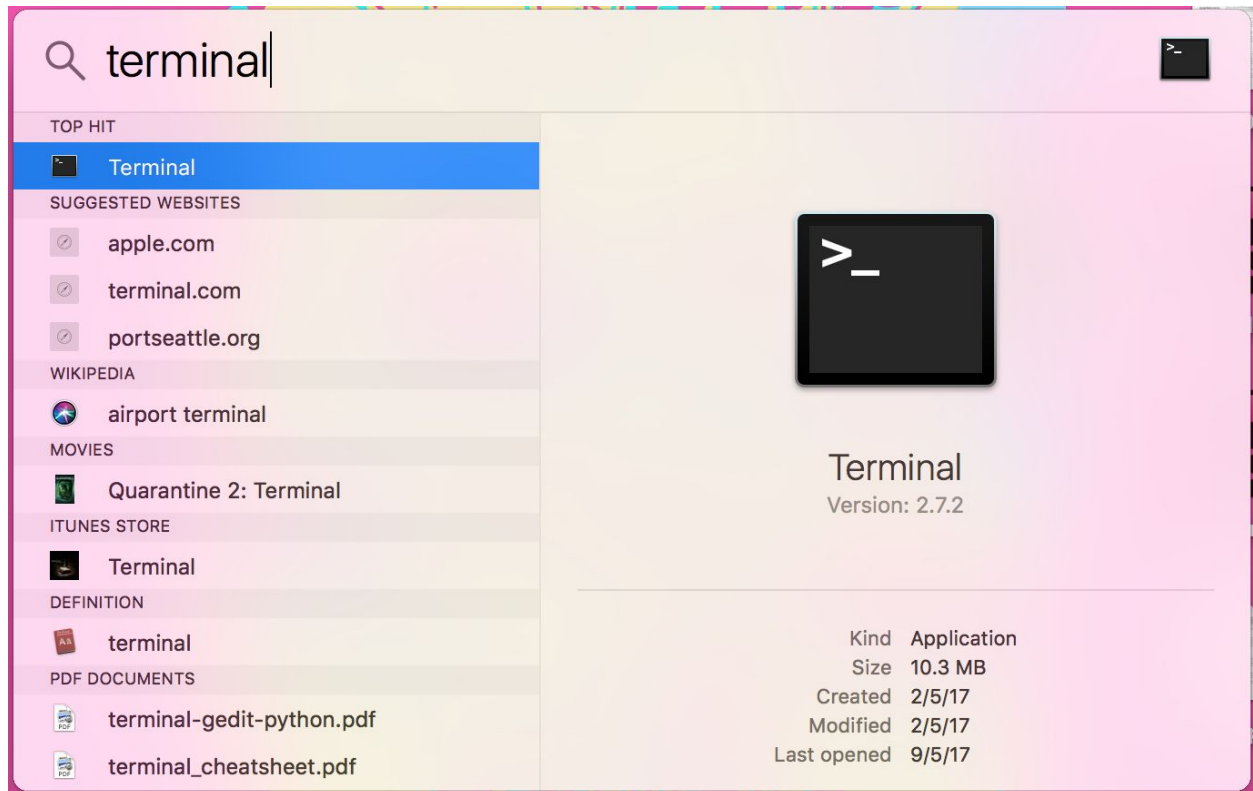


# Mac Setup Instructions

You can use your built-in terminal that comes with Mac OS to do your programming assignment.



## XQuartz

Before we get started with terminal, we will have to download [XQuartz](#).  
Once you download the install package, install it and reboot your Mac.



