UCF Physics PHZ 3150: Introduction to Numerical Computing
Organizing Your Class Files

Your class directory: You should have one directory (folder) for the class, with everything organized under it in subdirectories with obvious names. (Windows users, you will need to have one on the Linux side and one on the Windows side, keeping the same directory/folder structure in both.) This is your "class directory." We'll call it `phz3150/`. The trailing slashes here mean these are directories.

Put this under your home directory, for easy access: `/home/<yourname>/phz3150/`

After the course is over, you may wish to archive it, so it doesn't clutter your home directory. That should be under a long-term structure that allows you to organize directories for all your other classwork next to it, such as:

`/home/<yourname>/UCF/2019-1spring/phz3150/`

Choosing a username: For the names of homework files, you need to pick and stick with a username, which becomes part of the filenames you hand in. For example, if your name is "Susan Sarah Smith", your username might be ss, sss, s3, sue, ssmith, sssmith, suess, susan, smith, etc. "Barbie" is a poor choice, unless that's really your nickname! And "seuss" might not be great, because of confusion with the author of that name. Keep it professional, which means name-based. Save the "interesting" names for your social life.

Archival directories: Since you are handing things in for grading, you should keep separate copies of exactly what you handed in, so there is no question in your mind or ours in case of a grading dispute. This is called an "archive", and we use them a lot in research. The dates and other file metadata are important in archives! So, be very careful to copy files with the –a option, and otherwise to defend the integrity of the archive. Never edit in an archive! Only copy files out of them or read them. Generally, original data, reports you publish or prepare for your supervisor or funding agency, reports you receive from your employees (someday!), etc. are all archival.

Naming: Since command-line systems use blank space to separate command arguments and punctuation can mean special things, having filenames with spaces and punctuation in them is problematic. Only the symbols _ - . + , = @ are safe, the @ is too easy to confuse in email addresses, and , = just aren't seen much. Stick to _ - + . as the only punctuation you use in filenames.

Other constraints: Your log should be a text file in the top level named:
`0-phz3150-<username>.log`

There should be a small number of top-level directories, including what you hand in (archival), your work on homework, notes, lecture demos, handouts fromWebCourses, etc. For the handouts, it is easiest to mimic the file tree in WebCourses. You should

keep a copy of everything in the Files area of WebCourses. The worst way is to dump everything from the course (and everything else you download) in your Downloads folder. Some files get revised but keep the same name, for example, and finding things if you don't recall their names becomes hard.

A better solution is to mirror the file structure in WebCourses, following the same folder structure on your machine. You can easily do this by downloading a zip file of each top-level folder on WebCourses. In the Files tab, click on the course title. In the frame on the right, hover over, say, the lectures item. It will highlight. On the far right, a button with three vertical dots appears. Click that button and click "Download". It will think for a while, then download a .zip file. Make a WebCourses folder in your class folder, go into it, and extract the .zip file. A lectures folder appears, containing its structure of lecture folders and files. Do this for each top-level folder. You can do it for each lecture as they come out, navigating to the Lectures folder, exporting just the folder, and extracting it in the mirror Lectures folder on your machine. For individual files, just download them and move them to the right place in your WebCourses mirror. Delete the .zip files after extracting.

You get to decide how to organize your directories within these constraints. Here is my suggestion (names may vary somewhat, substitute your username for <urnm>):

```
phz3150/
.git/                          # this is the Git repository for the log
0-phz3150-<urnm>.log           # might have to end in .txt on Windows
handins/                       # archive: never edit, preserve metadata
hw1_<urnm>/                    # all files handed in for HW1, only
     0-phz3150-<urnm>.log          # it might end in .txt
hw2_<urnm>/                    # all files handed in for HW2, only
     0-phz3150-<urnm>.log          # it might end in .txt
...
hw3_<urnm>/ # all files handed in for HW3, only
     0-phz3150-<urnm>.log
     hw3_<urnm>.txt
...
hw3_<urnm>.tar.gz or hw3_<urnm>.zip
     hw4/
```

```
hw4_<urnm>.py
hw4_<urnm>.tar.gz or hw4_<urnm>.zip

...
homework/                    # Work on assignments and corrections
     hw1/                         # HW1 files (corrections, notes, .git, ...)
          .git/                   # HW1 Git repo
     hw2/
          .git/
     hw3/
          .git/
...

WebCourses                   # files from WebCourses, duplicate tree
     hw/
          hw1.pdf
          hw1-survey.pdf
          hw2.pdf
          hw3.pdf
          hw4.pdf
          hw4_sol.py
...
     handouts/
          bash-supplement
          fwunixref.pdf
          homework+coding.pdf
          learngit.pdf
          learnshell.pdf
```

```
          mac-software.pdf
…
     lectures/
          phz3150-L03-2017-01-17-T/
               01shell.sh
               phz3150-L03-2017-01-17-T.pdf
          phz3150-L04-2017-01-19-R/
               02shelltricks.sh
               phz3150-L04-2017-01-19-R.pdf
…
```