A112 – Lab 1
Setting Up Python Development Environment

DUE Friday, March 8, 2024, by 3:00:00 pm (SHARP)
Submit Python script file A112_LAB1_YOUR_NAME.py to
"LAB 1" Assignment in your Canvas "Lab Assignments" group

Goal: In this lab, you will learn how to set up your Python development environment using Python 3.11 and use the IDLE (Integrated Development and Learning Environment) for Python programming to create your very first program.

I. Installing Python 3.11

This part is only for students who wish to setup python on their personal computer. If you will be using campus computers exclusively, you may skip Part I and begin Part II.

Windows

1. Visit the Python website and download [Python 3.11.4 64-bit](#).

2. Run the Python installer and follow the installation instructions. Make sure to check the box that says **"Add Python 3.11.4 to PATH"** during installation.

3. Once the installation is complete, you can easily verify that Python 3.11.4 has been installed successfully by searching for 'IDLE' in your computer's start menu.

macOS

1. Visit the Python website and download [Python 3.11.4 64-bit](#).

2. Run the Python installer and follow the installation instructions.

3. Once the installation is complete, you can verify that Python 3.11.4 has been installed by pressing 'Command' + 'Spacebar' to bring up a Spotlight Search and searching for 'IDLE'.

If you are using an operating system other than Windows or macOS just make sure to install the specific version of Python 3.11.4 64-bit. If you encounter any difficulties or need guidance specific to your operating system, please do not hesitate to approach your Teaching Assistant (TA).

II. Using IDLE.

IDLE (Integrated Development and Learning Environment) is an integrated development environment that comes bundled with the Python programming language. It serves as a graphical user interface (GUI) for Python, providing a convenient and user-friendly way to write, edit, execute, and debug Python code.

1. Log into Windows 10 using your University Username and password. If you are using your personal computer, log in as usual.

2. Launch the IDLE (Integrated Development and Learning Environment) that comes with Python. You can find it in the Start Menu (Windows) or by searching for "IDLE" in the applications (macOS/Linux).

3. In the IDLE shell, you can start writing and executing Python code. Try the following:

    `>>> print("Hello, my name is <your name>!")`

4. In the IDLE window, navigate to the "File" menu located at the top left corner of the shell window. Select "New File" from the dropdown options. This action opens up a new, separate window dedicated to writing your Python script. This is where you'll write code that can be saved, edited, and run multiple times.

5. In the new script window that opens, type a simple Python program such as a "Hello, my name is <your name>!" program like from step 3 and save it with a .py extension (e.g., A112_LAB1_YOUR_NAME.py) by going to "File" > "Save As…"

6. Run your Python script by selecting "Run" > "Run Module" from the menu. Observe the output in the IDLE shell.

7. Now, let's have some fun and experiment with Python using IDLE. Try the following by directly entering them into the IDLE shell:

    >>> 2+2
    >>> print(2+2)
    >>> print("2+2")

    Think about why each line of code may output something similar or different.

8. Return to your Python script and type in those three lines of code from the previous step below your existing code. Ensure they run and output correctly.

9. Make sure to save your "A112_LAB1_YOUR_NAME.py" file that contains your "Hello, my name is <your name>!" program and the three lines from step 7. Run it again ("Run" > "Run Module") to make sure everything is working as expected and **turn it into Canvas.**

10. When you're finished with your Python programming session, you can close the IDLE environment, exit, and log out of the system.

11. Submit the single A112_LAB1_YOUR_NAME.py file to your Canvas "LAB 1" assignment **by 3:00 PM today as indicated above.**

Scoring:

Successfully submitted to Canvas: **2 points**
File "compiles" and runs: **2 points**
Heading with name and date: **2 points**
"Hello" print statement displays correct information: **2 points**
3 statements involving arithmetic operations 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 1" 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.