determine the tax for customer invoices (or vendor bills).

A tax table can be assigned to an invoice line or bill line.

The default invoice line tax table can be assigned to each customer and the default bill line tax table can be assigned to each vendor.

The default tax table for new customers or new vendors can be specified in the *Book Options* window which can be accessed by File → Properties → Business tab.

Tax Tables are maintained using the *Sales Tax Table* editor which is accessed via menu Business → Sales Tax Table. The following fields should be entered:

- Name This is the tax table name.
- Type Either Percent % or Value \$.
- Value This is the percentage or value depending on Type.
- Account This is the account to which tax will be posted. For tax collected from customers, this should probably be a Liability account as it must be payed to the government. For tax paid to vendors, if tax laws allow tax paid to vendors to offset tax collected from customers, this should probably also be a Liability account (even though it will usually have a debit balance) so that the net tax owed to the government can be easily observed.

If you set up Tax on Purchases and Tax on Sales as subaccounts of Liabilities:Tax then the net tax will be rolled up and can be seen in the GnuCash Accounts tab.

If unsure about tax law requirements, get professional advice.

Company Registration

After you have built the account structure and defined your tax tables, register the GnuCash file as belonging to your company by filling in the data requested in the the section called “Business Book Options Tab” accessible from the File → Properties menu item.

Counters

Define the format and last used numbers of codes such as customer, invoice, vendor, bill, employee, expense voucher, job number and order. See the section called “Counters Book Options Tab”.

Business Preferences

Set options on the Business tab of the GnuCash preferences, which is accessed via Edit → Preferences (GnuCash → Preferences on MacOS). See the section called “Business”.

Billing Terms

Billing Terms can be used to determine the payment due date and be a guide for determining discount for early payment of invoices (or vendor bills).

Note

As of GnuCash 2.6.7, Billing terms are only partially supported. Date due is calculated but discount amount is not.

Discount for early invoice payment is not implemented. There are 2 ways this may be done, although neither is recommended, and professional advice should be used to confirm that regulations are being complied with:

- After creating and posting a payment which pays the invoice in full, manually edit the payment transaction (usually strongly discouraged) and split the payment to reduce it by the amount of the discount and a create a compensating split in an income (discount) account.
- Alternatively, after creating and posting a payment for the discounted amount, create a credit note for the discount using a specific negative sales income (discount) account for the transfer account.

You can specify the billing terms on each invoice/bill. Invoice billing terms will default from the customer billing terms. Bill billing terms will default from the vendor billing terms.

Billing Terms are maintained using the Billing Terms Editor which is accessed via menu Business → Billing Terms Editor. The following fields should be entered:

- Name The internal name of the billing term. For some examples of billing term names and descriptions see https://wiki.gnucash.org/wiki/Payment_Terms
- Description The description of the billing term, printed on invoices
- There are 2 types of billing terms, with different information to be entered
 - Type Days
 - Due Days The invoice or bill is due to be paid within this number of days after the post date
 - Discount Days The number of days after the post date during which a discount will be applied for early payment
 - Discount % The percentage discount applied for early payment
 - Type Proximo
 - Due Day The day of the month bills are due
 - Discount Day The last day of the month for the early payment discount
 - Discount % The discount percentage applied if paid early
 - Cutoff Day The cutoff day for applying bills to the next month. After the cutoff, bills are applied to the following month. Negative values count backwards from the end of the month.

Accounts Receivable

GnuCash has an integrated accounts receivable system.

To use GnuCash's integrated accounts receivable system, you must first set up *Accounts Receivable* accounts of type *A/Receivable* under *Assets* to accrue income you're owed. It is within this account that the integrated A/R system will place transactions, debiting it when you post bills and crediting it when you receive payments.

Basic A/R Account Hierarchy:

- Assets
 - Accounts Receivable
 - Checking
- Income
 - Sales
- Liabilities
 - Tax
 - Tax on Purchases
 - Tax on Sales

Note

You need to add additional asset, expense, and income accounts to this hierarchy for it to be useful. The important aspects of this hierarchy are the use of an income account and the *Accounts Receivable* asset account, with account type set to *A/Receivable*.

If you deal with customers in more than one currency you will need a separate *Accounts Receivable* account for each currency.

The transactions generated by the A/R system are recorded within the *Accounts Receivable* account. You generally do not work directly with this account. You generally work with the four integrated GnuCash A/R application components available through the Business → Customer sub-menu. These four components are:

the section called “Customers”	People or companies to whom you sell products or services on credit.
the section called “Invoices”	The physical invoice you send to a customer to request payment. This invoice contains an itemized list of things you sold.
the section called “Customer Jobs”	Is where you register Customer Jobs. Jobs are a mechanism by which you can group multiple invoices to a particular customer.
the section called “Process Payment”	Used to register payments you received from a customer.

The following sections introduce the individual components in more detail.

Customers

Customers are people or companies to whom you sell goods or services. They must be registered within the A/R system.

New

To register a new customer, enter the menu Business → Customer → New Customer. Fill in customer information, such as Company Name, Address, Phone, Fax, etc. Below is a list of the other options:

- Identification - Customer Number - can be any number by which you would like to refer to this customer. You may leave it blank and a number will be chosen automatically. See the section called “Counters Book Options Tab” for more info.
- Identification - Active - differentiates active customers from inactive ones. This is useful when you have many past customers, and you want to see only those marked active.
- Billing Address - Name - is the contact name of the person to receive the invoices.
- Notes - records any additional comments about the customer.

- **Billing Information - Currency** - specifies the billing currency for this customer. It will default to the default currency set in Preferences

Note

All invoices will be denominated in this currency and GnuCash will require an Accounts Receivable account in this currency.

- **Billing Information - Terms** - specifies the default billing terms for this customer. Billing terms must be preregistered using Business → Billing Terms Editor.
- **Billing Information - Discount** - gives the customer a default percentage based discount at the time of invoice creation. Enter a value from 0 to 100. You can override the default discount when you create an invoice.
- **Billing Information - Credit Limit** - stores the maximum credit you are willing to extend to the customer. This field is for your reference purposes only. GnuCash does not use the value.
- **Billing Information - Tax Included** - this specifies whether or not tax is included in invoice amounts by default. You can choose Yes, No, or Use Global.
 - Yes means that the tax is already included in amounts on invoices.
 - No means tax is not included.
 - Use Global means to use the setting made in the global preferences accessible through Edit → Preferences (Gnucash → Preferences on MacOS).
- **Billing Information - Tax Table** - specifies a default tax table to apply to invoice line items. Tax tables must be registered from the Business → Tax Table Editor menu item.
- **Shipping Address** - records the customer's shipping address if it is different from the billing address. The shipping address is for your reference. GnuCash does not use the value.

Find and Edit

To search for an existing customer, use the Business → Customer → Find Customer window. You select a customer to View/Edit from the results of the search. This window is also used to look up customers when creating invoices and processing payments.

If many customers match the search criteria you provide, the search can be refined by running an additional search within the current results. The current result set is searched when the Refine Current Search radio button is selected. In fact, GnuCash selects this option for you after you run the initial search.

If the customer you are searching for does not match the supplied search criteria, change the search criteria, click the New Search radio button and then the Find button. The relevant step is the New Search selection. If the customer is not in the result of the original search, and you only search within this set, the customer cannot be found, regardless of new search criteria.

Note

To return a list of all registered active customers, set the search criterion to matches regex, and place a single dot "." in the text field area. Make sure Search only active data is checked, then click Find. The regular expression "." means to match anything.

Invoices

An invoice is the paperwork you send to a customer to request payment for products or services rendered. GnuCash can generate and track invoices.

A credit note is the paperwork you send to a customer to correct products or services rendered that were incorrectly invoiced. GnuCash can generate and track credit notes via the same menu entries as invoices.

Note

This section applies to both invoices and credit notes. In order to avoid repeating everything twice and to keep the text easier to read it will refer only to invoices. You can apply it equally to credit notes. Only where the behaviour of credit notes differs from invoices this will be explicitly mentioned. Credit notes were introduced starting with GnuCash stable release 2.6.0.

New

To send an invoice to a customer you must first create a new invoice. To create an invoice use Business → Customer → New Invoice. The New Invoice window must be filled in appropriately:

- Invoice Information - Type - the type of customer document to create - either an invoice or a credit note.
- Invoice Information - Invoice ID - the identification number of this invoice. This is your internal number for this invoice. If you leave it blank, an invoice number will be generated automatically. See the section called “Counters Book Options Tab” for more info
- Invoice Information - Date Opened - the date this invoice was created.
- Billing Information - Customer - the customer who is to receive this invoice. If you remember the *company name* you entered in the New Customer window for this customer, start to type it in this field and GnuCash will try auto complete it for you. Else, press the Select... button to access the Find Customer window described in the section called “Find and Edit”. Highlight the customer you are looking for with a click in the search results, then press the Select button.
- Billing Information - Job (optional) - associates the new invoice with a customer job (see the section called “Customer Jobs”). If you remember the *job name* you entered in the New Job window for this job, start to type it in this field and GnuCash will try auto complete it for you. Else, press the Select... button to access the Find Job window. This window is the same to the one described in the section called “Find and Edit”. Highlight the job you are looking for with a click in the search results, then press the Select button.
- Billing Information - Billing ID - this is the customer’s PO Number or other “customer reference number”. You should use it to identify your invoices to this customer (and job, if you have one).
- Billing Information - Terms - the payback terms agreement for this invoice. A list of registered terms is available within the pop up menu. If you specified a default value for the selected customer, this field is initialized with the default.

When you click the OK button, the Edit Invoice window opens.

Edit

From the Edit Invoice window you can enter an itemized list of goods and services you sold on this invoice in a manner similar to how the account register works. For credit notes you enter an itemized list of goods and services you refunded instead.

There are 15 columns in the Invoice Entries area:

- Date - The date this item was sold.
- Invoiced? - X means the item is attached to this invoice, an empty box means the item is not attached to this invoice. The item is attached for you when you proceed to the next line item.
- Description (optional) - is what the item or service is called.
- Action (optional) - is a user defined field. You can place Cost Center information here, or use one of the 3 predefined actions, Hours, Material, or Project.
- Income Account - selects which income account is credited with this income.
- Quantity - tracks how many of the items you sold.
- Unit Price - is the unit price of the item.
- Discount Type - is the type of discount:
 - \$ means Discount is a monetary value
 - % means Discount is a percentage.

You can click the field to toggle between the discount types.

- Discount How - the discount can be computed as follows:
 - > means the discount applies after tax.
 - < means the discount applies before tax.
 - = means both discount and tax are applied to the pretax value.

You can click the field to change the setting.

- Discount (optional) - is the total discount, in monetary units or percentage, depending on Discount Type. You can leave it blank for no discount. Any default discount you specified for the customer will be automatically entered for each new item.
- Taxable? - is this item taxable? X means yes, a blank field means no. You can click the field to toggle the setting.
- Tax Included? - has the tax already been included in the unit price? X means yes, a blank field means no. For example, if there is 1 item of \$100 with a tax of 5% then:
 - If Tax Included is empty, then subtotal = \$100 and tax = \$5.
 - If Tax included is set (X), then subtotal = \$95.23 and tax = \$4.77. The computation is: Subtotal = Total / (1+taxrate) and Tax = Total - Subtotal = Total - (Total / (1+taxrate)).
- Tax Table (optional) - this is a pop up menu of all the available tax tables. If you make the item taxable, then this table is used to compute the amount of tax. The tax table determines tax percentages and the accounts to which tax is charged.
- Subtotal (uneditable) - is the computed subtotal for this item (less tax).
- Tax (uneditable) - is the computed tax for this item.

When you have finished entering all the items, you can Post and print the invoice.

Post

When you finish editing an invoice and are ready to print, you must Post the invoice. The invoice does not have to be posted immediately. In fact, you should only post an invoice when you are ready to print it. Posting an invoice places the transactions in an accounts receivable account.

The Post Invoice window appears and asks you to enter the following information:

- **Post Date** - specifies the date for the transactions entered into the accounts receivable account. By default this is the invoice's Date Opened (see the section called "New" for information about that date).
- **Due Date** - is the date on which payment for the invoice is expected.
 - If you specified payment terms when you created the invoice, the date is calculated according to selected terms, and the entry field is insensitive.
 - If you did not specify payment terms, enter the expected payment due date here.
- **Description** - is an arbitrary description. When invoice transactions are placed in the accounts receivable account, this description is entered in the memo field of those transactions.
- **Post To Account** - selects the accounts receivable account in which invoice transactions are posted. You can select the account from a list of existing A/Receivable accounts.
- **Accumulate Splits** - determines if invoice items which transfer to the same account are combined into a single split for that account or entered individually. For the sample invoice which sold Nails and a Hammer, the setting affects post results as follows:
 - **Checked** (splits are accumulated) - a single transfer of \$575.00 from the *Income:Sales* account is recorded.
 - **Not checked** - the transaction created in the A/Receivable account, shows two transfers from *Income:Sales* account \$100.00 and \$475.00. The memo fields in the splits indicate the sale of Nails and the Hammer (the item descriptions entered on the invoice) respectively.

Find

To find an existing invoice, use the Business → Customer → Find Invoice menu item. From the results of the search, you can select an invoice to edit or view.

Note

Before you can edit a posted invoice, you will need to Unpost it.

One of the design goals in GnuCash's Account Receivable system was to allow different processes to get to the same state, so you can reach an invoice from different directions based on the way you think about the problem:

- You can search for the customer first, then list their invoices.
- You can search for invoices by number or by company name.
- You can list invoices associated with a customer job.

Print

After you post an invoice, you should print it and send it to your customer. To print an invoice use File → Print Invoice menu item.

Tip

You can modify the appearance of the invoice, IE: add a company logo, etc. To do so, see the the section called “Changing the Invoice Appearance”.

Invoices can also be printed from the main window by selecting Reports → Business Reports → Printable Invoice from the main menu. The resulting report window states that no valid invoice is selected. To select the invoice to print:

1. Use the Options *Toolbar* button or select Edit → Report Options from the main menu.
2. Select the General tab of the report options dialog.
3. Click the Select button next to the Invoice Number field.
4. Search for the invoice as usual.

You can also print invoices from within the Process Payment dialog. See the the section called “Process Payment” for instructions on how to do so.

Assign Starting Invoice Number

By default, GnuCash starts with invoice number 1 and increments from there. You can manually type an invoice number into the text box each time you create an invoice, but this gets tiring and sooner or later leads to duplicate numbers.

You can change the starting invoice number if it is important you. Use File → Properties, access the Counters tab, change the Invoice number value to be one less than your desired starting invoice number and click the OK button or the Apply button.

Customer Jobs

Customer Jobs are used to group multiple invoices and credit notes to the same customer. Use of the Customer Jobs feature is optional. The feature is useful when you have multiple jobs for the same customer, and would like to view all the invoices and credit notes related to a single job.

To use customer jobs, you must create them using the Business → Customer → New Job menu item. You will see the New Job window. The editable fields are:

- Job Info - Job Number (optional) - enter the number for this job. If left blank, a number will be chosen for you. See the section called “Counters Book Options Tab” for more info.
- Job Info - Job Name - the name you want to assign to the new job.
- Owner Info - Customer - the customer for whom the job is created. If you remember the *company name* you entered in the New Customer window for this customer, start to type it in this field and GnuCash will try auto complete it for you. Else, press the Select... button to access the Find Customer window

described in the section called “Find and Edit”. Highlight the customer you are looking for with a click in the search results, then press the Select button.

- Owner Info - Billing ID - the customer’s reference to this job (e.g. their PO Number). This is the "Billing Identification" that they require to correlated your invoices with their order. The Billing ID you enter is used to set the billing id for new invoices associated with this job.
- Job Active - toggles this job being active or not. This is useful when you have many inactive jobs, since it is easier to search only among jobs that are marked active.

To edit an existing customer job, use the Business → Customer → Find Job menu item. Select the desired job in the search results, and click the View/Edit Job button.

To select from the invoices and credit notes associated with a given job, use Business → Customer → Find Job menu item. Select the desired job in the search results and click the View Invoices button. A window listing invoices and credit notes associated with this job appears. Select an invoice or credit note and click the View Invoice button to open an invoice editor in the main application window.

Process Payment

Eventually, you will receive payment from your customers for outstanding invoices. To register these payments, use the Process Payment application found in Business → Customer → Process Payment.

Tip

There is an alternative way of assigning a payment to (one or more) invoices where the payment transaction already exists, say in the case where transactions have been imported from a bank. There is no way to assign a payment to an invoice during the import process, so this must be done after transactions have been imported.

This can best be done starting from the asset account register holding the imported payment transaction (like your bank account). In that account, select the payment, right-click (control-click for Mac OS X) and choose Assign as payment.... The payment window will pop-up, partly filled in with the information from the transaction. Fill in the missing information like the proper customer and invoice to complete the payment.

One caveat: the logic behind Assign as payment... won't properly detect credit note reimbursements and will wrongfully interpret such a transaction as a vendor bill.

The Process Payment application consists of:

- Payment Information - Customer - the customer who paid you. If you remember the *company name* you entered in the New Customer window for this customer, start to type it in this field and GnuCash will try auto complete it for you. Else, press the Select... button to access the Find Customer window described in the section called “Find and Edit”. Highlight the customer you are looking for with a click in the search results, then press the Select button.
- Payment Information - Invoice - the invoice for which payment was received. If you remember the *invoice ID*, start to type it in this field and GnuCash will try auto complete it for you. Else, press the Select... button to access the Find Invoice window described in the section called “Find”. Highlight the invoice you are looking for with a click in the search results, then press the Select button.
- Payment Information - Date - the date you you received payment.
- Payment Information - Amount - the amount of money received.

- Payment Information - Num - the check number.
- Payment Information - Memo - any comments about this payment.
- Post To - the A/Receivable account to which to post this transaction.
- Transfer Account - the account where the money will be deposited (a checking account for example).

Over Payments or Pre-Payments

If a customer overpays an invoice or pays for goods or services before they have been invoiced, Process Payment for the total amount received. GnuCash will then keep track of the over-payment (or pre-payment) in the A/R account and you can use the residual when paying the next invoice.

Partial Payments

Partial payments are possible too. Select the invoice to pay. GnuCash will automatically suggest that invoice's remaining balance as payment amount. Simply adjust that amount to what you want to pay.

Writing Off a Bad Debt

Note

Please check with your accountant to ensure the following is acceptable in your region.

The usual way to do this is to process a payment for the invoice to a *BadDebt* account. Such an account would be an expense account. However, in GnuCash, you can't process a payment for an invoice directly to an expense account, so it takes two steps:

- Pay the invoice to an asset or liability account, such as your checking account.
- Change the asset or liability account, in the *non* Accounts Receivable split of the payment transaction, to the *BadDebt* expense account.

Specifically

- Remove all transactions from the A/R account related to the invoice, except for the invoice's transaction itself. This includes any payment transactions, and transactions between your *BadDebt* and A/R account.

In case the payment has associated lot link transactions (1), remove those as well.

If all is well, your Process Payment window for this customer should list the invoice the customer won't pay, and no prepayments.

- Pay your invoice to an arbitrary asset or liability account. It can be your checking account. We will fix that in the next step.
- Open the account register for your A/R account. For this invoice there should now be one payment transaction. If you are using GnuCash 2.6.0 - 2.6.4 there will also be one lot link transaction (1).
- Select the payment transaction and change the transfer account to your *BadDebt* account. Make sure to leave the transaction (eg by clicking on another transaction) to save the changes.

If all is well, your Process Payment window should still be clean: no pre-payments, and the bad debt invoice gone.

Note

(1): GnuCash versions 2.6.0 to 2.6.4 created lot link transactions which show in the A/R account register. This came with its own set of subtle issues. It is recommended to upgrade to the latest (or at least 2.6.6) version, which fixes a lot of small problems. Version 2.6.5 had a flaw in the logic cleaning up the lot links. Once upgraded, please run Actions → Check & Repair on your A/R and A/P accounts to clean up most of the lot link legacy. Don't forget to make a backup first just in case.

Lots are used internally for relating payments to invoices. Lots themselves are invisible in the account registers. To see them you need to open the lot viewer, which can be found in Actions → View lots while in any A/R or A/P account register. Select a lot to see the *Splits in lot*.

Lot links are *transactions* which you can see in your A/R and A/P accounts. They are unusual in the sense that all their splits are in one account (A/R or A/P). Each split in a lot link transaction is *linked* (hence the name) to an invoice or payment transaction by means of a lot.

See https://wiki.gnucash.org/wiki/Business_Features_Issues for more information.

Changing the Invoice Appearance

The default Invoice style, as shown in the section called “Print”, is fairly barren. The default invoice style leaves the top part of the form blank, so you can print on company letterhead paper. There are some things you can do to change invoice appearance.

Use File → Properties to enter your Company information in the Business tab of the Book Options window. Some of the entered information is printed on the right side of invoices.

To add a customized background, heading banner or logo to invoices, modify the invoice style sheets. To do this, go to Edit → Style Sheets and select the New button in the Select HTML Style Sheet window that will appear.

Give a Name to the new style sheet (e.g. Custom Invoice) and select the Fancy Template. When you click the OK button, the HTML Style Sheet Properties window is displayed. This window presents you five sections listed in the left pane: Colors, Fonts, General, Images, and Tables. The Colors section allows you to change the colors of various items of the invoice. The Fonts section lets you set font type and dimensions. The General section allows you to set the Preparer and Prepared for information, and to Enable Links. The Images section allows you to import graphics into the style sheet. The Tables section allows you to adjust the spacing around the tables which make up the invoice.

To include a company logo, banner heading and background image, use your favorite graphics application such as The Gimp or OpenOffice Draw to save the images in either GIF or PNG format. Then import them into the style sheet using the Images section described above.

Note

The images are placed in the invoice as follows. The Background Tile is tiled to become the background image, the Heading Banner goes above the invoice text, and the Logo is placed in the upper left corner of the invoice to the left of the Heading Banner. You will probably have to try a few different sized images until you get the invoices to print nicely. Some sizing suggestions are that the Logo should be 1 square cm (~0.5 inch), and the Heading Banner should be 15 cm (~6 inches) wide and 1 cm (~0.5 inch) tall.

With the style sheet configured, when you print the invoice, you select the style sheet to use from the Options menu.

Accounts Payable

GnuCash has an integrated accounts payable system. As with *Accounts Receivable* you must have an *Accounts Payable* account set up under *Liabilities* for each currency in which you will issue invoices. The *Accounts Payable* accounts accrue the amounts you owe to others, so bills credit these accounts and payments and credit memos debit these accounts. Generally you do not directly work with this account but use the four integrated GnuCash A/P application components. The A/P components are available from the Business → Vendor sub-menu.

These A/P components are:

- Vendors are people or companies from which you buy products or services on credit.
- Bills represent the physical bills vendors send to request payment from you. A bill contains an itemized list of things you purchased.
- Jobs (optional) is where you register Vendor Jobs. Jobs are a mechanism by which you can group multiple bills from a particular vendor.
- Process Payments is where you register payments to a vendor to whom you owe money.

The following sections introduce the individual Accounts Payable application components.

Vendors

A vendor is a company or person from whom you purchase goods or services. Vendors must be registered within the A/P system.

New

To register a new vendor, select the Business → Vendor → New Vendor menu item. Fill in general information about the vendor, such as Company Name, Address, Phone, Fax, etc. Below is a list of the other options:

- Identification - Vendor Number - can be any number by which you would like to refer to this vendor. You may leave it blank and a number will be chosen automatically. See the section called “Counters Book Options Tab” for more info
- Identification - Active - differentiates active vendors from inactive ones. This is useful when you have many past vendors, and you want to see only those marked active.
- Payment Address - Name - is the contact name of the person to receive payments you make.
- Notes - records any additional comments about the vendor. Use it to track names of contact people within the vendor’s company, for example.
- Payment Information - Currency - specifies the payment currency for this vendor. It will default to the default currency set in Preferences

Note

All Bills and Credit Notes will be denominated in this currency and GnuCash will require an Accounts Payable account in this currency.

- Payment Information - Terms - specifies the default payment terms for this vendor. Payment terms must be preregistered using Business → Billing Terms.

- Payment Information - Tax Included - specifies if tax is included in bills from this vendor. You can choose Yes, No, or Use Global.
 - Yes means that tax is already included in amounts on bills.
 - No means tax is not included.
 - Use Global means to use the setting made in the global preferences accessible through Edit → Preferences (Gnucash → Preferences on MacOS).
- Payment Information - Tax Table - specifies a default tax table to apply to bills from this vendor. Tax tables must be registered using the Business → Tax Table menu item.

Find and Edit

To search for an existing vendor, use the Business → Vendor → Find Vendor window. You select a vendor to View/Edit from the results of the search. This window is also used to look up a vendor when entering bills and processing payments.

If many vendors match the search criteria you provide, the search can be refined by running an additional search within the current results. The current result set is searched when the Refine Current Search radio button is selected. In fact, GnuCash selects this option for you after you run the initial search.

If the vendor you are searching for does not match the supplied search criteria, change the search criteria, click the New Search radio button and then the Find button. The relevant step is the New Search selection. If the vendor is not in the result of the original search, and you only search within this set, the vendor cannot be found, regardless of new search criteria.

Tip

To return a list of all registered active vendors, set the search criterion to matches regex, and place a single dot “.” in the text field area. Make sure Search only active data is checked, then click Find. The regular expression “.” means to match anything.

Bills

A bill is a request for payment you receive from a vendor. GnuCash can track bills.

A credit note is the document you receive from a vendor to correct products or services rendered that you were incorrectly charged for on a bill. GnuCash can generate and track credit notes via the same menu entries as bills.

Note

This section applies to both bills and credit notes. In order to avoid repeating everything twice and to keep the text easier to read it will refer only to bills. You can apply it equally to credit notes. Only where the behaviour of credit notes differs from bills this will be explicitly mentioned.

New

When you receive a bill from a vendor and want to enter it into GnuCash, you must create a new bill. To create a new bill use the Business → Vendor → New Bill menu item, and fill in the resulting window appropriately.

- Invoice Information - Type - the type of vendor document to create - either a bill or a credit note.
- Invoice Info - Invoice ID (optional) - the identification number of the invoice as emitted by the vendor (IE: the vendor's internal number for this invoice).
- Invoice Info - Date Opened - the date the Invoice was emitted by the vendor.
- Billing Info - Vendor - the issuing vendor. If you remember the *company name* you entered in the New Vendor window for this vendor, start to type it in this field and GnuCash will try auto complete it for you. Else, press the Select... button to access the Find Vendor window described in the section called "Find and Edit". Highlight the vendor you are looking for with a click in the search results, then press the Select button.
- Billing Info - Job (optional) - associates a vendor job (see the section called "Vendor Jobs") with this bill. If you remember the *job name* you entered in the New Job window for this job, start to type it in this field and GnuCash will try auto complete it for you. Else, press the Select... button to access the Find Job window. This window is very similar to the one described in the section called "Find and Edit". Highlight the job you are looking for with a click in the search results, then press the Select button.
- Billing Info - Billing ID (optional) - the vendor's ID for the bill (e.g.: their invoice #).
- Billing Info - Terms - the pay back terms agreement for this bill. A list of registered terms is available within the pop up menu. If you specified a default value for the selected vendor, this field is initialized with the default.
- Chargeback Project - Customer (optional) - the customer to associate with this bill. This is used to charge your customer later.
- Chargeback Project - Job (optional) - the customer job to associate with this bill.

When you click the OK the Edit Bill window opens.

Edit

From the Edit Bill window you can enter an itemized list of goods and services you purchased, in a manner similar to how the account register works. For credit notes you enter an itemized list of goods and services the vendor refunded instead.

There are 12 columns in the Invoice Entries area:

- Date - The date this item was sold.
- Invoiced? - X means the item is attached to this invoice, an empty box means the item is not attached to this invoice. If the box is empty you can attach the item to the invoice by first selecting the item row and then clicking in this box.
- Description (optional) - is what the item or service is called.
- Action (optional) - is a user defined field. You can place Cost Center information here, or use one of the 3 predefined actions, Hours, Material, or Project.
- Expense Account - selects the expense account to charge for this item.
- Quantity - tracks how many of the items you bought.
- Unit Price - is the unit price of the item.

- Taxable? - is this item taxable? X means yes, a blank field means no. You can click the field to toggle the setting.
- Tax Included? - has the tax already been included in the unit price? X means yes, a blank field means no.
- Tax Table (optional) - this is a pop up menu of all the available tax tables. If the item is taxable and tax has not been included in the unit price, then this tax table is used to compute the amount of tax.
- Subtotal (uneditable) - computed subtotal for this item (less tax)
- Billable - is this item billable to the chargeback customer/job?

When you have finished entering all the items, Post the bill.

Post

When you finish editing a bill, you should Post the bill. You do not have to post the bill, you can close it and return to it later. You have to post the bill eventually. Posting a bill places its transactions into an accounts payable account. The Post Bill window appears and asks you to enter information:

- Post Date - specifies the date for the transactions entered into the accounts payable account.
- Due Date - is the date on which payment for the bill is expected.
 - If you specified payment terms when you created the bill, the date is calculated according to selected terms, and the entry field is insensitive.
 - If you did not specify payment terms, enter the expected payment due date here.
- Description - is an arbitrary description. When bill transactions are placed in the accounts payable account, this description is entered in the memo field of those transactions.
- Post To Account - selects the accounts payable account in which bill transactions are posted. You can select the account from a list of existing A/Payable accounts.
- Accumulate Splits - determines if bill items which transfer to the same account are combined into a single split for that account or entered individually. For the sample bill for Letterhead and Envelopes, the setting affects post results as follows:
 - Checked (splits are accumulated) - a single transfer of \$100.00 to the *Expenses:Office Supplies* account is recorded.
 - Not checked - the transaction created in the A/Payable account, shows two transfers to *Expenses:Office Supplies* account \$75.00 and \$25.00. The memo fields in the splits indicate the purchase of Letterhead and Envelopes (the item descriptions entered on the bill) respectively.

Find

To find an existing bill, use the Business → Vendor → Find Bill menu item. From the results of the search, you can select a bill to edit, or view.

Note

Before you can edit a posted bill, you will need to Unpost it.

Note

There are other ways to access an existing bill. These are similar to accessing invoices for your customers. See the section called “Find” for more information.

Vendor Jobs

Vendor Jobs are used to group multiple bills and credit notes from a single vendor. Use of the vendor jobs feature is optional. The feature is useful when you have multiple jobs for the same vendor, and would like to view all the bills and credit notes for a single job.

To use vendor jobs, you must create them using the Business → Vendor → New Job menu item. You will see the New Job window. The editable fields are:

- Job Info - Job Number (optional) - enter the number for this job. If left blank, a number will be chosen for you.
- Job Info - Job Name - the name you want to assign to the new job.
- Owner Info - Vendor - the vendor for whom the job is created.
- Owner Info - Billing ID - the vendor’s reference to this job (e.g. their PO Number).
- Job Active - toggles this job being active or not. This is useful when you have many inactive jobs, since it is easier to search only among jobs that are marked active.

To edit an existing vendor job, use the Business → Vendor → Find Job menu item. Select the desired job in the search results, and click the View/Edit Job button.

To select from the bills and credit notes associated with a given job, use the Business → Vendor → Find Job menu item. Select the desired job in the search results and click the View Invoices button. A window listing bills and credit notes associated with this job appears. Select a bill or credit note and click the View Invoice button to open a bill editor in the main application window.

Process Payment

Eventually, you need to pay your bills. To do so, use the Process Payment application found in Business → Vendor → Process Payment.

Tip

There is an alternative way of assigning a payment to (one or more) bills where the payment transaction already exists, say in the case where transactions are imported from a bank.

This can best be done starting from the asset account register holding the imported payment transaction (like your bank account). In that account, select the payment, right-click (control-click for Mac OS X) and choose Assign as payment.... The payment window will pop-up, partly filled in with the information from the transaction. Fill in the missing information like the proper vendor and bill to complete the payment.

One caveat: the logic behind Assign as payment... won't properly detect credit note reimbursements and will wrongfully interpret such a transaction as a customer invoice.

The Process Payment application consists of:

- Payment Information - Vendor - the vendor you wish to pay. If you remember the *company name* you entered in the New Vendor window for this vendor, start to type it in this field and GnuCash will try auto complete it for you. Else, press the Select... button to access the Find Vendor window described in the section called “Find and Edit”. Highlight the vendor you are looking for with a click in the search results, then press the Select button.
- Payment Information - Bill - the bill you wish to pay. If you remember the *bill ID*, start to type it in this field and GnuCash will try auto complete it for you. Else, press the Select... button to access the Find Bill window described in the section called “Find”. Highlight the bill you are looking for with a click in the search results, then press the Select button in the search window.
- Payment Information - Date - the date you wish to make the payment, normally the current date.
- Payment Information - Amount - the amount of money to transfer in this payment.
- Payment Information - Num - the check number.
- Payment Information - Memo - any comments about this payment.
- Post To - the A/Payable account to post this transaction.
- Transfer Account - the account from which money for the payments comes from, such as a checking account.

Over Payments or Pre-Payments

If you wish to overpay an invoice or pay for goods or services before they have been invoiced, Process Payment for the total amount paid. GnuCash will then keep track of the over-payment (or pre-payment) in the A/P account and you can use the residual in the future.

Partial Payments

You may wish to partially pay a bill. Select the bill to pay. GnuCash will automatically suggest that bill's remaining balance as payment amount. Simply adjust that amount to what you want to pay.

Employees

GnuCash can help your company by tracking employees. You can register a the section called “New Employee”, the section called “Find and Edit” existing employees, create the section called “New Expense Voucher/Credit Note” and the section called “Find and Edit Expense Voucher/Credit Note”.

Expense vouchers are used to reimburse employees for authorized expenses (f.e. travel, parking, food etc...). Employee credit notes are the opposite of expense vouchers.

New Employee

To register a new employee, select the Business → Employee → New Employee menu item. The New Employee window will open with two tabs:

- Employee tab
- Access Control tab

Employee tab

- Identification - Employee Number - can be any number by which you would like to refer to this employee. You may leave it blank and a number will be chosen automatically. See the section called “Counters Book Options Tab” for more info.
- Identification - Username (Mandatory) - a unique username to identify the employee.
- Identification - Active (Optional) - differentiates active employees from inactive ones. This is useful when you have many past employees, and you want to see only those marked Active.
- Payment Address - Name (Mandatory) - the full name of the employee.
- Payment Address - Address (Mandatory) - the address of the employee.
- Payment Address - Phone, Fax, Email (Optional)- other optional contact information for the employee.
- Interface - Language (Optional) -
- Payment Information - Terms (Optional) - specifies the default payment terms for this employee. Payment terms must be preregistered using Business → Billing Terms.
- Billing - Default Hours per Day (Optional) -
- Billing - Default Rate (Optional) -
- Billing - Currency - specifies the billing currency for this employee. It will default to the default currency set in Preferences

Note

All expense vouchers and credit notes for this employee will be denominated in this currency and GnuCash will require an Accounts Payable account in this currency.

- Billing - Credit Account (Optional) -

Access Control tab

- Access Control List

Find and Edit

To search for an existing employee, use the Business → Employee → Find Employee... menu. You select an employee to View/Edit from the results of the search. This window is also used to look up an employee when entering voucher and processing payments.

If many employees match the search criteria you provide, the search can be refined by running an additional search within the current results. The current result set is searched when the Refine Current Search radio button is selected. In fact, GnuCash selects this option for you after you run the initial search.

Note

If the employee you are searching for does not match the supplied search criteria, change the search criteria, click the New Search radio button and then the Find button. The relevant step is the New Search selection. If the employee is not in the result of the original search, and you only search within this set, the employee cannot be found, regardless of new search criteria.

Tip

To return a list of all registered active employees, set the search criterion to matches regex, and place a single dot “.” in the text field area. Make sure Search only active data is checked, then click Find. The regular expression “.” means to match anything.

New Expense Voucher/Credit Note

To register a new expense voucher/ Credit Note, select the Business → Employee → New Expense Voucher... menu item. The New Expense Voucher window will open. You can enter the following data:

- Voucher information - Type (Optional) - select if you are entering a Voucher or a credit note.
- Voucher information - Voucher ID (Optional) - can be any number by which you would like to refer to this voucher. You may leave it blank and a number will be chosen automatically. See the section called “Counters Book Options Tab” for more info.
- Voucher information - Date opened - the date of the voucher. Click on the button on the right of the date to open a calendar.
- Billing information - Employee (Mandatory) - the employee to which the voucher refers.

Tip

The field supports auto-completion so if you start typing GnuCash will try to complete the text automatically using existing employees name. You can also press the button Select... to open the Find Employee window.

- Billing information - Billing ID (Optional) - the identification number of the document (f.e. the bill number for a dinner).
- Billing information - Terms (Optional) - the pay back terms agreement for this bill. A list of registered terms is available within the pop up menu.
- Default chargeback project - Customer (Optional) - the Customer to which the voucher refers.

Tip

The field supports auto-completion so if you start typing GnuCash will try to complete the text automatically using an existing Customer name. You can also press the button Select... to open the Find Customer window.

- Default chargeback project - Job (Optional) - the Customer Job to which the voucher refers.

Note

you can type in this field only if there are one or more jobs registered in GnuCash belonging to the selected Customer.

Tip

The field supports auto-completion so if you start typing GnuCash will try to complete the text automatically using an existing Customer name. You can also press the button Select... to open the Find Customer window.

