Lab #1 Grading Rubric and Instructions

This is the first lab for the 'Introduction to Computer Programming' course.

Please see the syllabus for information about when the work in this lab is due.

Lab Objective

The objective of the lab is for you, the student, to confirm that you have installed the Python programming language on either your laptop or desktop computer, that you have installed an IDE such as VS Code, and that you have access to the Runestone textbook and Piazza. There are a variety of PowerPoint slide decks available which should aid you in these tasks.

NOTE: Although you may ultimately use whichever IDE you like, the Instructors and TAs will only support VS Code.

Instructions/ Deliverables

NOTE: These tasks should be completed in the order listed below. See the **Grading Items** section below for the point distribution.

Lecture Notes/ Supplemental Readings:

- 'Check off' your notes in your Engineering Notebook for the following material with the TA/ Instructor. These notes should already be done before the start of the lab period.
    - Runestone chapters 1, 2, and 3
        - **NOTE**: You do not need to complete any of the exercises at the end of the Runestone chapters. However, it would be helpful to you in the long term if you were to do so.
        - **NOTE**: You only need to take notes on the Runestone readings if you did *not* take lecture notes in class. The contents of these chapters are what was covered in the lectures.
    - Note-Taking Guide - by: Elizabeth Kim ‘21 and Emily Ndiokho ‘22
        - **Available**: https://cep.barnard.edu/note-taking-guide
    - The Outline Note-Taking Method: Steps, Benefits, and When To Use - by: Goodnotes
        - **Available**: https://www.goodnotes.com/blog/outline-note-taking-method
    - Why Writing by Hand Is Better for Memory and Learning - by: Charlotte Hu edited by Lauren J. Young
        - **Available**: https://www.scientificamerican.com/article/why-writing-by-hand-is-better-for-memory-and-learning/

Canvas Access:

- Show the TA/ Instructor that you know where the 'Files,' 'Grades,' and 'Assignments' sections on the Canvas page are.

Piazza Access:

- Show the TA/ Instructor that you can log on to Piazza, and are registered for the correct class.

Please see the syllabus for details.

Runestone Access:

- Show the TA/ Instructor that you are registered for the correct course on Runestone Academy. Please see the syllabus for details.

Python Installation:

- Follow along with the slides found in the `'Files' -> 'Supplimental_Slides_and_Files'` folder on Canvas, and complete the installation of both Python and VS Code.
    - If you are using a Mac, be sure to drag the VS Code app from your 'downloads' folder to your desktop. You should be able to find a link/ alias to that folder in the lower right hand side of the screen, next to the trash can.
    - **NOTE**: If you use a desktop computer at home as your primary workstation, and you do not own a laptop, you will need to use WebEx to connect with a TA/ Instructor either during office hours, or during the lab session itself, and then do a 'screen share' to show that you have properly installed Python and VS Code.

IDE Demo:

- Demonstrate to the TA/ Instructor that Python is installed correctly by running the `python --version` (PC) or `python3 --version` (Mac) command in your computer's terminal. Consult the following resources for information about how to open a terminal:

    - (PC): https://www.wikihow.com/Open-Terminal-in-Windows
    - (Mac): https://support.apple.com/guide/terminal/open-or-quit-terminal-apd5265185d-f365-44cb-8b09-71a064a42125/mac
- Demonstrate to the TA/ Instructor that you have created a dedicated folder for your COM S 1270 code on your desktop called `COMS127`.

- Create a new sub-folder inside your COMS127 folder called 'Lab#1' and demonstrate to the TA/ Instructor that you can properly open this folder in VS Code, such that is your active folder.

- Inside your new 'Lab#1' folder, use VS Code to create a file called `hello.py` and type in the following code (be sure to save if you see the 'white dot'):

```
print("Hello, World!")
```

- Show the TA/ Instructor that you can open the terminal in VS Code with the **CTRL+`** command (PC) or **Control+`** command (Mac), then run your hello.py script with the `python hello.py` (PC) or `python3 hello.py` (Mac) command.

