CSCI 104 Python Programming Assignment #1A

Purpose: This is our first experiment on Python programming. In the class, we'll go through the steps carefully. You have to come to the class and spend time exploring the Python programming environment. **You'll gain the full credit for this lab assignment if you have come to the class to spend 2 hours on it in the lab.**

Overview: We want to write a Python program to perform the task of temperature conversion from Celsius to Fahrenheit. Note that given *C* as the degree of temperature in Celsius, the corresponding degree *F* in Fahrenheit equals *1.8*C + 32.0*. For example 50 degree Celsius should be 122 degree Fahrenheit.

Stage 1. Try individual commands under the interactive mode:
Invoke IDLE Python GUI to work with Python under the interactive mode, and try to issue instructions in the Python programming language to have the computer do the following things one by one. Carefully observe what happen in each step after you issue the command to the computer. (Note: If your computer runs Windows 8 and cannot locate IDLE Python GUI, try to get to `C:\Python27\Lib\idlelib\idle.py` and double click it to open up the **Python IDLE environment** instead.)

a) Use the *print* command to print a message to ask the user to enter the degree of temperature in Celsius.
For example, *print "What is the degree in Celcius? "*

b) Use the *raw_input* function to read a string entered by the user and store the string into a variable *CelsiusString*.
For example, *CelciusString = raw_input( )*

c) Use the *int* function to extract the integer value from the *CelsiusString* and store the value into another variable *C*.
For example, *C= int(CelciusString)*

Note: If you want to allow the user to enter numerical values such as 50.5 instead just integers such as 50, you can use the *float* function instead of *int* to extract the numerical value such as 50.5 from the *CelsiusString.* For example, *C= float(CelciusString)*

d) Calculate the corresponding degree in Fahrenheit based on the value stored in *C* and then store the result into another variable *F*.
For example, *F= 1.8*C + 32*
Note that the multiplication operator is represented as *.

e) Print a message on the screen to tell the user that the number stored in *F* is the corresponding degree in Fahrenheit.
For example, *print "The corresponding degree in Fahrenheit is ", F*

Stage 2: Write down the program as a collection of all the individual instructions one by one in order:
If you are able to correctly conduct temperature conversion throughout all the steps in Stage A, you can now go to ***File*** => ***New Window*** under IDLE Python GUI to invoke a new editing window. Write down the Python instructions you used in Stage 1 above one by one in order under this new Window and save them in file, say *program1A.py*.

Stage 3. Run the program:
Under the new window, go to ***Run*** => ***Run Module*** to run the whole program you have written in Stage 2 above. Make sure your program can do temperature conversion correctly. For example 50 degree Celsius should be 122 degree Fahrenheit. If you encounter mistakes while running the program or if the results are not right, revisit your program and revise it to try to make it work.

Stage 4: Submission of your work:
In your weekly progress report,
(i) report how much time you have spent in this Python Programming #1A and **whether you have come to the class to spend 2 hours on it in the lab,**
(ii) report any problems you encountered in the process and whether the program you got in Stage 3 is working or not, and
(iii) copy and paste the contents of the Python program you wrote for Python Programming #1A into the weekly report.