- Notes - records any additional comments about the voucher/credit note.

Find and Edit Expense Voucher/Credit Note

To search for an existing Expense Voucher, use the Business → Employee → Find Expense Voucher... menu item. You select an Expense Voucher to View/Edit from the results of the search. This window is also used to look up an expense voucher when entering vouchers and processing payments.

If many expense vouchers match the search criteria you provide, the search can be refined by running an additional search within the current results. The current result set is searched when the Refine Current Search radio button is selected. In fact, GnuCash selects this option for you after you run the initial search.

Note

If the expense voucher you are searching for does not match the supplied search criteria, change the search criteria, click the New Search radio button and then the Find button. The relevant step is the New Search selection. If the expense voucher is not in the result of the original search, and you only search within this set, the voucher cannot be found, regardless of new search criteria.

Tip

To return a list of all expense vouchers, set the search criterion to matches regex, and place a single dot “.” in the text field area. Make sure Search only active data is checked, then click Find. The regular expression “.” means to match anything.

Chapter 8. Tools & Assistants

There are many specialized Tools used in GnuCash. These tools enable access to the enhanced functionality in GnuCash. These tools are accessed via the Tools option from any window that displays a Tools menu. Several of these tools may not be displayed depending on if your software was not configured to support Online banking, or the tools appropriate for the current window.

Find

The GnuCash *Find* assistant can be used to find transactions or to perform business related research on your data file.

Find Transaction

Find Transaction is used to search for transactions in GnuCash and display the results in a register window. To open the Find Transaction dialog in Split Search mode, you can type the keyboard shortcut **Ctrl+f**.

Exactly which transactions are searched depends on where you invoke the tool from. If you start from the main accounts hierarchy page, all transactions will be searched. If you start from an individual account register, only transactions in that account will be searched. And if you filter the transactions in a register using View → Filter By... , then only transactions in that account and shown by the filter will be searched.

Note

The first row of the Find Transaction dialog indicates that you are performing a Split Search.

There are two panes in the Find Transaction dialog. The top pane contains the Search Criteria buttons and the bottom pane contains the Type of Search selection.

There are two buttons in the top of the Search Criteria pane. The left button allows you to Add another criteria row to search for multiple criteria. The existing criteria row needs to be completed before adding a new row. The right button is used to Search for items where all criteria are met or Search for items where any criteria are met. The all criteria are met search requires all of the criteria rows to have at least one match. The any criteria are met search requires only one of the criteria rows to be matched.

The criteria row in the Search Criteria pane is used to combine different criteria buttons (see table Table 8.1, “Search criteria buttons - Split Search” for a comprehensive list of combinations)

In the Type of Search pane there are five selections. The first option is always enabled, the following three are available when you invoke the Find... option from a register window or after performing the first Find if the Find... command was invoked from any other window. The last option is available only for Business search.

New Search	Perform a new transaction search
Refine current search	Search within the results of the previous search
Add results to current search	Search based on the first set of criteria or the new criteria
Delete results from current search	Discard any results that match the previous search results

Search only active data

Search only if data are marked as active. This selector is greyed out for the Split Search as it is meaningful only for business related search

Note

When selecting search criteria keep in mind that criteria are applied to individual splits or fields in transactions, and that the entire transaction is included in the results. There is no visual indication in the results to indicate which split or field met the search criteria.

When search criteria are selected, you can press the Find button. You will be presented with the search results in a new register tab. A report of the search results may be created and printed using Reports → Account Report. The Account Report has limited formatting options but, like all GnuCash reports, being in html format, can be copied and pasted into a spreadsheet for further formatting. Alternatively, the Account Report can be exported to an html file, and the html file may be opened in a spreadsheet.

Note

Press the Close button to close the Find Transaction dialog.

Table 8.1. Search criteria buttons - Split Search

Button 1	Button 2	Button 3	Button 4	Button 5	Button 6	Button 7	Button 8
Description ^a	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			
	matches regex ^b						
	does not match regex ^b						
Memo ^a	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			
	matches regex ^b						
	does not match regex ^b						
Number ^a	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			
	matches regex ^b						
	does not match regex ^b						
Action	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			
	matches regex ^b						
	does not match regex ^b						
Notes	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			

Button 1	Button 2	Button 3	Button 4	Button 5	Button 6	Button 7	Button 8
	matches regex ^b						
	does not match regex ^b						
Date Posted	is before	Date selection field	Remove row				
	is before or on						
	is on						
	is not on						
	is after						
	is on or after						
Value	has credits or debits	less than	Amount entry field	Remove row			
		less than or equal to					
		equal to					
		not equal to					
		greater than					
		greater than or equal to					
	has credits	less than					
		less than or equal to					
		equal to					
		not equal to					
		greater than					
		greater than or equal to					
	has debits	less than					
		less than or equal to					
		equal to					
		not equal to					
		greater than					
		greater than or equal to					
Shares	is less than	Amount entry field	Remove row				
	is less than or equal to						
	equals						

Button 1	Button 2	Button 3	Button 4	Button 5	Button 6	Button 7	Button 8
	does not equal to						
	is greater than						
	is greater than or equal to						
Share Price	is less than	Amount entry field	Remove row				
	is less than or equal to						
	equals						
	is not equal to						
	is greater than						
	is greater than or equal to						
Reconcile ^c	is	Not Cleared	Cleared	Reconciled	Frozen	Voided	Remove row
	is not						
Balanced	is	set true	Remove row				
	is not						
Account ^d	matches any account	Choose Accounts	Remove row				
	matches no accounts						
All Accounts ^e	matches all accounts	Choose Accounts	Remove row				

^aThe Description, Memo, Number are common to all lines in a transaction.

^b*regex* means regular expression text search as used in various computer programs such as Perl

^cThe Reconcile option applies the selected criteria to each line of a transaction individually. Each transaction line may have only one of the indicated values, but there is often a mix of values within a complete transaction, so companion lines may not meet the selected criteria. See separate note defining status values. For a detailed description of transaction statuses see the section called "Setting the reconcile status (R field) of a transaction"

^dThe Account option performs a search where the accounts selected in the Choose Accounts dialog will both be searched individually for results. This means that a match in any of the selected accounts will either be displayed (matches any account) or discarded (matches no account).

^eThe All Accounts option performs a search where accounts selected in the Choose Accounts dialog will only return results that match in both accounts.

Explanations of the Criteria

The Reconcile criterion deserves some more explanation. Think of the selected reconciliation status buttons (Not Cleared, Cleared, and so on) as a single group, joined with a logical "or". In other words, the selection "is" or "is not" applies to the "or" of the selected status buttons. The buttons which are left unselected are simply ignored. (It's not the same as saying the reconciliation status *must not* be one of these.)

For example: if you select Reconcile is Cleared Reconciled, that means you're saying "I want all transactions which contain cleared splits OR reconciled splits" (imagine an invisible "OR" between all the selected status buttons). It's the same as selecting Reconcile is Cleared, then adding another search criterion with the Add button, then on the new line selecting Reconcile is Reconciled, and finally selecting Search for items where any criteria are met. In either case, GnuCash will show you exactly the same set of transactions.

Find Customer, Invoice, Job, Vendor, Bill, Employee, Expense Voucher

The business find assistant is used to search for business related items (Customer, Invoice, Job, Vendor, Bill, Employee, Expense Voucher). To open the business search dialog select the desired item to Find from the Business → Customer/Vendor/Employee submenus.

Tip

The titlebar and the first row of the assistant dialog reports the item type you are searching for: Customer, Invoice, Job, Vendor, Bill, Employee, Expense Voucher.

There are two panes in the Find dialog. The top pane contains the Search Criteria buttons and the bottom pane contains the Type of Search selection.

Search Criteria section

There are two buttons in the top of the Search Criteria pane. The left button allows you to Add another criteria row to search for multiple criteria.

Note

The existing criteria row needs to be completed before adding a new row.

The right button is used to Search for items where all criteria are met or Search for items where any criteria are met. The all criteria are met search requires all of the criteria rows to have at least one match. The any criteria are met search requires only one of the criteria rows to be matched.

The criteria row in the Search Criteria pane is used to combine different criteria buttons (see tables Table 8.2, "Search criteria buttons - Customer Search", Table 8.3, "Search criteria buttons - Invoice Search", Table 8.4, "Search criteria buttons - Job Search", Table 8.5, "Search criteria buttons - Vendor Search", Table 8.6, "Search criteria buttons - Bill Search", Table 8.7, "Search criteria buttons - Employee Search" Table 8.8, "Search criteria buttons - Expense Voucher Search" for a comprehensive list of combinations)

Type of Search section

In the Type of Search pane there are five selections. The first and alst options are always selectable while the following three are available only when you perform the first search by setting some search criteria and pressing the Find button.

New Search

Perform a new search

Refine current search

Search within the results of the previous search

Add results to current search

Search based on the first set of criteria or the new criteria

Delete results from current search

Discard any results that match the previous search results

Search only active data

Search only if data are marked as active.

The rest of the search dialog

When search criteria are selected, you can press the Find button. You will be presented with the list of search results in the same Find dialog.

Tip

Aside from the results, GnuCash gives you some buttons to manage the highlighted result.

Tip

In the bottom right of the Find dialog there is a button that allows you to create a New business item.

Note

Press the Close button to close the Find assistant dialog.

List of search criteria buttons

Table 8.2. Search criteria buttons - Customer Search

Button 1	Button 2	Button 3	Button 4	Button 5	Button 6	Button 7	Button 8
Company Name	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			
	matches regex ^b						
	does not match regex ^b						
Customer ID	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			
	matches regex ^b						
	does not match regex ^b						
Billing Contact	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			
	matches regex ^b						
	does not match regex ^b						
Shipping Contact	contains	Criteria entry field		Remove row			

Button 1	Button 2	Button 3	Button 4	Button 5	Button 6	Button 7	Button 8
	matches regex ^b		Is entry Case Insensitive?				
	does not match regex ^b						

Table 8.3. Search criteria buttons - Invoice Search

Button 1	Button 2	Button 3	Button 4	Button 5	Button 6	Button 7	Button 8
Invoice ID	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			
	matches regex ^b						
	does not match regex ^b						
Company Name	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			
	matches regex ^b						
	does not match regex ^b						
Date Opened	is before	Date selection field	Remove row				
	is before or on						
	is on						
	is not on						
	is after						
	is on or after						
Is Posted?	is	set true	Remove row				
	is not						
Date Posted	is before	Date selection field	Remove row				
	is before or on						
	is on						
	is not on						
	is after						
	is on or after						
Is Paid?	is	set true	Remove row				
	is not						
Billing ID	contains	Criteria entry field		Remove row			

Button 1	Button 2	Button 3	Button 4	Button 5	Button 6	Button 7	Button 8
	matches regex ^b does not match regex ^b		Is entry Case Insensitive?				
Invoice Notes	contains matches regex ^b does not match regex ^b	Criteria entry field	Is entry Case Insensitive?	Remove row			
Invoice Owner	is is not	Customer Vendor Employee Job Customer Vendor Employee Job	Criteria entry field	Select...	Remove row		

Table 8.4. Search criteria buttons - Job Search

Button 1	Button 2	Button 3	Button 4	Button 5	Button 6	Button 7	Button 8
Job Name	contains matches regex ^b does not match regex ^b	Criteria entry field	Is entry Case Insensitive?	Remove row			
Job Number	contains matches regex ^b does not match regex ^b	Criteria entry field	Is entry Case Insensitive?	Remove row			
Billing ID	contains matches regex ^b does not match regex ^b	Criteria entry field	Is entry Case Insensitive?	Remove row			
Only Active?	is is not	set true	Remove row				

Button 1	Button 2	Button 3	Button 4	Button 5	Button 6	Button 7	Button 8
Owner's Name	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			
	matches regex ^b						
	does not match regex ^b						

Table 8.5. Search criteria buttons - Vendor Search

Button 1	Button 2	Button 3	Button 4	Button 5	Button 6	Button 7	Button 8
Company Name	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			
	matches regex ^b						
	does not match regex ^b						
Vendor ID	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			
	matches regex ^b						
	does not match regex ^b						
Billing Contact	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			
	matches regex ^b						
	does not match regex ^b						

Table 8.6. Search criteria buttons - Bill Search

Button 1	Button 2	Button 3	Button 4	Button 5	Button 6	Button 7	Button 8
Bill ID	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			
	matches regex ^b						
	does not match regex ^b						
Company Name	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			
	matches regex ^b						
	does not match regex ^b						
Due Date	is before		Remove row				

Button 1	Button 2	Button 3	Button 4	Button 5	Button 6	Button 7	Button 8	
	is before or on	Date selection field						
	is on							
	is not on							
	is after							
	is on or after							
Date Opened	is before	Date selection field	Remove row					
	is before or on							
	is on							
	is not on							
	is after							
	is on or after							
Is Posted?	is	set true	Remove row					
	is not							
Date Posted	is before	Date selection field	Remove row					
	is before or on							
	is on							
	is not on							
	is after							
	is on or after							
Is Paid?	is	set true	Remove row					
	is not							
Billing ID	contains	Criteria entry field	Is entry Case Insensitive?	Remove row				
	matches regex ^b							
	does not match regex ^b							
Bill Notes	contains	Criteria entry field	Is entry Case Insensitive?	Remove row				
	matches regex ^b							
	does not match regex ^b							
Bill Owner	is	Customer Vendor	Criteria entry field	Select...	Remove row			

Button 1	Button 2	Button 3	Button 4	Button 5	Button 6	Button 7	Button 8
		Employee					
		Job					
	is not	Customer					
		Vendor					
		Employee					
		Job					

Table 8.7. Search criteria buttons - Employee Search

Button 1	Button 2	Button 3	Button 4	Button 5	Button 6	Button 7	Button 8
Employee Name	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			
	matches regex ^b						
	does not match regex ^b						
Employee Username	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			
	matches regex ^b						
	does not match regex ^b						
Employee ID	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			
	matches regex ^b						
	does not match regex ^b						

Table 8.8. Search criteria buttons - Expense Voucher Search

Button 1	Button 2	Button 3	Button 4	Button 5	Button 6	Button 7	Button 8
Voucher ID	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			
	matches regex ^b						
	does not match regex ^b						
Employee Name	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			
	matches regex ^b						
	does not match regex ^b						

Button 1	Button 2	Button 3	Button 4	Button 5	Button 6	Button 7	Button 8
Due Date	is before	Date selection field	Remove row				
	is before or on						
	is on						
	is not on						
	is after						
	is on or after						
Date Opened	is before	Date selection field	Remove row				
	is before or on						
	is on						
	is not on						
	is after						
	is on or after						
Is Posted?	is	set true	Remove row				
	is not						
Date Posted	is before	Date selection field	Remove row				
	is before or on						
	is on						
	is not on						
	is after						
	is on or after						
Is Paid?	is	set true	Remove row				
	is not						
Billing ID	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			
	matches regex ^b						
	does not match regex ^b						
Voucher Notes	contains	Criteria entry field	Is entry Case Insensitive?	Remove row			
	matches regex ^b						
	does not match regex ^b						

Button 1	Button 2	Button 3	Button 4	Button 5	Button 6	Button 7	Button 8
Voucher Owner	is	Customer	Criteria entry field	Select...	Remove row		
		Vendor					
		Employee					
		Job					
	is not	Customer					
		Vendor					
		Employee					
		Job					

Since Last Run Assistant

The Since Last Run assistant is run automatically when GnuCash is started. It is used to enter into the register any transactions that are due to be automatically entered (see the section called “Scheduling Transactions”). The run on GnuCash start can be altered in the Scheduled Transactions tab of the GnuCash Preferences. To run the Since Last Run assistant manually, go to Actions → Scheduled Transactions → Since Last Run...

In the Since Last Run assistant window you can see three columns:

Transaction The name assigned in the Scheduled Transaction Editor that identifies the scheduled transaction.

State The state column of the scheduled transaction can be one of the following:

Tip

Click on the state field in the row of a transaction to change its state (this option is available only if the state field is not *empty*)

Ignored If a scheduled transaction is being displayed, either to be created or as a reminder, the user can set the status to Ignored to skip this event. The scheduled transaction will not be entered in the register and the next reminder for this scheduled transaction will be the next occurrence. For instance, if you have a scheduled transaction set up with a reminder to transfer \$500 at the end of the month to your *savings* account but you bought yourself a computer this month and don't have the money for this month's transfer then you would set the status to Ignored.

Postponed If a scheduled transaction has been listed with a status To-create but you want to hold it and not have it entered to your register yet, then you can set it to Postponed. When at some later time you change it back to To-create it will be created with the original posted-date. If you want to change that you must edit the transaction after it's created.

Reminder You are n days from the scheduled transaction due date. The number of days n to remind in advance, is set either in the GnuCash Preferences Scheduled Transactions tab or in the Overview tab of the Scheduled Transaction Editor.

To-create	This scheduled transaction will be automatically created when you press OK.
<i>Empty</i>	An empty field means that no operations are pending for the scheduled transaction.

At the bottom of the window there are two buttons:

- The Cancel button is used to exit the Since Last Run window without creating the transactions scheduled to be entered.
- The Ok button closes the Since Last Run window and applies the pending operations.

At the bottom right of the Since Last Run window there is also an option that allows to Review created transactions. If this option is enabled when there are one or more transactions To-create, pressing OK will open a register window in which are shown the details of the scheduled transactions splits entered automatically by GnuCash.

Mortgage & Loan Repayment Assistant

This assistant creates a loan repayment scheduled transaction. When used to setup a scheduled transaction, the assistant creates a variable formula so that the compounding interest is correctly calculated. To start this assistant manually go to Actions → Scheduled Transactions → Mortgage and Loan Repayment....

It does not support zero-interest loans, but one doesn't really need an assistant for that: Just create a scheduled transaction for the principal divided by the number of payments that lasts for the number of payments. For example, if one has borrowed \$1200 for a year at no interest and promised to pay it back in monthly installments, the repayment schedule is \$100 monthly for twelve months.

The Mortgage and Loan Repayment assistant opens with a screen that briefly describes what this assistant does. The three buttons at the very bottom of the screen will not change while using the assistant.

- The Cancel button is used to exit the assistant and cancel creating the scheduled transaction. Any selections you have made in this assistant up to this point will be lost.
- The Back button will bring up the previous screen so you can change a selection made on that screen.
- The Forward button will bring up the next screen so you can continue though the assistant.

The next screen allows you to enter the basic loan information. This is usually the information provided by the bank when loan and disclosure documents are given to the borrower. Here you can also setup an account that the scheduled transaction will use to enter the payment transaction.

- Loan Account: Choose an account for the loan payment transactions or use New... to setup a new account for the transactions.
- Loan Amount: Enter the amount of the loan.
- Interest Rate: Enter the loan interest rate in percent per compounding period. The Assistant supports rates between .001% and 100%.
- Type: Choose the type of loan. If an adjustable rate is used the frequency screen is enabled.
- Interest Rate Change Frequency: Choose the frequency for the rate change and the start date of the rate change.

- **Start Date:** Choose the date the loan is starting on.
- **Length:** Enter the length of the loan with the number and period, e.g. 60 months or 5 years.
- **Months Remaining:** This tells the Assistant how many months remain on the loan. The default value assumes that the loan is paid up through today. For example, if a 5-year loan started on 1 January 2012 and today is 12 July 2015, the default months remaining is 18. If you want to create past payment transactions you'll set the months remaining accordingly: In our example, if you wanted to create all of the payments you'd set "months remaining" to 60; if you wanted to start tracking the payments at the beginning of 2015 you'd enter 24.

The next screen is used to set escrow, insurance and tax options for the loan. It is mainly used for mortgage payments. When each of the options here is set, this enables additional pages in the assistant to setup those portions of the payments. All of the pages will be described here, even though some may not show if that option is not chosen.

- ... **utilize an escrow account for payments?:** This selection enables the use of an account setup for tracking escrow payments. If the mortgage or loan uses an escrow account to pay taxes, insurance, etc then setup an account here.
- ... **pay "Taxes"?:** adds an additional page to setup a scheduled transaction to pay taxes.
- ... **pay "Insurance"?:** adds an additional page to setup a scheduled transaction to pay insurance payments.
- ... **pay "PMI"?:** adds an additional page to setup a scheduled transaction to pay PMI payments.
- ... **pay "Other Expense"?:** adds an additional page to setup a scheduled transaction to pay other expenses.

The next screen is used to setup the details of the scheduled transaction for the Loan Repayment.

- **Transaction Memo:** The name entered here will be used as the name for the scheduled transaction, the description of the scheduled transaction and the memo.
- **Payment Amount:** Shows the variable used to calculate the payment amount.
- **Payment From:** Choose an account to pay the loan amount from.
- **Principal To:** Choose an account to transfer the principal part of the loan to.
- **Interest To:** Choose an account to transfer the interest part of the loan to.
- **Repayment Frequency:** Select the Frequency and start date for loan repayments. Note that the start date will be the posted date of the first scheduled transaction. This is not taken into account for calculating the remaining duration of the loan, see Months Remaining:. Make sure that you set both to reflect your intentions or you may get surprising results.

The next screen is used to setup the details of the scheduled transaction for the Tax payment.

- **Transaction Memo:** The name entered here will be used as the name for the scheduled transaction, the description of the scheduled transaction and the memo.
- **Amount:** Enter the payment amount.
- **Payment From:** Choose an account to pay the tax amount from.
- **Payment To:** Choose an account to transfer the tax payment to.

- Repayment Frequency: Select the Frequency and start date for tax payments.

The next screen is used to setup the details of the scheduled transaction for the Insurance payment.

- Transaction Memo: The name entered here will be used as the name for the scheduled transaction, the description of the scheduled transaction and the memo.
- Amount: Enter the payment amount.
- Payment From: Choose an account to pay the insurance amount from.
- Payment To: Choose an account to transfer the insurance payment to.
- Repayment Frequency: Select the Frequency and start date for insurance payments.

The next screen is used to setup the details of the scheduled transaction for the PMI payment.

- Transaction Memo: The name entered here will be used as the name for the scheduled transaction, the description of the scheduled transaction and the memo.
- Amount: Enter the payment amount.
- Payment From: Choose an account to pay the PMI amount from.
- Payment To: Choose an account to transfer the PMI payment to.
- Repayment Frequency: Select the Frequency and start date for PMI payments.

The next screen is used to setup the details of the scheduled transaction for the Other Expense payment.

- Transaction Memo: The name entered here will be used as the name for the scheduled transaction, the description of the scheduled transaction and the memo.
- Amount: Enter the payment amount.
- Payment From: Choose an account to pay the other expense amount from.
- Payment To: Choose an account to transfer the other expense payment to.
- Repayment Frequency: Select the Frequency and start date for other expense payments.

The last screen gives you a list of three choices to finish the assistant.

- The Cancel button is used to exit the assistant and cancel creating a new loan scheduled transaction. Any selections you have made in this assistant up to this point will be lost.
- The Back button will bring up the previous screen so you can change a selection made on that screen.
- The Finish button creates the scheduled transaction.

You should now have the Mortgage or Loan Repayment scheduled transaction setup.

Recording a Stock Split

Stock splits commonly occur when a company decides its stock price is too expensive for individual investors to buy the stock. Splits have the effect of lowering the price of a single share while keeping the value of shares owned by investors who have already purchased shares.

Stock Split Assistant

GnuCash uses the Stock Split assistant to record stock splits. This provides a way of entering the details of the stock split and also any change in stock price or cash disbursement as a result of the stock split.

The Stock Split assistant is accessed by going to Actions → Stock Split....

The Stock Split assistant opens with a screen that briefly describes what this assistant does. The three buttons at the very bottom of the screen will not change while using the assistant.

- The Cancel button is used to exit the assistant and cancel entering the stock split information. Any selections you have made in this assistant up to this point will be lost.
- The Back button will bring up the previous screen so you can change a selection made on that screen.
- The Forward button will bring up the next screen so you can continue though the assistant.

The next screen allows you to select a Stock Account. Select an account from the list to record a stock split or merger.

- Account: Lists the GnuCash account name for the stock.
- Symbol: The stock symbol for the stock associated with this account.
- Shares: The amount of shares that have been purchased in the account.

The next screen lets you set the Stock Split Details. The top part of the screen contains details used in creating the stock split transaction.

- Date: Choose the date of the stock split.
- Share Distribution: Enter the amount of shares gained from the stock split. For a stock merger enter a negative number.
- Description: Enter a description or leave as the default.

The bottom part of the screen contains details used to record a price for the split (optional).

- New Price: Enter the price of the shares on the day of the stock split.
- Currency: Choose the currency of the shares.

The next screen lets you enter a transaction for a cash disbursement (Cash In Lieu) as a result of the stock split (optional).

- Cash Amount: Enter the amount of the Cash disbursement.
- Memo: Enter a memo or leave as the default.
- Income Account: Choose an Income Account for the disbursement.
- Asset Account: Choose an Asset Account for the disbursement.

The last screen gives you a list of three choices to finish the assistant.

- The Cancel button is used to exit the assistant and cancel creating the Stock Split transactions. Any selections you have made in this assistant up to this point will be lost.
- The Back button will bring up the previous screen so you can change a selection made on that screen.

- The Finish button creates the transactions for the Stock Split.

You should now have successfully entered the Stock Split or Merger.

The Online Banking Setup Assistant

Note

This section is "under construction - any input will be welcome !!".

The Online Banking Setup Assistant is used to create and edit data to enable access to Online banking transactions. Currently the best instruction for this process are in the GnuCash wiki at https://wiki.gnucash.org/wiki/Setting_up_OFXDirectConnect. If Online Banking Setup does not appear in your Tools menu, verify that you are in an Account Tree or Register tab.

Price Editor

Note

GnuCash uses the term *commodity* to mean anything that it counts: Currencies, securities (i.e. intangible assets like stock or mutual fund shares and bonds), or tangible assets like trucks and computers. When valuing one commodity in terms of another it uses the term *Exchange Rate* between two currencies and *Price* between a non-currency commodity and a currency commodity. For the rest of this section we'll use "price" to mean both price and exchange rate and "commodity" to mean any sort of commodity except where currency behavior is different.

The Price Editor is used to list and edit the price of one commodity in another commodity. New prices can be added, existing prices can be edited, and prices can be retrieved from a variety of sources on the World-Wide Web when the commodity is properly configured.

Each commodity pair can have one price per day. An existing price will be overwritten by a newer one if the newer one has the same or a more preferred source. The order of source preference (1 is most preferred) is:

1. user:price-editor: Prices created manually in the Price Editor
2. Finance::Quote: Online quotes
3. user:price: Prices entered explicitly in the Exchange Rate entry of the Transfer Funds dialog box or in the Price column of a register for an account of types STOCK or MUTUAL
4. user:xfer-dialog: Prices calculated from an entry in the To Amount entry of the Transfer Funds dialog box.
5. user:split-register: Prices calculated from the Shares and Debit or Credit columns of a register for an account of types STOCK or MUTUAL
6. user:stock-split: Prices entered in the Stock Split Assistant

Note

Prices created manually in the Price Editor are preferred over prices retrieved via Finance::Quote so Finance::Quote will fail to update such manually-created prices.

The Price Editor displays existing prices as follows:

- **Security:** The Security/commodity being priced. The display is sorted by the Namespace that the individual securities are listed on. The list is expanded by clicking on the caret on the left of the name.
- **Currency:** The currency the price is recorded in.
- **Date:** The date the price was recorded.
- **Source:** The source of the commodities price quote, listed above.
- **Type:** There are several different types of stock price quotes.
 - **Bid:** Indicates what a specialist dealer is prepared to pay for a stock.
 - **Ask:** Indicates at what price the dealers are prepared to sell a stock.
 - **Last:** Indicate the price at which the last trade in that stock/security occurred at. This is the price most commonly quoted in the media.
 - **Net Asset Value:** Are typically used for mutual funds. They are calculated on the net value of the fund's assets each day around the time of the market close and are in effect until the next recalculation.
 - **Unknown:** Use this if the type of price quoted is not known.
- **Price:** The actual price of the commodity.

Adding a stock price manually

To add a new price, click on Add, and enter the details of the security and price into the dialog box. To edit an existing price, select the price in the price list, click the Edit button, and edit the figures.

To remove just one price, select the price and click the Remove button. If you want to remove all prices older than a certain date, click on the Remove Old button and enter the details in the dialog box.

A pop-up will display with the message "**Delete all stock prices based upon the criteria below:**". Enter the date of the last price you wish to delete.

Two check-boxes are below the date field;

- Delete manually entered prices - If checked, delete manually entered stock prices dated earlier than the specified date. Otherwise only stock prices added by Finance::Quote will be deleted.
- Delete last price for a stock - If checked, delete all prices before the specified date. Otherwise the last stock price dated before the date will be kept and all earlier quotes deleted.

Configuring for use of the Get Quotes button

To support on-line quotations for a particular stock or mutual fund account, you must first enable on-line price quoting and select a price source in the Security. This is described in detail in the section called "Configuring Securities/Currencies for On-Line Retrieval of Prices". Once on-line quotes are enabled, and Finance::Quote is installed, you can update prices for your stocks and mutual funds manually by clicking the Get Quotes button.

Security Editor

The Security Editor is used to create and edit commodities that are used by mutual fund and stock type accounts. It also shows the details of National Currencies that are used by GnuCash.

To show the details for National Currencies click the Show National Currencies check-box at the bottom of the screen.

Each entry in the editor shows the details used by the security/currency:

- **Type:** Categories for organizing securities. GnuCash has the following built in:
 - CURRENCY or ISO4317: These are used for national currencies and are not editable with the Security Editor.
 - FUND: Ordinarily used for open-ended mutual funds, i.e., those that one purchases from and sells to only the issuing company and that are priced daily at their net asset value.
 - AMEX, ASX, EUREX, NASDAQ, and NYSE: These represent a few of the exchanges on which stocks, closed-end mutual funds, and exchange-traded funds are traded.
 - Template: This is a reserved word. It will not normally appear in the Security Editor unless you type it in, and if you do it will cause problems. Don't use it.

If your investment doesn't fit into one of these categories, for example if you trade stocks on the DAX or LSE, you can easily create your own type simply by typing it into the field. The type of security has no meaning to GnuCash (except Template, don't use that!), it's there only to make it easier for you to find the security from the selection lists.

- **Symbol:** Indicates the symbol or abbreviation for the commodity. This is usually the ticker symbol (for stocks) or other unique abbreviation for the commodity. If the commodity is traded on any public exchange, it is important to use the same identifier used on that exchange. For national currencies the symbol is the ISO-4217 currency code.
- **Name:** The full name of the commodity is a recognizable name such as *US Dollars* or *IBM Common Stock*.
- **Code:** This is any numeric or alphanumeric code that is used to identify the commodity. The CUSIP code is a unique identifying numeric string that is associated with every stock, bond or mutual fund, and most kinds of traded options, futures and commodities. This code is not required.
- **Fraction:** This is the smallest traded unit of the commodity, expressed as a fraction of a single nominal unit. This unit is used by GnuCash accounts as the default fraction for trades in the commodity.

Adding or Editing a Commodity

To add a new commodity (stock, or mutual fund), click on Add, and enter the details of the commodity into the **New Security** dialog box. To edit an existing commodity, select the commodity from the Commodities list, click the Edit button, and edit the **Edit Security** dialog box. To remove a commodity, select the commodity and click the Remove button.

The fields in the New/Edit Security screens are the same as defined for the Security Editor the section called "Security Editor". Below these fields are the options for Online Quotes.

Configuring Securities/Currencies for On-Line Retrieval of Prices

To support on-line quotations for a particular stock or mutual fund account, you must first enable on-line price quoting and select a price source in the Security Editor. Online currency quotes require only that

the check-box for Online quotes and the timezone be selected, and that the “Get Quotes” box be checked in the Security Editor.

Detailed instructions are in the section on Creating New Accounts. the section called “Steps to enable Online price updating”

Loan Repayment Calculator

The Loan Repayment Calculator is used to calculate compound interest. It provides a way of entering four of the five parameters of a compound interest calculation and then calculating the remaining figure.

The calculator is split into two panes. The left pane has five fields with a Calculate button and a Clear button. The Calculate button is used to select the figure to calculate. The Clear button is used to clear any amount in the field.

- **Payment Periods:** This field is used to select the number of payments you wish to use in the calculation.
- **Interest Rate:** This field is used for the interest rate percentage.
- **Present Value:** This field usually contains the amount you have borrowed. It is the base amount you wish to compound.
- **Periodic Payment:** This field contains the amount that is the payment for the period selected (IE monthly, weekly, etc). If it is for repaying a loan it should be a negative number.
- **Future Value:** This field contains the final value at the end of the periods above. If we are repaying a loan in full it would be 0.

The right pane contains buttons to select what sort of payments and compounding is used for the left pane calculations.

- **Compounding:** This button allows you to select the interval used if the Discrete Compounding button is selected.
- **Payments:** This button allows you to select the interval used for the Payment Periods field.
- **End of Period Payments:** Use this button if the payment is at the end of the period.
- **Beginning of Period Payments:** Use this button if the payment is at the beginning of the period.
- **Discrete Compounding:** This button is used where interest is charged at a discrete interval defined by the Compounding button above.
- **Continuous Compounding:** This button is used when the interest is charged continuously.
- **Payment Total:** This field shows the total amount paid.

Examples of using the Loan Repayment Calculator are given in the Tutorial and Concepts Guide. GnuCash Tutorial and Concepts Guide’s Chapter on Loans [https://code.gnucash.org/docs/C/gnucash-guide/loans_calcs1.html]

Close Book

The Close Book dialog box is used for “closing the books,”--an accounting process that resets the balances of the income and expense accounts. In this process, income account balances are transferred into an income equity account, while expense account balances are transferred into an expense equity account.

You must specify both these accounts, which may be the same. You must also specify the date for the closing transfer.

Dialog Box Details

The dialog box has the following parts:

- **Closing Date:** Specify the date for the closing transfer. You can type in a date or choose one from the drop-down.
- **Income Total:** Specify the account into which the total balance of all income accounts will be transferred. Optionally you can create a new account to receive the transfer using the New button.
- **Expense Total:** Specify the account into which the total balance of all expense accounts will be transferred. Again, you can optionally create a new account to receive the transfer using the New button.
- **Description:** Specify the description that will be entered in the closing entry.

How It Works

GnuCash closes books by creating one transaction per currency for income accounts, and one transaction per currency for expense accounts. The transactions all use the date selected by the user, and each transaction may contain any number of splits. Each split moves the balance out of one income or expense account. The last split in each closing transaction moves the total offsetting debit/credit balance into the specified equity account.

Each transaction will use the description provided by the user in the Description: entry.

The fact that GnuCash just uses transactions to close the books makes it very simple to undo a book closing: just delete the closing transactions.

What It Doesn't Do

The book closing tool does not delete any accounts or transactions; create any new files; or hide any accounts.

Necessity

Note that closing the books in GnuCash is unnecessary. You do not need to zero out your income and expense accounts at the end of each financial period. GnuCash's built-in reports automatically handle concepts like retained earnings between two different financial periods.

In fact, closing the books reduces the usefulness of the standard reports because the reports don't currently understand closing transactions. So from their point of view it simply looks like the net income or expense in each account for a given period was simply zero.

Conclusion

If you close your books, be prepared to see inaccuracies in the standard reports. On the other hand, you will see current-period income and expense figures in the chart of accounts.

Lots in Account

GnuCash uses *lots* in 2 ways:

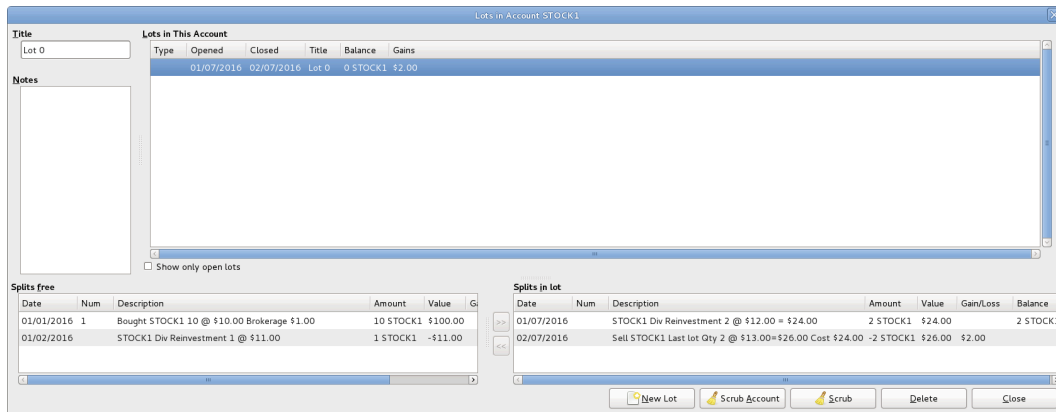
- To link security buy transactions to sell transactions so the real cost of the sold securities can be used to calculate capital gain or loss. See the section called “Lots for Security Capital Gains”.
- To link payments or credit notes to the invoices to which they apply in the Business Features. See the section called “Lots for Business Features”.

Lots for Security Capital Gains

The Lots in Account SSSS window, where SSSS is the security account, is used to manually or automatically link security transaction splits to lots and create capital gain/loss transactions to account for the difference between the costs of buying a security and the value received by selling it.

To open the Lots in Account window, open the security account register, then select Actions → View Lots.

Figure 8.1. Lots in Account window for Security Capital Gains



An image of the *Lots in Account* window for a security account.

