



Evaluation Guide:

What we are looking for

You will be evaluated on how you reach the solution, keeping in mind that the correctness of the solution will also be taken into consideration. Your focus should be on these elements of code quality:

- Code easy to read and to maintain (i.e. Clean code)
- Object-oriented design
- Unit testing
- Expandable design
- SOLID principles

What you should aim to deliver

A simple web service or console application does the job. You do not need to implement any input mechanism, any UI nor data store. It is important to keep in mind that we are looking for code quality and attention to details, not quantity of code.

There is no constraint in Input and Output design as long as it's provide the requested information. You may use frameworks and/or tools that are in general usage for the target technology stack (for example your preferred unit testing framework).

However, the central problem of the coding exercise should be performed entirely by your own code.

Please note that, according to the information collected from the candidates, they usually spend between 4 to 12 hours on this coding exercise.

- The code must be written using an IDE like Eclipse or IntelliJ, two free IDE available on the internet.
- Once the code is written, the source code must be submitted without its byte code; please remove any files archiving byte code (jar, war, "*.class" and the bin/target directory).
- The code can be submitted using an archive file or a link to a git repository.



Problem: Sales Taxes

Basic sales tax is applicable at a rate of 10% on all goods, except books, food, and medical products that are exempt. Import duty is an additional sales tax applicable on all imported goods at a rate of 5%, with no exemptions.

When I purchase items, I receive a receipt which lists the name of all the items and their price (including tax), finishing with the total cost of the items, and the total amounts of sales taxes paid. The rounding rules for sales tax are that for a tax rate of $n\%$, a shelf price of p contains $(np/100)$ rounded up to the nearest 0.05 amount of sales tax.

Write an application that returns the receipt details for these shopping baskets...

INPUT

Input 1

```
1 book at 12.49
1 music CD at 14.99
1 chocolate bar at 0.85
```

Input 2

```
1 imported box of chocolates at 10.00
1 imported bottle of perfume at 47.50
```

Input 3

```
1 imported bottle of perfume at 27.99
1 bottle of perfume at 18.99
1 packet of headache pills at 9.75
1 box of imported chocolates at 11.25
```



OUTPUT

Output 1

```
1 book: 12.49
1 music CD: 16.49
1 chocolate bar: 0.85
Sales Taxes: 1.50 Total: 29.83
```

Output 2

```
1 imported box of chocolates: 10.50
1 imported bottle of perfume: 54.65
Sales Taxes: 7.65 Total: 65.15
```

Output 3

```
1 imported bottle of perfume: 32.19
1 bottle of perfume: 20.89
1 packet of headache pills: 9.75
1 imported box of chocolates: 11.85
Sales Taxes: 6.70 Total: 74.68
```