Software Dev. & Problem Solving I — CSEC/SWEN-123

More Git, Scripting, & The Path — Homework 1.3

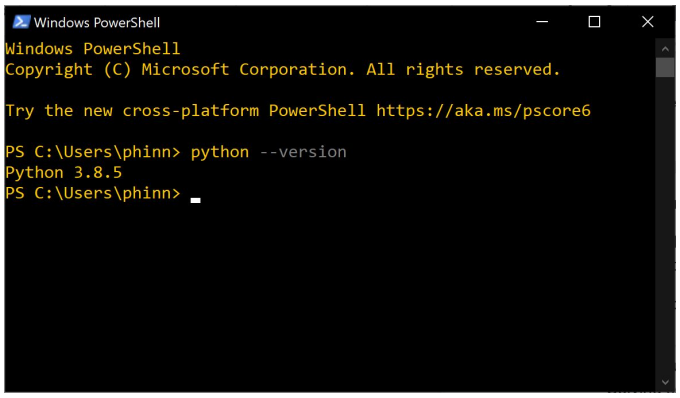
Goals of the Assignment

This homework has two purposes. The first is to give you an opportunity to continue practicing with the command line, including more advanced Git commands, batch files, and using the system path. The second is to make sure that you are prepared for the next unit by installing Python and Visual Studio (VS) Code on your personal computer.

Activities

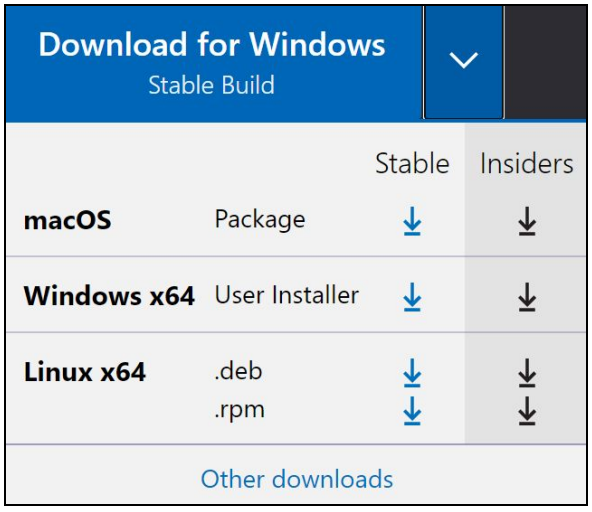
1. If you are working on a computer that is different from the one that you used in class, you will need to clone your repository onto the new computer:
    a. Open the repository in your browser (you can find it at https://www.github.com).
    b. Create a directory in your user directory: `SoftDevI\Unit01\`
    c. Change into the directory and use `git clone` with your repository URL to download the repository to your new computer.
2. Download and save this PDF file in the repository.
3. Python is a high level, modern programming language, and we will be using it throughout the remainder of this first course in the Software Development & Problem Solving sequence. You can download an installer for your operating system at https://www.python.org. Hover your mouse over the Downloads button and a button to download the specific version for your OS should appear. Do not worry about the specific version as long as it is a version of Python 3.

4. Once you have installed Python, launch a command prompt and execute the `python --version` command. Do not worry if the command does not appear to work! For now, just take a screenshot of the output (e.g. *Alt-Print Screen* and paste into *Paint 3D*) and save it to your repository. Practice the Git workflow (`status`, `add`, `commit`, `push`) and push it to GitHub.

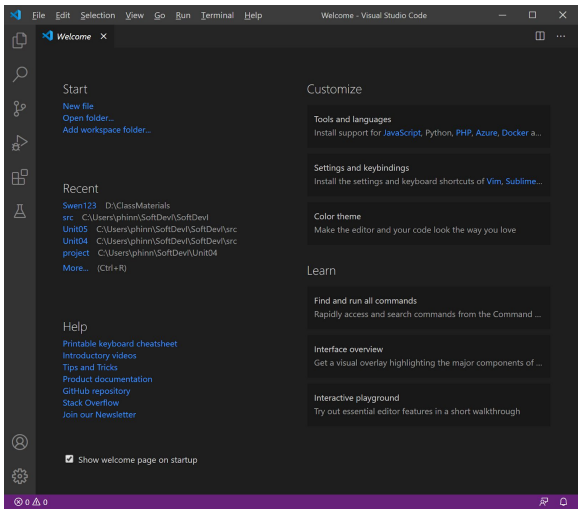


5. From the command line, display your system path environment variable. Take a screenshot, save it to your repository, and push it to GitHub.