Screen Elements

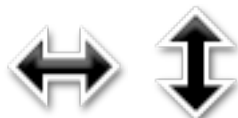
Adjusting the Size of Screen Elements

As well as adjusting the size of the whole window, it is possible to adjust the proportions of the window elements both horizontally and vertically.

There are 2 bars for adjusting the window horizontally. One between the Title and the Lots in This Account panel, and the other between the Splits free panel and the >> and << buttons.

The window proportions may be adjusted vertically by dragging the vertical bar located to the right of Show only open lots.

These resizing bars can be hard to see, so move the mouse pointer until it changes to the resize pointer then click and drag the bar. The resize pointers are different depending on your operating system and theme. Here are some examples of resize pointers:



It is not possible to individually adjust the size of panel columns.

Fields

- **Title:** Shows the title for the highlighted (selected) lot in the Lots in This Account panel. When a new lot is created by clicking the New Lot button, it has a default title of *Lot n* where n is a number starting at 0 (for each security account) and incrementing by 1. Deleting a lot does not reset the next number to be used, but the title can be changed as required.
- **Notes:** Notes for the highlighted lot. Users are free to enter anything they wish and the notes can be changed as required.

Panels

The order of the items in all the panels in this window can be adjusted by clicking on the column headings.

- **Lots in This Account panel**

This panel shows lots for this security account.

If Show only open lots is checked, only lots that have not been completely sold are shown.

Columns

- **Type:** Always blank for security lots. This window is also used for business lots (which link payments to invoices) when coming from an Accounts Payable or Receivable account and in that case, Type will be *I* for invoice. Credit Notes are also Type *I*.
- **Opened:** *Open* if there are no splits in the lot, otherwise the date of the earliest split in this lot.
- **Closed:** *Open* if the lot is not fully sold, otherwise the date of the last sell split.
- **Title:** Lot Title.
- **Balance:** Number of unsold securities in this lot.
- **Gains:** Calculated gains or losses for this lot.
- **Splits free panel**

This panel shows buy and sell splits for this security account which are not linked to a lot. Capital Gains splits (Shares and Price are 0) are not shown.

Columns

- **Date:** Transaction Date Posted.
- **Num:** Transaction Num.
- **Description:** Transaction Description.
- **Amount:** Number of shares bought or sold from the transaction split. Positive for buys, negative for sells. If the security transaction split has been split into multiple subsplits (because a split may only be linked to 1 lot), this amount will not be the full transaction amount, but only the amount for this split.
- **Value:** Amount x split price.
- **Gain/Loss:** For sell splits, shows calculated gain or loss. This will be recalculated during scrubbing.

- Balance: Cumulative number of unsold shares for free splits.
- Splits in Lot panel

This panel shows splits linked to the highlighted lot in the Lots in This Account panel. This panel will be empty until a lot is highlighted in the Lots in This Account panel. Capital Gains splits (Shares and Price are 0) are not shown.

Columns

- Date: Transaction Date Posted.
- Num: Transaction Num.
- Description: Transaction Description.
- Amount: Split number of shares bought or sold. Positive for buys, negative for sells. If the security transaction split has been split into multiple subsplits (say by scrubbing because a split may only be linked to 1 lot), this amount will not be the full transaction amount, but only the amount for this split.
- Value: Amount (No of Shares) x split price.
- Gain/Loss: For sell splits, shows calculated gain or loss. This will be recalculated during scrubbing.
- Balance: The number of unsold shares in this lot after this transaction.

Buttons

- >>: Links a free split (buy or sell) to a lot. This button is not enabled until both a lot and a free split are highlighted. The split moves from the Splits free panel to the Splits in lot panel.

Multiple buy splits and multiple sell splits may be linked to the same lot. Refer to following section about the Scrub Account button for details of the capital gains transactions created in these situations.

- <<: Unlinks a split from a lot. The split moves from the Splits in lot panel to the Splits free panel. This button is not enabled until a split in the Splits in lot panel is highlighted. When the last split is unlinked from a lot, the lot is automatically deleted if there is no capital gain/loss transaction.
- New Lot: Creates a new lot which shows in the Lots in This Account panel. The new lot is not linked to any split.
- Scrub Account:
 - Creates a lot for each buy transaction split that is not already linked to a lot.

A new lot is created for each unlinked buy transaction split because gains on investments, in some jurisdictions, may be taxed at different rates depending on how long they were held before being sold. As a separate capital gains transaction is created for each lot, this makes it easier to determine tax on the capital gains based on the lot opened and closed dates.

If you know that the capital gains from a sale are all to be taxed at the same rate, you can manually link multiple buys to a lot so scrubbing will only create 1 capital gains transaction.

It is also possible to manually link multiple sell transaction splits to a lot. In this case scrubbing creates a capital gains transaction per sell transaction split based on the average cost of securities held at the time of each sale, assuming acquisitions are allocated to sales using the security account costing method (currently only FIFO). As this makes it complicated to manually verify the costs are

correct, it may be wise to limit this to specific situations, say for example if there are multiple sales on the same day.

- Links buy and sell transaction splits to lots using FIFO method.
- Calculates gain/loss and creates a separate capital gain/loss transaction for each lot that does not already have one.

Note

If gain/loss splits have been manually entered as part of a sell transaction, scrubbing does not recognize them, so if manually adding gain/loss, always separate the gain/loss splits from the transaction that reduces the No of Shares, by putting them in a separate transaction.

- Scrub: Scrub only the highlighted lot. This button is only enabled if a lot is highlighted. If no buy splits are linked to the highlighted lot, nothing is done. The Scrub button will link any free sell splits to the lot as required until the sum of the sell split amounts equals the sum of the buy split amounts. If the sum of the sell split amounts is greater than the sum of the buy split amounts, a sell split will itself be split into 2 splits, with the remaining amount in an unlinked split.

Note

For both the Scrub Account and the Scrub buttons:

The Gain/Loss for each lot is recalculated and a capital gain transaction is created if needed. The transaction has 1 split for the security account and the other with account *Orphaned Gains-CCC* where CCC is the security currency. The *Orphaned Gains-CCC* account is used because GnuCash doesn't know which capital gain or loss account should be used, so the user must change it to the required income (or expense) gain or loss account.

- Delete: Delete the highlighted lot. Any linked splits are automatically freed (unlinked). This button is only enabled if a lot is highlighted.
- Close: Close the Lots in Account SSSS window.

See Tutorial and Concepts Guide, Automatic Calculation of Capital Gain or Loss Using Lots [<https://code.gnucash.org/docs/C/gnucash-guide/invest-sell1.html#invest-sellLots>] for more details.

Lots for Business Features

Introduction

For business features, lots are used to link payments or credit notes to the invoices to which they apply. This is for both customer invoices and vendor bills.

There are 2 main uses for the Lots in Account window in relation to the business features:

1. To enquire about which payments or credit notes offset particular invoices. For each invoice and credit note, GnuCash automatically creates 1 (and only 1) lot. By selecting the lot for the invoice or credit note in the Lots in This Account panel, all the transaction splits for that lot show in the Splits in Lot panel.

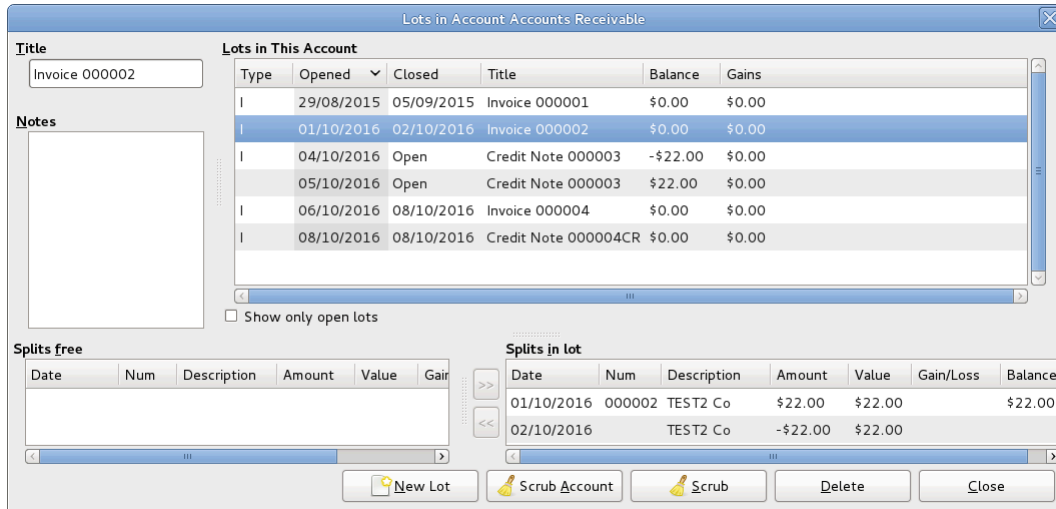
Tip

Alternatively, print the invoice and check the Payments option on the Display tab in the report options. The Tax Invoice always shows payments so does not have the Payments option.

2. To correct mistakes that are hard to correct otherwise (either due to bugs in past versions of gnuCash or due to unintended use of said features). Some of these use cases are found on this wiki page [https://wiki.gnucash.org/wiki/Business_Features_Issues]. In the context of the normal operation of business features, the Lots in Account window is *not* used to create, delete, link or unlink lots. Lots are usually generated and manipulated internally only by the business features programs.

To open the Lots in Account AAAA window, where AAAA is the *Accounts Receivable* (AR) or *Accounts Payable* (AP) account, open the AR or AP account register, then select Actions → View Lots.

Figure 8.2. Lots in Account window for business features



An image of the Lots in Account window for an Accounts Receivable account.

Screen Elements

The screen elements of the Lots in Account window for an AR or AP account are the same as for a security account, although the actions and data are different. As this window is only used for creating, deleting, linking or unlinking lots in *exceptional* circumstances, the differences are not described. See the section called “Screen Elements” for a description of the screen elements and what the buttons do when used with the lots of a security account.

Chapter 9. Reports And Charts

Note

This section is a “work in process”. Some of the material has not been reviewed for V2.0. While it may not be strictly accurate, it is at least a "guide".

Introduction

Reports and Charts give GnuCash the ability to present an overview of financial data in various ways. This can range from a simple summary of account totals to an advanced portfolio view. This section will present an explanation of the main GnuCash reports and how to adjust them.

To run a report or chart, click on the Reports menu, then either select a report (it will open with standard options), or click on Saved Report Configuration to select a report you have previously configured and saved.

Once the report has opened, click on the Options toolbar button to configure the report as needed, for example to set the report date or select accounts.

Tip

If you intend to save a report configuration, you should choose a named report date option such as *Today* rather than enter a specific date so it is not necessary to enter a specific date again in future reports.

Tip

If you often run a report with a date as at the start or end of an accounting period, set the accounting period start and end dates in Edit → Preferences → Accounting Period then select appropriate report date options. See the section called “Accounting Period”.

Tip

If you cannot find a specific report to suit your requirements, you may be able to use the Find Transaction assistant (Edit → Find) to select a set of transactions, and then report them using Reports → Account Report . Further formatting or analysis may be done by copying and pasting the report into a spreadsheet.

After you have configured a report, you can save the configuration for future use by clicking either the Save Report Configuration or Save Report Configuration As... button.

Saving a Report Configuration

To save a report configuration for future use, while the required report tab is selected, go to the report options, select the *General* tab and change the *Report Name* to a meaningful unique name. Do not confuse this with the *Report Title* which prints at the top of a report.

Click the Save Report Configuration or Save Report Configuration As... button. This will store your customized report options in a file in your home directory. E.g. Linux: `~/gnucash/saved-reports-[versioninfo]`

The first time you save a report with a name that has not already been saved, you can use either the Save Report Configuration or the Save Report Configuration As... button. You can modify the report name before saving it.

After a report configuration for a specific name has been saved, the Save Report Configuration button will immediately update the saved report configuration without giving the opportunity to save the configuration with a new name. Use the Save Report Configuration As... button to save the current report configuration with a new name.

After your customized report has been saved, it is available for use by the Reports → Saved Report Configurations menu and it will also be listed when starting Reports → Sample & Custom → Custom Multicolumn Report .

Working with Saved Report Configurations

Selecting Reports → Saved Report Configurations will open a dialog window with a list of the *Saved Report Configurations* you have previously created. In this context *Saved Report Configurations* means the set of customized settings for standard reports.

The *Saved Report Configurations* window lists each of your previously saved report configurations, and 3 small buttons at the end of each. These buttons perform the following actions

- Load (and run) report configuration. Double clicking a report configuration also performs this action.
- Edit report configuration name. This enables a report configuration to be renamed.
- Delete report configuration.

Configuring Reports and Charts

GnuCash reports have many configuration options. First, run the original report itself. Then, access the report options with the Options button on the toolbar.

Note

Check changed Graphic Engine Options

Report Options Buttons

After modifying report options, either

- Click the OK button to apply the changes, regenerate the report and close the options window.
- or
- Click the Apply button to apply the changes, regenerate the report and leave the options window open for possible further changes. In this case, both the Apply and OK buttons will be disabled, indicating changes have been applied, until further changes are made.
- or
- Click the Cancel button to close the options window without applying any unapplied changes.

Common Report Options

Many reports share similar options. Some common ones include:

- **Report Name:** Set the title of the report. This is also used to print the report for later viewing.
- **Date Options:** Reports typically specify either a single date, or a date range, for the report. Dates can be specified in two ways, either directly (using the date selector), or by selecting a relative date from the menu. Relative dates allow you to specify dates like Beginning of this year or Today.

Tip

If you often run a report with a date as at the start or end of an accounting period, set the accounting period start and end dates in Edit → Preferences → Accounting Period then select appropriate report date options. See the section called “Accounting Period”.

- **Step Size:** This option is used on bar charts to determine the interval which each bar represents. Typical values are daily, weekly, monthly, and yearly.
- **Accounts:** Select the appropriate accounts for the report. Note that in some reports only certain types of accounts can be selected. For example, an expense piechart only allows expense accounts to be selected.
- **Show Long Account Names:** This option allows displaying either short account names (for example, Power) or long account names (for example, Utilities:Power).
- **Include Subaccounts?:** Summary reports typically have an include all subaccounts option, which if selected ensures that all subaccounts are included if the parent account is.
- **Depth:** This option allows the selection of how many levels the report displays subaccounts. If the subaccounts go deeper than selected, an overall value for all the subaccounts is calculated and included in a total. To make sure every account selected is individually displayed, select All.
- **Style Sheet:** Select a Style Sheet. Style sheets control how reports are displayed. At the moment, there are four style sheets: Default, Easy, Footer and Technicolor. You can customize each of these from the Edit → Style Sheets... menu item. This is described in the the section called “Changing Style Sheets” section.
- **Plot Dimensions:** There are width and height options for most charts, which specify the displayed dimensions (in pixels).
- **Report Currency:** Select the report currency. Generally, values will be converted to this currency for display.

The default Report Currency is defined in Edit → Preferences Reports tab. See the section called “Reports”.

- **Price Source:** Select how stock and currency prices are calculated in this report. Choose between:
 - **Nearest in time (default for most reports):** A price retrieved from the prices database on the date nearest to the date of the report or of the datum for time-series reports.
 - **Most recent:** The latest price in the price database.
 - **Average Cost:** The amount-weighted *net* average of *all* splits exchanging the commodity for another *regardless of account*. Gain/loss splits are *included* in the calculation.

- **Weighted Average:** The *gross* amount-weighted average price of *all* splits exchanging the commodity for another *regardless of account*. Gain/Loss splits are *not* in the calculation. More information on Average Cost and Weighted Average may be found in the Investments chapter of The Tutorial and Concepts Guide.
- **Totals:** Charts display totals in the chart legend if this option is selected.
- **Maximum Slices:** Controls the maximum number of slices displayed in a piechart - other accounts will be placed in a slice marked Other.
- **Maximum Bars:** Controls the maximum number of bars displayed in a barchart.
- **Display Columns:** Choose columns to show from the register.

Reports Listed By Class

GnuCash has classified the main types of reports into major classes. These are all available under the Reports menu.

General Reports

The General Reports include the Account Summary Report, the Future Scheduled Transactions Summary, the Tax Schedule Report and TXF Export, and the Transaction Report and also the reports in the Sample & Custom menu.

Account Summary

Future Scheduled Transactions Summary

Tax Schedule Report and TXF Export

The tax schedule report lists all taxable income and deductible expense amounts used in the preparation of US Income Tax returns. The purpose of the report is to provide a complete audit trail for these amounts. The report is intended to be used by a tax payer to manually prepare his or her own tax return, or alternatively, to be provided to a tax preparer for that purpose. The report can also be used to generate an export of all tax related income and expenses to a TXF (Tax eXchange Format) file (this is in addition to exporting to the HTML format that all reports allow). The TXF file can be imported into tax filing programs such as TaxCut or TurboTax. The report should be run, inspected carefully for errors or omissions, and then corrections made to transactions, report settings, currency conversion rates or the account structure as needed. This process should be repeated as often as needed until all the amounts on the report are correct before a final version is used and saved along with the tax returns.

For accounts specified in the report options (none = all) that are also flagged as Tax-related, all transactions for the time period selected (also in the report options) are included. The report sorts transactions by date within account providing subtotals by account within tax code within Form or Schedule line number. Support is also provided for multiple copies of and for sub-line items for selected Forms/Schedules. Optionally uses special date processing to include federal estimated tax payments after year end.

All totals are in USD since this is the currency required for filing US Income Tax returns. Non-USD transaction amounts are converted to USD using the transaction conversion rate to USD, if available. If

not, a conversion rate from the price database is used (either the date nearest the transaction date or nearest the report date as specified in the report options; if none is available, transaction amounts are converted to zero and the report provides a comment accordingly). A complete audit trail of conversions is provided.

Note

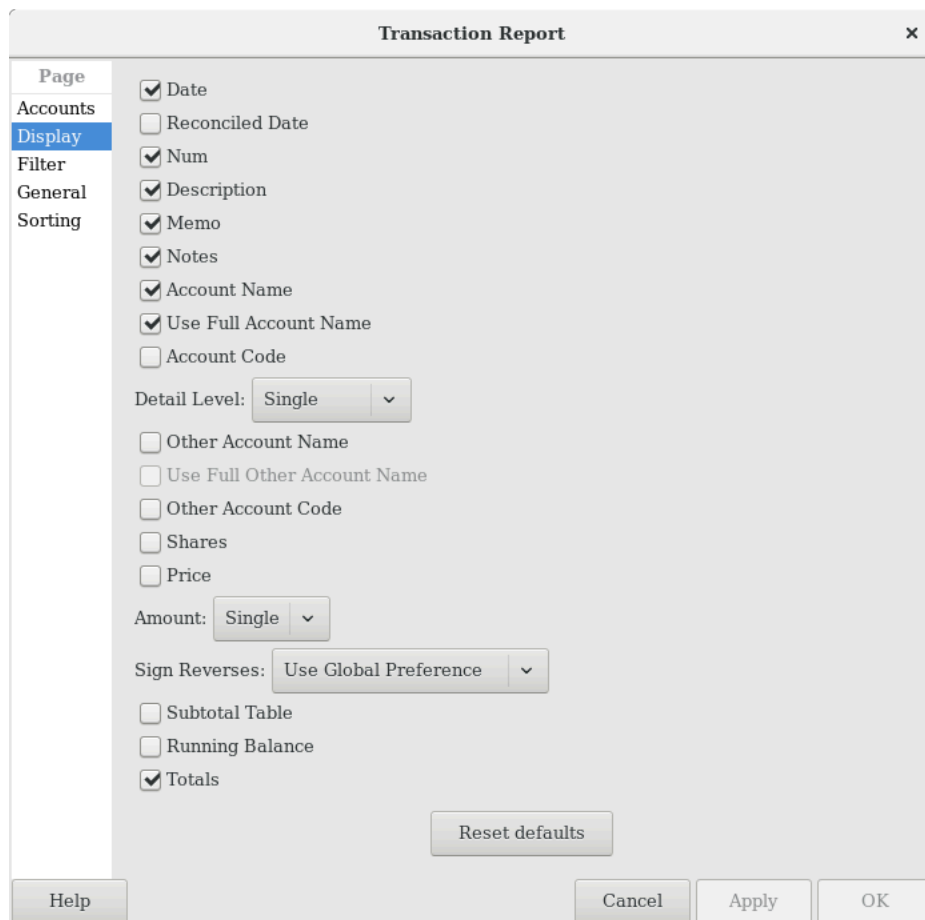
For this to work, the user has to segregate taxable and non taxable income to different accounts, as well as deductible and non deductible expenses. The Income Tax Information dialog is used for this. To access the Income Tax Information dialog go to Edit → Tax Report Options. The user also must set the TXF category of each tax related account. The Income Tax Information dialog is described in the the section called “Setting Tax Report Options” section.

Transaction Report

This report lists transactions in selected accounts during a specified financial period. Two fields may be optionally used for sorting and totalling.

Report Options

Figure 9.1. Transaction Report, Report Options



This is an image of the *Transaction Report, Report Options, Display tab*.

- *Accounts tab*

- Accounts: Select one or more accounts to be reported.

There are 4 buttons to aid account selection

Select All	Select all accounts
Clear All	Clear the selection and unselect all accounts
Select Children	Select all descendants of selected account
Select Default	Select the default account selection

- Show Hidden Accounts: Show accounts that have been marked hidden.
- Filter By: Optionally select accounts to be either included or excluded depending on Filter type
- Show Hidden Accounts: Show accounts that have been marked hidden in the Filter By list of accounts
- Filter Type: One of

None	Do not do any filtering
Include Transactions to/from Filter Accounts	Include Transactions to/from Filter Accounts only
Exclude Transactions to/from Filter Accounts	Exclude Transactions to/from all Filter Accounts

- Reset defaults button: Reset all values to their defaults
- *Display tab*
 - Date refers to the 'posted date' i.e. effective date of a transaction.
 - Reconciled Date refers to the 'date of reconciliation' of a transaction.
 - Num is commonly used for check numbers.
 - Description is a description of the transaction
 - Memo is the memo field of a transaction. This can be used as a secondary description of a transaction.
 - Notes: Display the notes if the memo is unavailable
 - Account Name will print the account name containing the transaction.
 - Use Full Account Name if the account name is enabled, this option will display the full account name hierarchy.
 - Account Code this refers to the 'account code' related to the account.
 - Detail Level— One of

Single	Display 1 line
Multi-Line	Display N lines

Note

Before stable version 3.0 *Detail Level* was called *Style* on the General tab.

If *Detail Level* is *Multi-Line*, check boxes *Other Account Name* and *Use Full Other Account Name* are automatically deselected and disabled, and the *Transfer* column is not reported.

- Other Account Name: For multi-split transactions, this parameter should be unticked. See below for more details.
- Use Full Other Account Name will enable display of full corresponding account name.
- Other Account Code will enable display of corresponding account code.
- Shares: Display number of shares
- Price: Display share prices
- Amount: One of

None	Do not display Amount
Single	Single column display
Double	Two column display

- Subtotal Table will add a summary table for the various subtotals generated in the report. It lists the same subtotals generated in tabular form.
- Running Balance refers to the running balance of the account holding the transaction.
- Totals will add a 'Grand Total' line adding all transactions in the report.
- Sign Reverses: One of

Global Preference	Use reversing option specified in global preference.
None	Do not display signs reversed
Credit Accounts	Reverse amount display for Liability, Payable, Equity, Credit Card and Income accounts
Income and Expense	Reverse amount display for Income and Expense accounts

- Reset defaults button Reset all values to their defaults
- *Filter tab*
 - Account Name Filter will include only selected accounts containing the substring. Alternatively, if the next option is checked, the account name filter will be matched according to full POSIX regular expressions.
 - Use regular expressions for account name filter toggles regular expressions for account name filter.
 - Transaction Filter will include only transactions which contain this substring in the description, notes, or memo. Alternatively if the next option is checked, the filter will be matched using full POSIX regular expressions.
 - Use regular expressions for transaction filter toggles regular expressions for the transaction filter.

- Reconcile Status

All	Show all transactions
Unreconciled	Unreconciled only
Cleared	Cleared only
Reconciled	Reconciled only

- Void Transactions: One of

Non-void only	Show only non-voided transactions
Void only	Show only voided transactions
Both	Show both and include voided transactions in totals

- Closing transactions: One of

Excluding closing transactions	Show only regular transactions
Show both closing and regular transactions	Show both regular and closing transactions
Show closing transactions only	Show closing transactions only

- Reset defaults button: Reset all values to their defaults

- *General tab*

- Report name: Enter a descriptive name for this report
- Stylesheet: Select Default, Easy, Footer or Technicolor
- Start Date: Enter or select a specific Start Date

or select one of the following named start date options which will be used to determine the start date each time the report is run

Today	The current date
Start of this month	First day of the current month
Start of previous month	First day of the previous month
Start of current quarter	First day of the current quarterly accounting period
Start of previous quarter	First day of the previous quarterly accounting period
Start of this year	First day of the current calendar year
Start of previous year	First day of the previous calendar year
Start of accounting period	First day of the accounting period as defined in the global preferences

- End Date: Enter or select a specific End Date,

or select one of the following named end date options which will be used to determine the end date each time the report is run

Today	The current date
End of this month	Last day of the current month
End of previous month	Last day of the previous month
End of current quarter	Last day of the current quarterly accounting period
End of previous quarter	Last day of the previous quarterly accounting period
End of this year	Last day of the current calendar year
End of previous year	Last day of the previous calendar year
End of accounting period	Last day of the accounting period as defined in the global preferences

- Style: One of

Single	Display 1 line
Multi-Line	Display N lines

Note

In stable version 3.0, the *Style* option will be renamed to *Detail Level* and moved to the Display tab.

- Common Currency: Convert all transactions into a common currency
- Report's currency: Select the currency to display values
- Show original currency amount Also show original currency amounts
- Table for Exporting: Formats the table for cut & paste exporting with extra cells
- Add options summary: Adds an informative text describing options that were changed by user. This is mainly useful for troubleshooting reports.
- Reset defaults button: Reset all values to their defaults
- *Sorting tab*
 - Primary Key: Primary Sort Key. One of

None	Do not sort
Account Name	Sort and subtotal by account name
Account Code	Sort and subtotal by account code
Date	Sort by date
Reconciled Date	Sort by the reconciled date
Reconciled Status	Sort by the reconciled status

Register Order	Sort as within the register
Other Account Name	Sort by account transferred from/to's name
Other Account Code	Sort by account transferred from/to's code
Amount	Sort by amount
Description	Sort by description
Number	Sort by check/transaction number
Memo	Sort by memo

- Primary Subtotal: Subtotal according to the primary key
- Primary Subtotal for Date Key: Do a date subtotal. Only configurable if primary key is date or reconciled date. One of None, weekly, monthly, quarterly or yearly
- Primary Sort Order: One of

Ascending	Smallest to largest, earliest to latest
Descending	Largest to smallest, latest to earliest

- Secondary Key: Secondary Sort Key. Same options as Primary Key
- Secondary Subtotal: Subtotal according to the secondary key
- Secondary Subtotal for Date Key: Do a date subtotal. Only configurable if primary key is date or reconciled date. One of None, weekly, monthly, quarterly or yearly
- Secondary Sort Order: One of

Ascending	Smallest to largest, earliest to latest
Descending	Largest to smallest, latest to earliest

- Show Full Account Name: Show the full account name for subtotals and subtitles
- Show Account Code: Show the account code for subtotals and subtitles
- Show Account Description: Show the account description for subtitles
- Show Informal Debit/Credit Headers: Show informal names for debit/credit in the subtitles. This requires that subtotal is enabled, and the primary or sortkey is account or account code.
- Add indenting columns: Add columns to align transactions within the same grouping together, and can be useful to highlight groups.
- Show subtotals only (hide transactional data): Will hide transactions. This may be useful for reports whereby only subtotals are required.
- Reset defaults button: Reset all values to their defaults

Displaying Split Account Details

This is controlled by the *Detail Level* option on the Display tab.

Note

In stable versions before 3.0 this option was called *Style* on the General tab.

In *Single* line mode, there's only one line per transaction. So you can have the account name on one side of the equation and

a. the other account name if there's only one other split in the transaction

or

b. "Split" if there are multiple other splits in the transaction. You can't display multiple "other" account names in one line. There's just no room for it.

In the case of *Multi-Line* mode, this report uses a completely different concept. For each transaction, every split (both the split in this account and the split(s) in the other account(s) !) is printed on a separate line. And every split really means every split: both the split which belongs in the account being reported and the split(s) in the other account(s) that balance the transaction. So even the most basic transaction, with only two splits (this account and other account) will print two lines in multiline mode.

For a simple transaction like this

<i>Description</i>	<i>Account</i>	<i>Debit</i>	<i>Credit</i>
Cheques Received			
"multiple payers"	IncomeAccount		£30.00
	BankAccount	£30.00	

then on a Transaction Report for the bank account the details appear pretty much as above.

For clarity of the accounts, you might enter transactions with multiple splits referring to the same account. For example, the above transaction might well be entered like this

<i>Description</i>	<i>Account</i>	<i>Debit</i>	<i>Credit</i>
Cheques Received			
"FirstPayer"	IncomeAccount		£10.00
"SecondPayer"	IncomeAccount		£20.00
	BankAccount	£30.00	

When this transaction is printed on the bank account's Transaction Report in *Single* line mode, then under *other account* it simply prints the word *split* instead of the account name.

To display the additional split detail, you need to set *Single/Multi-Line* to *Multi-Line* and then tick *Display -> Account Name*. Do NOT tick *Display -> Other Account Name*.

You can choose whether or not to turn off the full account name using *Display -> Use Full Account Name*.

Use Full Other Account Name has no effect in *Multi-Line* mode.

Assets & Liabilities

The Assets & Liabilities reports includes the Balance Sheet report, Investment reports and the Net Worth report.

- Advanced Portfolio:

Columns

- Account: Stock Account
- Symbol: Ticker Symbol/Abbreviation as defined in the Security Editor. A report option can suppress this column.
- Listing: Type as defined in the Security Editor. A report option can suppress this column.
- Shares: Number of shares (quantity). A report option sets how many decimal places to show. A report option can suppress this column.
- Price: Unit market price as at report date. A report option can suppress this column.
- Basis: Cost of all shares acquired by any means, including brokerage fees if the option to include them is checked. Report option *Basis calculation method* can be set to Average, LIFO or FIFO.
- Value: Number of shares * Unit market price as at report date
- Money In: Sum of the cost of stock purchased, excluding stock acquired as part of a Dividend Reinvestment Plan. I.e. External money used to purchase shares.
- Money Out: Money from selling shares or a spin off transaction.
- Realized Gain: Money received for selling shares minus basis for shares sold, minus brokerage fees for the sale if the option to include them in basis is checked.
- Unrealized Gain: Value less Basis for unsold shares
- Total Gain: Realized Gain + Unrealized Gain
- Rate of Gain: $\text{Total Gain} / \text{Money In} * 100$ (from GnuCash 2.6.1 onwards)
- Income: Total of all income transactions associated with a stock account.

Note

To include income from dividends which are not reinvested (if there is no split to the stock account in the income transaction, the report has no way of associating the income with a particular stock) :

Ensure there is a dummy transaction split to the stock account with quantity 0, price 1 and value 0 in the dividend transaction. Enter the dummy stock split with no values in the dividend account and it will create the transaction with price 1 even though you cannot see the Price column in that register.

In GnuCash 2.6.6, this report was modified to simplify the recording of dividend and interest payments. With this change it may not be necessary to include the dummy stock split in the transaction. The report will find income (and expense) transactions that are in the parent account of the stock account being reported on. This is done by looking in the parent account for transactions that have exactly two splits (not counting trading account splits) where the other split is to an income or expense account with the same name as the stock's account.

For example given an account structure like

Assets (type ASSET)

Broker (type ASSET)
Widget Stock (type STOCK)
Income (type INCOME)
Dividends (type INCOME)
Widget Stock (type INCOME)

A transaction that debits the "Assets:Broker" account and credits the "Income:Dividends:Widget Stock" account will count as income even though it doesn't have a split with account "Assets:Broker:Widget Stock".

This only works if the parent account ("Assets:Broker" in this case) is a Bank or Asset account and the Income/Expense account has the same name as the stock account. It won't double count transactions that have a dummy split since they won't have exactly two split transactions.

It will not work if the income or expense account split is to a subaccount of the account with the same name as the stock account i.e. "Income:Dividends:Widget Stock:Franked"

- Brokerage Fees: Brokerage Fees
- Total Return: Total Gain + Income
- Rate of Return: Total Return / Money In * 100

Common report options are described in the section called "Configuring Reports and Charts"

Report Specific Options

- Accounts Tab
 - Include accounts with no shares: Unchecked (default) or checked.
- Display Tab
 - Show ticker symbols: Checked (default) or unchecked. If unchecked, Symbol column will be omitted.
 - Show listings: Checked (default) or unchecked. If unchecked, Listing column (source of shares price quotes) will be omitted.
 - Show number of shares: Checked (default) or unchecked. If unchecked, Shares column will be omitted.
 - Share decimal places: The number of decimal places to show in the number of shares. Default is 2.
 - Show prices: Checked (default) or unchecked. If unchecked, Price column will be omitted.
- General Tab
 - Price Source: Nearest in time (default) or Most Recent.
 - Basis calculation method: Average (default), FIFO or LIFO.
 - Set preference for price list data: Checked (default): Use price list data. If there is no relevant price list data, transaction prices will be used and there will be a warning. Unchecked: Get prices from stock transactions.

- How to report brokerage fees: Include in basis (default), Include in gain or Ignore.
- Asset Barchart:

The Asset Barchart report displays bars that present the value of all assets in a GnuCash file over time. By default, the report shows all accounts in *Accounts Receivable*, *Current Assets*, *Fixed Assets*, *Investments* and Special Accounts (if they exist) and it displays monthly bars for the current financial period. This report provides a graphic view of the assets in the file over time.

Tip

Like all the generic reports, the user can assign a title and save the report with it's selected options for re-use later.

The display is in the form of either a stacked barchart or simple barchart with an option to display a table of the values.

This report calculates and displays a default of 8 bars or up to 24 separate asset accounts value at the end of the day on several dates through a specified time period. The report automatically selects the most significant accounts to display with all other selected accounts summed as *Other*.

The report exploits the outline structure of the chart of accounts to allow the user to select top level accounts and sub-accounts down to a user-selectable depth. Selected sub-accounts below the selected depth are automatically *summed up* into the next level when it is also selected. The default number of sub-account levels is 2, giving a summary view. Increasing the number of sub-levels increases the detail available to display. It is possible to un-select a higher level account and leave sub-accounts selected to force greater detail to appear in the report.

By default the report includes all *asset* accounts and sub-accounts, as well as *Imbalance* and *Orphan* Special accounts in whatever currencies or commodities may be present. The report's base currency is the default currency of the GnuCash file but if the file has data for multiple currencies, then it can be changed to another currency.

Since each account may be individually selected, the report can be designed to focus on a small subset of data such as current assets or investments.

The overall interval of the report defaults to start at the start of the current accounting period and to end at the end of the current accounting period. Numerous other starting choices and ending choices are available.

The first bar shows the selected values at the end of the day on the first date chosen. There are a number of choices for step size from *day* to *year* with the default being *month*. Note that if any step date would fall on the 29th, 30th or 31st in a month that does not have such a date the next interval will be 31 days later. For that step only the date will *slip* up to 3 days into the following month. This is true for releases at least through 2.4.13. Bug 639049 is open in Bugzilla to modify this behavior.

Currently, there is no option to start the report on the last day of any period. There is also no option to show *beginning* balances or *end of previous step* balances. This makes it difficult to correlate this report to business quarterly reports, for example.

The Net Worth linechart report, Liability barchart report and Net Worth barchart report are similar except for the graphic type and default account groups selected.

Other features are customizable in a manner similar to other standard reports.

- Asset Piechart:
- Average Balance:
- Balance Sheet: This report summarizes assets, liabilities, and equity. When properly maintained, assets should equal the sum of liabilities and equity. If that is not the case, there is some kind of internal imbalance in the accounts.
- Balance Sheet using eguile-gnc:
- General Journal:
- General Ledger:
- Investment Portfolio: This report summarizes the value of the stocks in the current portfolio.
- Liability Barchart:
- Liability Piechart:
- Net Worth Barchart: Net worth is the difference between the value of assets or liabilities.
- Net Worth Linechart: Net worth plotted over time. Net worth is the difference between the value of assets or liabilities.
- Price Scatterplot:

Business Reports

The Business Reports includes Customer and Vendor Reports and Printable Invoices as well as Aging reports.

Customer Report

Customer Summary

Easy Invoice

Employee Report

Fancy Invoice

Job Report

Payable Aging

This report provides a listing of vendors and their aged outstanding balances. Vendors may be included if they have posted business transactions (e.g. invoices) for the selected accounts payable account. It shows their current balance, and how much they have due from invoices over time periods 0-30 days, 31-60 days, 61-90 days, and over 90 days. The report also contains links to each vendor and to their current vendor report.

Optionally, vendor address details may be also shown.

Tip

To export vendor address details, say in order to do a mail merge, select the optional vendor address details in the report options display tab, apply the options to regenerate the report, then copy and paste the report into a spreadsheet. Alternatively, the report can be exported to a .html file, then read into a spreadsheet.

Report Options

Note

See Common Report Options in the *Configuring Reports and Charts* section of this help manual for more details of the common options.

