Bill Gate - Spec

Background

MicroSnow is an Internet market place mediating between Snow dealers all over the world.

Often a buyer will buy several types of snow from different regions and expect to get a bill using their own currency.

Goal

A system that:

- Loads exchange rates for any number of currencies
- Processes multi-currency bills and outputs total in required currency

Currency Exchange

A currency is defined by its unique Symbol (3 upper case letters).

For V1 the system will be presented a list of currencies and exchange rates (relative to Euro) on a periodic basis. File structure is:

- Line per currency
- Each line contains currency code '=' exchange rate, e.g.
  EUR=1
  USD=0.73
  ILS=0.21

Bills

A bill is composed of several line items.

Each line item consists of :

- Item description
- Amount
- Item Price
- Currency

Fields are separated with "::". ("::" cannot be part of an Item description, so no escaping is required). Example:
sleet::10::3.12::GBP
drizzle::14::4.25::USD
slush::8.99::CHF

Rules of the Game

- You have 2 hours
- Test will be on a command line utility that
    - accepts <rate file>, <bill> and <currency>
      ```
      java Main myrates.txt mybill.txt USD
      ```
    - returns the bill amount
      ```
      USD 23.41
      ```
- System will receive 5 bills as a test
- 3 possible extensions will be presented for V2
- Success measures, by importance:
    - System must work, passing all 5 tests
    - System maintainable (Readable code, Clear design)
    - System extensible (Clear way to extend system for V2)
    - Utility robustness is un-important. System robustness is.