A112 – Lab 2
Variables, Assignments, and Output
[revised/corrected at 1:00pm on 3/22/24.]

DUE Friday, March 22, 2024, by 3:00:00 pm (SHARP)
Submit Python script file A112_LAB2_YOUR_NAME.py to
"LAB 2" Assignment in your Canvas "Lab Assignments" group

Goal: In this lab, you will learn about variables and printing output in Python. You will write a Python script that involves basic arithmetic operations and using strings. The lab aims to strengthen your understanding of variables, expressions, and the print function in Python, and how to effectively comment on your code to enhance its readability and maintainability.

Discussion: As you embark on your journey through the world of programming, one essential skill you'll develop is not just writing code but writing code that others (and your future self) can understand. Commenting in your code plays a crucial role in achieving this clarity. Good comment etiquette involves briefly explaining the purpose of significant sections of your code, variables, and complex logic that might not be immediately apparent to someone unfamiliar with your work. However, it's also important to strike a balance and not go overboard. Too much commenting can make your code mess and tough to follow. However, under-commenting can make it hard for your future self and others to see what's going on. Aim to make your comments informative and concise, focusing on the "why" behind your code decisions more than the "what." This should be evident from the code itself. As we dive into variables, assignments, and output in this lab, remember that commenting is not just about fulfilling a requirement; it's about crafting your code into a readable, maintainable, and welcoming document for all who encounter it.

I. Arithmetic Operations with Variables

1. Open IDLE and click on File > New File to create a new Python script file ('.py').

2. Click on File > Save as.. to save the file to your preferred method of choice. Save it as A112_LAB2_YOUR_NAME.py. [This is the corrected filename, identical to what listed below and on Canvas.]

3. Add the following line at the top:

    # Part I BEGIN

4. Type the following code into your Python script:

    ```
    x _ 5
    y _ _
    result = 3 * (x + y)
    print(result)
    ```

5. Your task is to replace the blanks ('_') with appropriate values or expressions to make the output of the script is '24.'

6. Ensure that your code is appropriately commented, based on our discussion and what we've covered in class. This includes adding a header that complies with the commenting standard we've discussed.

7. To test your code, click on Run > Run Module, and observe the output via the IDLE Shell.

II. Strings

1. Continue in the same Python script. Make sure to save your progress by going to File > Save.

2. Add the following line below your work from Part I:

    # Part II BEGIN

3. Type the following code below the line you just wrote in step 2:

    ```
    my_name = _
    ```

print('My name is", _) # output >> My name is <Your Name>

4. Once again, replace the blanks ('_') with the necessary code to print out your name in the format specified. Remember to test your code as you did in *Part I, step 7.*

5. Ensure that your code is appropriately commented.

6. Run and test your code and make sure it works.

7. Submit the single A112_LAB2_YOUR_NAME.py file to your Canvas "LAB 2" assignment **by 3:00 PM today as indicated above.**

Scoring:

Successfully submitted to Canvas: **2 points**
File "compiles" and runs: **2 points**
Appropriate heading & comments: **2 points**
2 mathematical statements involving fill in the blank generate correct results: **2 points**
2 string statements involving fill in the blank generate correct results: **2 points**

TOTAL: 10 points

Handing in your Assignment

It should be clear that failure to successfully submit your Python script (.py) file to your Canvas "LAB 2" assignment in the "Lab Assignments" section or failing to meet the deadline will result in a score of zero (0). Partial credit will only be possible if your Python script doesn't compile successfully without errors, but you are successful in submitting the file and most or all of what you submit is correct. If you have questions about this, ask them ASAP.