- *General tab*
 - Report name: Enter a descriptive name for this report - see Common Report Options.
 - Stylesheet: Select a style sheet for this report - see Common Report Options.
 - To: Select a date to report on or a named date. Transactions up to and including the selected date will be used to calculate the outstanding aged balances. See Common Report Options.
 - Report's currency: Select the currency to display the values in - see Common Report Options
 - Price Source: Select the source of price information used for currency conversion if needed. One of

Average Cost	The volume-weighted net average price of all exchanges.
Weighted Average (default)	The volume-weighted gross average price of all exchanges up to the date of the report
Most recent	The most recent recorded price
Nearest in time	The price recorded nearest in time to the report date

- Show Multi-currency Totals: If not selected, all totals are shown in the report currency.
- Sort By: Sort companies by one of

Name (default)	Company name
Total Owed	Total amount owed to company
Bracket Total Owed	Amount owed in oldest bracket. If same, use next oldest

- Sort Order: One of

Increasing (default)	
Decreasing	

- Show zero balance items: Show companies even if they have a zero outstanding balance.

- Due or Post Date: Leading date. Which date to use to determine aging. One of

Due Date (default)	
Post Date	

- **Payable Account:** The accounts payable account used to select vendors to be reported. Vendors are included if they have a posted business transaction (usually an invoice) on or before the report date and also meet the *Show zero balance items* criteria.
- *Display tab*
 - **Address Name:** Display vendor address name. This, and other fields, may be useful if copying this report to a spreadsheet for use in a mail merge.
 - **Address 1:** Display address line 1.
 - **Address 2:** Display address line 2.
 - **Address 3:** Display address line 3.
 - **Address 4:** Display address line 4.
 - **Phone:** Display address phone number.
 - **Fax:** Display address fax number.
 - **Email:** Display email address.
 - **Active:** Display vendor active status.

Printable Invoice

Receivable Aging

This report provides a listing of customers and their aged outstanding balances. Customers may be included if they have posted business transactions (e.g. invoices) for the selected accounts receivable account. It shows their current balance, and how much they have outstanding from invoices over time periods 0-30 days, 31-60 days, 61-90 days, and over 90 days. The report also contains links to each customer and to their current customer report.

Optionally, customer address details may be also shown.

Tip

To export customer address details, say in order to do a mail merge, select the optional customer address details in the report options display tab, apply the options to regenerate the report, then copy and paste the report into a spreadsheet. Alternatively, the report can be exported to a .html file, then read into a spreadsheet.

Report Options

Note

See Common Report Options in the *Configuring Reports and Charts* section of this help manual for more details of the common options.

- *General tab*

- Report name: Enter a descriptive name for this report - see Common Report Options.
- Stylesheet: Select a style sheet for this report - see Common Report Options.
- To: Select a date to report on or a named date. Transactions up to and including the selected date will be used to calculate the outstanding aged balances. See Common Report Options.
- Report's currency: Select the currency to display the values in - see Common Report Options.
- Price Source: Select the source of price information used for commodity conversion if needed. One of

Average Cost	The volume-weighted net average price of all exchanges
Weighted Average (default)	The volume-weighted gross average price of all exchanges
Most recent	The most recent recorded price
Nearest in time	The price recorded nearest in time to the report date

- Show Multi-currency Totals: If not selected, all totals are shown in the report currency.
- Sort By: Sort companies by one of

Name (default)	Company name
Total Owed	Total amount owed by company
Bracket Total Owed	Amount owed in oldest bracket. If same, use next oldest

- Sort Order: One of

Increasing (default)	
Decreasing	

- Show zero balance items: Show companies even if they have a zero outstanding balance.
- Due or Post Date: Leading date. Which date to use to determine aging. One of

Due Date (default)	
Post Date	

- Receivables Account: The accounts receivable account used to select customers to be reported. Customers are included if they have a posted business transaction (usually an invoice) on or before the report date and also meet the *Show zero balance items* criteria.

- *Display tab*

- Address Source: Which customer address fields to display. One of

Billing (default)	148	Address fields from billing address.
Shipping		Address fields from shipping address.

- Address Name: Display customer address name. This, and other fields, may be useful if copying this report to a spreadsheet for use in a mail merge.
- Address 1: Display address line 1.
- Address 2: Display address line 2.
- Address 3: Display address line 3.
- Address 4: Display address line 4.
- Phone: Display address phone number.
- Fax: Display address fax number.
- Email: Display email address.
- Active: Display vendor active status.

Tax Invoice

Vendor Report

Income & Expense

The Income & Expense reports includes the Cash Flow and Income Statement reports.

- Cash Flow:
- Equity Statement:
- Expense Barchart:
- Expense Piechart:
- Expense vs Day of Week:
- Income & Expense Chart:
- Income Barchart:
- Income Piechart:
- Income Statement: This report summarizes sources of income and expenditure. (This report was called Profit & Loss in gnucash-1.8.)
- Income vs Day of Week:
- Profit & Loss: This is the same report as the Income Statement but with a different title.
- Trial Balance: This report summarizes sources of income and expenditure.

Sample & Custom

Welcome Sample Report

Custom Multicolumn Report

This report is used to place multiple reports into a single report window to examine a set of financial information at a glance.

Sample Report with Examples

Budget

Budget Balance Sheet

Budget Barchart

Budget Flow

Budget Income Statement

Budget Profit & Loss

Budget Report

This report is used to compare budgeted and real amounts for selected accounts. It allows you to review how well you follow the budget.

The report is generated as a table in which each row represents an account and each set of columns shows the *budgeted amount*, the *real amount*, and the *difference* between them for each report period.

Each entry in the *real amount* column is the sum of all the splits in the row's account over the column's period. For example, if the report is set up for monthly periods, the column is for May, and the row is for Expenses:Groceries, then the value will be the sum of all Expenses:Groceries splits for that May.

The report supports selecting a range of periods instead all of them. Periods that are out of range can be included in the report as the consolidated columns around the selected range. This allows you to focus on particular periods, for example the current one, and is especially useful for budgets with many periods. For example, if you have a 12 period budget you can make a 3 column report with the format "(all periods before columns set) (current period columns set) (all periods after columns set)" that is easily fits on the screen and allows you to match values with account names.

Budget report options

Note

Here we describe only options that are specific for the Budget Report. You can find information about standard parameters in the section called "Configuring Reports and Charts".

- *Show budget* - include the budgeted values for the period
- *Show actual* - include the real values for the period

- *Show difference* - include the difference between budgeted and real values for the period. Enabling this option does not force including budgeted and actual values in the report
- *Show Column with totals* - Adds a final column set containing budgeted, real value, and difference columns summing those values across all periods of the report.
- *Rollup budget amounts to parent* - not used in the report, can be deleted or should be fixed
- *Include accounts with zero total balances and budget values* - enables display of accounts with no budget or splits in any period.
- *Budget* - Select the budget to use for report generation
- *Report for range of budget periods* - Enables reporting on a subset of the budget by selecting a beginning and an ending period.
- *Range start* - a combobox with a list of options to select the start period:
 1. *First* - select first budget period
 2. *Previous* - select previous period.
 3. *Current* - select current period.
 4. *Next* - select next period.
 5. *Last* - select last budget period
 6. *Manual* - enables spinbox where you can select exact period

Note

The *current*, *previous*, and *next* options select the period based on the date on which the report is run, with *current* being the period in which the date falls, *previous* being the one before that, and *next* the period after. If the current date falls outside the date range covered by the budget, the *first* or *last* period will be used as appropriate.

- *Exact start period* - options for select exact start period, enabled only if the range start option is set to *Manual*
- *Range end* - a combobox with a list of options to select the end period. Values are the same as in *Range start* options
- *Exact end period* - the same as *Exact start period* but for the end of range
- *Include collapsed periods before selected* - if on, then includes in the report all budget periods, that are before selected period range, as a single consolidated column set
- *Include collapsed periods after selected* - if on, then includes in the report all budget periods, that are after selected period range, as a single consolidated column set.

Printing or Exporting Reports and Charts

Note

Verify !!! How customize printing with Gnome?

GnuCash is able to print reports and to export the reports to HTML (web) pages. The Print GnuCash Document dialog is accessed from the Print button on the *Toolbar* or go to File → Print in the menu. To Export a report to a web page (HTML) select the Export button on the *Toolbar* and type in a file name.

Most reports, being presented in HTML, can also be copied and pasted into a spreadsheet.

The Print GnuCash Document dialog is used to select which Printer to send the print job to or to print to a File. It also contains a Preview button to view the document before printing. Press Print to send the job to the selected printer or Cancel to dismiss the Print dialog.

Printing from an open register prints the Account Report, which is also called the Register Report. This lists transactions in the account with a total. Other reports print as viewed in the Report screen.

Creating Reports and Charts

Note

This section may need updating !!!

It is possible to write reports if the current ones are not suitable. To do this you will need to know Scheme (a LISP-like programming language), and it is an excellent idea to have a copy of the GnuCash source code available.

The reporting interface is documented in the source code file `src/report/report-system/doc/report-html.txt`. The file `src/report/utility-reports/hello-world.scm` in the GnuCash source distribution provides a good example of how reports are developed.

Accessing the GnuCash API

It is also necessary to access data from the engine to get information for your report. This is *since version 2.1.x* performed by a set of Scheme wrapper functions that are documented in the file `src/engine/swig-engine.c`. *Up to version 2.0.5* it was `src/g-wrap/gnc.html`. Examine some of the other reports in `src/scm/report` for an indication of how they are used.

Some users started a table in https://wiki.gnucash.org/wiki/Custom_Reports#The_GnuCash_API.

Because the above file only contains the syntax of the function you can use the Doxygen source documentation either local after running

```
./configure --enable-doxygen --enable-html-docs
make doc
```

on your sources or online <https://code.gnucash.org/docs/MAINT/> or <https://code.gnucash.org/docs/MASTER/> to get more information about the functions.

Report Rendering

At present, reports are produced by calling a HTML-generation API, which outputs a dialect of HTML and rendering this with a HTML widget. This has limitations, particularly when trying to align objects precisely, as might be necessary for printing onto pre-printed invoices for example.

Chapter 10. Customizing GnuCash

Account Display Options

The View → Filter By ... is used to set or modify the view of the account tree window. The Accounts tab of this form allows the selection of the types of accounts to display. These selections effect the view on each specific open window of the account tree.

The Other tab allows enabling/disabling of the options; Show Hidden accounts, Show zero total accounts.

The account tree window, by default, only shows the quantity of each commodity that you own, under the column heading Total. Often, however, you may want to display other values. This is easily accomplished by clicking on the Options button (the small down pointing arrow on the right side of the main account window *Titlebar*), and selecting the option(s) to display. These selections set the view on all open windows of the account tree.

Setting Preferences

The GnuCash Preferences window allows you to customize your GnuCash session by setting several options. From the GnuCash menu select Edit → Preferences (GnuCash → Preferences on MacOS). The GnuCash Preferences window will open. Using the tabs on the left make your desired changes. The settings in this dialog are set per user and not stored with the file. This is in contrast to the settings described in the section called “Book Options”, which are kept with, and are part of, the file (or Book), and as such are common to all users. So GnuCash Preferences settings are individual to each user who uses a given file and any changes made by one user will not affect other users of that file. Also, a given user's preferences will be common to all files that that user opens with GnuCash.

Tip

Pausing the cursor for a couple of seconds over options in these windows will display a tooltip with in-depth information on the choice.

Note

The changes you make will be applied at once.

To close the GnuCash Preferences window press the Close button.

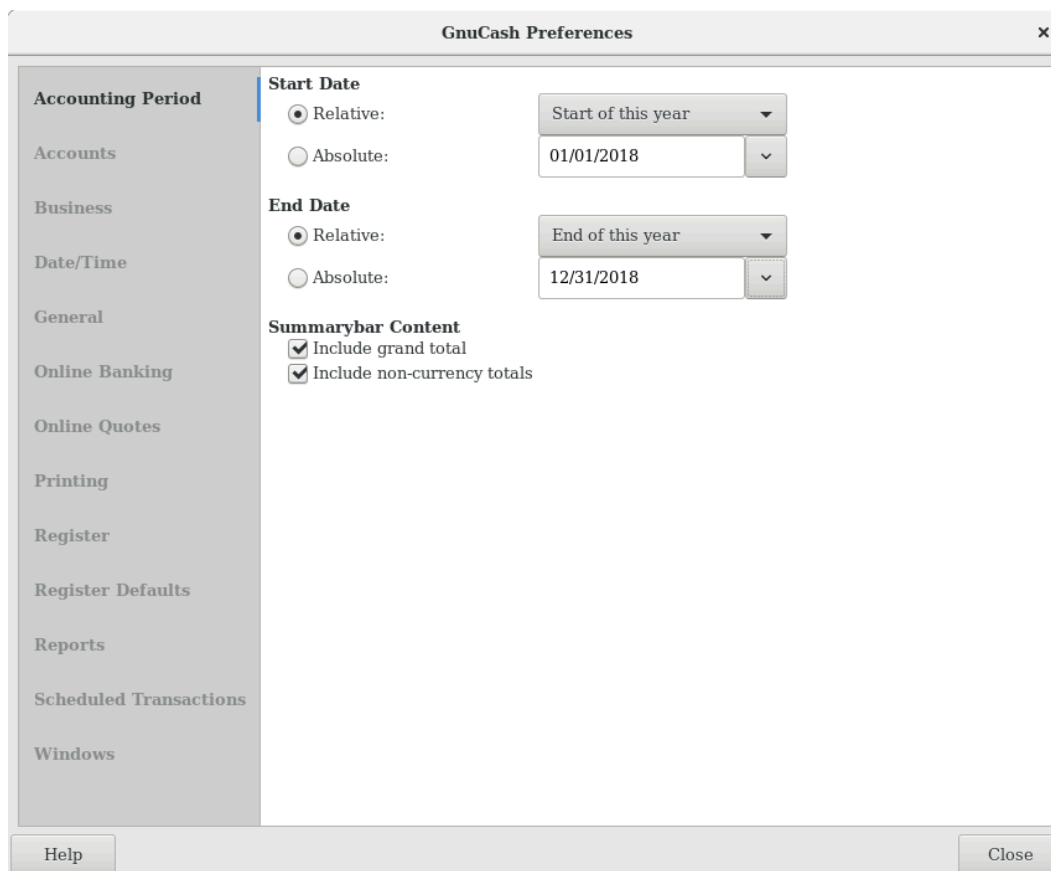
Each tab in the GnuCash Preferences window is discussed in its own section below. For a listing of the tabs, see Chapter 10, *Customizing GnuCash*.

Note

The presentation of the sections that follows matches the order of the tabs, which are sorted alphabetically by name, in English. The order of the tabs may be different in other languages.

Accounting Period

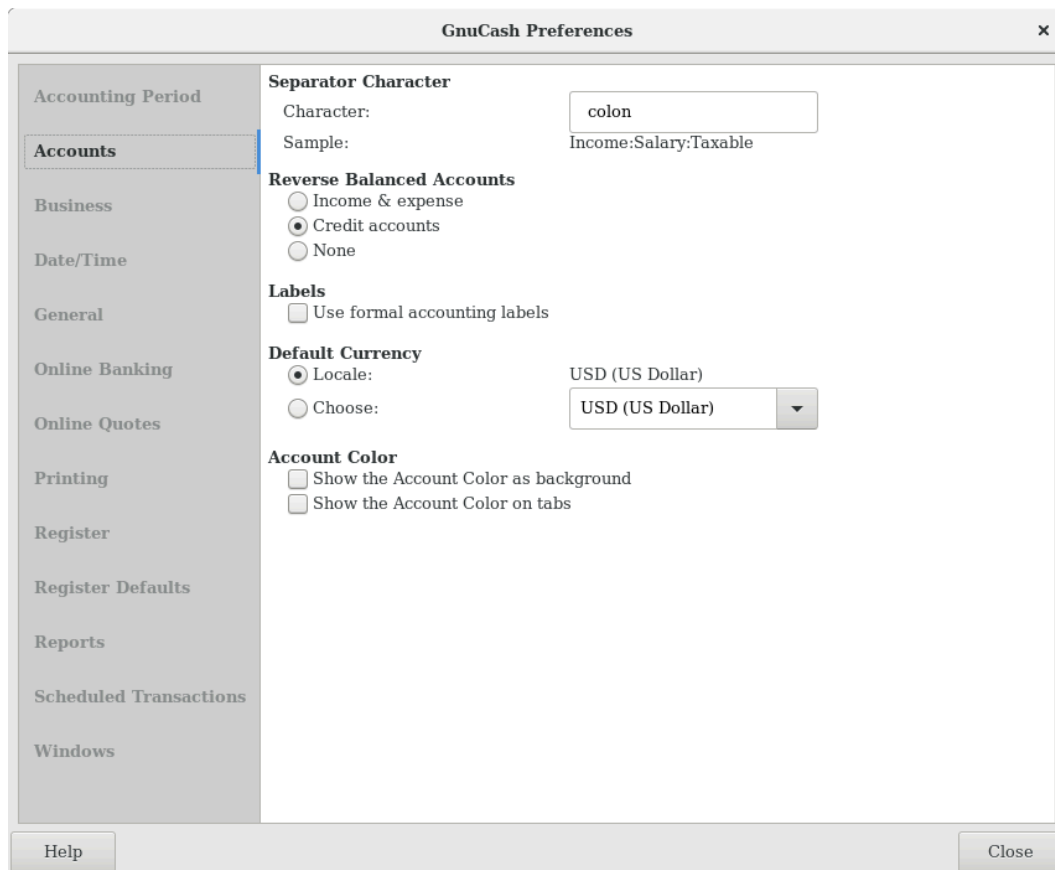
Figure 10.1. The Preferences window, Accounting Period tab



- **Start Date:** This item sets the accounting period's start date.
 - **Relative:** Use the specified relative starting date for profit/loss calculations. Also use this date for net assets calculations. Relative defines start by today or start of current/previous year, quarter, month.
 - **Absolute:** Use the specified absolute starting date for profit/loss calculations. Also use this date for net assets calculations.
- **End Date:** This item sets the accounting period's end date.
 - **Relative:** Use the specified relative ending date for profit/loss calculations. Also use this date for net assets calculations.
 - **Absolute:** Use the specified absolute ending date for profit/loss calculations. Also use this date for net assets calculations.
- **Summarybar content**
 - **Include grand total:** If checked, show in the *Summarybar* a grand total of all accounts converted to the default currency.
 - **Include non-currency totals:** if this option is selected, GnuCash will include in the *Summarybar* a total for non-currency items (for instance number of shares).

Accounts

Figure 10.2. The Preferences window, Accounts tab

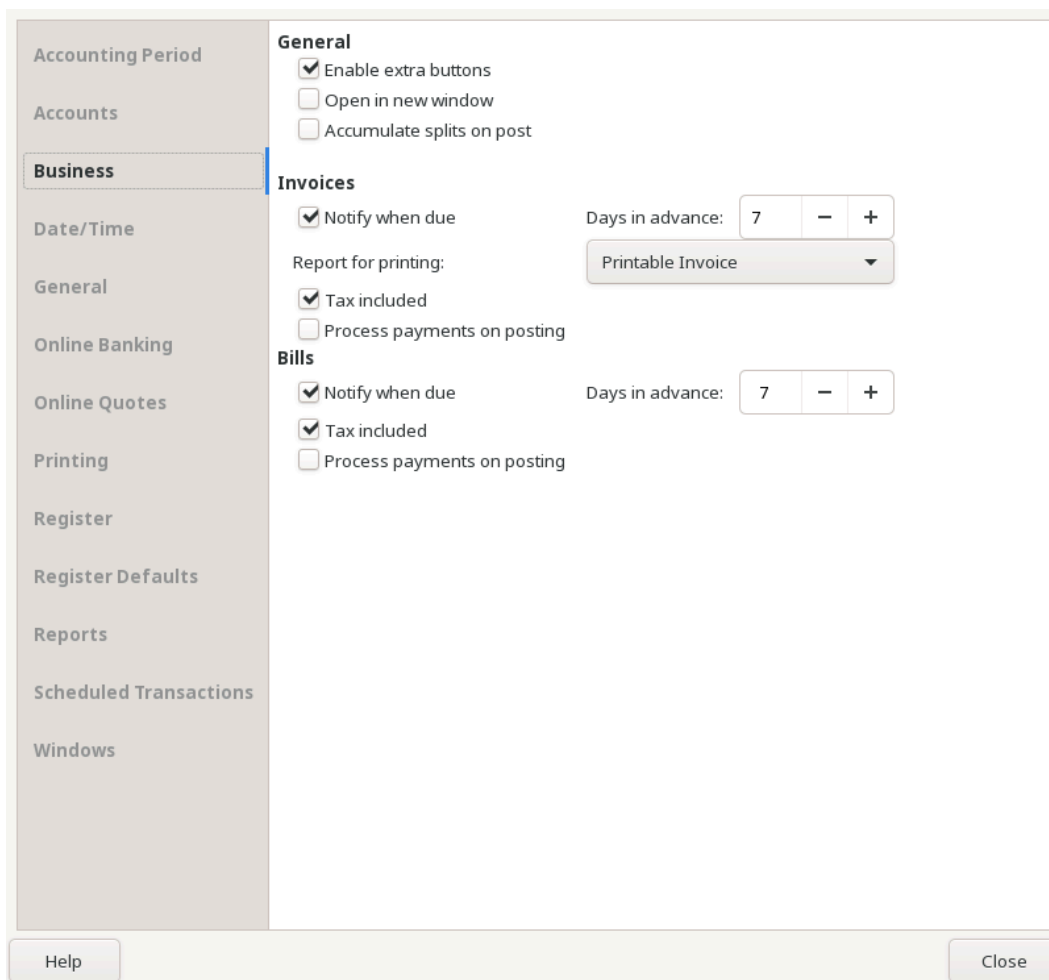


- **Separator Character:** The account separator is the character that separates a parent account from its sub-account, for example Utilities:Electric. The default is a : (Colon), but you can also select / (Slash), \ (Backslash), - (Dash) or . (Period), or any Unicode character that isn't a letter or a number.
- **Reverse Balanced accounts:** This option lets you determine whether account balances will display as positive or negative numbers:
 - **Income & Expense** assigns a positive credit balance to income account balances and a negative debit balance to expense account balances. See the section called “Types of GnuCash Accounts” for more information on these account types.
 - **Credit accounts (default)** displays a positive balance for account types that would normally carry a credit balance (income, credit, liability, equity). See the section called “Types of GnuCash Accounts” for more information on these account types.
 - **None** shows all credit balances as negative and all debit balances as positive.
- **Labels:** Select this option if you want column headings in the register to refer to debits and credits instead of the default informal headings such as withdrawal and deposit.
- **Default Currency:** This item determines which currency will be selected by default when creating new accounts.

- Locale: Use the system locale currency for all newly created accounts.
- Choose: specify the currency to use, independent of your system settings.
- Account Color: This option lets you manage the display of the account color set in the Edit Account window:
 - Show the Account Colors as background: show the accounts color as account name background in the Accounts Page.
 - Show the Account Colors on tabs: show the accounts color as background in the account register tabs.

Business

Figure 10.3. The Preferences window, Business tab



- General
 - Enable extra buttons: If checked, extra toolbar buttons for common business functions are shown.
 - Open in new window: If checked, each invoice will be opened in its own top level window. If clear, the invoice will be opened in the current window.

- Accumulate splits on post: Whether multiple entries in an invoice which transfer to the same account should be accumulated into a single split by default.
- Invoices
 - Report for printing: Allows to select the invoice report to be used for printing.
 - Tax Included: Whether tax is included by default in entries on invoices. This setting is inherited by new customers and vendors.
 - Auto pay on posting: If enabled, at post time automatically attempt to pay customer documents with outstanding pre-payments and counter documents.

Note

Counter documents are documents with opposite sign. For example for an invoice, customer credit notes and negative invoices are considered counter documents.

The pre-payments and documents obviously have to be against the same customer.

- Bills
 - Notify when due: Lets you set whether you want to be notified at GnuCash startup of when a bill is soon to be due.
 - Days in advance: How many days before the due date to warn about bills coming due.
 - Tax Included: Whether tax is included by default in entries on bills. This setting is inherited by new customers and vendors.
 - Process payments on posting: If enabled, at post time automatically attempt to pay vendor documents with outstanding pre-payments and counter documents.

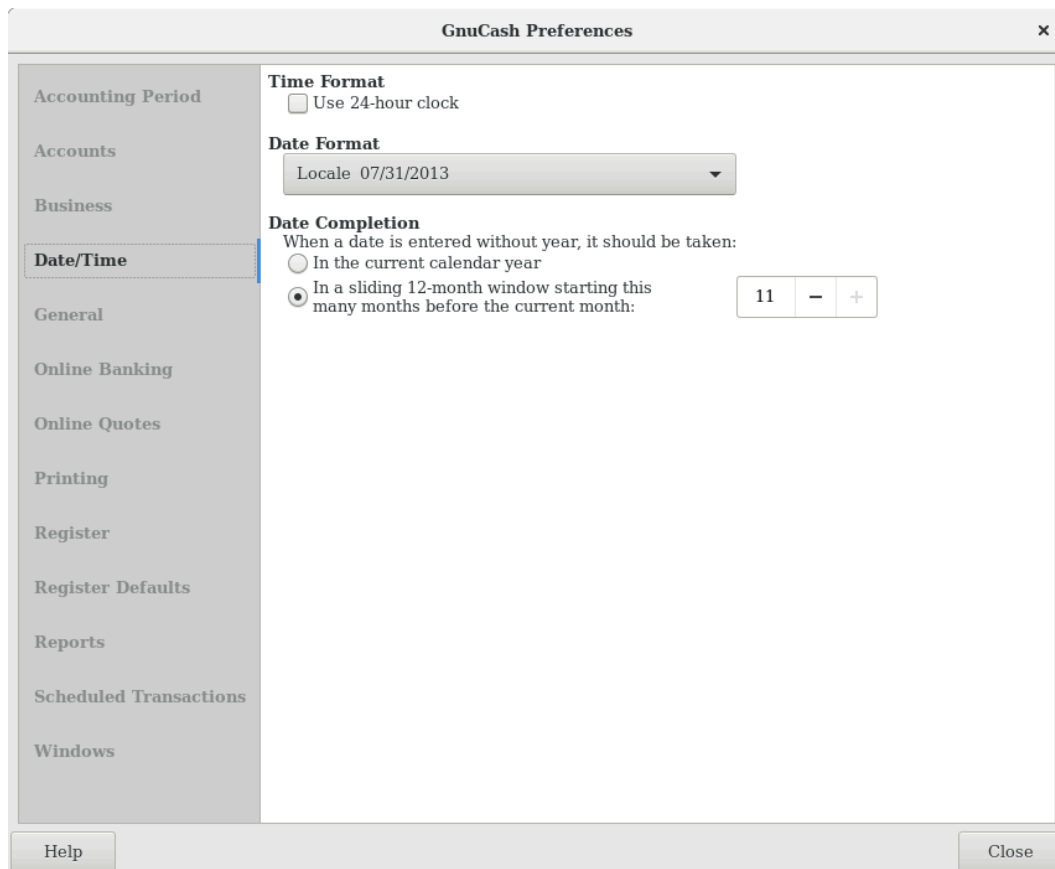
Note

Counter documents are documents with opposite sign. For example for a bill, vendor credit notes and negative bills are considered counter documents.

The pre-payments and documents obviously have to be against the same vendor.

Date/Time

Figure 10.4. The Preferences window, Date/Time tab

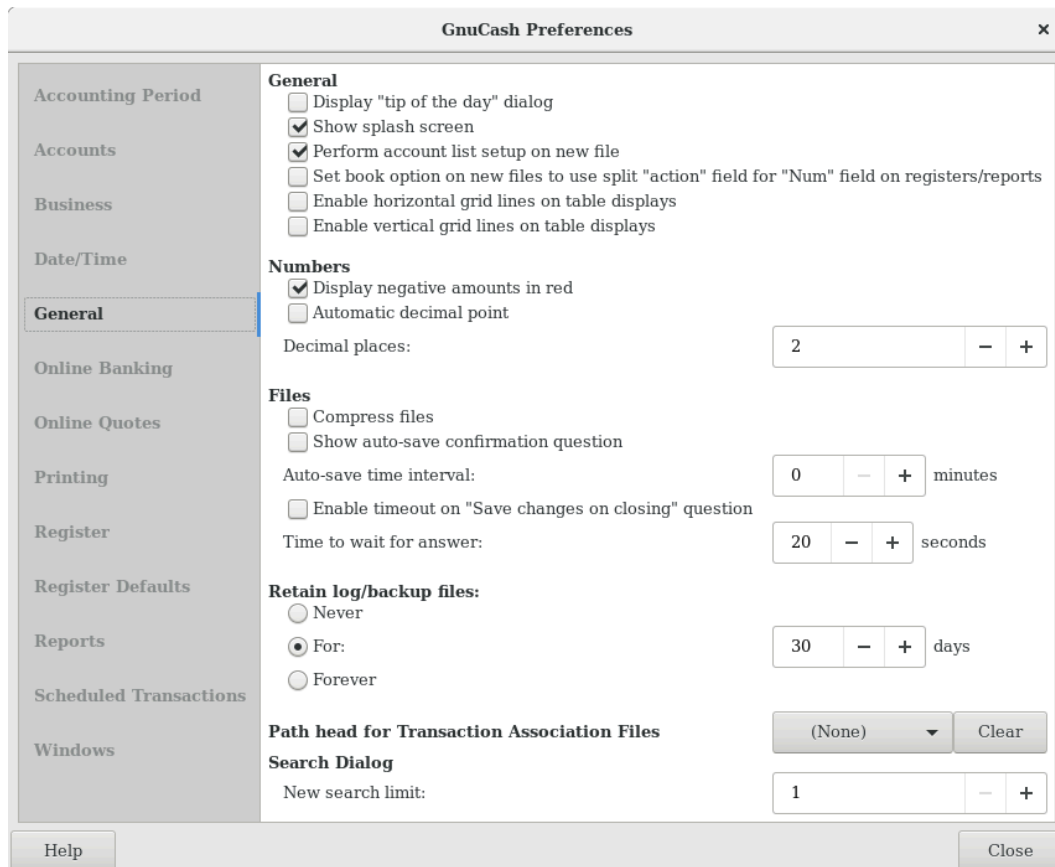


- Time Format
 - Use 24-hour clock: Lets you specify if you want to use 24 or 12 hours time format. That is if 11 o'clock at night should be represented as 11PM or 23:00.
- Date Format: This option controls the appearance of the date (you can see a preview of the date beside each of the choices). The available choices are:
 - US: Use the date format common in the United States.
 - UK: Use the date format common in the United Kingdom.
 - Europe: Use the date format common in continental Europe.
 - ISO: Use the date format specified by the ISO-8601 standard.
 - Locale: Use the date format specified by the system locale.
- Date completion: This option lets you manage the case when a date is entered without a year:
 - In the current calendar year: (Default) Dates will be completed so that they are within the current calendar year.

- In a sliding 12-month window starting a configurable number of months before the current month: Dates will be completed so that they are close to the current date. You can enter the maximum number of months to go backwards in time when completing dates.

General

Figure 10.5. The Preferences window, General tab



- **General**
 - **Display "Tip of the Day" dialog:** This option displays or hides the Tip of the Day screen when GnuCash is started.
 - **Show splash screen:** With this option you can enable or disable the visualization of the startup screen while GnuCash is starting up.
 - **Perform account list setup on new file:** This option turns off the display of the New Account Hierarchy Setup assistant when the entry File → New File is selected from the GnuCash menu.
 - **Set book option on new files to use split "action" field for "Num" field on registers/reports:** If selected, the displayed setting on the New Book Options dialog for the Use Split Action Field for Number setting will be selected and, if saved, the book option for the new file will be set so that the "Num" field on registers shows/updates the split-action field and the transaction-num field is shown on the second line in double line mode (and is not visible in single line mode). Otherwise, the displayed setting on the dialog will not be selected and, if saved, the book option for the new file will be set so that the

"Num" field on registers shows/updates the transaction-num field. See the discussion in the section called "Book Options" about how to set book options including the option for the section called "Use Split Action Field for Number". Regardless of the setting of this preference, the user can modify the initially displayed setting for this option on the New Book Options dialog before saving the options.

Note

If the New Book Options dialog appears in situations where a new book is being set up, the settings from this preference will determine the default setting for the corresponding check box on the dialog. However, the OK button on the New Book Options dialog must be pressed for the setting to be made for the new book; otherwise it will default to *not selected*.

- Numbers
 - Display negative amounts in red: If you turn off this option, GnuCash will display negative numbers in black.
 - Automatic Decimal Point: This option will automatically insert a decimal point into numbers you type in.

Note

When a calculation is entered in the Amount field, the decimal sign is inserted into *every* operand that omits a decimal separator.

- Decimal Places: This field allows you to set the number of decimal places to be used.
- Files

Note

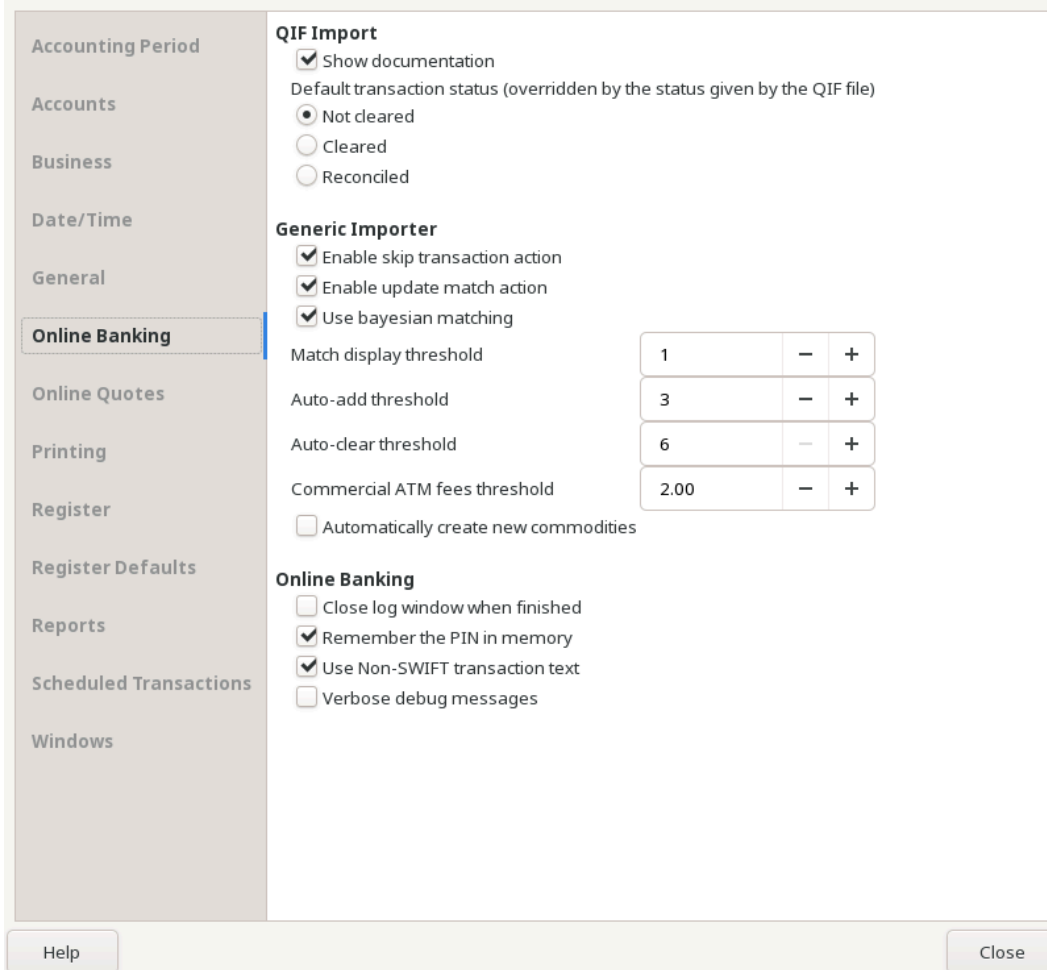
The following options are only relevant for files saved in XML format.

- Compress files: This option determines whether the GnuCash data file will be compressed or not.
- Show auto-save confirmation question: If this option is enabled, GnuCash will show you a confirmation screen each time the auto-save process is started.
- Auto-save time interval: This field sets the number of minutes between each automatic saving of the file. Set to 0 to disable the auto-save feature.
- Enable timeout on "Save changes on closing" question: If enabled, the Save changes on closing question will only wait a limited number of seconds for an answer. If the user didn't answer within that time, the changes will be saved automatically and the question window closed. You can set the number of seconds in the Time to wait for answer field.
- Retain log files: In this section you can set your preferences about the log files using the provided radio buttons.
 - Never: Disable the creation of log files.
 - For: Enter a specific number of days for which keep the files.
 - Forever: Disable the auto deletion of log files; retains the log files forever.
- Search Dialog

- New search limit: Defaults to "new search" if fewer than this number of items is returned.

