

Assignment #0: Introduction to the IDLE Environment

Due Date:

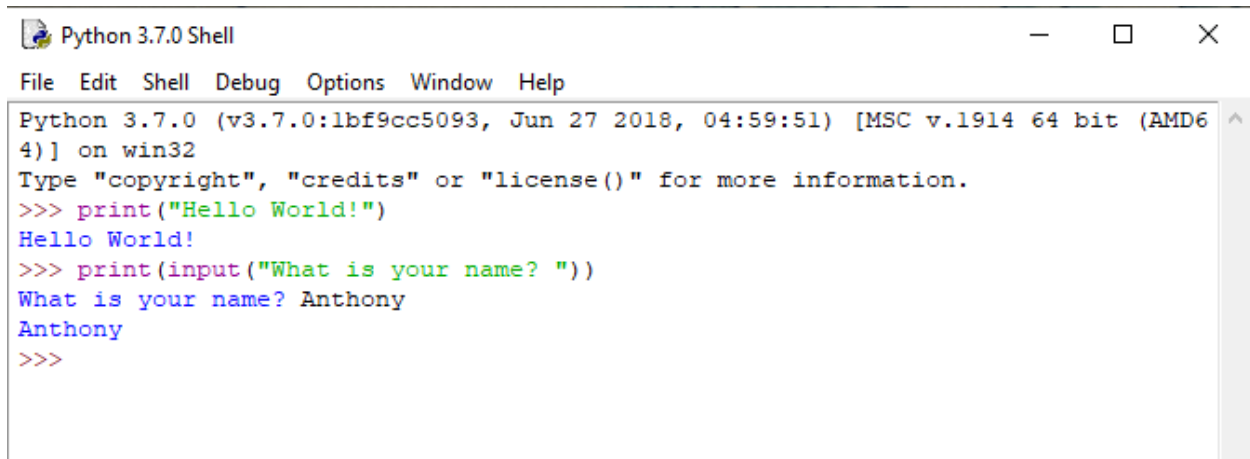
A screenshot of the Python 3.7.0 Shell window. The window has a title bar with the text 'Python 3.7.0 Shell' and standard window controls (minimize, maximize, close). Below the title bar is a menu bar with 'File', 'Edit', 'Shell', 'Debug', 'Options', 'Window', and 'Help'. The main text area contains the following text: 'Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32', 'Type "copyright", "credits" or "license()" for more information.', '>>> print("Hello World!")', 'Hello World!', '>>> print(input("What is your name? "))', 'What is your name? Anthony', 'Anthony', and '>>>'. The text is color-coded: Python version and platform in blue, prompt characters in red, and code in green. The user input 'Anthony' is in blue.

Figure 1 – An example of the Python shell making use of text commands to execute Python code.

Abstract

As the title suggests, this assignment will serve as your starting point towards developing programs written in Python within the IDLE environment, which is supported by the Python Software Foundation.

IDLE is intended to be a simple Python integrated development environment (IDE) suitable for beginners, and it is cross-platform. The main features of IDLE include a multi-window text editor with syntax highlighting, autocompletion, smart indentations, a Python shell, an integrated debugger with stepping, persistent breakpoints, and call stack visibility, among other features.

Not all these features will be explored immediately, and many may not even be explored at all. However, it is still vital to know how to develop Python programs, as the skills obtained from learning them can be translated to not only other languages, but other IDEs as well.