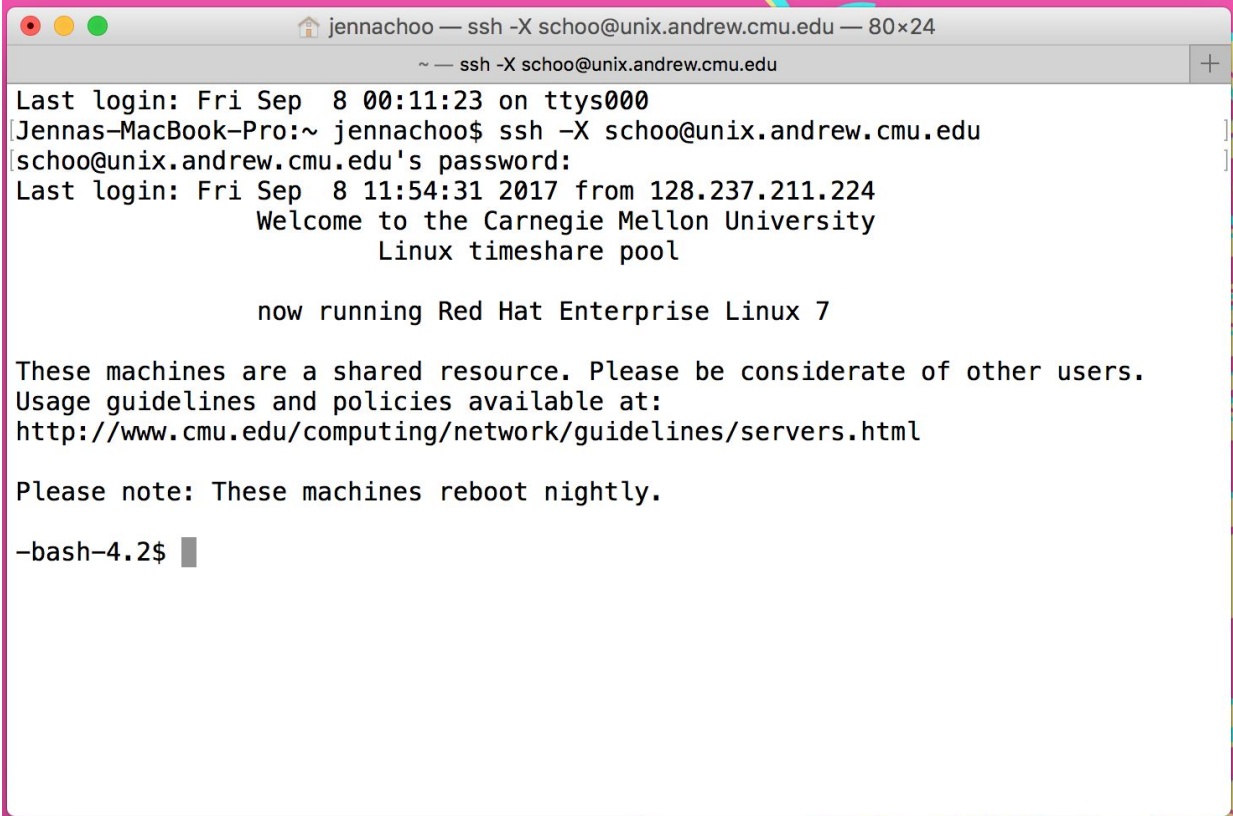
## Terminal

Please open your terminal. Now we will log in by typing in

```
ssh -X <andrewID>@unix.andrew.cmu.edu
```

It will prompt you to enter in your password. Type in your Andrew password to log in. The password will not be displayed when you type.

You should see something like this. (It might take a little long.)



```
jennachoo — ssh -X schoo@unix.andrew.cmu.edu — 80x24
~ — ssh -X schoo@unix.andrew.cmu.edu
Last login: Fri Sep  8 00:11:23 on ttys000
jennachoo$ ssh -X schoo@unix.andrew.cmu.edu
schoo@unix.andrew.cmu.edu's password:
Last login: Fri Sep  8 11:54:31 2017 from 128.237.211.224
Welcome to the Carnegie Mellon University
Linux timeshare pool

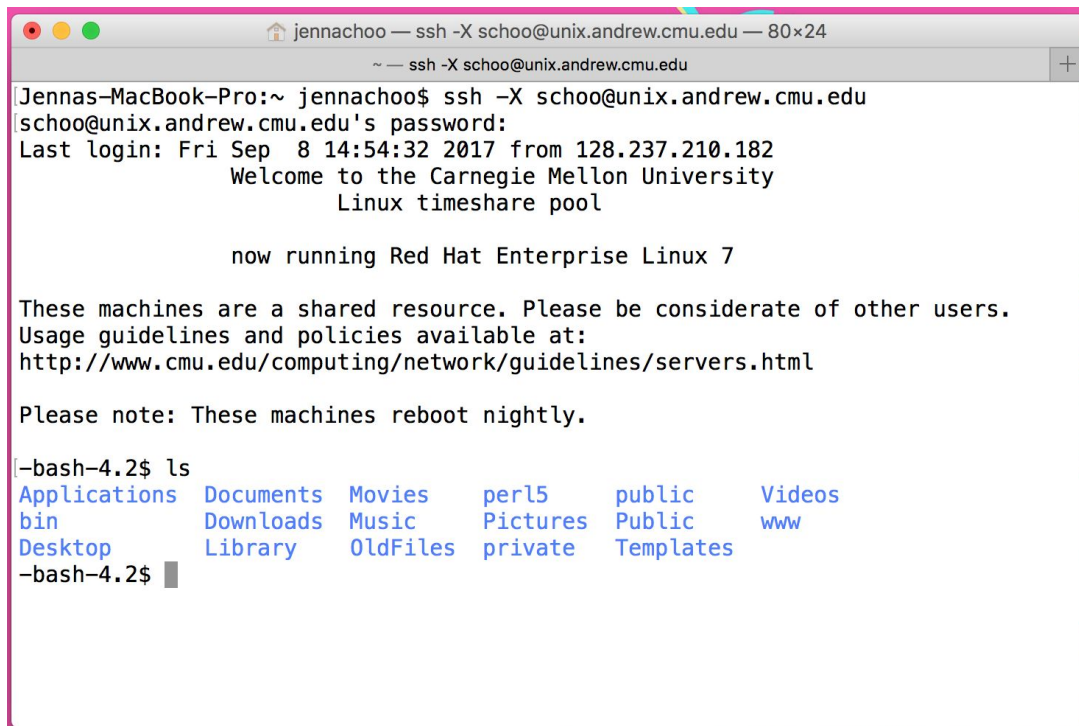
now running Red Hat Enterprise Linux 7

These machines are a shared resource. Please be considerate of other users.
Usage guidelines and policies available at:
http://www.cmu.edu/computing/network/guidelines/servers.html

Please note: These machines reboot nightly.

-bash-4.2$
```