Online Banking

Figure 10.6. The Preferences window, Online Banking tab



- QIF Import
 - Show documentation: The first time you use the QIF importer you may notice that the importer has detailed instructions on how to import a file. Once you have become familiar with using the importer, you might want to turn off this option. Turning off the option gives you less detail in the importer screens.
 - Default transaction status (overridden by the status given by the QIF file): In this section you can set the default status for imported transactions using the provided self-explaining radio buttons:
 - Not cleared (Default)
 - Cleared
 - Reconciled

- **Generic Importer**
 - **Enable skip transaction action:** Enable the SKIP action in the transaction matcher. If enabled, a transaction whose best match's score is in the yellow zone (above the Auto-ADD threshold but below the Auto-CLEAR threshold) will be skipped by default.
 - **Enable update match action:** Enable the UPDATE AND RECONCILE action in the transaction matcher. If enabled, a transaction whose best match's score is above the Auto-CLEAR threshold and has a different date or amount than the matching existing transaction will cause the existing transaction to be updated and cleared by default.
 - **Use Bayesian matching:** Use Bayesian algorithms to match new transactions with existing accounts.
 - **Match display threshold:** The minimal score a potential match must have to be displayed in the match list.
 - **Auto-add threshold:** A transaction whose best match's score is in the red zone (above display threshold, but below or equal to Auto-add threshold) will be added by default.
 - **Auto-clear threshold:** A transaction whose best match's score is in the green zone (above or equal to Auto-clear threshold) will be cleared by default.
 - **Commercial ATM fees threshold:** In some places commercial ATMs (not belonging to a financial institution) are installed in places like convenience stores. These ATMs add their fee directly to the amount instead of showing up as a separate transaction or in your monthly banking fees. For example, you withdraw \$100, and you are charged \$101.50 plus Interac fees. If you manually entered that \$100, the amounts won't match. You should set this to whatever is the maximum such fee in your area (in units of your local currency), so the transaction will be recognized as a match by GnuCash.
 - **Automatically create new commodities:** Enables the automatic creation of new commodities if any unknown commodity is encountered during import. If not enabled, the user will be asked what to do with each unknown commodity.
- **Online Banking**

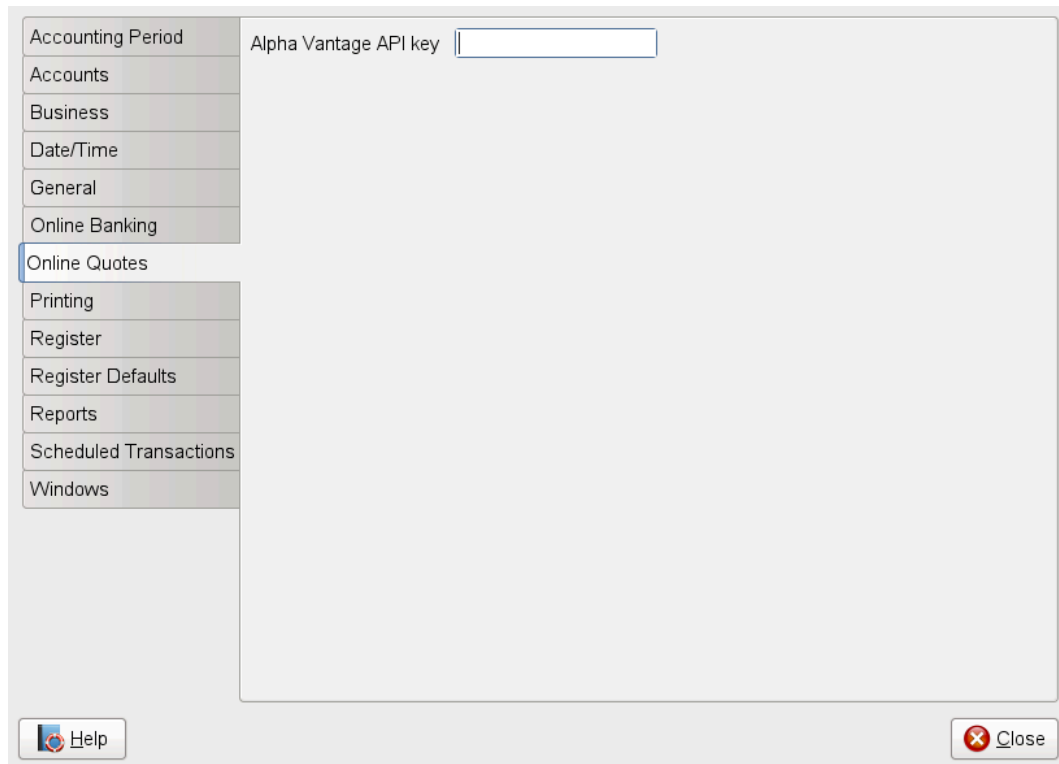
Note

This section is shown only if GnuCash is compiled with Aqbanking and HBCI support.

- **Close log window when finished:** Close the log window when the operation is completed.
- **Remember PIN:** Enable this option if you want GnuCash to remember the PIN you enter for online banking authentication.
- **Verbose debug messages:** Enable this option if you want GnuCash to show more information about the online banking operations.

Online Quotes

Figure 10.7. The Preferences window, Online Quotes tab



The Online Quotes tab allows you to set options that affect the fetching of online quotes with the perl module `Finance::Quote`.

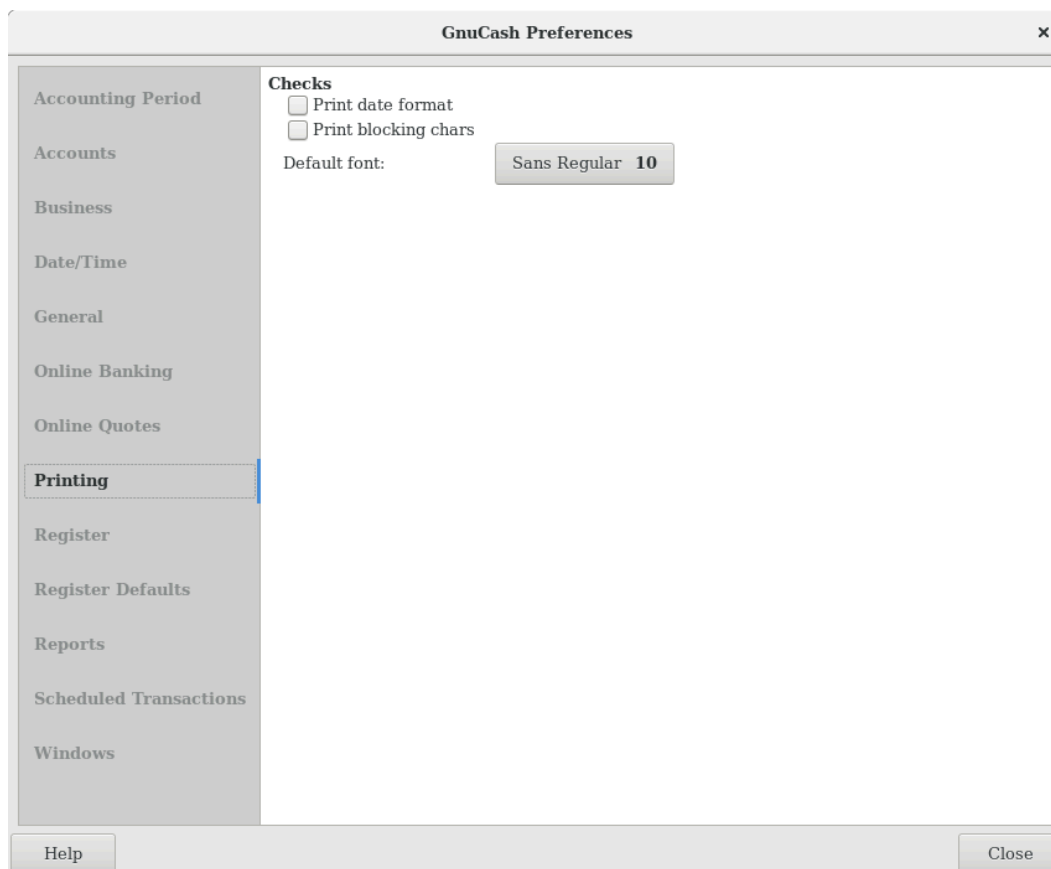
- Alpha Vantage API key: To retrieve online quotes from Alphavantage, this key needs to be set. A key can be retrieved from the Alpha Vantage website [<https://www.alphavantage.co/>].

See also:

- the section called “Finance::Quote Sources”,
- “Automatic Updating Exchange Rates” in the guide.

Printing

Figure 10.8. The Preferences window, Printing tab

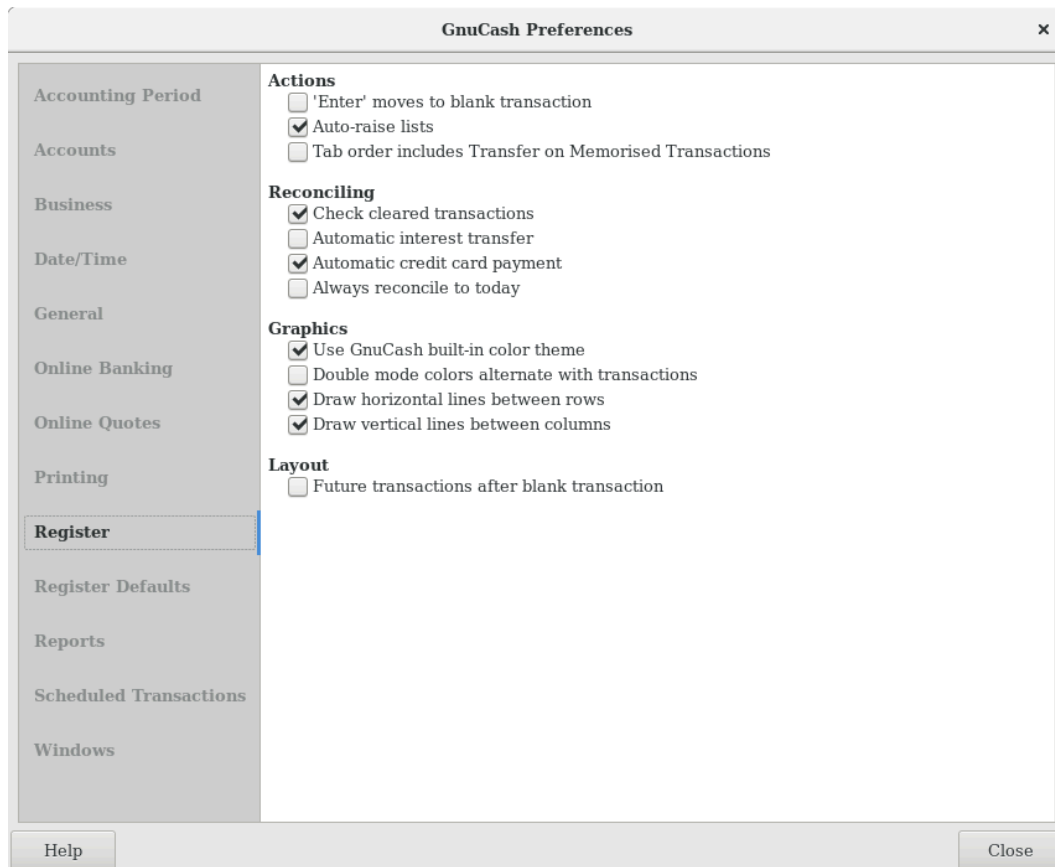


The Printing tab allows you to set some options that affect the printing of checks on paper.

- **Print date format:** Enable this option if you want to print on the check, below the actual date, its format in 8 point type.
- **Print blocking chars:** Enable this option to print a series of three asterisks before and after each text field in the check.
- **Default font:** Click the button on the left to open a Pick a Font screen in which you can customize the font that will be used to print checks.

Register

Figure 10.9. The Preferences window, Register tab

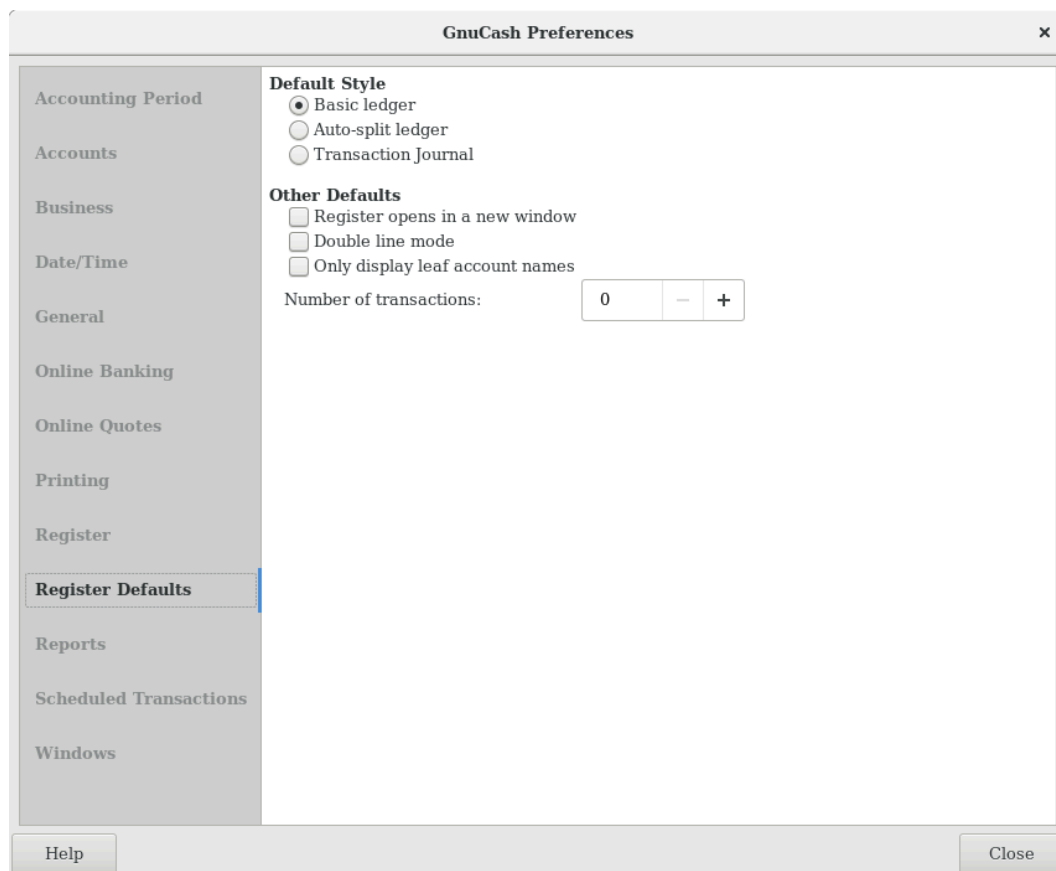


- **Actions**
 - 'Enter' moves to blank transaction: If selected, move the cursor to the blank transaction at the end of the register after the user presses the **Enter** key. Otherwise the cursor will be moved down one row.
 - Auto-raise lists: If selected, all lists will automatically be expanded when input focus is in the list field.
 - Tab order includes Transfer on Memorized Transaction: If selected, when the transaction is auto filled, pressing the **Tab** key in the register the cursor's jump will include the Transfer field.
- **Reconciling**
 - Check cleared transactions: If selected, automatically check off cleared transactions when reconciling.
 - Automatic interest transfer: If selected, prior to reconciling an account which charges or pays interest, prompt the user to enter a transaction for the interest charge or payment. Currently only enabled for Bank, Credit, Mutual, Asset, Receivable, Payable, and Liability accounts.
 - Automatic credit card payment: If selected, after reconciling a credit card statement, prompt the user to enter a credit card payment.
 - Always reconcile to today: If selected, always open the reconcile screen with today's date for statement date, regardless of previous reconciliation.

- Graphics
 - Use GnuCash built-in color theme: If selected, the original GnuCash register color theme will be used. Otherwise the system color theme will be applied to register windows.
 - Double mode colors alternate with transactions: If selected, configures the register window to alternate between the primary and secondary colors with each transaction, instead of each row.
 - Draw horizontal lines between rows: If selected, GnuCash will draw a horizontal line between each row.
 - Draw vertical lines between columns: If selected, GnuCash will draw a vertical line between the cells in each row.

Register Defaults

Figure 10.10. The Preferences window, Register Defaults tab



The Register Defaults tab preferences affect the behavior of the transaction register windows.

- Default Style

Here you can choose from 3 different styles for register windows:

- Basic ledger: Show all transactions on one line. (Two in double line mode.)

- Auto-split ledger: Automatically expand the current transaction to show all splits. All other transactions are shown on one line. (Two in double line mode.)
- Transaction journal: All transactions are expanded to show all splits.
- Other Defaults
 - Register opens in a new window: If selected, register will be in a separate window instead of in a tab.
 - Double line mode: If selected, show two lines of information for each transaction instead of one.
 - Only display leaf account names: If selected, only the name of the leaf accounts will be displayed in the Account selection popup. The default behavior is to display the full account name including the path in the account tree.

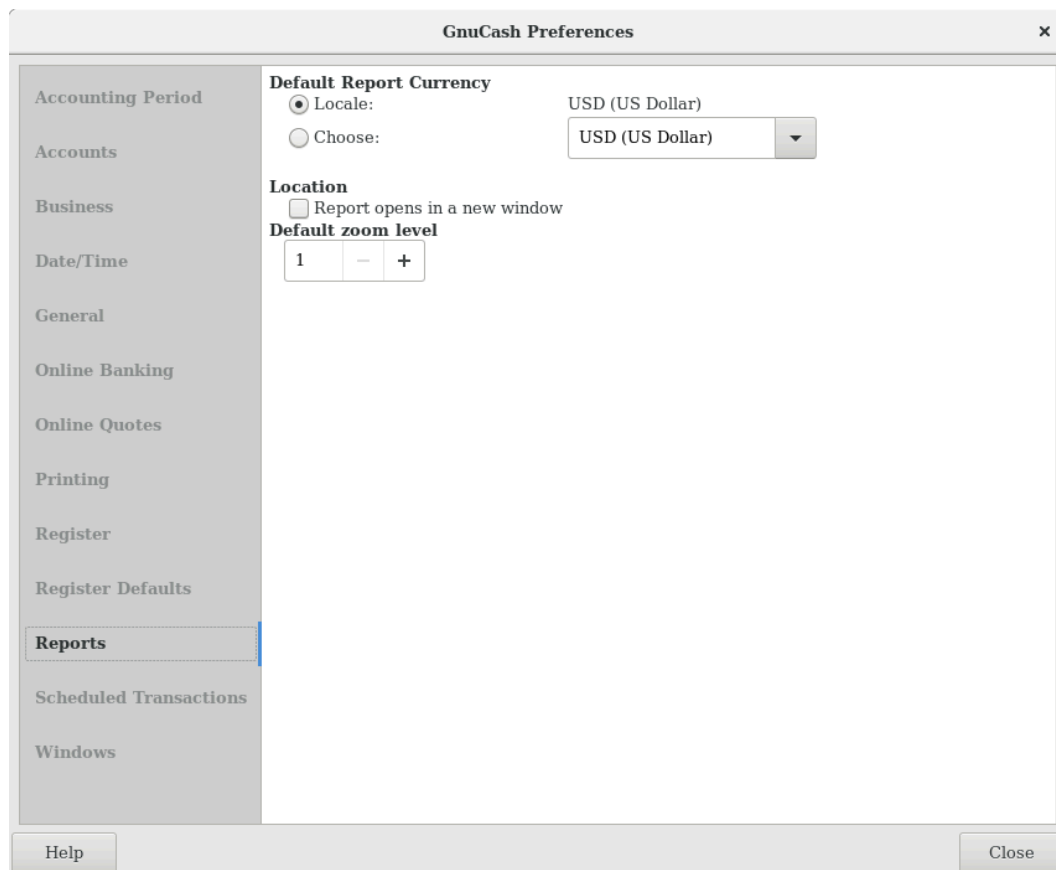
Warning

Enabling this option implies that you use unique leaf account names.

- Number of transactions: How many transactions to show in a register. Set to 0 to show all transactions.

Reports

Figure 10.11. The Preferences window, Reports tab

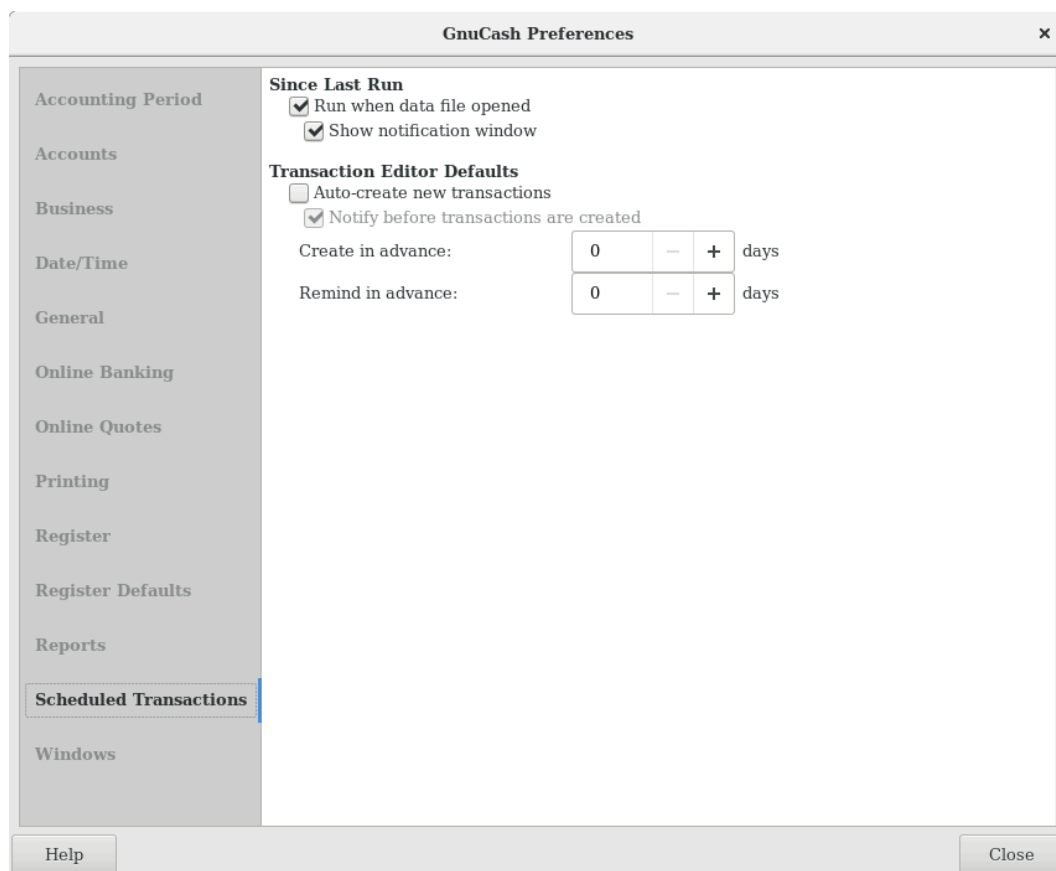


The Reports tab preferences affect the behavior of GnuCash reports.

- **Default Report Currency:** This item determines which currency will be used by default when creating reports. You can choose:
 - **Locale:** Use the system locale currency for all newly created reports.
 - **Choose:** Use the specified currency for all newly created reports.
- **Location**
 - **Report opens in a new window:** if you select this option, the reports will open up in a new window, instead of in a tab.

Scheduled Transactions

Figure 10.12. The Preferences window, Scheduled Transactions tab



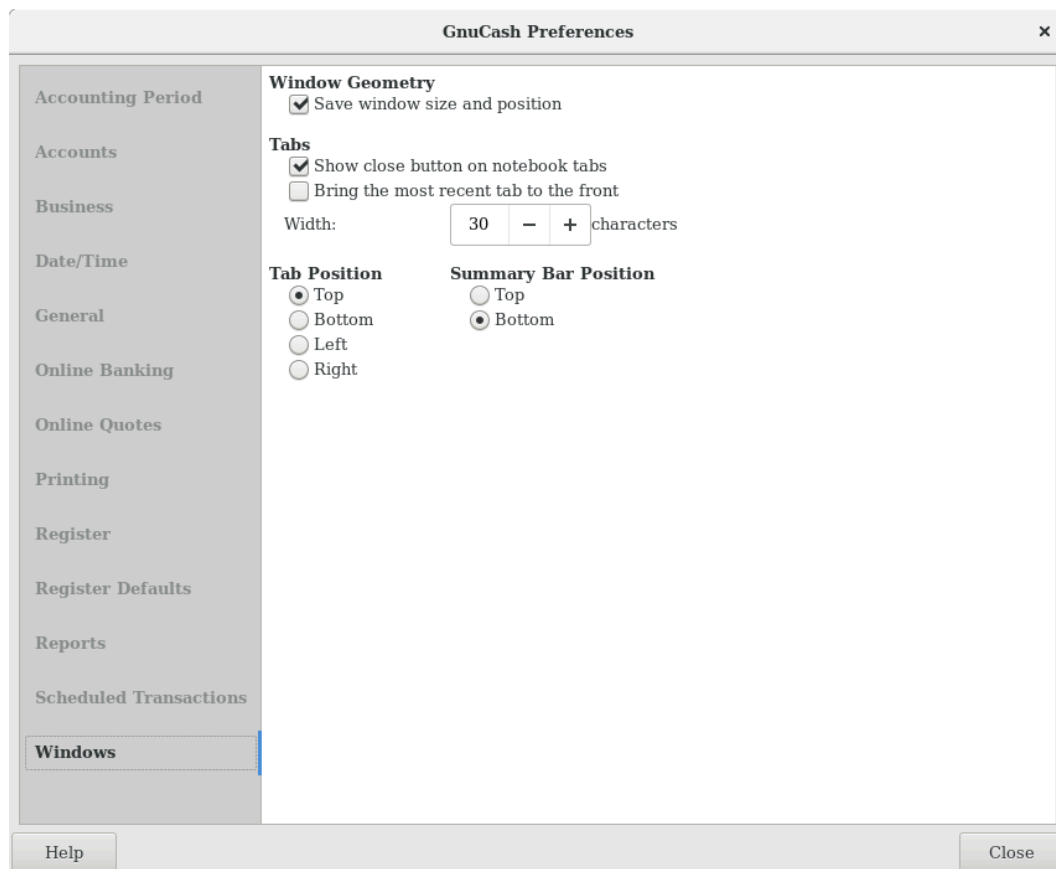
The Scheduled Transactions tab preferences affect the behavior of GnuCash for scheduling transactions. More information about scheduled transactions can be found in the section called “Scheduling Transactions”.

- **Since Last Run Dialog**
 - **Run when data file opened:** If selected, the Since Last Run screen will appear when GnuCash opens the file.
 - **Show notification window:** If selected, a list of scheduled and created transactions will appear when GnuCash opens the file.

- Transaction Editor Defaults
 - Auto-Create new transactions: If selected, new scheduled transactions will automatically be entered into the register. If the auto-create option is enabled, you can also check Notify before transactions are created so that you will be able to confirm creating the transactions.
 - Create in advance: The default number of days in advance to create the registered scheduled transactions.
 - Remind in advance: The default number of days in advance to remind about new scheduled transactions.

Windows

Figure 10.13. The Preferences window, Windows tab



- Window Geometry
 - Save window size and position: If selected, next time GnuCash starts it will re-use the window size and position configured in the last run.
- Tabs
 - Show close button on notebook tabs: Adds a small close icon on each tab, to make it easier to close the various tabs.

- Bring the most recent tab to the front: If selected, the newly created tab will be shown over the other tabs.
- Width: The width of tab label expressed in characters.

Note

If the text in the tab is longer than this value (the test is approximate) then the tab label will have the middle cut and replaced with an ellipsis.

- Tab Position

Position the tabs at the Top (default), Bottom, Left or Right.

- Summary Bar Position

Position the Summary Bar at the Top or at the Bottom (default) of the GnuCash main window.

Book Options

The File → Properties menu item is used to set or modify choices that affect how a specific GnuCash file (also referred to as a Book) operates. Selecting this menu item brings up the Book Options dialog. This dialog also appears in situations where you are importing transactions into a new book, with the title New Book Options. It is automatically raised in these 'new book' situations because these settings can affect how imported data are converted to GnuCash transactions and so should be considered and set before your first import (specifically, the the section called “Use Split Action Field for Number” setting).

The settings in this dialog are kept with, and are part of, the file (or Book). This is in contrast to the settings described in the section called “Setting Preferences”, which are set per user and not stored with the file. So Book Options settings are shared by all users who use a given file and any changes made by one user will affect all users of that file.

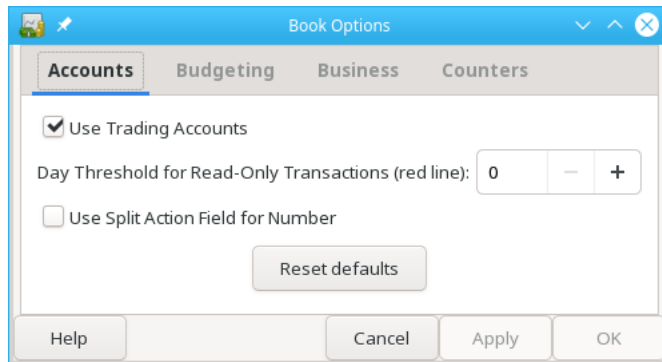
Tip

Pausing the cursor for a couple of seconds over options in these tabs will display a tooltip with a more detailed description of the choice.

The Book Options dialog has five buttons that are common to all tabs. The Reset defaults button takes all items on the visible tab and sets their value to the default setting; it only affects the visible tab. The Help button opens up a help window to this section. The Cancel button closes the dialog, making no changes to the saved settings for Book Options. The Apply button is initially insensitive but becomes sensitive when any setting is set or changed. Selecting it saves the setting(s) for the book but keeps the Book Options dialog open. Typically, the changes are reflected in the affected areas of GnuCash as soon as the button is pressed, so it can be used to 'see' the effect of a given option without having to re-open the dialog. The Apply button is not sensitive on the dialog if it appears during transaction import (that is, 'new book') situations. The OK button behaves like the Apply button except that it immediately *closes* the dialog, as well.

Accounts Book Options Tab

Figure 10.14. The Book Options window, Accounts tab



The Accounts tab of this dialog allows the selection of options that affect how accounting registers function.

Use Trading Accounts

Check the Use Trading Accounts checkbox to have trading accounts used for transactions involving more than one currency or commodity.

Day Threshold for Read-Only Transactions

Use the Day Threshold for Read-Only Transactions spin-box to choose the number of days before today, prior to which, transactions will be read-only and cannot be edited anymore in the registers. This threshold is marked by a red line in the account register windows. If zero, all transactions can be edited and none are read-only. This feature is intended to be used to guard against accidental changes to non-current transactions.

Use Split Action Field for Number

Note

This option is only available in GnuCash version 2.6 or later.

Check the Use Split Action Field for Number checkbox to have the split action field of the anchor split used for the 'Num' column in registers, reports and import/export functions, where applicable, in place of the transaction number; the transaction number is then shown as 'T-Num' on reports and on the second line of registers. This choice has a corresponding effect on business features.

The difference between the two is that with the checkbox not selected, the same 'Num' is displayed for a given transaction regardless of what register it is viewed in and with the checkbox selected, a different 'Num' can be entered/displayed for a given transaction in each register it is viewed in. In both cases, the 'next number logic' of the 'Num' cell is based on the account of the register the transaction is entered to or viewed from but in one case it fills the transaction number, in the other, it fills the split action field of the anchor split. In both cases, both fields are visible and can be viewed and used as free-form text in double-line mode for any value the user wants.

Warning

Initial setup of GnuCash: It is expected that, after careful consideration of the consequences, this option will be set when a new GnuCash file is created and not changed thereafter (see next

warning). For this reason, a preference is provided (see Setting Preferences - General) that can establish an initial default setting for new files, so that if you will have more than one file, it is easier to set them all up consistently. You may wish to set up a test file and experiment with the two settings to understand the differences before establishing your first real GnuCash file.

Tip

Moving from Quicken: For users that are switching from other personal accounting applications, such as Quicken, selecting this option may be more consistent with the numbering approach used there and can preserve the numbering of historical data brought over; this option should be set before performing the initial import.

Warning

Changing this option for an existing GnuCash file: If you change this option for an existing file, historical data will not be changed. This means that if you set the option one way, enter (or import) transactions, then change the option and enter (or import) additional transactions and switch back-and-forth, you will end up with a file that will appear to have inconsistent treatment of numbers in registers, reports and exports. This is because the setting of this option at the time of data entry/import determines where the number data is stored and the setting at the time of data display/reporting/exporting determines which field is displayed as number.

There is no reason to avoid changing this option for an existing GnuCash file if you understand the implications. If you elect to make this change, it should probably be done between accounting periods with the understanding that number data prior to the date the option is changed will be displayed/reported/exported differently from that after the date.

Warning

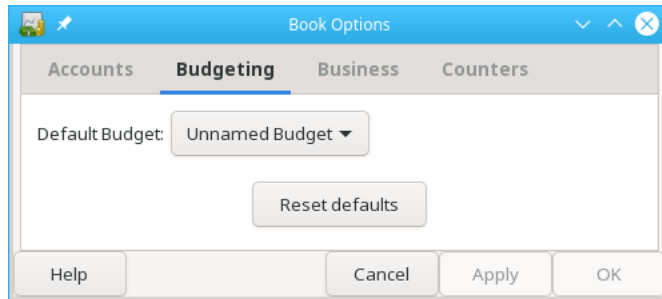
If you change this option, and press Apply or OK, open registers and labels on query and sorting dialogs will be refreshed to reflect the new option immediately. But open reports need to be individually reloaded by the user to have the change reflected on the report.

Warning

This option is only available in GnuCash version 2.6 or later. If a GnuCash file from an earlier version is opened in version 2.6 or later, and this feature is not used, this feature will not prevent the file from being opened in the earlier version of GnuCash. However, if the option is set, the file will not be able to be opened by the earlier version, even if the option is set back to its original setting. A warning dialog will be displayed from the earlier version. Do not set this option if you want to open the file with an earlier version.

Budgeting Book Options Tab

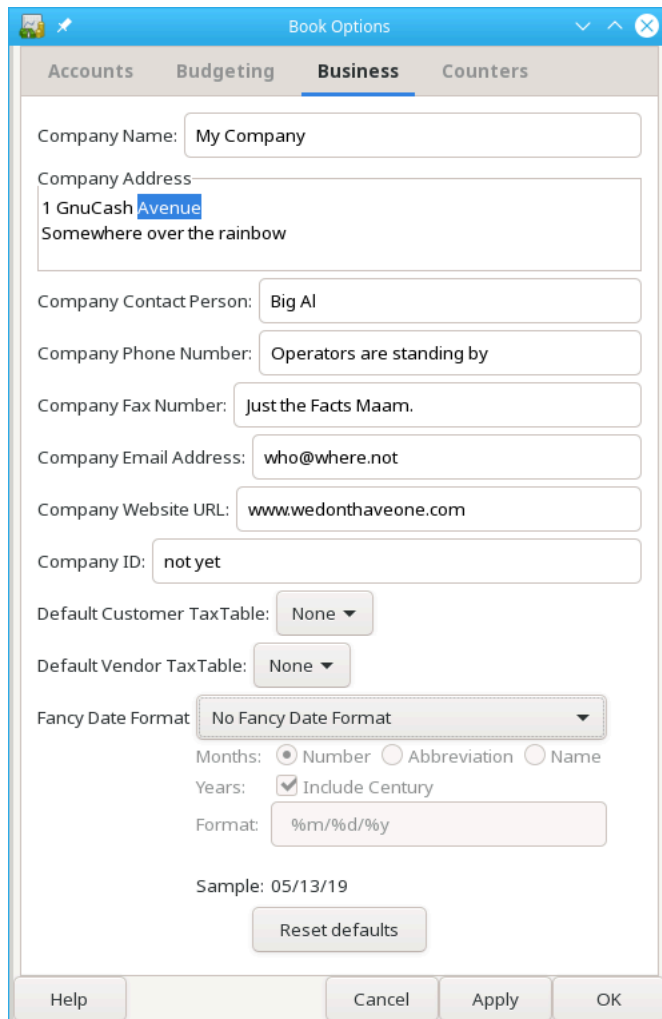
Figure 10.15. The Book Options window, Budgeting tab



The Budgeting tab allows you to specify the budget to be used for reports when none has otherwise been specified.

Business Book Options Tab

Figure 10.16. The Book Options window, Business tab



The Business tab allows you to enter values that are in turn used by the business features of GnuCash:

Company Name	The name of the company is used in many reports.
Company Contact Person	The name of the contact person to print on invoices.
Company Phone, Fax, Email Address	The references of your business.
Company Website URL	The internet address of the company's website.
Company ID	The tax ID of your company.
Default Customer TaxTable	The default taxable applicable to your most common customers.
Default Vendor TaxTable	The default taxable applicable to your most common vendors.
Fancy Date Format	The default date format used for fancy printed dates (e.g. on invoices).
Reset Defaults	Press the button to reset all values to their defaults.

Note

None of the above values is required to use GnuCash but, if given, will be used throughout the program. (f.e. in reports, invoices etc...)