1. Overview

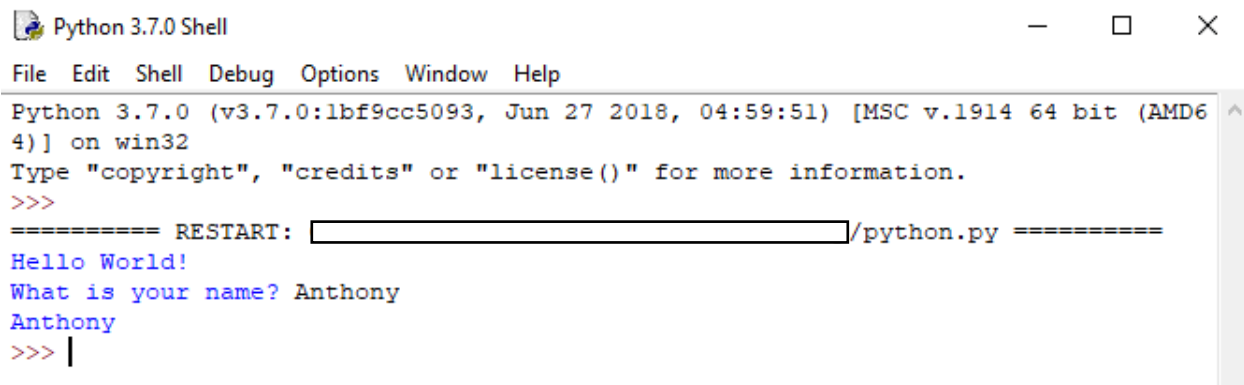
For this assignment, two screenshots will be submitted will be used to verify the following:

1. That you can use and navigate through the IDLE environment.
2. That you have a working understanding on how the Python shell works.
3. That you can develop a Python script within the IDLE environment.
4. That you have a good understanding on the differences between programming using an interpreter and programming using a script.

When you open the IDLE environment, the first thing that you will see is the Python shell. In short, a shell is a form of a user interface to either navigate a service, execute user commands, or both, and can be either text-based or graphical-based. The Python shell is text-based, and it acts similarly to a command-line interface that makes use of the Python interpreter, which is a computer program that reads and executes Python code.

The first thing that you will do is write and execute two lines of code in the Python interpreter via the shell. Notice the three '>>>' characters, which should be the last line in the shell. This is a prompt that indicates that the interpreter is ready for you to enter code. By typing a line of code and hitting **Enter**, the interpreter will execute it.

The first line of code should be a **print()** statement that will output any sentence that you give it. In **Figure 1**, this is the sentence "Hello World!". You do not have to use that sentence specifically, as any will do. The second line of code will be an **input()** statement inside of a **print()** statement. Within this **input()** statement, ask a question, any question. In **Figure 1**, this question is "What is your name?". Again, you do not have to use this question specifically, so long as it is a simple question that can be answered in few words.



```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: >>> /python.py =====
Hello World!
What is your name? Anthony
Anthony
>>> |
```

Figure 2 – What should be shown if you run a Python script.

The next step in the assignment is creating a Python script. This can be accomplished by clicking on **File** near the top left corner of the IDLE window, then selecting the **New File** option that will appear in the dropdown menu. This will open a blank window where you can now begin writing Python code! Type in the two lines of code you typed in for the first part, then save your file by selecting **File**, then clicking on **Save As**. When saving your Python script, ensure that it will be saved as a Python file by ensuring that the **Save as type:** says **Python files**.

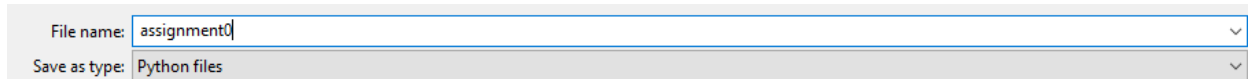


Figure 3 – For this assignment, the **File name** field won't matter at all. What will matter, and for all subsequent assignments, is that the file is saved as a Python file.

Once your script is saved, select **Run** at the top of the toolbar, then select **Run module**. Alternatively, pressing the **F5** key on your keyboard will also execute that command. The contents shown in **Figure 2** is an example of what you will see when you run a Python script in this manner.

2. Screenshot Requirements

When submitting your screenshots, please abide by the following restrictions:

1. Please don't submit a screenshot of the entire desktop or an unnecessarily large window. You should crop the screenshot down to the size of the IDLE window.
2. Please submit a .bmp, .jpg, or .png image.

3. Sample Screenshot

The images shown in **Figure 1** and **Figure 2** demonstrates screenshots that will receive full credit. It is strongly encouraged that you show your screenshots to a classmate to see if you've missed any requirements.