Shopping Receipt

Objective

Write a program to print receipt for a shopping cart including sales tax.

Customers shop from different states of US, and sales tax is applied based on location and product category.

Sales tax = roundup(price * quantity * sales tax rate)

Certain product categories are exempt from sales tax (means tax will be 0), and sales tax amount should be rounded up to the nearest 0.05 (e.g. 1.13->1.15, 1.16->1.20, 1.151->1.20)

The interactive UI or web framework is not required, at minimum you can implement code method and use parameters as input. or read input value from file.

Input

The input of the program includes: product name, price, quantity and location of the purchase.

All other information, such as tax rates and product categories, is not part of the input and can be stored/ initialized within the program or as part of configuration settings.

Output

The program should print the list of items customer purchased, including name/qty/price, subtotal, sales tax, and total, by following format of use cases.

Tax rates

In California (CA), sales tax rate is 9.75%, food is exempt.

In New York (NY), sales tax rate is 8.875%, food and clothing are exempt.

Please implement the program in Java, unit test is a plus.

The implementation will be graded by completeness of requirements, object oriented coding techniques, readability and testability.

Use case 1:

Input: Location: CA, 1 book at 17.99, 1 potato chips at 3.99

Output

```
item              price           qty

book             $17.99             1
potato chips      $3.99             1
subtotal:                       $21.98
tax:                             $1.80
total:                          $23.78
```

Use case 2:

Input: Location: NY, 1 book at 17.99, 3 pencils at 2.99

Output:

```
item              price           qty

book             $17.99             1
pencil            $2.99             3
subtotal:                       $26.96
tax:                             $2.40
total:                          $29.36
```

Use case 3

Input: Location: NY, 2 pencils at 2.99, 1 shirt at 29.99

Output:

```
item              price           qty

pencil            $2.99             2
shirt            $29.99             1
subtotal:                       $35.97
tax:                             $0.55
total:                          $36.52
```