**CSS 225 Module 2 Lab Activity – Variables and Functions**

**Due:** Wednesday, Jan. 27 at 11:59pm

Instructions:

* Download lab\_activity\_2.py
* Complete Problems 1 through 4 by completing the code in the file
  + Full explanations of each question are in this document
* Complete Problem 5 by writing a new program in a new .py file

For full credit, you should be able to run lab\_activity\_2.py and get the expected outputs with the testing code found at the bottom of the file. Do not change any of the testing code.

**Turn in**:

* Your completed code in lab\_activity\_2.py
* A new .py file with your answer to Problem 5

Proper commenting is expected of all programs from now on. Assignments submitted without proper comments will receive a grade penalty of up to 10%.

Worth 20% points each:

**Problem 1 – Say hello**

Complete the **say\_hello()** function in lab\_activity\_2.py. This function should get the user's name and print it back to them with a nice message.

**Problem 2 - BMI**

A person’s BMI is a ratio of their weight to their height. The following equation will calculate a person's BMI based on their height in inches and their weight in pounds:

Complete the **bmi()** function in lab\_activity\_2.py. It should ask the user for their height and weight, then return their BMI calculated with the above equation.

The test code should print the user's BMI.

If the user's height is 62 and weight is 200, their BMI should be 36.58

If the user's height is 75 and weight is 188, their BMI should be 23.5

**Problem 3 - What do I owe you**

When you buy more than one of the same item at a store, you figure out how much money you'll need to pay by multiplying the number of items you're buying by the price of each item.

Complete the **total()** function in lab\_activity\_2.py which takes the price of a single item and the number of that item being purchased as parameters. It should return the amount you'll need to pay in order to purchase all the items.

The test code should print 67.2 then 59.96.

**Problem 4 - Add 'em Up**

Complete the **add\_up()** function in lab\_activity\_2.py. This function takes three numbers as parameters and returns the sum of all three.

The test code should print 27 then 152.

**Problem 5 – Self Checkout**

You’re the owner of a small shop with relatively few patrons. Even so, it’d be nice to have a self-checkout machine that could manage the register while you work on your programming assignments.

Each item in your store has a name and a price.

Write a program that asks your customer how many of each item in your store they’d like to buy, and display the total amount they owe you.

Your shop must have a minimum of three items.

There are dozens of ways to do this. As long as you write all of your own code, and it works, you are free to solve this however you want. You may reuse any code from class or that you've written in the rest of this assignment.

Be sure to greet your customer and wish them a nice day! Customer service is key.

**Side note**:

If your decimals are ugly, you can use

round(number,2)

which will return whatever ‘number’ is, rounded to two decimal places.

**Bonus**Write a function that takes two numbers. Return True if the sum of the numbers is greater than 10, otherwise return False.

You do not need to ask for user input. Just the function is fine.

You do not need an if/else statement.