If you type in `ls`, you should see a familiar set of directories.



```
jennachoo — ssh -X schoo@unix.andrew.cmu.edu — 80x24
~ — ssh -X schoo@unix.andrew.cmu.edu

jennachoo$ ssh -X schoo@unix.andrew.cmu.edu
schoo@unix.andrew.cmu.edu's password:
Last login: Fri Sep  8 14:54:32 2017 from 128.237.210.182
        Welcome to the Carnegie Mellon University
        Linux timeshare pool

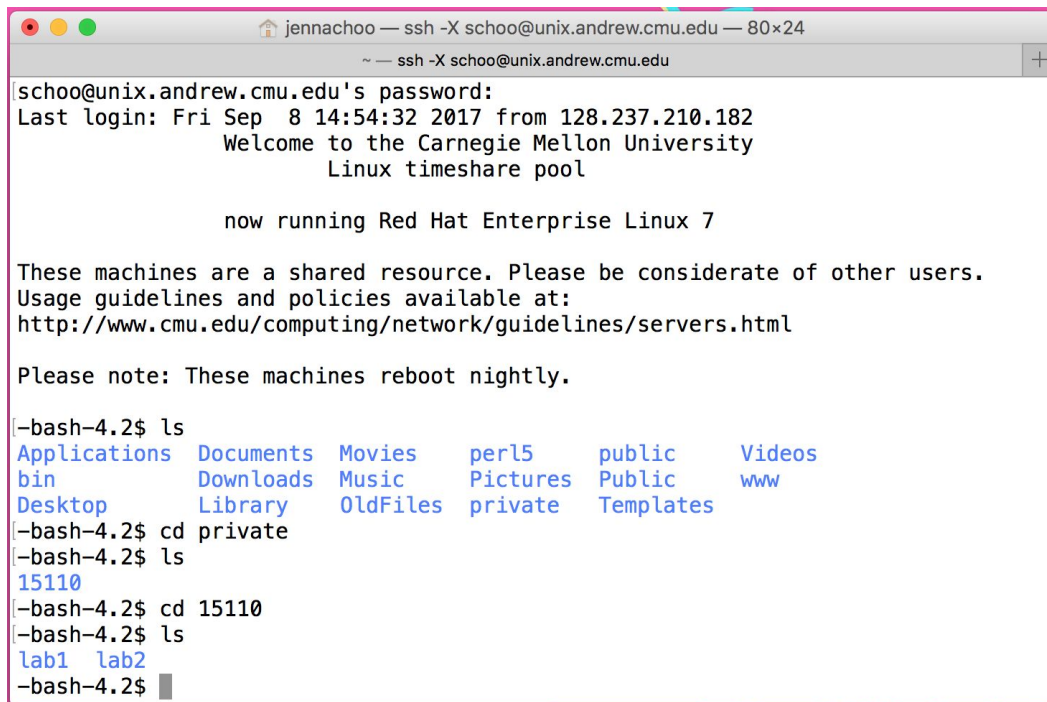
        now running Red Hat Enterprise Linux 7

These machines are a shared resource. Please be considerate of other users.
Usage guidelines and policies available at:
http://www.cmu.edu/computing/network/guidelines/servers.html

Please note: These machines reboot nightly.

[-bash-4.2$ ls
Applications  Documents  Movies     perl5     public    Videos
bin           Downloads  Music      Pictures  Public    www
Desktop      Library    OldFiles   private   Templates
[-bash-4.2$
```

