

Software and Using Terminal

BIOE/BIOMEDIN/BIOPHYS/CME/CS 279

Fall 2017

1 Policies

In this class, there will be exercises which involve some coding that use existing software packages. We will make sure that all required software is available on all the VPTL machines (and remotely on the rye FarmShare machines) so that you need not install any software on your local machines.

While you are free to install the programs on your own machine and develop locally, in general, if you encounter issues with installation or development, we encourage you to work on the VPTL machines. Feel free to post issues to Piazza or come to office hours if you have any issues.

2 Installing PyMOL

For the first assignment, you will need to download and install PyMOL (<https://www.pymol.org/>) on your computer. PyMOL is also available on all the VPTL Macs (all of cluster computers on campus in the libraries and in the dorms). If you cannot get PyMOL to run on your computer, please use any of the VPTL machines or contact the TAs.

3 Basic Shell Commands in Terminal

For those of you who've never accessed a computer through a terminal, there are a few commands that will be helpful to know. At a high level, you are navigating the computer's files and invoking programs by typing commands rather than using a mouse with a graphical display.

Here is a list of commands that may be helpful:

- `pwd` – prints the current working directory
- `cd <new directory>` – changes the working directory to the new directory
Note that `.` refers to the working directory and `..` refers to the parent directory
- `ls` – lists the files in the current directory
- `cp <original> <copy>` – copies the original file to the new copy

- `mv <original> <new>` – moves the original file to the new file.
(This is also how you rename files.)

If you want additional information about any command or program, you can use `man <command>` which brings up the command's manual page.

To execute a program that lives in the current directory, you invoke

```
./<program name> <program arguments>
```

In our case, almost all programs that you will run will be Python scripts, which you invoke using `python`.

```
python <program name> <program arguments>
```

If you want to experiment in an interactive Python window, you can just invoke `python`, which will start a Python interpreter.

```
python
```

4 Accessing Starter Code

Generally, the starter files for all the assignments will be listed on the class website. This means, that you can download the zipped files from the website or can copy them to your workspace on FarmShare.

If you are logged onto FarmShare, simply copy the files from the AFS space for the class. We will zip the assignment files together, such that the overall process for accessing the project files from a FarmShare machine will look like the following.

```
cd <desired location>
cp /afs/ir/class/cs279/WWW/assignments/<assignment name>.zip .
unzip <assignment name>.zip
cd <assignment directory>
```

5 Editing Files in Terminal

If you are editing files directly on Terminal, you will have to open them with a text editor. Two popular editors are `emacs` and `vim`.