UCF Physics PHZ 3150: Introduction to Numerical Computing
Fall 2021 Homework 2
Due September 2 2021 (before start of class)

Goals:
Obtain access to the Anaconda Python distribution, and the Git revision control system, on the computer you will use in class. Gain some background on our computational and numerical topics.

Reading: Read Chapter 1 of ThinkPython.

Problems to Hand In:
For this assignment, your log is (still) the "main homework file". In one of the entries, it should identify the start and end of HW 2 and list the problem numbers in order. After each problem number, give your answer and the names of any files you are handing in for each problem.

For problem 1, give the date and time of the log entry where you logged installing that component, or otherwise recall what you can about the installation. If you made a HW2 entry in your log in a prior session and want to change it, just copy it to the current (last) session, and edit there. We will grade the last entry only. All text related to one assignment should be in one entry, with the problems done in order. We're doing it this way since you may install software in more than one session, and it is more important NEVER to edit a prior session than to have all the install notes under each problem number. Remember to make a hw2_<yourname> folder and hand in all assignments as a single zip file. Remember to name the files, screenshots etc following the instructions on the 'homework_and_coding.pdf'.

1. (**10 points total**) Follow the instructions in WebCourses/ to install the software you'll need (Jupyter notebook and/or Spyder). Unlike all other assignments, feel free to get lots of assistance from others! The important thing here is to get the right software installed correctly on your computer. Ideally, you should be able to do it again on your own, of course. Log all your work, including installation choices like where to install things, what versions you installed, and where you got the software (exact, full URL).

(a) (**5 points**) Install the Anaconda Python distribution. Install all necessary additional packages like Jupyter. If you chose to install Spyder, start Spyder and take a screenshot. Rename the screenshot as instructed in the homework_and_coding.pdf and hand it in. Use the screenshot functionality of your operating system rather than taking a photograph, if you can. In any case, record in your log how you took the screenshot.
Start Jupyter notebook (or lab). What is your python version? Write it in your log. Take a screenshot of the notebook. Add that to your hw2_<yourname> folder.

(b) (**5 points**) Install GitHub Desktop. Sync it with the classroom phz3150 / phz3150_main_dir. Make a screenshot of your GitHub Desktop. Add that to your hw2_<yourname> folder.

2. (**10 points**) Write an original English sentence that has correct syntax but incorrect tokens, and an original English sentence with incorrect syntax but correct tokens. What main "feature" of natural languages prevents their use (so far) as programming languages, and why? Answer clearly and in a few sentences, no more.

3. (**10 points**) Do the GitHub Hello World tutorial (https://guides.github.com/activities/hello-world/). Then, add to the classroom's phz3150_main_dir/HW1 the hw1_survey.txt (drag and drop to appropriate folder). Take a screenshot of your GitHub Desktop and add it to your hw2_<yourname> folder. Commit the change with an appropriate message and push the change to the classroom GitHub (push to origin). Open in our classroom directory in a web browser, go to HW1 and make a screenshot that shows you added the file. Add it to your hw2_<yourname> folder

4. (**10 points**) After closing your final entry, turn in your log file in Webcourses, along with the rest of your assignment. Remember, it should be submitted as hw2_<yourname>.zip.