INTRO TO PROGRAMMING (PYTHON)

ASSIGNMENT 03

Overview

In this activity, you learn about typical programming statements and working writing to a file. You also learn about how to download, install, and use a new Integrated Development Environment (IDE) called PyCharm. Once again, you create an assignment script and document your knowledge. In later modules, your documents will be reviewed by your peers, so practice making your document and code look professional!

This assignment includes the following tasks:

1. Watch the module videos.
2. Read a book chapter
3. Review some web pages.
4. Watch the additional videos.
5. Apply your knowledge.
6. Document your knowledge.
7. Submit your work.

We are trying to answer the following questions:

- What is pseudo-code?
- What are "conditional" statements?
- How do you use multiple conditional expressions?
- What are comparison operators?
- What are the Boolean values for the integers 0, 1, and 2?
- What is a Loop?
- Name the most common programming loop?
- How do you pass arguments into a script?
- What statement allows you to write data into a file?

Assignment Steps

The following assignment steps ask you to read about, perform, and write about programming.

Note: *Course assignments help you learn through* ***reading****,* ***watching*** *demonstrations,* ***performing*** *programming in Python, and reflecting on what you learned through* ***writing****. You are strongly encouraged to continue your learning by experimentation.*

Step 1 - Watch the Module Videos

Please watch my course videos. You can find the course video **links on Canvas**.

Step 2 - Read a book chapter

Please **read chapter three** in your textbook. You **do not have to perform the exercises or type in the code**, but it is best if you open the script files as you read about them. You can find the downloadable **book files on Canvas** for your convenience.

Step 3 - Web pages

Please review the following web pages. These are shorter than the book and provide online resources you can use later.

1. http://www.tutorialspoint.com/python/python_if_else.htm (external site)
2. http://www.tutorialspoint.com/python/python_while_loop.htm (external site)

Step 4 - Additional Videos

Please watch this video. It will explain things a bit differently, which helps with learning!

1. Python Programming Tutorial - 20 - If Statement (external site)
2. Python Programming Tutorial - 21 - else and elseif (external site)
3. Python Programming Tutorial - 22 - Nesting Statements (external site)
4. Python Programming Tutorial - 23 - Comparison Operators (external site)

Step 5 - Apply your knowledge

Now that you have reviewed the websites and videos, create a new program that asks the user for the name of a household item, and then asks for its estimated value. Store, both pieces of data in a text file called, HomeInventory.txt

Step 5.1 Create a Folder

Create a **new sub-folder called Assignment03** inside of the **_PythonClass folder** (you created this in Module 01). Please use the C: Drive on a Windows OS or the Documents folder on a Mac OS (using the Desktop on either OS is not recommend).

Step 5.2 Create a new Project in PyCharm

Create a new project in PyCharm that uses the _PythonClass\Assignment03 folder as its location (figure1).

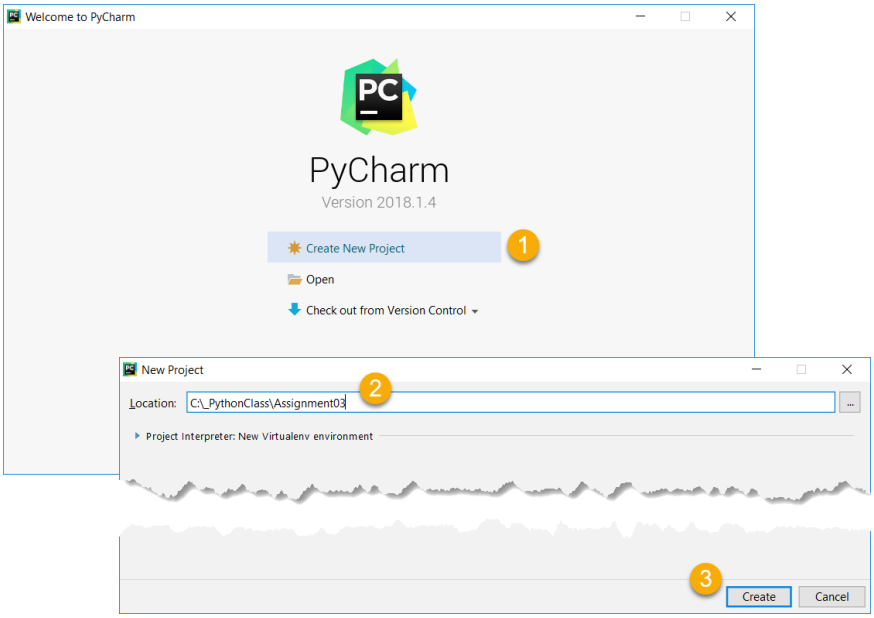

Figure 1: Creating a new project in PyCharm

Step 5.3 Create a Python Script

Create a python script file within your project (Figure 2).

