Programming Assignment #1

Burger Cafe

CS 2308.001 and 002 Fall 2016
Instructor: Jill Seaman

Due: Tuesday, 9/13/2016: upload electronic copy by 12:00 midnight.

Write a program that stores the following data about an item on a menu in a structure:
   Description of the menu item
   Price of the item

The program should keep an array of 5 menu items, initialized with the following data:
   Cheeseburger   2.65
   Hamburger   2.25
   French Fries   1.35
   Coke   1.75
   Beer   3.00

When the program runs it should display the menu items, along with the corresponding prices, in a numbered list. It should then ask the user to enter the numbers of the items ordered by a given customer, followed by a 0. The program should then calculate and display the bill, including the description and price of each item ordered, the 8% sales tax, and the total amount due.

Your program should include the following functions:

showMenu takes the array of menu items as an argument. This function should display the menu items and their prices with a corresponding number starting at 1.

getOrder takes one int array argument. This function should ask the user to choose as many menu items as they like, using the corresponding number. The user may select the same number more than once to indicate a purchase more than one of that item. The choices should be stored in the int array, including the 0 after the last choice.

printCheck takes the array of menu items and the int array of orders as arguments. This function should display the items ordered with their prices, and calculate and display 8% tax and the total amount due.

Note: you may assume there will be no more than 50 items sold to each customer.

Sample output (data does not need to line up in columns, but should be easy to read):

```
Burger Cafe Menu
1  Cheeseburger       2.65
2  Hamburger          2.25
3  French Fries       1.35
4  Coke               1.75
5  Beer               3.00

Make your selections by number.
Enter a number more than once to place multiple orders.
When you are done, type 0.

2 1 3 3 4 0

Order Receipt:

Hamburger            2.25
Cheeseburger         2.65
French Fries         1.35
French Fries         1.35
Coke                 1.75
Tax                  0.75
Amount Due          10.10
```

Additional Requirements:

* Your program **must compile** and run, otherwise you will receive a score of 0.

* Your program must pass **Test Case 0** (below) or you will receive a score of 30 or less with no credit for the other grading categories (correctness/constraints/style):

  Input: 1 5 0
  Expected output: Either of the following is acceptable for Test Case 0:

```
Cheeseburger       2.65      Cheeseburger       2.65
Beer               3.00      Beer               3.00
Tax                0.45      Amount Due         5.65
Amount Due         6.10
```

* Output values within .01 of the expected result values are acceptable.

* Output does not need to line up in columns, but the output prices should be displayed to exactly 2 decimal places (Hint: cout<<fixed<<setprecision(2))

* Please do not use any features of C++ that we have not yet covered in class (use features from Chapters 1-7, 11 only). Do not use classes!

Style:

See the Style Guidelines document on the course website. Especially pay attention to the **comments** required for the top of the file and for each function. The grader will deduct points if your program violates the style guidelines.

Logistics:

Name your file **assign1_xxxxx.cpp** where xxxxx is your TX State NetID (your txstate.edu email id). The file name should look something like this: assign1_js236.cpp

There are two steps to the turn-in process:

1. Submit an <u>electronic copy</u> using the Assignments tool on the TRACS website for this class.

2. Submit a <u>printout</u> of the source file at the beginning of class, the day after the assignment is due. Please **print your name on top of the front page**, and staple if there is more than one page.

See the assignment policy on the course website (<u>cs.txstate.edu/~js236/cs2308</u>) for more details.