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Exercises for Programmers

57 Challenges to Develop Your Coding Skills

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The
Pragmatic
Programmers

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Brian P. Hogan

Edited by Susannah Davidson Pfalzer

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Working with multiple inputs and currency can introduce some tricky precision issues.

Create a simple self-checkout system. Prompt for the prices and quantities of three items. Calculate the subtotal of the items. Then calculate the tax using a tax rate of 5.5%. Print out the line items with the quantity and total, and then print out the subtotal, tax amount, and total.

Example Output

```
Enter the price of item 1: 25
Enter the quantity of item 1: 2
Enter the price of item 2: 10
Enter the quantity of item 2: 1
Enter the price of item 3: 4
Enter the quantity of item 3: 1
Subtotal: $64.00
Tax: $3.52
Total: $67.52
```

Constraints

- Keep the input, processing, and output parts of your program separate. Collect the input, then do the math operations and string building, and then print out the output.
- Be sure you explicitly convert input to numerical data before doing any calculations.

Challenges

- Revise the program to ensure that prices and quantities are entered as numeric values. Don't allow the user to proceed if the value entered is not numeric.
- Alter the program so that an indeterminate number of items can be entered. The tax and total are computed when there are no more items to be entered.