Change the current directory to `private/15110` directory to view your work from labs.



```
jennachoo — ssh -X schoo@unix.andrew.cmu.edu — 80x24
~ — ssh -X schoo@unix.andrew.cmu.edu

schoo@unix.andrew.cmu.edu's password:
Last login: Fri Sep  8 14:54:32 2017 from 128.237.210.182
        Welcome to the Carnegie Mellon University
        Linux timeshare pool

        now running Red Hat Enterprise Linux 7

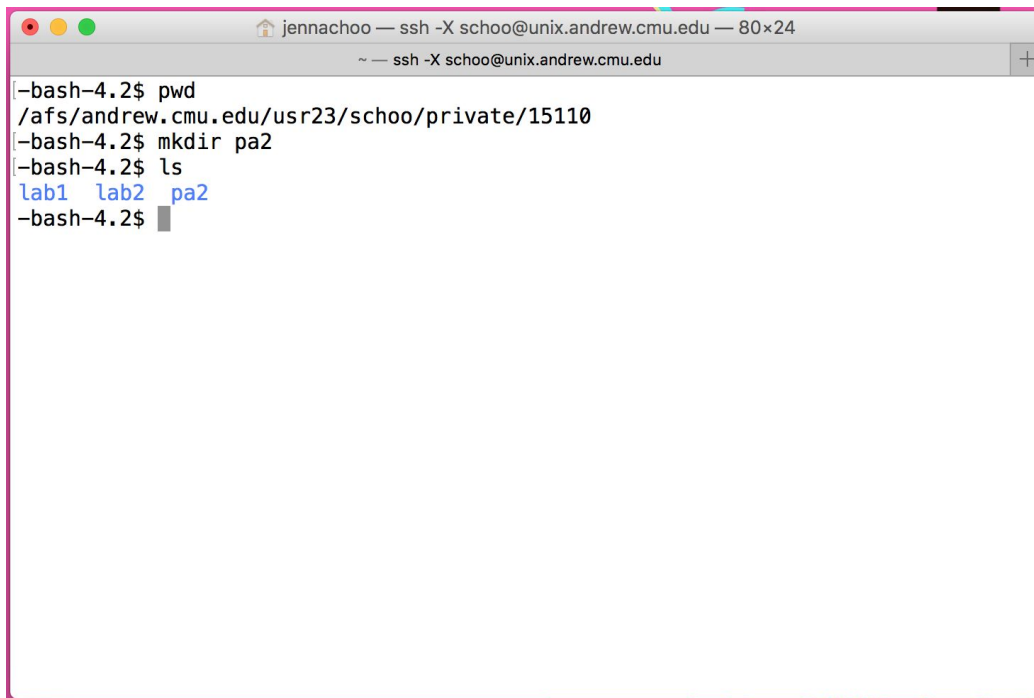
These machines are a shared resource. Please be considerate of other users.
Usage guidelines and policies available at:
http://www.cmu.edu/computing/network/guidelines/servers.html

Please note: These machines reboot nightly.

[-bash-4.2$ ls
Applications  Documents  Movies     perl5     public    Videos
bin           Downloads  Music      Pictures  Public    www
Desktop      Library    OldFiles   private   Templates
[-bash-4.2$ cd private
[-bash-4.2$ ls
15110
[-bash-4.2$ cd 15110
[-bash-4.2$ ls
lab1 lab2
[-bash-4.2$
```