Counters Book Options Tab

Figure 10.17. The Book Options window, Counters tab

The screenshot shows the 'Book Options' dialog box with the 'Counters' tab selected. The dialog contains the following fields and controls:

- Bill number:** Input field with '0', minus, and plus buttons.
- Bill number format:** Text input field.
- Customer number:** Input field with '0', minus, and plus buttons.
- Customer number format:** Text input field.
- Employee number:** Input field with '0', minus, and plus buttons.
- Employee number format:** Text input field.
- Expense voucher number:** Input field with '0', minus, and plus buttons.
- Expense voucher number format:** Text input field.
- Invoice number:** Input field with '0', minus, and plus buttons.
- Invoice number format:** Text input field.
- Job number:** Input field with '0', minus, and plus buttons.
- Job number format:** Text input field.
- Order number:** Input field with '0', minus, and plus buttons.
- Order number format:** Text input field.
- Vendor number:** Input field with '0', minus, and plus buttons.
- Vendor number format:** Text input field.
- Reset defaults:** Button.
- Help, Cancel, Apply, OK:** Buttons at the bottom.

The Counters tab allows you to set the 'previous' value for each number indicated: Bill, Customer, Employee, etc. These counters are used by the Chapter 7, *Business Features* of GnuCash.

The number entered here will be incremented when the various business features calculate a value for a corresponding field on a dialog. For example, if you leave the Customer Number field blank on the New Customer dialog, the customer will be assigned the number in the counter field plus 1. The numbers displayed in the tab are incremented as these business features are used. (But note that if you have the Book Options dialog open, you need to close it and re-open it to see the changes; the displayed field values are not automatically refreshed.)

The corresponding format fields are used to specify printf-style format strings that are used to format the printing of the number. For example, to put the literal "C - " in front of the customer number, you would put "C - %li" (without the quotes) in the customer format string field. If the value in the customer number field was 5, the next customer added would be assigned the number "C - 6". As another example, if you

wanted the number to be printed with leading zeros and 5 characters wide, you would enter "C - %05li" and the next customer number would be assigned the number "C - 00006".

Note

For historical reasons GnuCash accepts multiple format specifiers although they all yield the same end result. You can choose "li", "lli" or I64i".

Changing Style Sheets

GnuCash has four default style sheets for web-page reports. These style sheets can be altered by using the HTML Style Sheets editor. To access the editor go to Edit → Style Sheets...

Using the Style Sheet Editor you may display/modify the setting of a Style Sheet.

Note

Changing the Style Sheet will change the appearance of all reports that have selected that Style Sheet. A Reload is required to view the changes, if the report(s) are currently displayed.

To add a new Style Sheet click the New... button in the Style Sheet pane. The New Style Sheet dialog will appear. Fill in the name field with the name of the new Style Sheet and choose a template. To remove a Style Sheet select the Style Sheet from the list and click Delete.

Default Style Sheet

The Default Style Sheet has four tabs to alter the appearance of reports utilizing it, Colors, Fonts, General and Tables.

Colors Tab

- Alternate Table Cell Color: Opens the color picker to choose a color that will be applied to alternate table rows.

Fonts Tab

- Title: Select the font and size for Titles.
- Account Link: Select the font and size for Account Links.
- Number Cell: Select the font and size for Number Cells.
- Negative Values in Red: Select to have negative values displayed in red.
- Text Cell: Select the font and size for Text Cells.
- Total Number Cell: Select the font and size for Total Number Cells.
- Total Label Cell: Select the font and size for Total Label Cells.
- Centered Label Cell: Select the font and size for Centered Label Cells.

General Tab

- Background Color: Opens the color picker to choose a new background color.
- Background Pixmap: Use the Browse button to select a picture to use as the background in reports.

- Enable Links: Select this to enable blue hyperlinks in reports.

Tables Tab

- Table cell spacing: Sets the space between table cells
- Table cell padding: Sets the space between table cell edges and contents
- Table border width: Sets the width of the borders on tables.

Easy Style Sheet

The Easy Style Sheet has five tabs to alter the appearance of reports: Colors, Fonts, General, Images and Tables.

Colors

- Background Color: Opens the color picker to choose a new background color.
- Text Color: Opens the color picker to choose a new text color.
- Text Cell Color: Opens the color picker to choose a new text cell color.
- Link Color: Opens the color picker to choose a new link color.
- Alternate Table Cell Color: Opens the color picker to choose a new color for alternate table rows.
- Subheading/Subtotal Cell Color: Opens the color picker to choose a new color for subheading/subtotal table rows.
- Sub-subheading/total Cell Color: Opens the color picker to choose a new color for sub-subheading/total table rows.
- Grand Total Cell Color: Opens the color picker to choose a new color for grand total rows.

Fonts

- Title: Select the font and size for Titles.
- Account Link: Select the font and size for Account Links.
- Number Cell: Select the font and size for Number Cells.
- Negative Values in Red: Select to have negative values displayed in red.
- Number Header: Select the font and size for Number Header table rows.
- Text Cell: Select the font and size for Text Cells.
- Total Number Cell: Select the font and size for Total Number Cells.
- Total Label Cell: Select the font and size for Total Label Cells.
- Centered Label Cell: Select the font and size for Centered Label Cells.

General

- Preparer: Name of the person preparing the report.
- Prepared for: Name of Organization or Company the report is prepared for.

- Show preparer info: Show the Preparer information in the report.
- Enable Links: Select this to enable blue hyperlinks in reports.

Images

- Background Tile: Use the Browse button to select a picture to use as the background in reports. The Clear button will clear the selection.
- Heading Banner: Use the Browse button to select a picture to use as the heading in reports. The Clear button will clear the selection.
- Heading Alignment: Select from pull-down list; Left, Right, Center, to specify the alignment of the banner at the top of report(s).
- Logo: Use the Browse button to select a picture to use as the logo in reports. The Clear button will clear the selection.

Tables

- Table cell spacing: Sets the space between table cells
- Table cell padding: Sets the space between table cell edges and contents
- Table border width: Sets the width of the borders on tables.

Footer Style Sheet

The Footer Style Sheet has the same five tabs to alter the appearance of reports as the Easy Style Sheets: Colors, Fonts, General, Images and Tables.

Colors

- Background Color: Opens the color picker to choose a new background color.
- Text Color: Opens the color picker to choose a new text color.
- Text Cell Color: Opens the color picker to choose a new text cell color.
- Link Color: Opens the color picker to choose a new link color.
- Alternate Table Cell Color: Opens the color picker to choose a new color for alternate table rows.
- Subheading/Subtotal Cell Color: Opens the color picker to choose a new color for subheading/subtotal table rows.
- Sub-subheading/total Cell Color: Opens the color picker to choose a new color for sub-subheading/total table rows.
- Grand Total Cell Color: Opens the color picker to choose a new color for grand total rows.

Fonts

- Title: Select the font and size for Titles.
- Account Link: Select the font and size for Account Links.
- Number Cell: Select the font and size for Number Cells.

- Negative Values in Red: Select to have negative values displayed in red.
- Number Header: Select the font and size for Number Header table rows.
- Text Cell: Select the font and size for Text Cells.
- Total Number Cell: Select the font and size for Total Number Cells.
- Total Label Cell: Select the font and size for Total Label Cells.
- Centered Label Cell: Select the font and size for Centered Label Cells.

General

- Preparer: Name of the person preparing the report.
- Prepared for: Name of Organization or Company the report is prepared for.
- Show preparer info: Show the Preparer information in the report.
- Enable Links: Select this to enable blue hyperlinks in reports.
- Footer: Text to be included in report footer.

Images

- Background Tile: Use the Browse button to select a picture to use as the background in reports. The Clear button will clear the selection.
- Heading Banner: Use the Browse button to select a picture to use as the heading in reports. The Clear button will clear the selection.
- Heading Alignment: Select from pull-down list; Left, Right, Center, to specify the alignment of the banner at the top of report(s).
- Logo: Use the Browse button to select a picture to use as the logo in reports. The Clear button will clear the selection.

Tables

- Table cell spacing: Sets the space between table cells
- Table cell padding: Sets the space between table cell edges and contents
- Table border width: Sets the width of the borders on tables.

Technicolor Style Sheet

The Technicolor Style Sheet has five tabs to alter the appearance of reports: Colors, Fonts, General, Images and Tables.

Colors

- Background Color: Opens the color picker to choose a new background color.
- Text Color: Opens the color picker to choose a new text color.
- Text Cell Color: Opens the color picker to choose a new text cell color.

- Link Color: Opens the color picker to choose a new link color.
- Alternate Table Cell Color: Opens the color picker to choose a new color for alternate table rows.
- Subheading/Subtotal Cell Color: Opens the color picker to choose a new color for subheading/subtotal table rows.
- Sub-subheading/total Cell Color: Opens the color picker to choose a new color for sub-subheading/total table rows.
- Grand Total Cell Color: Opens the color picker to choose a new color for grand total rows.

Fonts

- Title: Select the font and size for Titles.
- Account Link: Select the font and size for Account Links.
- Number Cell: Select the font and size for Number Cells.
- Negative Values in Red: Select to have negative values displayed in red.
- Number Header: Select the font and size for Number Header table rows.
- Text Cell: Select the font and size for Text Cells.
- Total Number Cell: Select the font and size for Total Number Cells.
- Total Label Cell: Select the font and size for Total Label Cells.
- Centered Label Cell: Select the font and size for Centered Label Cells.

General

- Preparer: Name of the person preparing the report.
- Prepared for: Name of Organization or Company the report is prepared for.
- Show preparer info: Show the Preparer information in the report.
- Enable Links: Select this to enable blue hyperlinks in reports.

Images

- Background Tile: Use the Browse button to select a picture to use as the background in reports. The Clear button will clear the selection.
- Heading Banner: Use the Browse button to select a picture to use as the heading in reports. The Clear button will clear the selection.
- Heading Alignment: Select from pull-down list; Left, Right, Center, to specify the alignment of the banner at the top of report(s).
- Logo: Use the Browse button to select a picture to use as the logo in reports. The Clear button will clear the selection.

Tables

- Table cell spacing: Sets the space between table cells

- Table cell padding: Sets the space between table cell edges and cell contents
- Table border width: Sets the width of the borders on tables.

Setting Tax Report Options

The tax report can be used to prepare online tax reports in the USA.

Localization

Before it can be used in other regions, one needs to provide a localized taxtable. See the instructions in the wiki [https://wiki.gnucash.org/wiki/Translation#How_to_create_localized_Income_Tax_Tables].

The Income Tax Information dialog is used to set Tax Report Options. The settings on accounts in this dialog are used by the TXF Export function in reports to select the accounts for export. To access this dialog go to Edit → Tax Report Options.

If the Income Tax features are used, it is strongly recommended that the Tax Info column be made visible on the accounts tab (click large downward-pointing arrow and select Tax Info check box). The Tax Info column will display the Form/Schedule and tax category (e.g., Schedule D Dividend, cap gain distrib.) assigned to an account, if any. Alternatively, it will display the following error messages which can be corrected through Edit → Tax Report Options

- Tax-related but has no tax code
- Tax entity type not specified
- Tax type "tax_type": invalid code "code" for account type"
- Not tax-related; tax type "tax_type": invalid code "code" for account type
- Invalid code "code" for tax type "tax_type"
- Not tax-related; invalid code "code" for tax type "tax_type"
- No form: code "code", tax type "tax_type"
- Not tax-related; no form: code "code", tax type "tax_type"
- No description: form "form", code "code", tax type "tax_type"
- Not tax-related; no description: form "form", code "code", tax type "tax_type"
- Not tax-related; "form"("copy") "desc" (code "code", tax type "tax_type")

The Income Tax Identity must be set in order to assign codes to individual accounts. Click Edit to set the identity. The Tax Name is optional. If entered, it will be printed at the top of the report. A Type must be selected in order to activate the tax category selections. The choices are:

- Individual, Joint, etc. - Files US Form 1040 Tax Return
- Partnership - Files US Form 1065 Tax Return
- Corporation - Files US Form 1120 Tax Return
- S Corporation - Files US Form 1120S Tax Return
- None - No Income Tax Options Provided

While the Income Tax Entity Type can be changed after tax categories have been assigned to accounts, you should be cautioned that you will need to manually change each one if you do so, which could be quite tedious. The tax categories are unique for each Income Tax Entity Type, so changing the type will make all previously assigned categories invalid. It is assumed (and highly recommended) that each GnuCash file is for only one tax entity and this is where you specify its type of tax entity. You should not keep, for example, personal and partnership accounts mixed in one GnuCash file if you plan to use the Income Tax Reporting features.

A given TXF code can be assigned to multiple accounts. The Tax Schedule Report will combine accounts by code and generate a detailed TXF record for each account and a summary TXF record for the total as calculated by the report.

For codes for which the "Payer Name Source" is not grayed, the payer on the TXF record will be based on what is specified here, either the account name of the account or the account name of the account's parent account. This feature is typically used for interest accounts or stocks or mutual funds that pay dividends where the individual payees are shown on the tax schedule. For example, if the parent account's name is the name of your broker and the sub-account's names are the names of individual stocks that pay dividends and the name on the 1099-DIV received is that of the broker, in order to match that name, you would select 'Parent Account'; the total dividends from the broker would be exported and, if you had several brokers, there would be an amount exported and a subtotal for each broker, along with each brokers name. Alternatively, if you had a parent account named *Directly Held*, for example, and below it sub-accounts for one or more stocks, you would receive a 1099-DIV from the issuer of each stock separately and, in order to match that name, you would select Current Account; the total dividends from each stock would be exported and, if you had several stocks, there would be an amount exported and a subtotal for each stock, along with each stock's name as the payer.

Some tax Forms/Schedules need to have multiple copies filed under some circumstances (for example, Schedule C if a taxpayer and spouse have separate businesses). For tax categories on these Forms/Schedules, the Copy Number is not grayed out and can be used to segregate accounts by copy number.

- **Accounts:** This pane contains the list of accounts. Select an account to set a TXF category. If no account is selected nothing is changed. If multiple accounts are selected, all of the accounts will be set to the selected item.
- **Tax Related:** Select this check-box to add tax information to an account then select the TXF Category below. This setting is displayed on the account edit dialogue but cannot be changed from there.
- **TXF Categories:** Select the desired one. A detailed description appears just below (if available, otherwise it says No help available), along with the TXF code for the category and information about what line number on the form or schedule the amounts are included in by tax year (used for detailed sort on report).
- **Payer Name Source:** Select an option to determine where the text description that is exported along with the value of the account is derived from, as described above. This is usually the name of a bank, stock, or mutual fund that pays dividends or interest. Occasionally, it is a description of a deduction.
- **Copy Number:** A copy number that is exported along with the value of the account. This is used to segregate amounts between different copies of the same Form/Schedule that may need to be filed (e.g., Schedule C(1), Schedule C(2), etc.). This is also used to sort the report.

TXF Export - Known Anomalies and Limitations

TaxCut 1999

- Code: N488 "^ Sched B \ Div. income, cap gain distrib."
- Code: N286 "^ Sched B \ Dividend income"

These two codes, from the same payer, are not correlated. The user will have to adjust for this after import.

TaxCut 1999, 2000

- Code: N521 " F1040 \ Federal estimated tax, quarterly"

Does not accept the date field and does not import the individual payment amounts, only the total. The date and individual payment amounts, only matter if you have to compute the penalty. (this may be a TurboTax enhancement)

- Code: N460 " W-2 \ Salary or wages, self"
- Code: N506 " W-2 \ Salary or wages, spouse"
- and other related codes.

Use Copy Number to separate information from more than one job.

TurboTax 1999, 2000

- Code: N521 " F1040 \ Federal estimated tax, quarterly"

Does not accept the dates outside of the tax year. This is a problem for the last payment that is due Jan 15. GnuCash changes the the date of the last payment to Dec 31 for the export unless the "Do not use special date processing" option is selected in the report options display tab. The user will have to adjust for this after import. The date only matters if you have to compute the penalty.

TXF Tax eXport Format

- Duplicate Codes

Codes can be assigned to multiple accounts and the amounts will be summed for all the accounts generating one detail TXF record per account and one summary TXF record for the sum. Codes that let you select "Payer Name Source" will generate a separate summary TXF account with each change in payer. Selecting the "Print TXF export parameters" option will cause the report to show to which codes this applies (Payer Name Source option Y) and, for the accounts assigned to those codes, the Name Source each account is set to and the TXF item number that will be assigned to each. A summary TXF record will be generated for each change in assigned item line number. These may not be handled the same by TaxCut and TurboTax.

- Code: N673 "Short/Long gain or loss"

Short term or long term gain or loss from the sale of a security; generates TXF output for only the date sold and sales amount, with the date acquired and cost basis information left blank (to be separately added in the tax software). The code can be assigned to either a short-, long-, or mixed-term gain/loss income account and the security sales transaction should be entered as illustrated in Section 8.7, Selling Shares, of the GnuCash Tutorial and Concepts Guide. The report uses the transaction split of the gain/loss account to find one or more other splits in the same transaction with negative share quantities. For each of these found, it generates a detailed TXF output record with the quantity sold, the name of the security, the date sold, and the sales amount. Note that if, for a given transaction, more than one transaction split is to a gain/loss income account assigned to code 673, TXF output data will be erroneously repeated. That is because the report will fetch the same data, and re-output it, for each transaction split set to a gain/loss income account within the same transaction. For this reason, there should be no more than one gain/loss account entered per transaction to use this tax reporting code properly. (Note that no amounts are used from GnuCash's lot-tracking; a future enhancement is expected to use this data to provide capital gain reporting).

Detailed TXF Category Descriptions

Table 32. Detailed TXF Category Descriptions

Table 10.1. Detailed TXF Category Descriptions

<i>Tax Form</i> \ TXF Code	Extended TXF Help messages
Description	
< <i>help</i> \ H001 Name of Current account is exported.	Categories marked with a “<” or a “^”, require a Payer identification to be exported. “<” indicates that the name of this account is exported as this Payer ID. Typically, this is a bank, stock, or mutual fund name.
^ <i>help</i> \ H002 Name of Parent account is exported.	Categories marked with a “<” or a “^”, require a Payer identification to be exported. “^” indicates that the name of the PARENT of this account is exported as this Payer ID. Typically, this is a bank, stock, or mutual fund name.
# <i>help</i> \ H003 Not implemented yet, Do NOT Use!	Categories marked with a “#” not fully implemented yet! Do not use these codes!
<i>none</i> \ N000 Tax Report Only - No TXF Export	This is a dummy category and only shows up on the tax report, but is not exported.
<i>Help F1040</i> \ H256 Form 1040 - the main tax form	Form 1040 is the main form of your tax return.
<i>F1040</i> \ N261 Alimony received	Amounts received as alimony or separate maintenance. Note: child support is not considered alimony.
<i>F1040</i> \ N257 Other income, misc.	Miscellaneous income such as: a hobby or a farm you operate mostly for recreation and pleasure, jury duty pay. Exclude self employment income, gambling winnings, prizes and awards.
<i>F1040</i> \ N258 Sick pay or disability pay	Amounts you receive from your employer while you are sick or injured are part of your salary or wages. Exclude workers’ compensation, accident or health insurance policy benefits, if you paid the premiums.
<i>F1040</i> \ N260 State and local tax refunds	Refund of state or local income tax refund (or credit or offset) which you deducted or took a credit for in an earlier year. You should receive a statement, Form 1099-G. Not reportable if you didn’t itemize last year.
<i>F1040</i> \ N262 IRA contribution, self	Contribution to a qualified IRA. If you or your spouse are covered by a company retirement plan, this amount could be limited or eliminated.
<i>F1040</i> \ N263 Keogh deduction, self	Contributions to a Keogh or HR 10 plan of a sole proprietor or a partnership.
<i>F1040</i> \ N264 Alimony paid	Amounts payed as alimony or separate maintenance. Note: child support is not considered alimony.

Tax Form \ TXF Code	Extended TXF Help messages
Description	
< F1040 \ N265 Early withdrawal penalty	Penalty on Early Withdrawal of Savings from CD's or similar instruments. This is reported on Form 1099-INT or Form 1099-OID.
F1040 \ N266 Social Security income, self	The part of any monthly benefit under title II of the Social Security Act. These will be reported on Form SSA-1099.
F1040 \ N269 Taxable fringe benefits	Fringe benefits you receive in connection with the performance of your services are included in your gross income as compensation. Examples: Accident or Health Plan, Educational Assistance, Group-Term Life Insurance, Transportation (company car).
F1040 \ N481 IRA contribution, spouse	Contribution of a working spouse to a qualified IRA. If you or your spouse are covered by a company retirement plan, the deductible contribution could be limited or eliminated.
F1040 \ N482 IRA contrib., non-work spouse	IRA contribution for a non-working spouse.
F1040 \ N483 Social Security inc., spouse	Spouse's part of any monthly benefit under title II of the Social Security Act. These will be reported on Form SSA-1099.
F1040 \ N516 Keogh deduction, spouse	Spouse Contributions to a Keogh or HR 10 plan of a sole proprietor or a partnership.
F1040 \ N517 SEP-IRA deduction, self	Contributions made to a simplified employee pension plan (SEP-IRA).
F1040 \ N518 SEP-IRA deduction, spouse	Spouse contributions made to a simplified employee pension plan (SEP-IRA).
F1040 \ N519 RR retirement income, self	The part of tier I railroad retirement benefits, which are treated as a social security benefits. These will be reported on Form RRB-1099.
F1040 \ N520 RR retirement inc., spouse	Spouse's part of tier I railroad retirement benefits, which are treated as a social security benefits. These will be reported on Form RRB-1099.
F1040 \ N521 Federal estimated tax, quarterly	The quarterly payments you made on your estimated Federal income tax (Form 1040-ES). Include any overpay from your previous year return that you applied to your estimated tax. NOTE: If a full year (Jan 1, YEAR to Dec 31, YEAR) is specified, GnuCash adjusts the date to Mar 1, YEAR to Feb 28, YEAR+1. Thus, the payment due Jan 15 is exported for the correct year.
F1040 \ N607	Contributions made to your medical savings account that were not reported on your Form W-2.

Tax Form \ TXF Code	Extended TXF Help messages
Description	
Medical savings contribution, self	
<i>F1040 \ N608</i> Medical savings contribution, spouse	Contributions made to your spouse's medical savings account that were not reported on their Form W-2.
<i>F1040 \ N609</i> SIMPLE contribution, self	Contributions made to your SIMPLE retirement plan that were not reported on your Form W-2.
<i>F1040 \ N610</i> SIMPLE contribution, spouse	Contributions made to your spouse's SIMPLE retirement plan that were not reported on your spouse's Form W-2.
<i>F1040 \ N611</i> Fed tax withheld, Social Security, self	The amount of federal income taxes withheld from your part of any monthly benefit under title II of the Social Security Act.
<i>F1040 \ N612</i> Fed tax withheld, Social Security, spouse	The amount of federal income taxes withheld from your spouse's part of any monthly benefit under title II of the Social Security Act.
<i>F1040 \ N613</i> Fed tax withheld, RR retire, self	The amount of federal income taxes withheld from your part of tier I railroad retirement benefits, which are treated as a social security benefits.
<i>F1040 \ N614</i> Fed tax withheld, RR retire, spouse	The amount of federal income taxes withheld from your spouse's part of tier I railroad retirement benefits, which are treated as a social security benefits.
<i>F1040 \ N636</i> Student loan interest	The amount of interest you paid this year on qualified student loans.
<i>Help F1099-G \ H634</i> Form 1099-G - certain Government payments	Form 1099-G is used to report certain government payments from federal, state, or local governments.
<i>F1099-G \ N260</i> State and local tax refunds	Refund of state or local income tax refund (or credit or offset) which you deducted or took a credit for in an earlier year. You should receive a statement, Form 1099-G. Not reportable if you didn't itemize last year.
<i>F1099-G \ N479</i> Unemployment compensation	Total unemployment compensation paid to you this year. Reported on Form 1099-G.
<i>F1099-G \ N605</i> Unemployment comp repaid	If you received an overpayment of unemployment compensation this year or last and you repaid any of it this year, subtract the amount you repaid from the total amount you received.
<i>F1099-G \ N606</i> Fed tax withheld, unemployment comp	The amount of federal income taxes withheld from your unemployment compensation.
<i>F1099-G \ N672</i>	Qualified state tuition program earnings you received this year.

Tax Form \ TXF Code	Extended TXF Help messages
Description	
Qualified state tuition earnings	
<i>Help F1099-MISC \ H553</i> Form 1099-MISC - MISCellaneous income	Form 1099-MISC is used to report miscellaneous income received and direct sales of consumer goods for resale.
<i>^ F1099-MISC \ N259</i> Prizes and awards	The amount of prizes and awards that are not for services performed. Included is the fair market value of merchandise won on game shows.
<i>^ F1099-MISC \ N557</i> Other income	The amount of prizes and awards that are not for services performed. Included is the fair market value of merchandise won on game shows. Included is all punitive damages, any damages for nonphysical injuries or sickness, and any other taxable damages, Deceased employee's wages paid to estate or beneficiary.
<i>^ F1099-MISC \ N555</i> Rents	Amounts received for all types of rents, such as real estate rentals for office space, machine rentals, and pasture rentals.
<i>^ F1099-MISC \ N556</i> Royalties	The gross royalty payments received from a publisher or literary agent.
<i>^ F1099-MISC \ N558</i> Federal tax withheld	The amount of federal income tax withheld (backup withholding) from 1099-MISC income.
<i>^ F1099-MISC \ N559</i> Fishing boat proceeds	Your share of all proceeds from the sale of a catch or the fair market value of a distribution in kind that you received as a crew member of a fishing boat.
<i>^ F1099-MISC \ N560</i> Medical/health payments	The amount of payments received as a physician or other supplier or provider of medical or health care services. This includes payments made by medical and health care insurers under health, accident, and sickness insurance programs.
<i>^ F1099-MISC \ N561</i> Non employee compensation	The amount of non-employee compensation received. This includes fees, commissions, prizes and awards for services performed, other forms of compensation for services you performed for a trade or business by which you are not employed. Also include oil and gas payments for a working interest.
<i>^ F1099-MISC \ N562</i> Crop insurance proceeds	The amount of crop insurance proceeds as the result of crop damage.
<i>^ F1099-MISC \ N563</i> State tax withheld	The amount of state income tax withheld (state backup withholding) from 1099-MISC income.
<i>Help F1099=MSA \ H629</i> Form 1099-MSA Medical Savings Account	Form 1099-MSA is used to report medical savings account distributions.

Tax Form TXF Code	Extended TXF Help messages
Description	
<i>F1099-MSA</i> \ N631 MSA gross distribution	The amount you received this year from a Medical Savings Account. The amount may have been a direct payment to the medical service provider or distributed to you.
<i>F1099-MSA</i> \ N632 MSA earnings on excess contrib	The earnings on any excess contributions you withdrew from an MSA by the due date of your income tax return. If you withdrew the excess, plus any earnings, by the due date of your income tax return, you must include the earnings in your income in the year you received the distribution even if you used it to pay qualified medical expenses.
<i>Help F1099-R</i> \ H473 Form 1099-R - Retirement distributions	Form 1099-R is used to report taxable and non-taxable retirement distributions from retirement, pension, profit-sharing, or annuity plans. Use a separate Form 1099-R for each payer.
^ <i>F1099-R</i> \ N475 Total pension gross distribution	The gross amount of a distribution from a qualified pension or annuity plan. Note: IRA distributions are not included here.
^ <i>F1099-R</i> \ N476 Total pension taxable distribution	The taxable amount of a distribution from a qualified pension or annuity plan. Note: IRA distributions are not included here.
^ <i>F1099-R</i> \ N477 Total IRA gross distribution	The gross amount of a distribution from a qualified Individual Retirement Arrangement (IRA) plan.
^ <i>F1099-R</i> \ N478 Total IRA taxable distribution	The taxable amount of a distribution from a qualified Individual Retirement Arrangement (IRA) plan.
^ <i>F1099-R</i> \ N529 Pension federal tax withheld	The amount of federal income taxes withheld from your pension distribution.
^ <i>F1099-R</i> \ N530 Pension state tax withheld	The amount of state income taxes withheld from your pension distribution.
^ <i>F1099-R</i> \ N531 Pension local tax withheld	The amount of local income taxes withheld from your pension distribution.
^ <i>F1099-R</i> \ N532 IRA federal tax withheld	The amount of federal income taxes withheld from your IRA distribution.
^ <i>F1099-R</i> \ N533 IRA state tax withheld	The amount of state income taxes withheld from your IRA distribution.
^ <i>F1099-R</i> \ N534 IRA local tax withheld	The amount of local income taxes withheld from your IRA distribution.

Tax Form TXF Code	Extended TXF Help messages
Description	
<i>^ F1099-R \ N623</i> SIMPLE total gross distribution	The gross amount of a distribution received from a qualified SIMPLE pension plan.
<i>^ F1099-R \ N624</i> SIMPLE total taxable distribution	The taxable amount of a distribution received from a qualified SIMPLE plan. This amount may be subject to a federal penalty of up to 25%.
<i>^ F1099-R \ N625</i> SIMPLE federal tax withheld	The amount of federal income taxes withheld from a SIMPLE distribution received.
<i>^ F1099-R \ N626</i> SIMPLE state tax withheld	The amount of state income taxes withheld from a SIMPLE distribution received.
<i>^ F1099-R \ N627</i> SIMPLE local tax withheld	The amount of local income taxes withheld from a SIMPLE distribution received.
<i>Help F2106 \ H380</i> employee business expenses	Form 2106 is used to deduct employee business expenses. You must file this form if you were reimbursed by your employer or claim job-related travel, transportation, meal, or entertainment expenses. Use a separate Form 2106 for your spouse's expenses.
<i>F2106 \ N381</i> Education expenses	Cost of tuition, books, supplies, laboratory fees, and similar items, and certain transportation costs if the education maintains or improves skills required in your present work or is required by your employer or the law to keep your salary, status, or job, and the requirement serves a business purpose of your employer. Expenses are not deductible if they are needed to meet the minimum educational requirements to qualify you in your work or business or will lead to qualifying you in a new trade or business.
<i>F2106 \ N382</i> Automobile expenses	Total annual expenses for gasoline, oil, repairs, insurance, tires, license plates, or similar items.
<i>F2106 \ N384</i> Local transportation expenses	Local transportation expenses are the expenses of getting from one workplace to another when you are not traveling away from home. They include the cost of transportation by air, rail, bus, taxi, and the cost of using your car. Generally, the cost of commuting to and from your regular place of work is not deductible.
<i>F2106 \ N385</i> Other business expenses	Other job-related expenses, including expenses for business gifts, trade publications, etc.
<i>F2106 \ N386</i> Meal/entertainment expenses	Allowable meals and entertainment expense, including meals while away from your tax

Tax Form \ TXF Code	Extended TXF Help messages
Description	
	home overnight and other business meals and entertainment.
<i>F2106 \ N387</i> Reimb. business expenses (non-meal/ent.)	Reimbursement for business expenses from your employer that is NOT included on your Form W-2. Note: meals and entertainment are NOT included here.
<i>F2106 \ N388</i> Reimb. meal/entertainment expenses	Reimbursement for meal and entertainment expenses from your employer that is NOT included on your Form W-2.
<i>F2106 \ N389</i> Job seeking expenses	Fees to employment agencies and other costs to look for a new job in your present occupation, even if you do not get a new job.
<i>F2106 \ N390</i> Special clothing expenses	cost and upkeep of work clothes, if you must wear them as a condition of your employment, and the clothes are not suitable for everyday wear. Include the cost of protective clothing required in your work, such as safety shoes or boots, safety glasses, hard hats, and work gloves.
<i>F2106 \ N391</i> Employee home office expenses	Your use of the business part of your home must be: exclusive, regular, for your trade or business, AND The business part of your home must be one of the following: your principal place of business, a place where you meet or deal with patients, clients, or customers in the normal course of your trade or business, or a separate structure (not attached to your home) you use in connection with your trade or business. Additionally, Your business use must be for the convenience of your employer, and You do not rent all or part of your home to your employer and use the rented portion to perform services as an employee. See IRS Pub 587.
<i>F2106 \ N383</i> Travel (away from home)	Travel expenses are those incurred while traveling away from home for your employer. The cost of getting to and from your business destination (air, rail, bus, car, etc.), taxi fares, baggage charges, and cleaning and laundry expenses. Note: meal and entertainment expenses are not included here.
<i>Help F4137 \ H503</i> Form 4137 - tips not reported	Form 4137 is used to compute social security and Medicare tax owed on tips you did not report to your employer.
<i>F4137 \ N505</i> Total cash/tips not reported to employer	The amount of tips you did not report to your employer.
<i>Help F2441 \ H400</i> Form 2441 - child and dependent credit	Form 2441 is used to claim a credit for child and dependent care expenses.

Tax Form \ TXF Code	Extended TXF Help messages
Description	
< F2441 \ N401 Qualifying child/dependent care expenses	The total amount you actually paid to the care provider. Also, include amounts your employer paid to a third party on your behalf.
< F2441 \ N402 Qualifying household expenses	The cost of services needed to care for the qualifying person as well as to run the home. They include the services of a babysitter, cleaning person, cook, maid, or housekeeper if the services were partly for the care of the qualifying person.
Help F3903 \ H403 Form 3903 - moving expenses	Form 3903 is used to claim moving expenses.
F3903 \ N406 Transport/storage of goods	The amount you paid to pack, crate and move your household goods and personal effects. You may include the cost to store and insure household goods and personal effects within any period of 30 days in a row after the items were moved from your old home.
F3903 \ N407 Travel/lodging, except meals	The amount you paid to travel from your old home to your new home. This includes transportation and lodging on the way. Although not all members of your household must travel together, you may only include expenses for one trip per person. Do not include meals.
Help F4684 \ H412 Form 4684 - casualties and thefts	Form 4684 is used to report gains and losses from casualties and thefts.
F4684 \ N416 FMV after casualty	The fair market value (FMV) is the price at which the property would change hands between a willing buyer and seller, each having knowledge of the relevant facts. The FMV after a theft is zero if the property is not recovered. The FMV is generally determined by competent appraisal.
F4684 \ N413 Basis of casualty property	Cost or other basis usually means original cost plus improvements. Subtract any postponed gain from the sale of a previous main home. Special rules apply to property received as a gift or inheritance. See Pub 551, Basis of Assets, for details.
F4684 \ N414 Insurance/reimbursement	The amount of insurance or other reimbursement you received expect to receive.
F4684 \ N415 FMV before casualty	The fair market value (FMV) is the price at which the property would change hands between a willing buyer and seller, each having knowledge of the relevant facts. FMV is generally determined by competent appraisal.
Help F4835 \ H569	Form 4835 is used to report farm rental income received as a share of crops or livestock produced

Tax Form \ TXF Code	Extended TXF Help messages
Description	
Form 4835 - farm rental income	by your tenant if you did not materially participate in the operation or management of the farm. Use a different copy of Form 4835 for each farm rented.
<i>F4835 \ N572</i> Total cooperative distributions	Distributions received from a cooperative. This includes patronage dividends, non patronage distributions, per-unit retain allocations, and redemption of non qualified notices and per unit retain allocations. Reported on Form 1099-PATR.
<i>F4835 \ N571</i> Sale of livestock/produce	Income you received from livestock, produce, grains, and other crops based on production. Under both the cash and the accrual methods of reporting, you must report livestock or crop share rentals received in the year you convert them into money or its equivalent.
<i>F4835 \ N573</i> Agricultural program payments	Government payments received for: price support payments, market gain from the repayment of a secured Commodity Credit Corporation (CCC) loan for less than the original loan amount, diversion payments, cost-share payments (sight drafts), payments in the form of materials (such as fertilizer or lime) or services (such as grading or building dams). Reported on Form 1099-G.
<i>F4835 \ N574</i> CCC loans reported/election	Generally, you do not report CCC loan proceeds as income. However, if you pledge part or all of your production to secure a CCC loan, you may elect to report the loan proceeds as income in the year you receive them, instead of the year you sell the crop.
<i>F4835 \ N575</i> CCC loans forfeited/repaid	The full amount forfeited or repaid with certificates, even if you reported the loan proceeds as income. See IRS Pub 225.
<i>F4835 \ N576</i> Crop insurance proceeds received	You generally include crop insurance proceeds in the year you receive them. Treat as crop insurance proceeds the crop disaster payments you receive from the federal government.
<i>F4835 \ N577</i> Crop insurance proceeds deferred	If you use the cash method of accounting and receive crop insurance proceeds in the same tax year in which the crops are damaged, you can choose to postpone reporting the proceeds as income until the following tax year. A statement must also be attached to your return. See IRS Pub 225.
<i>F4835 \ N578</i> Other income	Illegal Federal irrigation subsidies, bartering income, income from discharge of indebtedness, state gasoline or fuel tax refund, the gain or loss on the sale of commodity futures contracts, etc.
<i>F4835 \ N579</i> Car and truck expenses	The business portion of car or truck expenses, such as, for gasoline, oil, repairs, insurance, tires, license plates, etc.

