COMP 480 – PROBLEM SOLVING WITH COMPUTING **WINTER 2010**

LAB #3 (3-1)[1] [17 PTS] **DUE:** TUE FEB 16

PURPOSE:

To practice more Python coding, in particular, 'CONSTANTS', string formatting, and using functions (or methods, we'll use these terms interchangeably) and to firm up your understanding of terminology.

TASKS:

You will answer a set of short questions and write a short program using methods.

(1) Work "Short Answer" questions on page 109, #2, 3, 4 and 5. Your answers should go into a MS Word document. Don't forget your name/assignment designation on the document. [7 pts]

(2) The program that you are writing (**`cash_reg.py`**) should use methods along the same model as `cost_calc6.py`. Your methods do not have to take parameters or return values; though if you want to practice doing that I fully encourage you to try (it is not required). [10 pts]

Create your own banner function to display at the start and end of the program. Your banner should minimally display your name, but feel free to embellish with art or company logos/names.

Also create a main function to call the other methods you are creating.

I am providing you with a sample run of the program as a form of specifications. Here are some tips for items to consider as you write your program:

- Your program should be easy to modify if the current state tax rate changes. That means code should only have to *change only in one spot* for this.
- Your identifiers for methods and variables should be descriptive.
- Your code should be properly documented – this includes your methods.
- Use % formatting instructions to produce your output *whenever you display any variable(s).* I have provided you with a sample program (`formatting_fn.py`) and your text shows their use in chapter 2 as well.
- Your output has to be lined up nicely and be as close to the output format that I am showing on the next page.

Please make sure your program contains this header:

[1] The number in () corresponds to the assignment number on the Franklin University web page and should be used when you submit your assignment via dropbox for proper credit.

```
Your name
480
Lab3 (3-1)
```

at the top of your regular program description/documentation.

Test your program to make sure it works correctly.

Sample program run follows; user input is shown in **red**. Obviously, item number, description etc all could vary, but you may want to use these for *initial* testing. Notice that each program run contains two transactions.

```
-----------------------------------
  your own fun banner here
-----------------------------------

Program calculates total cost of same items purchased.
State tax is 8 percent.

Enter item description: flashlight
Number of items purchased? 1
Price per item? 5.25

Item       :  flashlight
Number     :     1
Item Price:  $   5.25
SubTotal   :  $   5.25
Tax        :  $   0.42
=====================
Total      :  $   5.67


Program calculates total cost of same items purchased.
State tax is 8 percent.

Enter item description: umbrella
Number of items purchased? 3
Price per item? 7.75

Item       :  umbrella
Number     :     3
Item Price:  $   7.75
SubTotal   :  $  23.25
Tax        :  $   1.86
=====================
Total      :  $  25.11
-----------------------------------
  your own fun banner here
-----------------------------------
```

DELIVERABLES:

One MS Word document and one program file. Put them both into a folder and zip them up before you upload it to the dropbox in the appropriate spot (see http://cs.franklin.edu/~esmail/COMP_480/submit.html for a refresher)

Your program source file has to be named **`cash_reg.py`** Be sure the required identifying information (name, class, assignment numbers etc) are on all of your documents so that you can receive credit for your work.