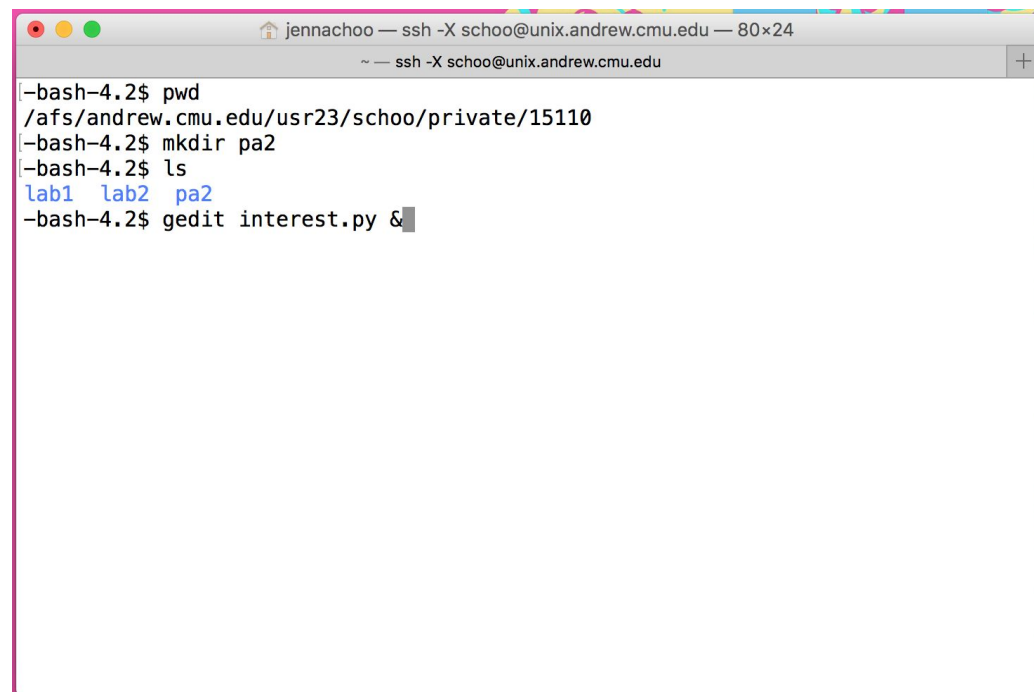
## Getting Started

To get started, let's create `pa2` directory under `private/15110`.



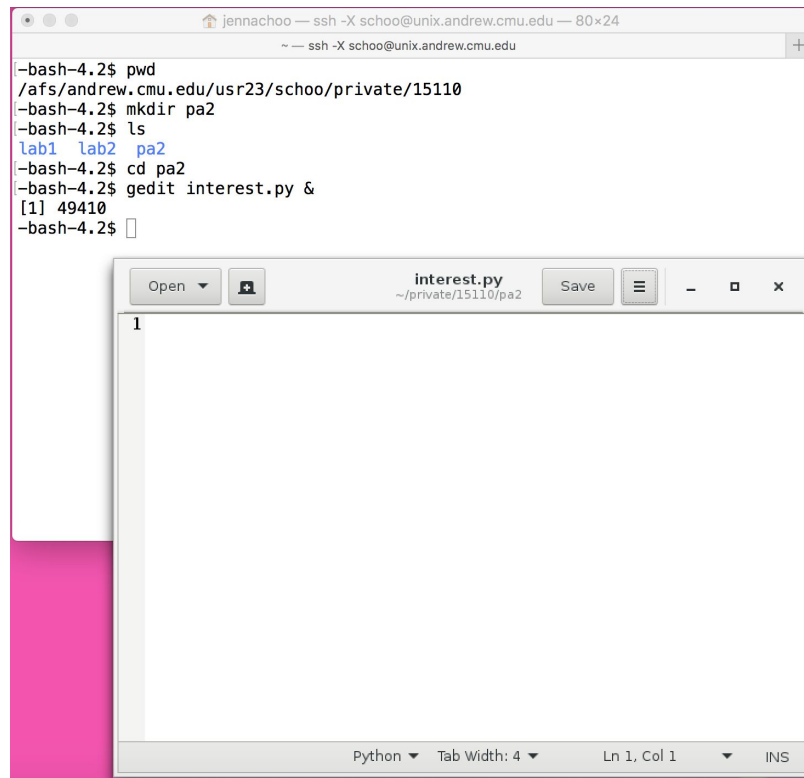
```
jennachoo — ssh -X schoo@unix.andrew.cmu.edu — 80x24
~ — ssh -X schoo@unix.andrew.cmu.edu
[-bash-4.2$ pwd
/afs/andrew.cmu.edu/usr23/schoo/private/15110
[-bash-4.2$ mkdir pa2
[-bash-4.2$ ls
lab1 lab2 pa2
[-bash-4.2$ █
```

We will move into `pa2` directory and create a file called `interest.py`



```
jennachoo — ssh -X schoo@unix.andrew.cmu.edu — 80x24
~ — ssh -X schoo@unix.andrew.cmu.edu
[-bash-4.2$ pwd
/afs/andrew.cmu.edu/usr23/schoo/private/15110
[-bash-4.2$ mkdir pa2
[-bash-4.2$ ls
lab1 lab2 pa2
[-bash-4.2$ gedit interest.py & █
```

It should open up a `gedit` window.