    - **NOTE**: See the `L05_Workflow.pptx` slides for a general outline of what the process should look like.
- **NOTE**: If your copy of VS Code is behaving super strangely, or seems to have crazy 'red squigglies' all over your code no matter what you do, or if it is generally just 'being a butt,' then please talk to the TA/ Instructor. We will happily try to help you fix it. If it turns out that it just isn't working no matter what, there is an alternative IDE called Spyder you can use if you like. Please see the file `L06_AlternativeIDE.pptx` for details.

Button Statement:

- You will copy the following statement into your Engineering Notebook. While it may seem a bit 'silly' to do so, the information contained therein is critical to your success in running your code - especially later on in the class when we start talking about file access.
    - **"I will not use 'the button' in the upper right hand corner of VS Code to run my code. This is the button that looks like a triangle pointing to the right, or a 'play button' from a VCR/ DVD player. I realize that there may be a keyboard shortcut to enable the same behavior as 'the button,' but I will not use that either. I realize that there is a menu option to enable the same behavior as 'the button,' but I will not use that either. I realize that there may be a myriad of ways to enable the same behavior as 'the button,' but I will not use any of them. I will only run my code on the terminal by typing out the `python`/ `python3` command, followed by the name of my `.py` file. I will open up the terminal with the `CTRL+\`` command on PC, or `Control+\`` on Mac. I recognize that if my `python`/ `python3` command does not work, but Python is properly installed, then I am probably in the wrong folder in the terminal as my code is not actually inside the folder I am currently in. I will need to confirm the directory of the file I want to run, and then use the `'File' -> 'Open Folder'` command in VS Code, navigate to the folder my code is actually in, and then open that folder in order to fix the problem."**

Canvas Quiz:

- On Canvas, there is a quiz about the syllabus.
    - This quiz does have 'right' and 'wrong' answers.
- Fill out the quiz and show the results to the TA/ Instructor. The syllabus quiz should have a perfect score.

Attendance:

- If you have completed all of your tasks for the lab, you may work on any of the 'Additional Resources for Study' found in the Canvas announcement of the same name.
    - **NOTE**: If you leave early, you will not receive the 'attendance points' for the lab.

Files Provided

On Canvas: `'Files' -> 'Supplimental_Slides_and_Files'`

- L00_Canvas_Access.pptx
- L01_Runestone_Access.pptx
- L02_Piazza_Access.pptx
- L03_Python_Install.pptx
- L04_VS_Code_Install.pptx
- L05_Workflow.pptx
- L06_AlternativeIDE.pptx

Example Output

None

Grading Items

- (**Lecture Notes/ Supplemental Readings**) Has the student taken notes on the listed material, and shown their notes in their Engineering Notebook to the TA/ Instructor?: ______ / 20
- (**Canvas Access**) Has the student demonstrated their Canvas access and knowledge of the 'Files,' 'Grades,' and 'Assignments' sections?: ______ / 10
- (**Piazza Access**) Has the student demonstrated their Piazza access, and that they have signed up for the correct course?: ______ / 10
- (**Runestone Access**) Has the student demonstrated their Runestone access, and that they have signed up for the correct course?: ______ / 10
- (**Python Installation**) Has the student demonstrated their Python installation is working via the `python --version` (PC)/ `python3 --version` (Mac) command in the terminal?: ______ / 10
- (**IDE Demo**) Has the student demonstrated that they have installed an IDE (such as VS Code), created a folder on the desktop called `COMS127`, created a sub-folder for `labWeek2`, created the `hello.py` file detailed above, and run that file via the `python hello.py` (PC) or `python3 hello.py` (Mac) command on the terminal?: ______ / 10
- (**Button Statement**) Has the student copied the bolded statement into their Engineering Notebook?: ______ / 10
- (**Canvas Quiz**) Has the student filled out the quiz on Canvas (with the syllabus quiz having a perfect score) and shown the results to the TA/ Instructor?: ______ / 10
- (**Attendance**) Did the student attend the full lab meeting in person?: ______ / 10

TOTAL ______ / 100