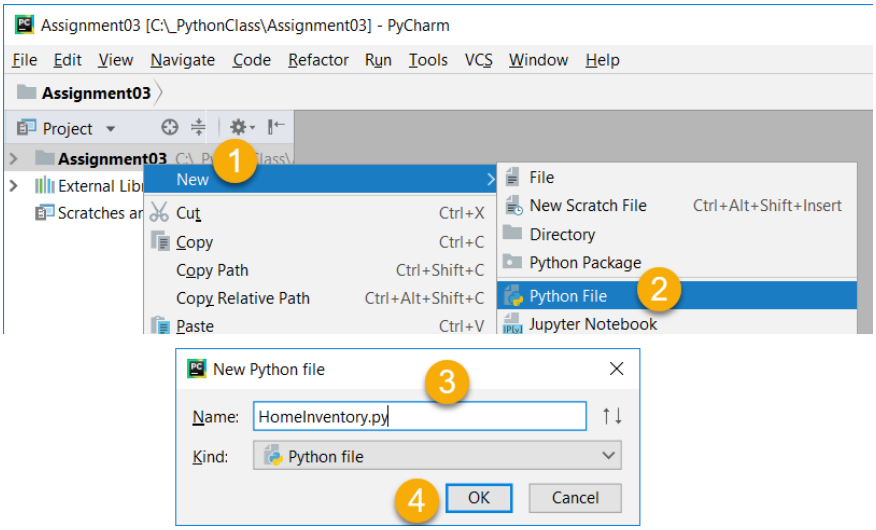

Figure 2: Creating a new Python Script in the Project

Step 5.3 Add Code to the Script

Add code to your script that will perform that assignment's task. I suggest you start by adding the header and some basic comments about what you are going to do (Figure 3).

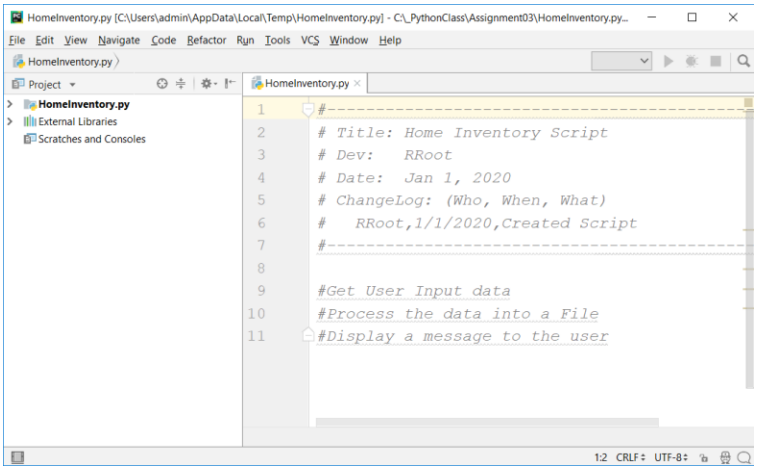

Figure 3: The start of code in HomeInventory.py

Step 5.4 Run Your Script

With the script created in its proper location, run the script in **BOTH** PyCharm and an OS command/shell window and capture images of it working on your computer (Figures 4 and 5).

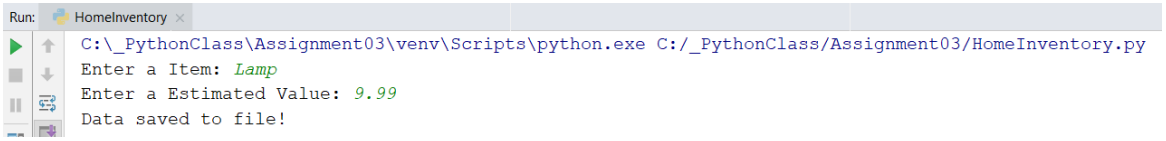

Figure 4: A screenshot of the script running in PyCharm.

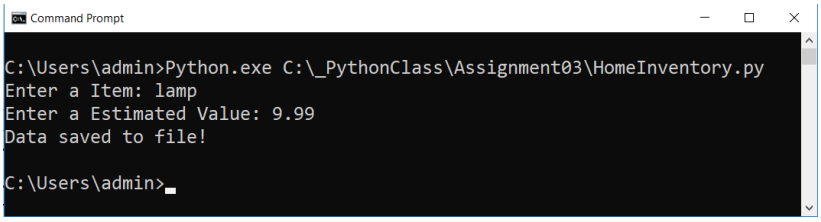

Figure 5: A screenshot of the script running in a command window.

Step 5.5 Verify that it Worked

Locate the text file and open it in a text editor (Figure 6).

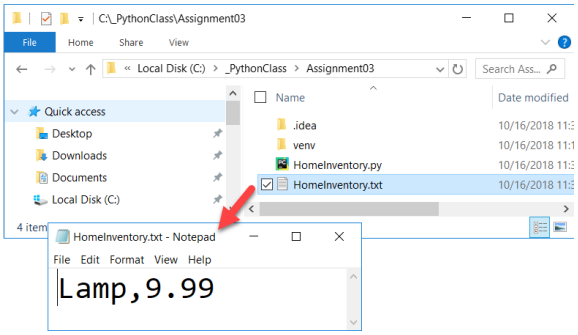

Figure 6: Verifying that the file has data

Step 6 - Document your knowledge

After you have created and tested your Python script, create a document describing the steps you took in performing this assignment. Use screenshots and code samples to explain the process, just as was done in your book, my programming notes, and the web pages you reviewed. Make sure the document is in a Microsoft Word document (.doc or .docx).

Note: Make sure you put it in the proper, professional level, formatting! It does not have to be perfect, but if you turn in a simple blob of text, you will not get credit for it! Here is a link that may help you understand what I am looking for: https://youtu.be/9ojhSW9ljjo (External Site)

Step 7 - Submit your work

Now place your document with the python script in the Assignment03 folder. Zip this folder into a ".zip" file, then upload the file to the class assignment page.

Congratulations! You are done!