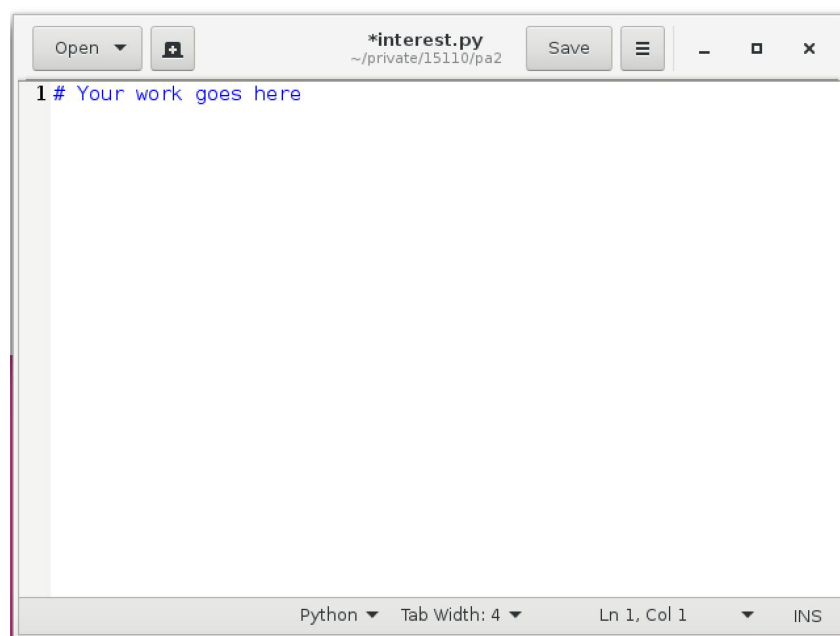
```
-bash-4.2$ pwd
/afs/andrew.cmu.edu/usr23/schoo/private/15110
-bash-4.2$ mkdir pa2
-bash-4.2$ ls
lab1 lab2 pa2
-bash-4.2$ cd pa2
-bash-4.2$ gedit interest.py &
[1] 49410
-bash-4.2$
```

The image shows a terminal window with the following commands and output:

- `pwd`: `/afs/andrew.cmu.edu/usr23/schoo/private/15110`
- `mkdir pa2`: successful
- `ls`: `lab1 lab2 pa2`
- `cd pa2`: successful
- `gedit interest.py &`: successful, PID `[1] 49410`

A `gedit` window titled `interest.py` is open, showing a blank file with a cursor at line 1, column 1. The window title bar includes `Open`, `+`, `interest.py`, `~/private/15110/pa2`, `Save`, and window control buttons. The status bar at the bottom shows `Python`, `Tab Width: 4`, `Ln 1, Col 1`, and `INS`.

Please don't forget to save your work after you are done! It is okay if you see a lot of error messages. You can hit enter key to type in your next command.



```
*interest.py
~/private/15110/pa2
1 # Your work goes here
```

The image shows a `gedit` window titled `*interest.py` with the following content:

```
1 # Your work goes here
```

The window title bar includes `Open`, `+`, `*interest.py`, `~/private/15110/pa2`, `Save`, and window control buttons. The status bar at the bottom shows `Python`, `Tab Width: 4`, `Ln 1, Col 1`, and `INS`.

## Submitting your work to Autolab

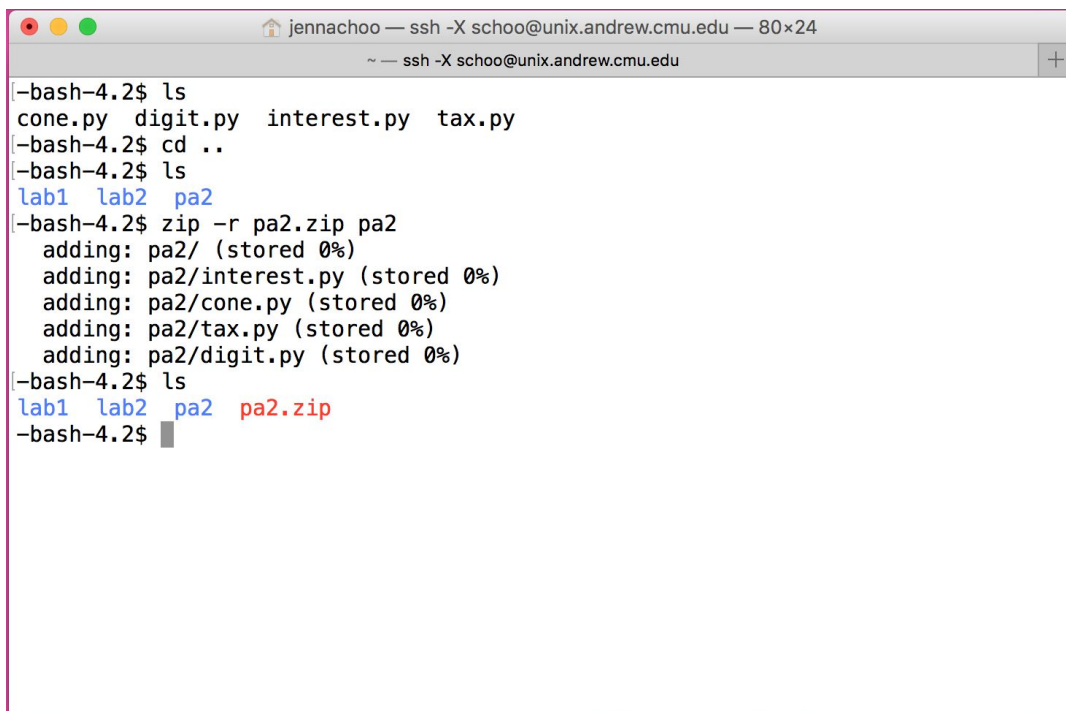
Once you are done, you should have four files in your `pa2` directory.



```
jennachoo — ssh -X schoo@unix.andrew.cmu.edu — 80x24
~ — ssh -X schoo@unix.andrew.cmu.edu

[-bash-4.2$ ls
cone.py digit.py interest.py tax.py
-bash-4.2$
```