6. Visual Studio Code (*VS Code* or just *Code* for short) is the *integrated development environment* (*IDE*) that we will be using this semester. While you are not strictly required to use VS Code to create and edit your source code, all code examples, lecture materials, and in class demonstrations will use VS Code. You can download it from https://code.visualstudio.com. You should see a prominent download link on the site for your operating system, but you can click the arrow and select the stable build for a different OS if you prefer.



7. Once you have installed VS Code, run it and take a screenshot. Save it to your repository and practice the Git workflow to push it to GitHub.



8. Launch a command prompt and navigate to your repository. Run a Git log and redirect the output to a text file named `git_log01.txt`. Push the file to your repository.

9. From your repository:
    a. Use your `git_log01.txt` file to find the latest commit hash.
    b. List the files in the top level directory in the repository.
    c. Delete one of your files, e.g. one of your screenshots.
    d. List the files again to show that the file is now missing.
    e. Use `git` to restore the file using the commit hash.
    f. List the files again.
    g. Take a screenshot that shows at least the listing before and after the restore and save it to your repository. Push it to GitHub.

10. Use your favorite search engine to search for quotes from your favorite movie, e.g. "*Terminator movie quotes*". Create a new text file named "`quotes.txt`" and type or copy/paste 2 or 3 quotes into it. Push it to GitHub.

11. Create a temporary directory somewhere in your file system, e.g. `C:\users\hermione\temp`. Change into the directory and clone your repository into it. Open your `quotes.txt` and add another movie quote to the top of the file. Push it to GitHub.

12. Navigate back to the original repository in your `SoftDev1\Unit01` directory. ***Do not pull yet***.
    a. Open your `quotes.txt` file and add yet another unique quote to the top of the file.
    b. Try to add, commit, and push your repository. You should receive an error indicating that you need to pull the latest version of the remote repository.
    c. Pull from the remote repository. This should cause a merge conflict.
    d. Open your `quotes.txt` file. Take a screenshot of the conflict and save it to your repository.

e. Resolve the conflict so that *all* of the quotes are saved in the file. Then push the resolved file to GitHub.

13. Write a PowerShell script named "`logger.ps1`" that does the following:
    a. Print a message to the console using the first argument to the script. Don't forget to enclose the argument in quotes if there is more than one word!
    b. Run a `git log` and direct it to a file named "`git_log02.txt`"
    c. Display the contents of the file.
    d. `git add`
    e. `git commit` using the second argument to the script as a comment. Don't forget to enclose the argument in quotes if there is more than one word!
    f. `git push`

    Run the script at least 3 times.

14. Finally, use your browser to go to the CSEC/SWEN-123 MyCourses site and access the Discussions. You can find the menu at the top of the page.
    a. Disable the "Include original post in reply" option in your discussion settings. Do this by first clicking on the *Settings* gear near the top right of the discussions page.

    b. Next, scroll down to *Reply Settings* and make sure that the *Include original post in reply* checkbox is ***not*** checked. This will prevent you from automatically quoting any post to which you are replying. This will keep replies short and easier to read through. ***Make sure to click the Save button at the bottom!***

    c. Take a screenshot of your settings (showing the unchecked box) and save it to your repository.
    d. Finally, head to the *General Course Discussion* forum and look inside the *Questions & Comments About the Course* topic for the thread titled *Say Hello!* Read through your fellow students' introductions and, if you have not done so already, take a moment to write your own reply (optional).

Submission Instructions & Grading

Be sure that you have committed all of your solution files to your repository ***before*** the start of the next class. Your grader will verify that you finished your solution before the deadline.

See the course syllabus for the rubric that is used for grading homework assignments.