Tax Form \ TXF Code	Extended TXF Help messages
Description	
<i>F4835 \ N580</i> Chemicals	Chemicals used in operating your farm, such as insect sprays and dusts.
<i>F4835 \ N581</i> Conservation expenses	Your expenses for soil or water conservation or for the prevention of erosion of land used in farming. To take this deduction, your expenses must be consistent with a plan approved by the Natural Resources Conservation Service (NRCS) of the Department of Agriculture.
<i>F4835 \ N582</i> Custom hire expenses	Amounts you paid for custom hire (machine work) (the machine operator furnished the equipment). Do not include amounts paid for rental or lease of equipment you operated yourself.
<i>F4835 \ N583</i> Employee benefit programs	Contributions to employee benefit programs, such as accident and health plans, group-term life insurance, and dependent care assistance programs. Do not include contributions that are a incidental part of a pension or profit-sharing plan.
<i>F4835 \ N584</i> Feed purchased	The cost of feed for your livestock. Generally, you cannot currently deduct expenses for feed to be consumed by your livestock in a later tax year. See instructions for Schedule F.
<i>F4835 \ N585</i> Fertilizers and lime	The cost of fertilizer, lime, and other materials applied to farm land to enrich, neutralize, or condition it. You can also deduct the cost of applying these materials. However, see Prepaid Farm Supplies, in Pub 225, for a rule that may limit your deduction for these materials.
<i>F4835 \ N586</i> Freight and trucking	The costs of freight or trucking of produce or livestock.
<i>F4835 \ N587</i> Gasoline, fuel, and oil	The costs of gas, fuel, oil, etc. for farm equipment.
<i>F4835 \ N588</i> Insurance (other than health)	Premiums paid for farm business insurance, such as: fire, storm, crop, theft and liability protection of farm assets. Do not include premiums for employee accident and health insurance.
<i>F4835 \ N589</i> Interest expense, mortgage	The interest you paid to banks or other financial institutions for which you received a Form 1098, for a mortgage on real property used in your farming business (other than your main home). If you paid interest on a debt secured by your main home, and any proceeds from that debt were used in your farming operation, refer to IRS Pub 225.
<i>F4835 \ N590</i>	The interest you paid for which you did not receive a Form 1098 (perhaps someone else did, and you are

Tax Form \ TXF Code	Extended TXF Help messages
Description	
Interest expense, other	liable too), for a mortgage or other loans for your farm business.
<i>F4835 \ N591</i> Labor hired	The amounts you paid for farm labor. Do not include amounts paid to yourself. Count the cost of boarding farm labor but not the value of any products they used from the farm. Count only what you paid house-hold help to care for farm laborers.
<i>F4835 \ N592</i> Pension/profit-sharing plans	Enter your deduction for contributions to employee pension, profit-sharing, or annuity plans. If the plan included you as a self-employed person, see the instructions for Schedule C (Form 1040).
<i>F4835 \ N593</i> Rent/lease vehicles, equip.	The business portion of your rental cost, for rented or leased vehicles, machinery, or equipment. But if you leased a vehicle for a term of 30 days or more, you may have to reduce your deduction by an inclusion amount. For details, see the instructions for Schedule C (Form 1040).
<i>F4835 \ N594</i> Rent/lease land, animals	Amounts paid to rent or lease property such as pasture or farm land.
<i>F4835 \ N595</i> Repairs and maintenance	Amounts you paid for repairs and maintenance of farm buildings, machinery, and equipment. You can also include what you paid for tools of short life or minimal cost, such as shovels and rakes.
<i>F4835 \ N596</i> Seeds and plants purchased	The amounts paid for seeds and plants purchased for farming.
<i>F4835 \ N597</i> Storage and warehousing	Amounts paid for storage and warehousing of crops, grains, etc.
<i>F4835 \ N598</i> Supplies purchased	Livestock supplies and other supplies, including bedding, office supplies, etc.
<i>F4835 \ N599</i> Taxes	Real estate and personal property taxes on farm business assets; Social security and Medicare taxes you paid to match what you are required to withhold from farm employees' wages and any Federal unemployment tax paid; Federal highway use tax.
<i>F4835 \ N600</i> Utilities	Amounts you paid for gas, electricity, water, etc., for business use on the farm. Do not include personal utilities. You cannot deduct the base rate (including taxes) of the first telephone line into your residence, even if you use it for business.
<i>F4835 \ N601</i> Vet, breeding, medicine	The costs of veterinary services, medicine and breeding fees.

Tax Form TXF Code	Extended TXF Help messages
Description	
<i>F4835 \ N602</i> Other farm expenses	Include all ordinary and necessary farm rental expenses not deducted elsewhere on Form 4835, such as advertising, office supplies, etc. Do not include fines or penalties paid to a government for violating any law.
<i>Help F4952 \ H425</i> Form 4952 - investment interest	Form 4952 is used to compute the amount of investment interest expense deductible for the current year and the amount, if any, to carry forward to future years.
<i>F4952 \ N426</i> Investment interest expense	The investment interest paid or accrued during the tax year, regardless of when you incurred the indebtedness. Investment interest is interest paid or accrued on a loan (or part of a loan) that is allocable to property held for investment.
<i>Help F6252 \ H427</i> Form 6252 - income from casual sales	Form 6252 is used to report income from casual sales of real or personal property when you will receive any payments in a tax year after the year of sale (i.e., installment sale).
<i>F6252 \ N428</i> Selling price	Enter the total of any money, face amount of the installment obligation, and the FMV of other property that you received or will receive in exchange for the property sold.
<i>F6252 \ N429</i> Debt assumed by buyer	Enter only mortgages or other debts the buyer assumed from the seller or took the property subject to. Do not include new mortgages the buyer gets from a bank, the seller, or other sources.
<i>F6252 \ N431</i> Depreciation allowed	Enter all depreciation or amortization you deducted or should have deducted from the date of purchase until the date of sale. Add any section 179 expense deduction. Several other adjustments are allowed, See Form 6252 instructions.
<i>F6252 \ N432</i> Expenses of sale	Enter sales commissions, advertising expenses, attorney and legal fees, etc., in selling the property.
<i>F6252 \ N434</i> Payments received this year	Enter all money and the fair market value (FMV) of any property you received in this tax year. Include as payments any amount withheld to pay off a mortgage or other debt, such as broker and legal fees. Do not include interest whether stated or unstated.
<i>F6252 \ N435</i> Payments received prior years	Enter all money and the fair market value (FMV) of property you received before this tax year from the sale. Include allocable installment income and any other deemed payments from prior years. Do not include interest whether stated or unstated.
<i>Help F8815 \ H441</i>	Form 8815 is used to compute the amount of interest you may exclude if you cashed series EE U.S.

<i>Tax Form</i> TXF Code	Extended TXF Help messages
Description	
Form 8815 - EE U.S. savings bonds sold for education	savings bonds this year that were issued after 1989 to pay for qualified higher education costs.
<i>F8815</i> \ N442 Qualified higher education expenses	Qualified higher education expenses include tuition and fees required for the enrollment or attendance of the person(s). Do not include expenses for room and board, or courses involving sports, games, or hobbies that are not part of a degree or certificate granting program.
<i>F8815</i> \ N443 Nontaxable education benefits	Nontaxable educational benefits. These benefits include: Scholarship or fellowship grants excludable from income under section 117; Veterans' educational assistance benefits; Employer-provided educational assistance benefits that are not included in box 1 of your W-2 form(s); Any other payments (but not gifts, bequests, or inheritances) for educational expenses that are exempt from income tax by any U.S. law. Do not include nontaxable educational benefits paid directly to, or by, the educational institution.
<i>F8815</i> \ N444 EE US savings bonds proceeds	Enter the total proceeds (principal and interest) from all series EE and I U.S. savings bonds issued after 1989 that you cashed during this tax year.
<i>F8815</i> \ N445 Post-89 EE bond face value	The face value of all post-1989 series EE bonds cashed this tax year.
<i>Help F8863</i> \ H639 Form 8863 - Hope and Lifetime Learning education credits	Form 8863 is used to compute the Hope and Lifetime Learning education credits. IRS rules are stringent for these credits. Refer to IRS Publication 970 for more information.
<i>F8863</i> \ N637 Hope credit	Expenses qualified for the Hope credit are amounts paid this tax year for tuition and fees required for the student's enrollment or attendance at an eligible educational institution.
<i>F8863</i> \ N638 Lifetime learning credit	Expenses qualified for the Lifetime Learning credit are amounts paid this tax year for tuition and fees required for the student's enrollment or attendance at an eligible educational institution.
<i>Help F8829</i> \ H536 Form 8829 - business use of your home	Form 8829 is used only if you file a Schedule C, Profit or Loss from Business, and you meet specific requirements to deduct expenses for the business use of your home. IRS rules are stringent for this deduction. Refer to IRS Publication 587.
<i>F8829</i> \ N537 Deductible mortgage interest	The total amount of mortgage interest that would be deductible whether or not you used your home for business (i.e., amounts allowable as itemized deductions on Schedule A, Form 1040). Form 8829 computes the deductible business portion.

Tax Form \ TXF Code	Extended TXF Help messages
Description	
<i>F8829 \ N538</i> Real estate taxes	The total amount of real estate taxes that would be deductible whether or not you used your home for business (i.e., amounts allowable as itemized deductions on Schedule A, Form 1040). Form 8829 computes the deductible business portion.
<i>F8829 \ N539</i> Insurance	The total amount of insurance paid for your home, in which an area or room is used regularly and exclusively for business. Form 8829 computes the deductible business portion.
<i>F8829 \ N540</i> Repairs and maintenance	The total amount of repairs and maintenance paid for your home, in which an area or room is used regularly and exclusively for business. Form 8829 computes the deductible business portion.
<i>F8829 \ N541</i> Utilities	The total amount of utilities paid for your home, in which an area or room is used regularly and exclusively for business. Form 8829 computes the deductible business portion.
<i>F8829 \ N542</i> Other expenses	If you rent rather than own your home, include rent paid for your home, in which an area or room is used regularly and exclusively for business. Form 8829 computes the deductible business portion.
<i>Help F8839 \ H617</i> Form 8839 - adoption expenses	Form 8839 is used to report qualified adoption expenses.
<i>F8839 \ N618</i> Adoption fees	Adoption fees that are reasonable and necessary, directly related to, and for the principal purpose of, the legal adoption of an eligible child.
<i>F8839 \ N619</i> Court costs	Court costs that are reasonable and necessary, directly related to, and for the principal purpose of, the legal adoption of an eligible child.
<i>F8839 \ N620</i> Attorney fees	Attorney fees that are reasonable and necessary, directly related to, and for the principal purpose of, the legal adoption of an eligible child.
<i>F8839 \ N621</i> Traveling expenses	Traveling expenses (including meals and lodging) while away from home, directly related to, and for the principal purpose of, the legal adoption of an eligible child.
<i>F8839 \ N622</i> Other expenses	Other expenses that are reasonable and necessary, directly related to, and for the principal purpose of, the legal adoption of an eligible child.
<i>Home Sale \ N392</i> Home Sale worksheets (was F2119)	Home Sale worksheets (replaces Form 2119) are used to report the sale of your personal residence. See IRS Pub 523.
<i>Home Sale \ N393</i> Selling price of old home	The selling price is the total amount you receive for your home. It includes money, all notes, mortgages, or other debts assumed by the buyer as part of

<i>Tax Form</i> \ TXF Code	Extended TXF Help messages
Description	
	the sale, and the fair market value of any other property or any services you receive. Reported on Form 1099-S.
<i>Home Sale</i> \ N394 Expense of sale	Selling expenses include commissions, advertising fees, legal fees, title insurance, and loan charges paid by the seller, such as loan placement fees or "points."
<i>Home Sale</i> \ N396 Fixing-up expenses	Fixing-up expenses are decorating and repair costs that you paid to sell your old home. For example, the costs of painting the home, planting flowers, and replacing broken windows are fixing-up expenses. Fixing-up expenses must meet all the following conditions. The expenses: Must be for work done during the 90-day period ending on the day you sign the contract of sale with the buyer; Must be paid no later than 30 days after the date of sale; Cannot be deductible in arriving at your taxable income; Must not be used in figuring the amount realized; and Must not be capital expenditures or improvements.
<i>Home Sale</i> \ N397 Cost of new home	The cost of your new home includes costs incurred within the replacement period (beginning 2 years before and ending 2 years after the date of sale) for the following items: Buying or building the home; Rebuilding the home; and Capital improvements or additions.
<i>Help Sched A</i> \ H270 Schedule A - itemized deductions	Schedule A is used to report your itemized deductions.
<i>Sched A</i> \ N271 Subscriptions	Amounts paid for subscriptions to magazines or services that are directly related to the production or collection of taxable income. (example: subscriptions to investment publications, stock newsletters, etc.).
<i>Sched A</i> \ N272 Gambling losses	Gambling losses, but only to the extent of gambling winnings reported on Form 1040. Note: not subject to the 2% AGI of limitation.
<i>Sched A</i> \ N273 Medicine and drugs	Prescription medicines, eyeglasses, contact lenses, hearing aids. Over-the-counter medicines are not deductible.
<i>Sched A</i> \ N274 Medical travel and lodging	Lodging expenses while away from home to receive medical care in a hospital or a medical care facility related to a hospital. Do not include more than \$50 a night for each eligible person. Ambulance service and other travel costs to get medical care.
<i>Sched A</i> \ N275 State income taxes	State income taxes paid this year for a prior year. Include any part of a prior year refund that you chose to have credited to this years state income taxes.

Tax Form \ TXF Code	Extended TXF Help messages
Description	
<i>Sched A \ N276</i> Real estate taxes	Include taxes (state, local, or foreign) you paid on real estate you own that was not used for business, but only if the taxes are based on the assessed value of the property. Do not include taxes charged for improvements that tend to increase the value of your property (for example, an assessment to build a new sidewalk).
<i>Sched A \ N277</i> Other taxes	Other taxes paid not included under state and local income taxes, real estate taxes, or personal property taxes. You may want to take a credit for the foreign tax instead of a deduction.
<i>Sched A \ N280</i> Cash charity contributions	Contributions or gifts by cash or check you gave to organizations that are religious, charitable, educational, scientific, or literary in purpose. You may also deduct what you gave to organizations that work to prevent cruelty to children or animals. For donations of \$250 or more, you must have a statement from the charitable organization showing the amount donated and the value of goods or services you received.
<i>Sched A \ N281</i> Tax preparation fees	Fees you paid for preparation of your tax return, including fees paid for filing your return electronically.
<i>Sched A \ N282</i> Investment management fees	Investment interest is interest paid on money you borrowed that is allocable to property held for investment. It does not include any interest allocable to passive activities or to securities that generate tax-exempt income.
<i>Sched A \ N283</i> Home mortgage interest (1098)	Home mortgage interest and points reported to you on Form 1098. The interest could be on a first or second mortgage, home equity loan, or refinanced mortgage.
<i>Sched A \ N284</i> Points paid (no 1098)	Generally, you must deduct points you paid to refinance a mortgage over the life of the loan. If you used part of the proceeds to improve your main home, you may be able to deduct the part of the points related to the improvement in the year paid. See Pub. 936 Use this line for points not reported on Form 1098.
<i>Sched A \ N484</i> Doctors, dentists, hospitals	Insurance premiums for medical and dental care, medical doctors, dentists, eye doctors, surgeons, X-ray, laboratory services, hospital care, etc. See IRS Pub 502.
<i>Sched A \ N486</i> Misc., subject to 2% AGI limit	Safety equipment, small tools, and supplies you needed for your job; Uniforms required by your employer and which you may not usually wear away from work; subscriptions to professional journals;

<i>Tax Form</i> TXF Code	Extended TXF Help messages
Description	
	job search expenses; certain educational expenses. You may need to file Form 2106.
<i>Sched A</i> \ N485 Non-cash charity contributions	The fair market value of donated property, such as used clothing or furniture.
<i>Sched A</i> \ N522 State estimated tax, quarterly	State estimated tax payments made this year.
<i>Sched A</i> \ N523 Misc., no 2% AGI limit	Other miscellaneous itemized deductions that are not reduced by 2% of adjusted gross income, such as casualty and theft losses from income-producing, amortizable bond premium on bonds acquired before October 23, 1986, federal estate tax on income in respect to a decedent, certain unrecovered investment in a pension, impairment-related work expenses of a disabled person.
<i>Sched A</i> \ N535 Personal property taxes	Enter personal property tax you paid, but only if it is based on value alone. Example: You paid a fee for the registration of your car. Part of the fee was based on the car's value and part was based on its weight. You may deduct only the part of the fee that is based on the car's value.
<i>Sched A</i> \ N544 Local income taxes	Local income taxes that were not withheld from your salary, such as local income taxes you paid this year for a prior year.
<i>Sched A</i> \ N545 Home mortgage interest (no 1098)	Home mortgage interest paid, for which you did not receive a Form 1098 from the recipient. The interest could be on a first or second mortgage, home equity loan, or refinanced mortgage.
<i>Help Sched B</i> \ H285 Schedule B - interest and dividend income	Schedule B is used to report your interest and dividend income.
^ <i>Sched B</i> \ N286 Dividend income, Ordinary	Ordinary dividends from mutual funds, stocks, etc., are reported to you on a 1099-DIV. Note: these are sometimes called short term capital gain distributions. Do not include (long term) capital gain distributions or non-taxable dividends here, these go on Sched D
< <i>Sched B</i> \ N287 Interest income	Taxable interest includes interest you receive from bank accounts, credit unions, loans you made to others. There are several categories of interest, be sure you select the correct one!
< <i>Sched B</i> \ N288 Interest income, US government	Interest on U.S. obligations, such as U.S. Treasury bills, notes, and bonds issued by any agency of the United States. This income is exempt from all state and local income taxes. There are several categories of interest, be sure you select the correct one!

Tax Form \ TXF Code	Extended TXF Help messages
Description < <i>Sched B</i> \ N289 Interest income, State and municipal bond	Interest on bonds or notes of states, counties, cities, the District of Columbia, or possessions of the United States is generally free of federal income tax (but you may pay state income tax). There are several categories of interest, be sure you select the correct one!
< <i>Sched B</i> \ N290 Interest income, tax-exempt private activity bond	Interest income from a qualified tax-exempt private activity bond is not taxable if it meets all requirements. This income is included on your Schedule B as non-taxable interest income. There are several categories of interest, be sure you select the correct one!
< <i>Sched B</i> \ N487 Dividend income, non-taxable	Some mutual funds pay shareholders non-taxable dividends. The amount of non-taxable dividends are indicated on your monthly statements or Form 1099-DIV.
< <i>Sched B</i> \ N489 Interest income, non-taxable	Non-taxable interest income other than from bonds or notes of states, counties, cities, the District of Columbia, or a possession of the United States, or from a qualified private activity bond. There are several categories of interest, be sure you select the correct one!
< <i>Sched B</i> \ N490 Interest income, taxed only by fed	Interest income that is taxed on your federal return, but not on your state income tax return - other than interest paid on U.S. obligations. There are several categories of interest, be sure you select the correct one!
< <i>Sched B</i> \ N491 Interest income, taxed only by state	Interest income that is not taxed on your federal return, but is taxed on your state income tax return - other than interest income from state bonds or notes, the District of Columbia, or a possession of the United States. There are several categories of interest, be sure you select the correct one!
< <i>Sched B</i> \ N492 Interest income, OID bonds	Interest income from Original Issue Discount (OID) bonds will be reported to you on Form 1099-OID. There are several categories of interest, be sure you select the correct one!
< <i>Sched B</i> \ N524 Interest income, Seller-financed mortgage	Interest the buyer paid you on a mortgage or other form of seller financing, for your home or other property and the buyer used the property as a personal residence. There are several categories of interest, be sure you select the correct one!
< <i>Sched B</i> \ N615 Fed tax withheld, dividend income	The amount of federal income taxes withheld from dividend income. This is usually reported on Form 1099-DIV.

Tax Form \ TXF Code	Extended TXF Help messages
Description	
< <i>Sched B</i> \ N616 Fed tax withheld, interest income	The amount of federal income taxes withheld from interest income. This is usually reported on Form 1099-INT.
<i>Help Sched C</i> \ H291 Schedule C - self-employment income	Schedule C is used to report income from self-employment. Use a separate Schedule C to report income and expenses from different businesses.
<i>Sched C</i> \ N293 Gross receipts or sales	The amount of gross receipts from your trade or business. Include amounts you received in your trade or business that were properly shown on Forms 1099-MISC.
<i>Sched C</i> \ N294 Meals and entertainment	Total business meal and entertainment expenses. Business meal expenses are deductible only if they are (a) directly related to or associated with the active conduct of your trade or business, (b) not lavish or extravagant, and (c) incurred while you or your employee is present at the meal.
<i>Sched C</i> \ N296 Returns and allowances	Credits you allow customers for returned merchandise and any other allowances you make on sales.
<i>Sched C</i> \ N297 Wages paid	The total amount of salaries and wages for the tax year. Do not include amounts paid to yourself.
<i>Sched C</i> \ N298 Legal and professional fees	Accountant's or legal fees for tax advice related to your business and for preparation of the tax forms related to your business.
<i>Sched C</i> \ N299 Rent/lease vehicles, equip.	The amount paid to rent or lease vehicles, machinery, or equipment, for your business. If you leased a vehicle for a term of 30 days or more, you may have to reduce your deduction by an amount called the inclusion amount. See Pub. 463.
<i>Sched C</i> \ N300 Rent/lease other business property	The amounts paid to rent or lease real estate or property, such as office space in a building.
<i>Sched C</i> \ N301 Supplies (not from Cost of Goods Sold)	The cost of supplies not reported under Cost Of Goods Sold.
<i>Sched C</i> \ N302 Other business expenses	Other costs not specified on other lines of Schedule C, such as: Clean-fuel vehicles and refueling property; Donations to business organizations; Educational expenses; Environmental cleanup costs; Impairment-related expenses; Interview expense allowances; Licenses and regulatory fees; Moving machinery; Outplacement services; Penalties and fines you pay for late performance or nonperformance of a contract; Subscriptions to trade or professional publications.

Tax Form \ TXF Code	Extended TXF Help messages
Description	
<i>Sched C \ N303</i> Other business income	The amounts from finance reserve income, scrap sales, bad debts you recovered, interest (such as on notes and accounts receivable), state gasoline or fuel tax refunds you got this year, prizes and awards related to your trade or business, and other kinds of miscellaneous business income.
<i>Sched C \ N304</i> Advertising	The amounts paid for advertising your trade or business in newspapers, publications, radio or television. Also include the cost of brochures, business cards, or other promotional material.
<i>Sched C \ N305</i> Bad debts from sales/services	Include debts and partial debts from sales or services that were included in income and are definitely known to be worthless.
<i>Sched C \ N306</i> Car and truck expenses	You can deduct the actual expenses of running your car or truck, or take the standard mileage rate.
<i>Sched C \ N307</i> Commissions and fees	The amounts of commissions or fees paid to independent contractors (non employees) for their services.
<i>Sched C \ N308</i> Employee benefit programs	Contributions to employee benefit programs that are not an incidental part of a pension or profit-sharing plan. Examples are accident and health plans, group-term life insurance, and dependent care assistance programs.
<i>Sched C \ N309</i> Depletion	The amounts for depletion. If you have timber depletion, attach Form T. See Pub. 535.
<i>Sched C \ N310</i> Insurance, other than health	Premiums paid for business insurance. Do not include amounts paid for employee accident and health insurance. nor amounts credited to a reserve for self-insurance or premiums paid for a policy that pays for your lost earnings due to sickness or disability. See Pub. 535.
<i>Sched C \ N311</i> Interest expense, mortgage	The interest you paid to banks or other financial institutions for which you received a Form 1098, for a mortgage on real property used in your business (other than your main home).
<i>Sched C \ N312</i> Interest expense, other	The interest you paid for which you did not receive a Form 1098 (perhaps someone else did, and you are liable too), for a mortgage or other loans for your business.
<i>Sched C \ N313</i> Office expenses	The cost of consumable office supplies such as business cards, computer supplies, pencils, pens, postage stamps, rental of postal box or postage machines, stationery, Federal Express and UPS charges, etc.

Tax Form \ TXF Code	Extended TXF Help messages
Description <i>Sched C \ N314</i> Pension/profit sharing plans	You can set up and maintain the following small business retirement plans for yourself and your employees, such as: SEP (Simplified Employee Pension) plans; SIMPLE (Savings Incentive Match Plan for Employees) plans; Qualified plans (including Keogh or H.R. 10 plans). You deduct contributions you make to the plan for yourself on Form 1040.
<i>Sched C \ N315</i> Repairs and maintenance	The cost of repairs and maintenance. Include labor, supplies, and other items that do not add to the value or increase the life of the property. Do not include the value of your own labor. Do not include amounts spent to restore or replace property; they must be capitalized.
<i>Sched C \ N316</i> Taxes and licenses	Include the following taxes: State and local sales taxes imposed on you as the seller of goods or services; Real estate and personal property taxes on business assets; Social security and Medicare taxes paid to match required withholding from your employees' wages; Also, Federal unemployment tax paid; Federal highway use tax.
<i>Sched C \ N317</i> Travel	Expenses for lodging and transportation connected with overnight travel for business while away from your tax home.
<i>Sched C \ N318</i> Utilities	The costs of electricity, gas, telephone, etc. for your business property.
<i>Sched C \ N493</i> Cost of Goods Sold - Purchases	If you are a merchant, use the cost of all merchandise you bought for sale. If you are a manufacturer or producer, this includes the cost of all raw materials or parts purchased for manufacture into a finished product. You must exclude the cost of merchandise you withdraw for your personal or family use.
<i>Sched C \ N494</i> Cost of Goods Sold - Labor	Labor costs are usually an element of cost of goods sold only in a manufacturing or mining business. In a manufacturing business, labor costs that are properly allocable to the cost of goods sold include both the direct and indirect labor used in fabricating the raw material into a finished, salable product.
<i>Sched C \ N495</i> Cost of Goods Sold - Materials/supplies	Materials and supplies, such as hardware and chemicals, used in manufacturing goods are charged to cost of goods sold. Those that are not used in the manufacturing process are treated as deferred charges. You deduct them as a business expense when you use them.

Tax Form \ TXF Code	Extended TXF Help messages
Description	
<i>Sched C \ N496</i> Cost of Goods Sold - Other costs	Other costs incurred in a manufacturing or mining process that you charge to your cost of goods sold are containers, freight-in, overhead expenses.
<i>Help Sched D \ H320</i> Schedule D - capital gains and losses	Schedule D is used to report gains and losses from the sale of capital assets.
<i># Sched D \ N321</i> Short Term gain/loss - security	Short term gain or loss from the sale of a security. Not yet implemented in GnuCash.
<i># Sched D \ N323</i> Long Term gain/loss - security	Long term gain or loss from the sale of a security. Not yet implemented in GnuCash.
<i>^ Sched D \ N488</i> Dividend income, capital gain distributions	Sometimes called long term capital gain distributions. These are from mutual funds, other regulated investment companies, or real estate investment trusts. These are reported on your monthly statements or Form 1099-DIV. Note: short term capital gain distributions are reported on Sched B as ordinary dividends
<i># Sched D \ N673</i> Short/Long Term gain or loss	Short term or long term gain or loss from the sale of a security; for use when only the date sold and net sales amount are available and the date acquired and cost basis information is not available and will be separately added in the tax software.
<i>Help Sched E \ H325</i> Schedule E - rental and royalty income	Schedule E is used to report income or loss from rental real estate, royalties, and residual interest in REMIC's. Use a different copy for each rental or royalty. Use the Schedule K-1 categories for partnership rental income and loss amounts.
<i>Sched E \ N326</i> Rents received	The amounts received as rental income from real estate (including personal property leased with real estate) but you were not in the real estate business. (If you are in the business of renting personal property, use Schedule C.)
<i>Sched E \ N327</i> Royalties received	Royalties received from oil, gas, or mineral properties (not including operating interests); copyrights; and patents.
<i>Sched E \ N328</i> Advertising	Amounts paid to advertise rental unit(s) in newspapers or other media or paid to realtor's to obtain tenants.
<i>Sched E \ N329</i> Auto and travel	The ordinary and necessary amounts of auto and travel expenses related to your rental activities, including 50% of meal expenses incurred while traveling away from home.
<i>Sched E \ N330</i> Cleaning and maintenance	The amounts paid for cleaning services (carpet, drapes), cleaning supplies, locks and keys, pest

Tax Form \ TXF Code	Extended TXF Help messages
Description	
	control, pool service, and general cost of upkeep of the rental property.
<i>Sched E \ N331</i> Commissions	The amounts paid as Commissions to realtor's or management companies to collect rent.
<i>Sched E \ N332</i> Insurance	Insurance premiums paid for fire, theft, liability.
<i>Sched E \ N333</i> Legal and professional fees	The amounts of fees for tax advice and the preparation of tax forms related to your rental real estate or royalty properties.
<i>Sched E \ N334</i> Mortgage interest expense	Interest paid to banks or other financial institutions for a mortgage on your rental property, and you received a Form 1098.
<i>Sched E \ N335</i> Other interest expense	Interest paid for a mortgage on your rental property, not paid to banks or other financial institutions or you did not receive a Form 1098.
<i>Sched E \ N336</i> Repairs	You may deduct the cost of repairs made to keep your property in good working condition. Repairs generally do not add significant value to the property or extend its life.
<i>Sched E \ N337</i> Supplies	Miscellaneous items needed to maintain the property, such as: brooms, cleaning supplies, nails, paint brushes, etc.
<i>Sched E \ N338</i> Taxes	The amounts paid for real estate and personal property taxes. Also include the portion of any payroll taxes you paid for your employees.
<i>Sched E \ N339</i> Utilities	The costs of electricity, gas, telephone, etc. for your rental property.
<i>Sched E \ N341</i> Other expenses	Other expenses that are not listed on other tax lines of Schedule E. These might include the cost of gardening and/or snow removal services, association dues, bank charges, etc.
<i>Sched E \ N502</i> Management fees	The amount of fees to a manager or property management company to oversee your rental or royalty property.
<i>Help Sched F \ H343</i> Schedule F - Farm income and expense	Schedule F is used to report farm income and expense. Use a different copy of Schedule F for each farm you own.
<i>Sched F \ N344</i> Labor hired	The amounts you paid for farm labor. Do not include amounts paid to yourself. Count the cost of boarding farm labor but not the value of any products they used from the farm. Count only what you paid house-hold help to care for farm laborers.

Tax Form \ TXF Code	Extended TXF Help messages
Description	
<i>Sched F \ N345</i> Repairs and maintenance	Amounts you paid for repairs and maintenance of farm buildings, machinery, and equipment. You can also include what you paid for tools of short life or minimal cost, such as shovels and rakes.
<i>Sched F \ N346</i> Interest expense, mortgage	The interest you paid to banks or other financial institutions for which you received a Form 1098, for a mortgage on real property used in your farming business (other than your main home). If you paid interest on a debt secured by your main home, and any proceeds from that debt were used in your farming operation, refer to IRS Pub 225.
<i>Sched F \ N347</i> Interest expense, other	The interest you paid for which you did not receive a Form 1098 (perhaps someone else did, and you are liable too), for a mortgage or other loans for your farm business.
<i>Sched F \ N348</i> Rent/lease land, animals	Amounts paid to rent or lease property such as pasture or farm land.
<i>Sched F \ N349</i> Rent/lease vehicles, equip.	The business portion of your rental cost, for rented or leased vehicles, machinery, or equipment. But if you leased a vehicle for a term of 30 days or more, you may have to reduce your deduction by an inclusion amount. For details, see the instructions for Schedule C (Form 1040).
<i>Sched F \ N350</i> Feed purchased	The cost of feed for your livestock. Generally, you cannot currently deduct expenses for feed to be consumed by your livestock in a later tax year. See instructions for Schedule F.
<i>Sched F \ N351</i> Seeds and plants purchased	The amounts paid for seeds and plants purchased for farming.
<i>Sched F \ N352</i> Fertilizers and lime	The cost of fertilizer, lime, and other materials applied to farm land to enrich, neutralize, or condition it. You can also deduct the cost of applying these materials. However, see Prepaid Farm Supplies, in Pub 225, for a rule that may limit your deduction for these materials.
<i>Sched F \ N353</i> Supplies purchased	Livestock supplies and other supplies, including bedding, office supplies, etc.
<i>Sched F \ N355</i> Vet, breeding, and medicine	The costs of veterinary services, medicine and breeding fees.
<i>Sched F \ N356</i> Gasoline, fuel, and oil	The costs of gas, fuel, oil, etc. for farm equipment.

Tax Form \ TXF Code	Extended TXF Help messages
Description	
<i>Sched F \ N357</i> Storage and warehousing	Amounts paid for storage and warehousing of crops, grains, etc.
<i>Sched F \ N358</i> Taxes	Real estate and personal property taxes on farm business assets; Social security and Medicare taxes you paid to match what you are required to withhold from farm employees' wages and any Federal unemployment tax paid; Federal highway use tax.
<i>Sched F \ N359</i> Insurance, other than health	Premiums paid for farm business insurance, such as: fire, storm, crop, theft and liability protection of farm assets. Do not include premiums for employee accident and health insurance.
<i>Sched F \ N360</i> Utilities	Amounts you paid for gas, electricity, water, etc., for business use on the farm. Do not include personal utilities. You cannot deduct the base rate (including taxes) of the first telephone line into your residence, even if you use it for business.
<i>Sched F \ N361</i> Freight and trucking	The costs of freight or trucking of produce or livestock.
<i>Sched F \ N362</i> Conservation expenses	Your expenses for soil or water conservation or for the prevention of erosion of land used in farming. To take this deduction, your expenses must be consistent with a plan approved by the Natural Resources Conservation Service (NRCS) of the Department of Agriculture.
<i>Sched F \ N363</i> Pension/profit sharing plans	Enter your deduction for contributions to employee pension, profit-sharing, or annuity plans. If the plan included you as a self-employed person, see the instructions for Schedule C (Form 1040).
<i>Sched F \ N364</i> Employee benefit programs	Contributions to employee benefit programs, such as accident and health plans, group-term life insurance, and dependent care assistance programs. Do not include contributions that are an incidental part of a pension or profit-sharing plan.
<i>Sched F \ N365</i> Other farm expenses	Include all ordinary and necessary farm expenses not deducted elsewhere on Schedule F, such as advertising, office supplies, etc. Do not include fines or penalties paid to a government for violating any law.
<i>Sched F \ N366</i> Chemicals	Chemicals used in operating your farm, such as insect sprays and dusts.
<i>Sched F \ N367</i> Custom hire expenses	Amounts you paid for custom hire (machine work) (the machine operator furnished the equipment). Do not include amounts paid for rental or lease of equipment you operated yourself.

Tax Form \ TXF Code	Extended TXF Help messages
Description	
<i>Sched F \ N372</i> Agricultural program payments	Government payments received for: price support payments, market gain from the repayment of a secured Commodity Credit Corporation (CCC) loan for less than the original loan amount, diversion payments, cost-share payments (sight drafts), payments in the form of materials (such as fertilizer or lime) or services (such as grading or building dams). Reported on Form 1099-G.
<i>Sched F \ N373</i> CCC loans reported/election	Generally, you do not report CCC loan proceeds as income. However, if you pledge part or all of your production to secure a CCC loan, you may elect to report the loan proceeds as income in the year you receive them, instead of the year you sell the crop.
<i>Sched F \ N374</i> CCC loans forfeited or repaid	The amount forfeited or repaid with certificates, even if you reported the loan proceeds as income. See IRS Pub 225.
<i>Sched F \ N375</i> Crop insurance proceeds received	You generally include crop insurance proceeds in the year you receive them. Treat as crop insurance proceeds the crop disaster payments you receive from the federal government.
<i>Sched F \ N376</i> Crop insurance proceeds deferred	If you use the cash method of accounting and receive crop insurance proceeds in the same tax year in which the crops are damaged, you can choose to postpone reporting the proceeds as income until the following tax year. A statement must also be attached to your return. See IRS Pub 225.
<i>Sched F \ N377</i> Other farm income	Illegal Federal irrigation subsidies, bartering income, income from discharge of indebtedness, state gasoline or fuel tax refund, the gain or loss on the sale of commodity futures contracts, etc.
<i>Sched F \ N368</i> Sales livestock/product raised	Amounts you received from the sale of livestock, produce, grains, and other products you raised.
<i>Sched F \ N369</i> Resales of livestock/items	Amounts you received from the sales of livestock and other items you bought specifically for resale. Do not include sales of livestock held for breeding, dairy purposes, draft, or sport. These are reported on Form 4797, Sales of Business Property.
<i>Sched F \ N370</i> Custom hire income	The income you received for custom hire (machine work).
<i>Sched F \ N371</i> Total cooperative distributions	Distributions received from a cooperative. This includes patronage dividends, non patronage distributions, per-unit retain allocations, and redemption of non qualified notices and per unit retain allocations. Reported on Form 1099-PATR.