Let's zip `pa2` directory.

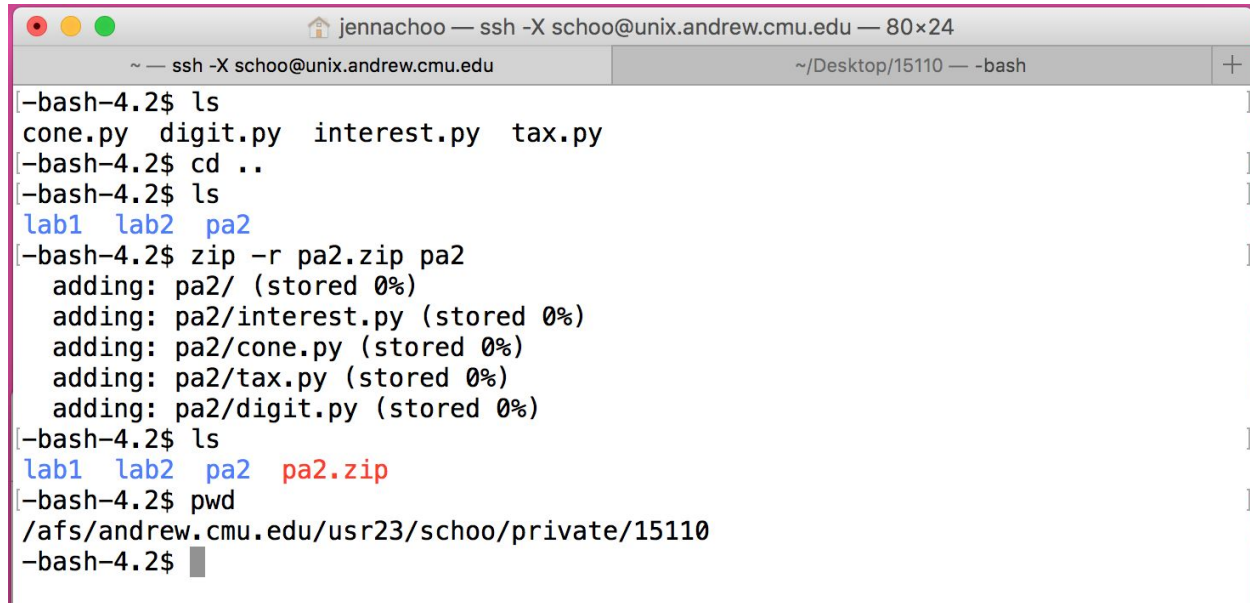


```
jennachoo — ssh -X schoo@unix.andrew.cmu.edu — 80x24
~ — ssh -X schoo@unix.andrew.cmu.edu

[-bash-4.2$ ls
cone.py digit.py interest.py tax.py
[-bash-4.2$ cd ..
[-bash-4.2$ ls
lab1 lab2 pa2
[-bash-4.2$ zip -r pa2.zip pa2
  adding: pa2/ (stored 0%)
  adding: pa2/interest.py (stored 0%)
  adding: pa2/cone.py (stored 0%)
  adding: pa2/tax.py (stored 0%)
  adding: pa2/digit.py (stored 0%)
[-bash-4.2$ ls
lab1 lab2 pa2 pa2.zip
-bash-4.2$
```

Once we have pa2.zip file ready, we will move it to our own computer so we can hand it in to Autolab.

