Sales Tax Solution - C#

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Purpose: This document is to better explain the design and assumptions for the solution to the Sales Tax Solution written in C#.

For the solution to the Sales Tax Problem I made the following assumptions:

* There would be many most items then one ones shown in the solution. In order to keep the solution simple and yet accurately display what was needed, I only included the items that were given for sample input
* The object Item contains an itemId which is not actually used in the solution. It made logical sense to include to show that the object was created in a manner than made sense in a real world situation. The items would be most likely stored in a database and would use the itemId to fetch the items.
* I created each item when the application loads. In all reality the application would be attached to a database to grab this information.
* The tax category determines how much the item is taxed.
  + Category 1 is no tax (food, books, and medical products)
  + Category 2 is regular tax rate (10%)
  + Category 3 is imported tax on food, books, and medical products (5%)
  + Category 4 is imported tax (15%)
* You can add multiples of the same item. They will appear separately from each other instead of all calculated together because on most receipts each item will appear on its own line.

I used a C# form to demonstrate my solution, but the logic for solving the problem would be the same in a console application. The form would be the easiest for people to understand and follow. In addition the user does not have the ability to input any information not given by the program. This takes away any chance of the user entering any invalid data. I also believe that while the solution is quite simple, it would give a more accurate demonstration of what a real world Cash Register application might look like.

To run the program:

1. Open Visual Studio and click File >> New >> Project From Existing Code

2. Select C# and click next

3. Select the submitted SalesTaxC# folder, name your new project, and select Windows Application and then hit finish

4. Simply hit F5 and the application will run

5. The list box on the left hand side contains all the items and the list box on the right contains the items selected for purchase. The text box on the bottom left side contains the details of the selected item in inventory and the text box on the bottom right contains the purchase details of the items selected.

6. Select an item from the inventory and click the add button and you will see the item appear in the items selected box. Continue as necessary.

7. If you wish to remove an item from being purchased, then select the item from the Items Selected box and click remove.

8. If you wish to calculate your order then click calculate and the order details will appear below.

9. If you wish to clear the order then click the clear button and the Items Selected box will empty.

If you have any questions or problems please feel free to contact me.

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