Tax Form \ TXF Code	Extended TXF Help messages
Description	
<i>Sched F \ N378</i> Cost of resale livestock/items	The cost or other basis of the livestock and other items you actually sold.
<i>Sched F \ N543</i> Car and truck expenses	The business portion of car or truck expenses, such as, for gasoline, oil, repairs, insurance, tires, license plates, etc.
<i>Help Sched H \ H565</i> Schedule H - Household employees	Schedule H is used to report Federal employment taxes on cash wages paid this year to household employees. Federal employment taxes include social security, Medicare, withheld Federal income, and Federal unemployment (FUTA) taxes.
<i>^ Sched H \ N567</i> Cash wages paid	For household employees to whom you paid \$1,100 (as of 1999) or more each of cash wages that are subject to social security and Medicare taxes. To find out if the wages are subject to these taxes, see the instructions for Schedule H.
<i>^ Sched H \ N568</i> Federal tax withheld	Federal income tax withheld from total cash wages paid to household employees during the year.
<i>Help Sched K-1 \ H446</i> Schedule K-1 - partnership income, credits, deductions	Schedule K-1 is used to report your share of a partnership's income, credits, deductions, etc. Use a separate copy of Schedule K-1 for each partnership.
<i># Sched K-1 \ N448</i> Ordinary income or loss	Your share of the ordinary income (loss) from the trade or business activities of the partnership. This is reported to you on Schedule K-1. (You usually report this on Schedule E, See instructions for Schedule K-1)
<i># Sched K-1 \ N449</i> Rental real estate income or loss	The income or (loss) from rental real estate activities engaged in by the partnership. This is reported to you on Schedule K-1. (You usually report this on Schedule E, See instructions for Schedule K-1)
<i># Sched K-1 \ N450</i> Other rental income or loss	The income or (loss) from rental activities, other than the rental of real estate. This is reported to you on Schedule K-1. (You usually report this on Schedule E, See instructions for Schedule K-1)
<i>Sched K-1 \ N451</i> Interest income	The amount of interest income the partnership reported to you on Schedule K-1. (You report this on Schedule B)
<i>Sched K-1 \ N452</i> Dividends, ordinary	The amount of dividend income the partnership reported to you on Schedule K-1. (You report this on Schedule B)
<i># Sched K-1 \ N453</i> Net ST capital gain or loss	The short-term gain or (loss) from sale of assets the partnership reported to you on K-1. (You report this on Schedule D)

Tax Form \ TXF Code	Extended TXF Help messages
Description	
# Sched K-1 \ N454 Net LT capital gain or loss	The long-term gain or (loss) from the sale of assets the partnership reported to you on Schedule K-1. (You report this on Schedule D)
Sched K-1 \ N455 Guaranteed partner payments	A guaranteed payments the partnership reported to you on Schedule K-1. (You report this on Schedule E)
# Sched K-1 \ N456 Net Section 1231 gain or loss	The gain or (loss) from sale of Section 1231 assets the partnership reported to you on Schedule K-1. (You report this on Form 4797)
Sched K-1 \ N527 Royalties	The amount of the royalty income the partnership reported to you on Schedule K-1. (You report this on Schedule E)
Sched K-1 \ N528 Tax-exempt interest income	The amount of tax-exempt interest income the partnership reported to you on Schedule K-1. (You report this on Form 1040)
Help W-2 \ H458 Form W-2 - Wages earned and taxes withheld	Form W-2 is used by your employer to report the amount of wages and other compensation you earned as an employee, and the amount of federal and state taxes withheld and fringe benefits received. Use a separate copy of Form W-2 for each employer.
^ W-2 \ N267 Reimbursed moving expenses, self	Qualified moving expense reimbursements paid directly to you by an employer.
^ W-2 \ N460 Salary or wages, self	The total wages, tips, and other compensation, before any payroll deductions, you receive from your employer.
^ W-2 \ N461 Federal tax withheld, self	The amount of Federal income tax withheld from your wages for the year.
^ W-2 \ N462 Social Security tax withheld, self	The amount of social security taxes withheld from your wages.
^ W-2 \ N463 Local tax withheld, self	The amount of local taxes withheld from your wages.
^ W-2 \ N464 State tax withheld, self	The amount of state taxes withheld from your wages.
^ W-2 \ N465 Dependent care benefits, self	The amount dependent care benefits, including the fair market value of employer-provided or employer-sponsored day-care facilities you received.
^ W-2 \ N480 Medicare tax withheld, self	The amount of Medicare taxes withheld from your wages.

Tax Form TXF Code	Extended TXF Help messages
Description	
^ W-2 \ N506 Salary or wages, spouse	The total wages, tips, and other compensation, before any payroll deductions, your spouse receives from your spouse's employer.
^ W-2 \ N507 Federal tax withheld, spouse	The amount of Federal income tax withheld from your spouse's wages for the year.
^ W-2 \ N508 Social Security tax withheld, spouse	The amount of social security taxes withheld from your spouse's wages.
^ W-2 \ N509 Local tax withheld, spouse	The amount of local taxes withheld from your spouse's wages.
^ W-2 \ N510 Medicare tax withheld, spouse	The amount of Medicare taxes withheld from your spouse's wages.
^ W-2 \ N511 State tax withheld, spouse	The amount of state taxes withheld from your spouse's wages.
^ W-2 \ N512 Dependent care benefits, spouse	The amount dependent care benefits, including the fair market value of employer-provided or employer-sponsored day-care facilities your spouse received.
^ W-2 \ N546 Reimbursed moving expenses, spouse	Qualified moving expense reimbursements paid directly to your spouse by your spouse's employer.
Help W-2G \ H547 Form W-2G - gambling winnings	Form W-2G is used to report certain gambling winnings.
^ W-2G \ N549 Gross winnings	The amount of gross winnings from gambling. This may include winnings from horse racing, dog racing, jai alai, lotteries, keno, bingo, slot machines, sweepstakes, and wagering pools. If the amount is large enough, it will be reported on Form W-2G.
^ W-2G \ N550 Federal tax withheld	The amount of federal income taxes withheld from gross gambling winnings.
^ W-2G \ N551 State tax withheld	The amount of state income taxes withheld from gross gambling winnings.

Source: <https://github.com/Gnucash/gnucash/blob/maint/src/tax/us/txf-help.scm>

Reset Warnings...

GnuCash gives warnings when certain operations are attempted, such as removing a transaction or removing the splits of a transaction. The warning message gives you the option to not give you these warnings when attempting the operation. Check-boxes labeled Remember and don't ask me again and

Remember and don't ask me again this session allow disabling the warnings. This option permits resetting the warnings to the default, IE make the warning happen. Warnings may be selectively enabled.

Changing the Language

The language of the GnuCash user interface is not modifiable directly from the program's preferences.

The way you can change the language depends on the operating system you are running GnuCash on.

Linux In general you should set the `LANGUAGE` and `LANG` environment variables before starting GnuCash. To do this you need to open a terminal and run the following command:

```
LANGUAGE=ll_LL LANG=ll_LL gnucash
```

ll_LL is the locale you want to run GnuCash with (*de_DE* for Deutsch, *it_IT* for Italian etc.)

Note

On some systems (e.g. Ubuntu) the encoding could be part of the locales name, like *ll_LL.UTF-8*. You can use these names as well.

MacOSX If you want to use a different translation from the one that is automatically selected, you can run the following in Terminal.app:

```
defaults write $(mdls -name kMDItemCFBundleIdentifier -raw /Applications/GnuCash.app) AppleLanguages "(de, en)"
```

Use whatever language codes you want, replacing Deutsch and English. It won't work if there isn't a translation file for the language you want.

If you want to unset it (that is, return to using the system settings), run this:

```
defaults delete $(mdls -name kMDItemCFBundleIdentifier -raw /Applications/GnuCash.app)
```

Windows™ If you are running GnuCash 2.4.0 (or newer) on Windows, you can set the interface language by editing the file `environment` with a text editor (e.g. Notepad). By default this file is installed in `c:\Program Files\gnucash\etc\gnucash`. Change this file such that the last few lines are:

```
# If you wish GnuCash to use a different language, uncomment the two
# below and set LANG to your preferred locale
LANG=ll_LL
LANGUAGE={LANG}
```

ll_LL is the locale you want to run GnuCash with (*de_DE* for Deutsch, *it_IT* for Italian etc.)

Tip

More and updated information about this topic can be found on the Locale Settings page [https://wiki.gnucash.org/wiki/Locale_Settings] of the GnuCash wiki.

Appendix A. GnuCash Tips and tidbits

GnuCash Version 2.6.20 + Finance::Quote Version 1.47, March 2018

This chapter gives you some background information about Finance::Quote.

Finance::Quote Sources

There are 3 types of sources of which the first - currency - is hardcoded and responsible to fetch ISO currencies. The other two can be selected in the security editor.

Finance::Quote Sources - Currency source

Table A.1. Currency source for Finance::Quote

GnuCash Name	Finance::Quote Name	Notes
Currency	currency	End of 2017 the provider changed. Make sure, you updated F:Q to at least version 1.47 and follow the instructions at Alphavantage below.

Quote Sources - Individual sources

Table A.2. Individual sources for quotes

GnuCash Name	Finance::Quote Name	URL, Notes
Alphavantage, US	alphavantage	You need to <ol style="list-style-type: none">1. register at https://www.alphavantage.co/ and2. store the key which you got there in Edit → Preferences +Online Quotes .3. To use him also with gnc-fq-* commands you should set an <i>environment variable</i> <code>ALPHAVANTAGE_API_KEY</code>. Please consult the manual of your OS or command shell. Example. Environment variable in .bashrc <pre>export ALPHAVANTAGE_API_KEY=####</pre>
Amsterdam Euronext eXchange, NL	aex	https://www.aex.nl includes former sources AEX-“Futures” and -“Options”
American International Assurance, HK	aiahk	https://www.aia.com.hk

GnuCash Name	Finance::Quote Name	URL, Notes
Association of Mutual Funds In India, IN	amfiindia	https://www.amfiindia.com
Athens Stock Exchange, GR	asegr	https://www.ase.gr
Australian Stock Exchange, AU	asx	https://www.asx.com.au Requires at least F::Q 1.41, but unfortunately the ASX website is only working sometimes. And then only with a small no of stocks in 1 go. From final comment on: Price editor does not find ASX:XRO [https://bugs.gnucash.org/show_bug.cgi?id=770132#c12]
BAMOSZ funds, HU	bamosz	https://www.bamosz.hu
BMO NesbittBurns, CA	bmonesbitburns	https://bmonesbitburns.com
Bucharest Stock Exchange (Bursa de Valori Bucuresti), RO	bsero	https://www.bvb.ro
Budapest Stock Exchange (BET), ex-BUX, HU	bse or bet	https://www.bet.hu
Citywire Funds, GB	citywire	https://citywire.co.uk
Colombo Stock Exchange, LK	cse	https://www.cse.lk
Cominvest Asset Management, ex-Adig, DE	cominvest	https://www.cominvest-am.de Obsolete, update: https://eggert.org/software/Comdirect.pm
Deka Investments, DE	deka	https://www.deka.de
DWS, DE	dwsfunds	https://www.dws.de
Equinox Unit Trusts, ZA	za_unittrusts	https://www.equinox.co.za
Fidelity Investments, US	fidelity_direct	https://www.fidelity.com
Fidelity Fixed, US	fidelityfixed	https://www.fidelity.com/fixed-income-bonds/overview
Finance Canada	financecanada	https://finance.canada.com
Financial Times Funds service, GB	ftfunds	https://funds.ft.com
Finanzpartner, DE	finanzpartner	https://www.finanzpartner.de
First Trust Portfolios, US	ftportfolios_direct	https://www.ftportfolios.com
Fund Library, CA	fundlibrary	https://www.fundlibrary.com This module uses an id that represents the mutual fund on www.fundlibrary.com . There is no easy way of fetching the id except to jump onto the

GnuCash Name	Finance::Quote Name	URL, Notes
		fundlibrary website, look up the fund and view the url for clues to its id number.
GoldMoney spot rates, JE	goldmoney	https://www.goldmoney.com
Helsinki stock eXchange, FI	hex	https://www.hex.com
Man Investments, AU	maninv	https://www.maninvestments.com.au
Morningstar, GB	mstaruk	https://morningstar.co.uk
Morningstar, JP	morningstarjp	https://www.morningstar.co.jp
Morningstar, SE	morningstar	https://www.morningstar.se
Motley Fool, US	fool	https://www.fool.com
New Zealand stock eXchange, NZ	nzx	https://www.nzx.com
Paris Stock Exchange/ Boursorama, FR	boursorama	https://www.boursorama.com
Paris Stock Exchange/LeRevenu, FR	lerevenu	https://bourse.lerevenu.com
Platinum Asset Management, AU	platinum	https://www.platinum.com.au
SIX Swiss Exchange Funds, CH	sixfunds	https://www.six-swiss-exchange.com
SIX Swiss Exchange Shares, CH	sixshares	https://www.six-swiss-exchange.com
Skandinaviska Enskilda Banken funds, SE	seb_funds	https://www.seb.se Consult https://taz.vv.sebank.se/cgi-bin/pts3/pow/Fonder/kurser/kurslista_body.asp for all available funds.
Sharenet, ZA	za	https://www.sharenet.co.za
StockHouse Canada, CA	stockhousecanada_fund	https://www.stockhouse.ca
TD Waterhouse Funds, CA	tdwaterhouse	https://www.tdassetmanagement.com
TD Efund, CA	tdefunds	https://www.tdwaterhouse.ca
TIAA-CREF, US	tiaacref	https://www.tiaa-cref.org
Toronto Stock eXchange, CA	tsx	https://www.TMXmoney.com
T. Rowe Price, US	troweprice_direct	https://www.troweprice.com
Trustnet via tnetuk.pm, GB	tnetuk	https://www.trustnet.com
Trustnet via trustnet.pm, GB	trustnet	https://www.trustnet.com
Union Investment, DE	unionfunds	https://www.union-invest.de
US Treasury Bonds, US	usfedbonds	https://www.publicdebt.treas.gov
US Govt. Thrift Savings Plan, US	tsp	https://www.tsp.gov
Vanguard, US	vanguard	part of AlphaVantage

GnuCash Name	Finance::Quote Name	URL, Notes
VWD, DE (unmaintained)	vwd	See https://lists.gnucash.org/pipermail/gnucash-user/2008-February/023686.html
Yahoo USA	yahoo	CSV interface since 2017-11-01 shut off
Yahoo Asia	yahoo_asia	
Yahoo Australia	yahoo_australia	
Yahoo Brasil	yahoo_brasil	
Yahoo Europe	yahoo_europe	
Yahoo New Zealand	yahoo_nz	
Yahoo as JSON, US	yahoo_json	https://finance.yahoo.com/ through "JavaScript Object Notation"
Yahoo as YQL, US	yahoo_yql	https://finance.yahoo.com/ through "Yahoo Query Language"
Zuerich Investments (replaced)	zifunds	Zürich Invest has been purchased by Deutsche Bank and integrated into DWS.

Finance::Quote Sources - Multiple sources

Here the first successful result of a list of sources gets returned.

Table A.3. Multiple sources for quotes

Name
Asia disappeared with Yahoo
Australia (ASX, ...)
Brasil disappeared with Yahoo
Canada (Alphavantage, TSX, ...)
Canada Mutual (Fund Library, StockHouse, ...)
Dutch (AEX, ...)
Europe (asegr,,bsero, hex ...)
Greece (ASE, ...)
Hungary (Bamosz, BET, ...)
India Mutual (AMFI, ...)
Fidelity (Fidelity, ...)
Finland (HEX, ...)
First Trust (First Trust, ...)
France (Boursorama, LeRevenu, ...)
Nasdaq (Alphavantage, Fool, ...)

Name
New Zealand (NZX, ...)
NYSE (Alphavantage, Fool, ...)
South Africa (Sharenet, ...)
Romania (bsero, ...)
T. Rowe Price
U.K. Funds (citywire, FTfunds, MStar, tnetuk, ...)
U.K. Unit Trusts (trustnet, ...)
USA (Alphavantage, Fool ...)

Sources: `src/engine/gnc-commodity.c:gnc_quote_source` (commit c0fd3b3, which was adjusted for Finance::Quote 1.47), GnuCash-Wiki [<https://wiki.gnucash.org/wiki/>], bugzilla [<https://bugs.gnucash.org/page.cgi?id=browse.html&product=GnuCash>], mailing list archive [https://wiki.gnucash.org/wiki/Mailing_Lists#Mailing_List_Archives].

Yahoo Specifics

Yahoo has offered quotes from many exchanges and markets. Alphavantage will behave similar but without delay. If you are not asking for US markets, you have to specify where to look. A typical Yahoo symbol has the form `<ISIN><markets suffix>`.

Table A.4. Yahoo Codes for Exchanges and Markets

Country	Exchange	Suffix	Delay
Argentina	Buenos Aires Stock Exchange	.BA	30 min
Australia	Australian Stock Exchange	.AX	20 min
Austria	Vienna Stock Exchange	.VI	15 min
Brazil	BOVESPA - Sao Paolo Stock Exchange	.SA	15 min
Canada	Toronto Stock Exchange	.TO	15 min
Canada	TSX Venture Exchange	.V	15 min
Chile	Santiago Stock Exchange	.SN	15 min
China	Shanghai Stock Exchange	.SS	30 min
China	Shenzhen Stock Exchange	.SZ	30 min
Denmark	Copenhagen Stock Exchange	.CO	15 min
France	Euronext	.NX	15 min
France	Paris Stock Exchange	.PA	15 min
Germany	Berlin Stock Exchange	.BE	15 min
Germany	Bremen Stock Exchange	.BM	15 min

Country	Exchange	Suffix	Delay
Germany	Dusseldorf Stock Exchange	.DU	15 min
Germany	Frankfurt Stock Exchange	.F	15 min
Germany	Hamburg Stock Exchange	.HM	15 min
Germany	Hanover Stock Exchange	.HA	15 min
Germany	Munich Stock Exchange	.MU	15 min
Germany	Stuttgart Stock Exchange	.SG	15 min
Germany	XETRA Stock Exchange	.DE	15 min
Greece	Athens Stock Exchange	.AT	15 min
Hong Kong	Hong Kong Stock Exchange	.HK	15 min
India	Bombay Stock Exchange	.BO	15 min
India	National Stock Exchange of India	.NS	Real-time**
Indonesia	Jakarta Stock Exchange	.JK	10 min
Israel	Tel Aviv Stock Exchange	.TA	20 min
Italy	Milan Stock Exchange	.MI	20 min
Japan	Nikkei Indices	N/A	30 min
Mexico	Mexico Stock Exchange	.MX	20 min
Netherlands	Amsterdam Stock Exchange	.AS	15 min
New Zealand	New Zealand Stock Exchange	.NZ	20 min
Norway	Oslo Stock Exchange	.OL	15 min
Russia	Moscow Interbank Currency Exchange (MICEX)	.ME	15 min
Singapore	Singapore Stock Exchange	.SI	20 min
South Korea	Korea Stock Exchange	.KS	20 min
South Korea	KOSDAQ	.KQ	20 min
Spain	Barcelona Stock Exchange	.BC	15 min
Spain	Bilbao Stock Exchange	.BI	15 min
Spain	Madrid Fixed Income Market	.MF	15 min
Spain	Madrid SE C.A.T.S.	.MC	15 min
Spain	Madrid Stock Exchange	.MA	15 min

Country	Exchange	Suffix	Delay
Sweden	Stockholm Stock Exchange	.ST	15 min
Switzerland	Swiss Exchange	.SW	30 min
Taiwan	Taiwan OTC Exchange	.TWO	20 min
Taiwan	Taiwan Stock Exchange	.TW	20 min
United Kingdom	FTSE Indices	N/A	15 min
United Kingdom	London Stock Exchange	.L	20 min
United Kingdom	London Stock Exchange	.IL	20 min
United States of America	BATS Exchange	N/A	Real-time
United States of America	Chicago Board of Trade	.CBT	10 min
United States of America	Chicago Mercantile Exchange	.CME	10 min
United States of America	Dow Jones Indexes	N/A	Real-time
United States of America	NASDAQ Stock Exchange	N/A	Real-time*
United States of America	New York Board of Trade	.NYB	30 min
United States of America	New York Commodities Exchange	.CMX	30 min
United States of America	New York Mercantile Exchange	.NYM	30 min
United States of America	New York Stock Exchange	N/A	Real-time*
United States of America	NYSE Mkt	N/A	Real-time*
United States of America	OTC Bulletin Board Market	N/A	Real-time*
United States of America	OTC Markets Group	N/A	15 min
United States of America	S & P Indices	N/A	Real-time

Source: <https://help.yahoo.com/l/us/yahoo/finance/quotes/fitadelay.html> queried at 2012-09-22.

TIAA-CREF Specifics

TIAA-CREF Annuities are not listed on any exchange, unlike their mutual funds TIAA-CREF provides unit values via a cgi on their website. The cgi returns a csv file in the format

```
bogus_symbol1,price1,date1
bogus_symbol2,price2,date2
..etc.
```

where bogus_symbol takes on the following values for the various annuities:

Note

The symbols are case-sensitive and changed their capitalization in the last time.

Table A.5. Pseudo-symbols that can be used for TIAA-CREF quotes

Name	Symbol	bogus
CREF Bond Market Account	CREFbond	41081991
CREF Equity Index Account	CREFequi	41082540
CREF Global Equities Account	CREFglob	41081992
CREF Growth Account	CREFgrow	41082544
CREF Inflation-Linked Bond Account	CREFinfb	41088773
CREF Money Market Account	CREFmony	41081993
CREF Social Choice Account	CREFsoci	41081994
CREF Stock Account	CREFstok	41081995
TIAA Real Estate Account	TIAAreal	41091375
TIAA-CREF Bond Fund (Retirement)	TIDRX	4530828
TIAA-CREF Bond Index Fund (Retirement)	TBIRX	20739662
TIAA-CREF Bond Plus Fund (Retirement)	TCBRX	4530816
TIAA-CREF Emerging Markets Equity Fund (Retirement)	TEMSX	26176543
TIAA-CREF Emerging Markets Equity Index Fund (Retirement)	TEQSX	26176547
TIAA-CREF Equity Index Fund (Retirement)	TIQRX	4530786
TIAA-CREF Global Natural Resources Fund (Retirement)	TNRRX	39444919
TIAA-CREF Growth & Income Fund (Retirement)	TRGIX	312536
TIAA-CREF High Yield Fund (Retirement)	TIHRX	4530821
TIAA-CREF Inflation-Linked Bond Fund (Retirement)	TIKRX	4530829
TIAA-CREF International Equity Fund (Retirement)	TRERX	302323
TIAA-CREF International Equity Index Fund (Retirement)	TRIEX	300269
TIAA-CREF Large-Cap Growth Fund (Retirement)	TILRX	4530785
TIAA-CREF Large-Cap Growth Index Fund (Retirement)	TRIRX	299525

Name	Symbol	bogus
TIAA-CREF Large-Cap Value Fund (Retirement)	TRLCX	301332
TIAA-CREF Large-Cap Value Index Fund (Retirement)	TRCVX	304333
TIAA-CREF Lifecycle 2010 Fund (Retirement)	TCLEX	302817
TIAA-CREF Lifecycle 2015 Fund (Retirement)	TCLIX	302393
TIAA-CREF Lifecycle 2020 Fund (Retirement)	TCLTX	307774
TIAA-CREF Lifecycle 2025 Fund (Retirement)	TCLFX	313994
TIAA-CREF Lifecycle 2030 Fund (Retirement)	TCLNX	307240
TIAA-CREF Lifecycle 2035 Fund (Retirement)	TCLRX	309003
TIAA-CREF Lifecycle 2040 Fund (Retirement)	TCLOX	300959
TIAA-CREF Lifecycle 2045 Fund (Retirement)	TTFRX	9467597
TIAA-CREF Lifecycle 2050 Fund (Retirement)	TLFRX	9467596
TIAA-CREF Lifecycle 2055 Fund (Retirement)	TTRLX	34211330
TIAA-CREF Lifecycle Index 2010 Fund (Retirement)	TLTRX	21066482
TIAA-CREF Lifecycle Index 2015 Fund (Retirement)	TLGRX	21066496
TIAA-CREF Lifecycle Index 2020 Fund (Retirement)	TLWRX	21066479
TIAA-CREF Lifecycle Index 2025 Fund (Retirement)	TLQRX	21066485
TIAA-CREF Lifecycle Index 2030 Fund (Retirement)	TLHRX	21066435
TIAA-CREF Lifecycle Index 2035 Fund (Retirement)	TLYRX	21066475
TIAA-CREF Lifecycle Index 2040 Fund (Retirement)	TLZRX	21066473
TIAA-CREF Lifecycle Index 2045 Fund (Retirement)	TLMRX	21066488
TIAA-CREF Lifecycle Index 2050 Fund (Retirement)	TLLRX	21066490
TIAA-CREF Lifecycle Index 2055 Fund (Retirement)	TTIRX	34211328

Name				Symbol	bogus
TIAA-CREF Retirement (Retirement)	Lifecycle Income Fund	Index Fund		TRCIX	21066468
TIAA-CREF Retirement (Retirement)	Lifecycle Income Fund			TLIRX	9467594
TIAA-CREF Aggressive (Retirement)	Lifestyle Growth Fund			TSARX	40508431
TIAA-CREF Conservative Fund (Retirement)	Lifestyle Fund			TSCTX	40508433
TIAA-CREF Fund (Retirement)	Lifestyle Growth			TSGRX	40508437
TIAA-CREF Fund (Retirement)	Lifestyle Income			TLSRX	40508427
TIAA-CREF Fund (Retirement)	Lifestyle Moderate			TSMTX	40508460
TIAA-CREF Fund (Retirement)	Managed Allocation			TITRX	4530825
TIAA-CREF Fund (Retirement)	Mid-Cap Growth			TRGMX	305499
TIAA-CREF Fund (Retirement)	Mid-Cap Value			TRVRX	315272
TIAA-CREF Fund (Retirement)	Money Market			TIEXX	4530771
TIAA-CREF Securities Fund (Retirement)	Real Estate			TRRSX	300081
TIAA-CREF Fund (Retirement)	S&P 500 Index			TRSPX	306105
TIAA-CREF Fund (Retirement)	Short-Term Bond			TISRX	4530818
TIAA-CREF Index Fund (Retirement)	Small-Cap Blend			TRBIX	314644
TIAA-CREF Fund (Retirement)	Small-Cap Equity			TRSEX	299968
TIAA-CREF Equity Fund (Retirement)	Social Choice			TRSCX	300078
TIAA-CREF (Institutional)	Bond Fund			TIBDX	307276
TIAA-CREF (Institutional)	Bond Index Fund			TBIIX	20739664
TIAA-CREF (Institutional)	Bond Plus Fund			TIBFX	4530820

Name	Symbol	bogus
TIAA-CREF Emerging Markets Equity Fund (Institutional)	TEMLX	26176540
TIAA-CREF Emerging Markets Equity Index Fund (Institutional)	TEQLX	26176544
TIAA-CREF Enhanced International Equity Index Fund (Institutional)	TFIIX	9467603
TIAA-CREF Enhanced Large-Cap Growth Index Fund (Institutional)	TLIIX	9467602
TIAA-CREF Enhanced Large-Cap Value Index Fund (Institutional)	TEVIX	9467606
TIAA-CREF Equity Index Fund (Institutional)	TIEIX	301718
TIAA-CREF Global Natural Resources Fund (Institutional)	TNRIX	39444916
TIAA-CREF Growth & Income Fund (Institutional)	TIGRX	314719
TIAA-CREF High Yield Fund (Institutional)	TIHYX	4530798
TIAA-CREF Inflation-Linked Bond Fund (Institutional)	TIILX	316693
TIAA-CREF International Equity Fund (Institutional)	TIIEIX	305980
TIAA-CREF International Equity Index Fund (Institutional)	TCIEIX	303673
TIAA-CREF Large-Cap Growth Fund (Institutional)	TILGX	4530800
TIAA-CREF Large-Cap Growth Index Fund (Institutional)	TILIX	297809
TIAA-CREF Large-Cap Value Fund (Institutional)	TRLIX	300692
TIAA-CREF Large-Cap Value Index Fund (Institutional)	TILVX	302308
TIAA-CREF Lifecycle 2010 Fund (Institutional)	TCTIX	4912376
TIAA-CREF Lifecycle 2015 Fund (Institutional)	TCNIX	4912355
TIAA-CREF Lifecycle 2020 Fund (Institutional)	TCWIX	4912377
TIAA-CREF Lifecycle 2025 Fund (Institutional)	TCYIX	4912384

Name	Symbol	bogus
TIAA-CREF Lifecycle 2030 Fund (Institutional)	TCRIX	4912364
TIAA-CREF Lifecycle 2035 Fund (Institutional)	TCIIX	4912375
TIAA-CREF Lifecycle 2040 Fund (Institutional)	TCOIX	4912387
TIAA-CREF Lifecycle 2045 Fund (Institutional)	TTFIX	9467607
TIAA-CREF Lifecycle 2050 Fund (Institutional)	TFTIX	9467601
TIAA-CREF Lifecycle 2055 Fund (Institutional)	TTRIX	34211329
TIAA-CREF Lifecycle Index 2010 Fund (Institutional)	TLTIX	21066484
TIAA-CREF Lifecycle Index 2015 Fund (Institutional)	TLFIX	21066498
TIAA-CREF Lifecycle Index 2020 Fund (Institutional)	TLWIX	21066480
TIAA-CREF Lifecycle Index 2025 Fund (Institutional)	TLQIX	21066486
TIAA-CREF Lifecycle Index 2030 Fund (Institutional)	TLHIX	21066495
TIAA-CREF Lifecycle Index 2035 Fund (Institutional)	TLYIX	21066477
TIAA-CREF Lifecycle Index 2040 Fund (Institutional)	TLZIX	21066474
TIAA-CREF Lifecycle Index 2045 Fund (Institutional)	TLXIX	21066478
TIAA-CREF Lifecycle Index 2050 Fund (Institutional)	TLLIX	21066492
TIAA-CREF Lifecycle Index 2055 Fund (Institutional)	TTIIX	34211326
TIAA-CREF Lifecycle Index Retirement Income Fund (Institutional)	TRILX	21066463
TIAA-CREF Lifecycle Retirement Income Fund (Institutional)	TLRIX	9467595
TIAA-CREF Lifestyle Aggressive Growth Fund (Institutional)	TSAIX	40508428
TIAA-CREF Lifestyle Conservative Fund (Institutional)	TCSIX	40508425

Name	Symbol	bogus
TIAA-CREF Lifestyle Growth Fund (Institutional)	TSGGX	40508434
TIAA-CREF Lifestyle Income Fund (Institutional)	TSITX	40508450
TIAA-CREF Lifestyle Moderate Fund (Institutional)	TSIMX	40508443
TIAA-CREF Managed Allocation Fund (Institutional)	TIMIX	4530787
TIAA-CREF Mid-Cap Growth Fund (Institutional)	TRPWX	297210
TIAA-CREF Mid-Cap Value Fund (Institutional)	TIMVX	316178
TIAA-CREF Money Market Fund (Institutional)	TCIXX	313650
TIAA-CREF Real Estate Securities Fund (Institutional)	TIREX	303475
TIAA-CREF S&P 500 Index Fund (Institutional)	TISPX	306658
TIAA-CREF Short-Term Bond Fund (Institutional)	TISIX	4530784
TIAA-CREF Small-Cap Blend Index Fund (Institutional)	TISBX	309018
TIAA-CREF Small-Cap Equity Fund (Institutional)	TISEX	301622
TIAA-CREF Social Choice Equity Fund (Institutional)	TISCX	301897
TIAA-CREF Tax-Exempt Bond Fund (Institutional)	TITIX	4530819
TIAA-CREF Bond Fund (Retail)	TIORX	4530794
TIAA-CREF Bond Index Fund (Retail)	TBILX	20739663
TIAA-CREF Bond Plus Fund (Retail)	TCBPX	4530788
TIAA-CREF Emerging Markets Equity Fund (Retail)	TEMRX	26176542
TIAA-CREF Emerging Markets Equity Index Fund (Retail)	TEQKX	26176545
TIAA-CREF Equity Index Fund (Retail)	TINRX	4530797
TIAA-CREF Global Natural Resources Fund (Retail)	TNRLX	39444917
TIAA-CREF Growth & Income Fund (Retail)	TIIRX	4530790

Name	Symbol	bogus
TIAA-CREF High Yield Fund (Retail)	TIYRX	4530830
TIAA-CREF Inflation-Linked Bond Fund (Retail)	TCILX	313727
TIAA-CREF International Equity Fund (Retail)	TIERX	4530827
TIAA-CREF Large-Cap Growth Fund (Retail)	TIRTX	4530791
TIAA-CREF Large-Cap Value Fund (Retail)	TCLCX	302696
TIAA-CREF Lifecycle Retirement Income Fund (Retail)	TLRRX	9467600
TIAA-CREF Lifestyle Aggressive Growth Fund (Retail)	TSALX	40508429
TIAA-CREF Lifestyle Conservative Fund (Retail)	TSCLX	40508432
TIAA-CREF Lifestyle Growth Fund (Retail)	TSGLX	40508435
TIAA-CREF Lifestyle Income Fund (Retail)	TSILX	40508438
TIAA-CREF Lifestyle Moderate Fund (Retail)	TSMLX	40508453
TIAA-CREF Managed Allocation Fund (Retail)	TIMRX	4530817
TIAA-CREF Mid-Cap Growth Fund (Retail)	TCMGX	305208
TIAA-CREF Mid-Cap Value Fund (Retail)	TCMVX	313995
TIAA-CREF Money Market Fund (Retail)	TIRXX	4530775
TIAA-CREF Real Estate Securities Fund (Retail)	TCREX	309567
TIAA-CREF Short-Term Bond Fund (Retail)	TCTRX	4530822
TIAA-CREF Small-Cap Equity Fund (Retail)	TCSEX	297477
TIAA-CREF Social Choice Equity Fund (Retail)	TICRX	4530792
TIAA-CREF Tax-Exempt Bond Fund (Retail)	TIXRX	4530793
TIAA-CREF Bond Fund (Premier)	TIDPX	21066506
TIAA-CREF Bond Index Fund (Premier)	TBIPX	21066534

Name	Symbol	bogus
TIAA-CREF Bond Plus Fund (Premier)	TBPPX	21066533
TIAA-CREF Emerging Markets Equity Fund (Premier)	TEMPX	26176541
TIAA-CREF Emerging Markets Equity Index Fund (Premier)	TEQPX	26176546
TIAA-CREF Equity Index Fund (Premier)	TCEPX	21066530
TIAA-CREF Global Natural Resources Fund (Premier)	TNRPX	39444918
TIAA-CREF Growth & Income Fund (Premier)	TRPGX	21066461
TIAA-CREF High Yield Fund (Premier)	TIHPX	21066501
TIAA-CREF Inflation-Linked Bond Fund (Premier)	TIKPX	21066500
TIAA-CREF International Equity Fund (Premier)	TREPX	21066466
TIAA-CREF International Equity Index Fund (Premier)	TRIPX	21066462
TIAA-CREF Large-Cap Growth Fund (Premier)	TILPX	21066499
TIAA-CREF Large-Cap Value Fund (Premier)	TRCPX	21066467
TIAA-CREF Lifecycle 2010 Fund (Premier)	TCTPX	21066521
TIAA-CREF Lifecycle 2015 Fund (Premier)	TCFPX	21066528
TIAA-CREF Lifecycle 2020 Fund (Premier)	TCWPX	21066518
TIAA-CREF Lifecycle 2025 Fund (Premier)	TCQPX	21066522
TIAA-CREF Lifecycle 2030 Fund (Premier)	TCHPX	21066527
TIAA-CREF Lifecycle 2035 Fund (Premier)	TCYPX	21066517
TIAA-CREF Lifecycle 2040 Fund (Premier)	TCZPX	21066516
TIAA-CREF Lifecycle 2045 Fund (Premier)	TTFPX	21066444
TIAA-CREF Lifecycle 2050 Fund (Premier)	TCLPX	21066526
TIAA-CREF Lifecycle 2055 Fund (Premier)	TTRPX	34211331

Name	Symbol	bogus
TIAA-CREF Lifecycle Index 2010 Fund (Premier)	TLTPX	21066483
TIAA-CREF Lifecycle Index 2015 Fund (Premier)	TLFPX	21066497
TIAA-CREF Lifecycle Index 2020 Fund (Premier)	TLWPX	21066434
TIAA-CREF Lifecycle Index 2025 Fund (Premier)	TLVPX	21066481
TIAA-CREF Lifecycle Index 2030 Fund (Premier)	TLHPX	21066494
TIAA-CREF Lifecycle Index 2035 Fund (Premier)	TLYPX	21066476
TIAA-CREF Lifecycle Index 2040 Fund (Premier)	TLPRX	21066487
TIAA-CREF Lifecycle Index 2045 Fund (Premier)	TLMPX	21066489
TIAA-CREF Lifecycle Index 2050 Fund (Premier)	TLLPX	21066491
TIAA-CREF Lifecycle Index 2055 Fund (Premier)	TTIPX	34211327
TIAA-CREF Lifecycle Index Retirement Income Fund (Premier)	TLIPX	21066493
TIAA-CREF Lifecycle Index Retirement Income Fund (Premier)	TPILX	21066470
TIAA-CREF Lifestyle Fund Aggressive Growth Fund (Premier)	TSAPX	40508430
TIAA-CREF Lifestyle Fund Conservative Fund (Premier)	TLSPX	40508426
TIAA-CREF Lifestyle Growth Fund (Premier)	TSGPX	40508436
TIAA-CREF Lifestyle Income Fund (Premier)	TSIPX	40508451
TIAA-CREF Lifestyle Moderate Fund (Premier)	TSMPX	40508456
TIAA-CREF Mid-Cap Growth Fund (Premier)	TRGPX	21066464
TIAA-CREF Mid-Cap Value Fund (Premier)	TRVPX	21066455
TIAA-CREF Money Market Fund (Premier)	TPPXX	21066469

Name	Symbol	bogus
TIAA-CREF Real Estate Securities Fund (Premier)	TRRPX	21066459
TIAA-CREF Short-Term Bond Fund (Premier)	TSTPX	21066445
TIAA-CREF Small-Cap Equity Fund (Premier)	TSRPX	21066446
TIAA-CREF Social Choice Equity Fund (Premier)	TRPSX	21066460

Source: Comments in <https://rt.cpan.org/Ticket/Attachment/1121440/589997/Tiaacref.pm.zip>

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