First, double check where your file is. In this case, it is under `/private/15110/`

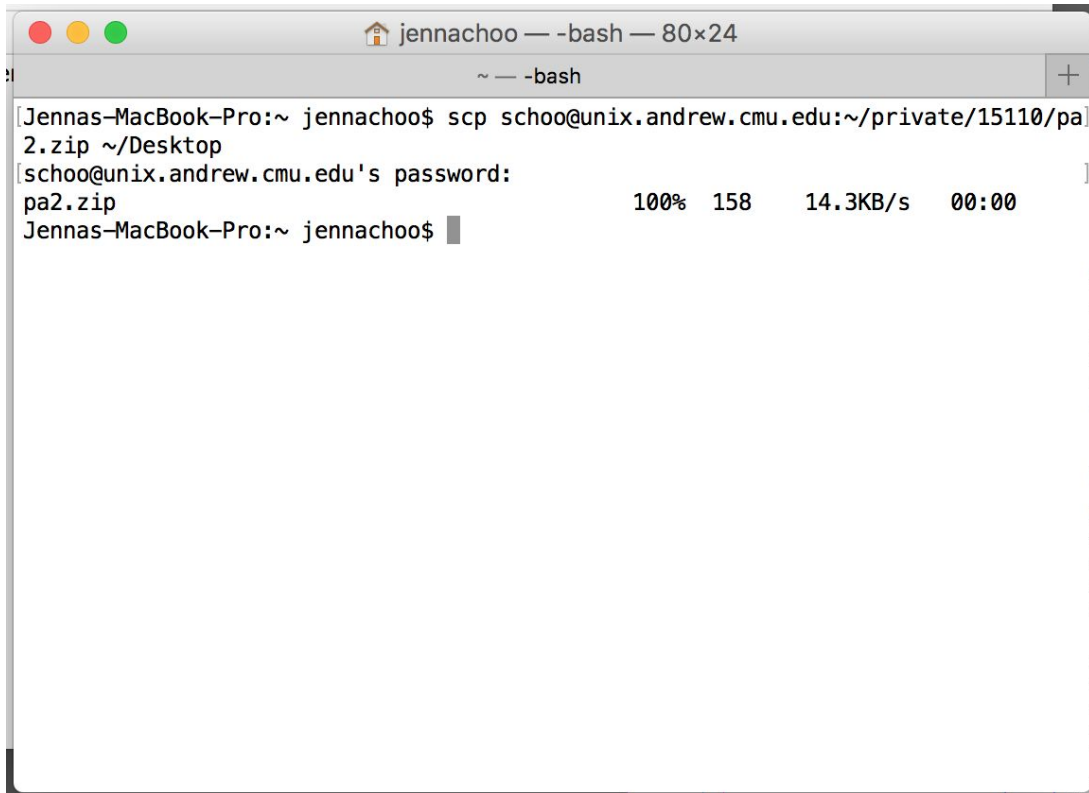


```
jennachoo — ssh -X schoo@unix.andrew.cmu.edu — 80x24
~ — ssh -X schoo@unix.andrew.cmu.edu ~/Desktop/15110 — -bash
[-bash-4.2$ ls
cone.py digit.py interest.py tax.py
[-bash-4.2$ cd ..
[-bash-4.2$ ls
lab1 lab2 pa2
[-bash-4.2$ zip -r pa2.zip pa2
  adding: pa2/ (stored 0%)
  adding: pa2/interest.py (stored 0%)
  adding: pa2/cone.py (stored 0%)
  adding: pa2/tax.py (stored 0%)
  adding: pa2/digit.py (stored 0%)
[-bash-4.2$ ls
lab1 lab2 pa2 pa2.zip
[-bash-4.2$ pwd
/afs/andrew.cmu.edu/usr23/schoo/private/15110
[-bash-4.2$ █
```

**Open a new terminal window** and type in the command below.

```
scp <andrewID>@unix.andrew.cmu.edu:~/private/15110/pa2.zip ~/Desktop
```

The highlighted text might need to be adjusted depending on where your `pa2.zip` file is.



```
jennachoo — -bash — 80x24
~ — -bash
[Jennas-MacBook-Pro:~ jennachoo$ scp schoo@unix.andrew.cmu.edu:~/private/15110/pa2.zip ~/Desktop
[schoo@unix.andrew.cmu.edu's password:
pa2.zip                               100% 158    14.3KB/s   00:00
Jennas-MacBook-Pro:~ jennachoo$
```

You should be able to see that `pa2.zip` got copied over to your local computer (in Desktop folder). Please submit this file to Autolab.

**If you are confused with this last step, you can also go to GHC 5207/5208/5210 and hand in your work to Autolab from one of the machines there.**