

Katchr Software Developer – Coding Assessment

Purpose

The pre-assessment is small programming assignment that you will be expected to complete prior to your interview.

The core objectives of the pre-interview assignment are to

- acquire an understanding of your basic coding style and approach.
- assess your general architectural abilities
- ascertain your understanding of object oriented programming concepts
- form part of a discussion at your interview

Project Constraints

Please develop this project in C#.

You can take as long as required; but ensure your solution is submitted at least two days prior to your interview. Feel free to submit it as a zipped project/solution file or via GitHub repo or equivalent.

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Core Expectations

Your solution will require some input. You are free to provide any mechanism for feeding this input into your solution (for example mock data provided from within a unit test).

You should provide sufficient evidence that your solution is complete by, as a minimum, indicating that it works correctly against the supplied test data.

Task 1 – Sales Tax

Basic 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 tax applicable on all imported goods at a rate of 5%, with no exceptions.

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 items, and the total amount of tax paid

The rounding rules for tax are:

For a tax rate of $n\%$, a price of p attracts $(np / 100$ rounded up to the nearest 0.05) amount of tax.

Write an application that prints out the receipt details for these shopping baskets

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 paracetamol at 9.75
1 Box of imported chocolates at 11.2

Once calculated the following output should be shown.

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