Beancount:
a bookkeeping system written in Python

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Revelations

- Double-entry accounting system (Luca Pacioli, circa 1494)

- OFX files

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- OFX files

Quickbooks, Simply Accounting, Excel, GnuCash, ...

Ledger

John Wigley

Differences with "real" accounting systems

- "Signed" amounts (no debits/credits)

- Each account can contain *anything* (a "wallet of commodities")

- No required categories of accounts

Just a fancy calculator...

Functions of Accounting

- Bookkeeping

- Budgeting

- Payroll

- Invoicing

- Tax law

- Corporate finance

- etc...

Functions of Accounting

- Bookkeeping

Data Model
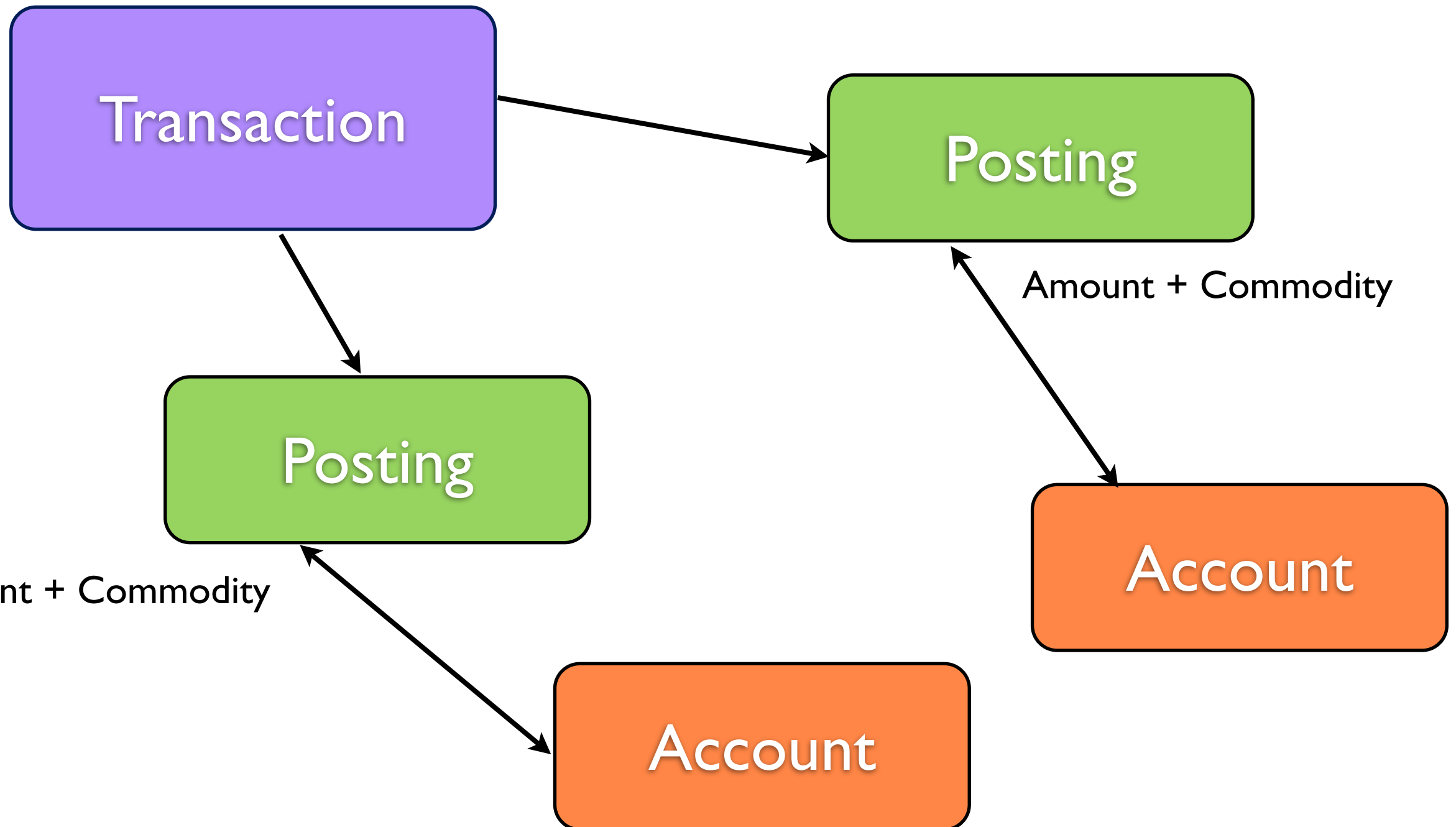
Date + Description

Transaction

Posting

Amount + Commodity

Posting

Account

Amount + Commodity

Account

Text files rock!

If you possess the valuable skill of being able to edit text files...

- No need for complicated GUIs

- No database: parsing input to memory each time is good enough

Input Format

```
2008-03-06 * Barnes & Noble | books
  Expenses:Books                 74.43 USD
  Assets:Current:Cash           -74.43 USD
```

Input Format

```
2008-03-06 * Barnes & Noble | books
  Expenses:Books                    74.43 USD
  Assets:Current:Cash
```

Input Format

```
;; Doing this because of skirt-length statistic computation.
2008-02-28 * Sell off my Apple
  Assets:Investments:UTrade:Account:AAPL     -30 AAPL @ 193.02 USD
  Assets:Investments:UTrade:Account         5780.65 USD
  Expenses:Financial:Commissions               9.95 USD
  (Income:Investments:Capital-Gains)        -208.70 USD
```

Accounting in 30 sec

Accounting in 30 sec

- Assets

- Liabilities

- Equity

Accounting in 30 sec

- Assets

- Liabilities

- Equity

A = L + E

Accounting in 30 sec

- Assets

- Liabilities

- Equity

A = L + E

"Balance Sheet"

Accounting in 30 sec

- Assets
- Liabilities
- Equity

- Income
- Expenses

$$A = L + E$$

"Balance Sheet"

Accounting in 30 sec

- Assets

- Liabilities

- Equity

$$A = L + E$$

"Balance Sheet"

- Income

- Expenses

$$P\&L = Inc - Exp$$

Accounting in 30 sec

- Assets

- Liabilities

- Equity

▽

A = L + E

▽

"Balance Sheet"

- Income

- Expenses

▽

P&L = Inc - Exp

▽

"P&L Report"

Accounting in 30 sec

Accounting in 30 sec

$$A + Exp = L + E + Inc$$

Accounting in 30 sec

$$A + Exp = L + E + Inc$$

$$E\_begin = (A - L)$$
$$E\_end = (A - L) + (Exp - Inc)$$

Accounting in 30 sec

$$A + Exp = L + E + Inc$$

$$E\_begin = (A - L)$$
$$E\_end = (A - L) + (Exp - Inc)$$

"Capital Report"

Signed amounts

Simple form:

$$A = L + E$$

becomes

$$A + L + E = 0$$

Extended form:

$$A + Exp = L + E + Inc$$

becomes

$$A + L + E + Inc + Exp = 0$$

(Demo)

Ledger

- C++

- Runs very fast

- Reporting is basic (shell)

- Supports fancier syntax

Beancount

- Pure Python

- Slow (>2y of data)

- Reporting via local web server

- Easy to extend

Future work

- Book value

- Better web views

Try it!

http://furius.ca/beancount

Source code via Mercurial:
https://hg.furius.ca/public/beancount

Example input:
beancount/examples/demo.ledger

```
cd beancount/examples
./demo1.sh
./demo2.sh
```