Joe Student
CS 155-01
Assignment #4
Due date: 03/17/20

Program requirements:

This program will calculate the sales tax and total amount due on a purchase. The sales tax has three parts: the state, county, and city taxes. The program will prompt the user for a purchase price and then use functions to compute the taxes and display a formatted receipt.

Functions:
- stateTax – returns the state tax due for a purchase
- countyTax – returns the county tax due for a purchase
- cityTax – returns the city tax due for a purchase
- displayReceipt – displays the purchase price, state tax amount, county tax amount, city tax amount, and total amount due as a formatted receipt

The tax amounts for each jurisdiction are constants:
- State 4%
- County 2%
- City 3.5%

The output will be formatted as a receipt similar to the example shown in Figure 1.

```
    ------------------------------
         *** Wise Guy Buys ***

     Item price :    256.32

     State tax  :     10.25
     County tax :      5.13
     City tax   :      8.97

     Total      :    280.67
    ------------------------------
```

Figure 1. Example formatted receipt

Program inputs:

The user will provide a single real number representing the price in dollars and cents of a purchased item. This value will be stored in the program as a double.

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Program outputs:

The program will output the purchase price, state, county, and city tax amounts, and the total amount due. All values will be displayed as real numbers with two digits after the decimal. The computed values will all be stored as doubles.

Test plan:

The *purchase price* column represents the input and the tax and total columns represent the expected output for each test case.

	Purchase price	State tax	County tax	City tax	Total
Test case #1	100.00	4.00	2.00	3.50	109.50
Test case #2	0.00	0.00	0.00	0.00	0.00
Test case #3	10.00	0.40	0.20	0.35	10.95
Test case #4	1.00	0.04	0.02	0.04	1.10

Algorithm:

Start with the purchase price for an item as a single real number representing dollars and cents. The state tax is computed by multiplying the purchase price by 4%. The county tax is computed by multiplying the purchase price by 2%. The city tax is computed by multiplying the purchase price by 3.5%. The total is the sum of the purchase price, state tax, county tax, and city tax. Finally, display the purchase price, state tax amount, county tax amount, city tax amount, and total amount due formatted as a sales receipt. All the amounts are displayed as U.S. dollar amounts with two digits after the decimal.

Flowchart:

<<< Flowchart is on next page >>>

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START

get item price from user

compute state tax due

state tax = item price * 4%

compute county tax due

county tax = item price * 2%

compute city tax due

city tax = item price * 3.5%

display
item price, state tax,
county tax, city tax,
and total amount
formatted as a
sales receipt

END