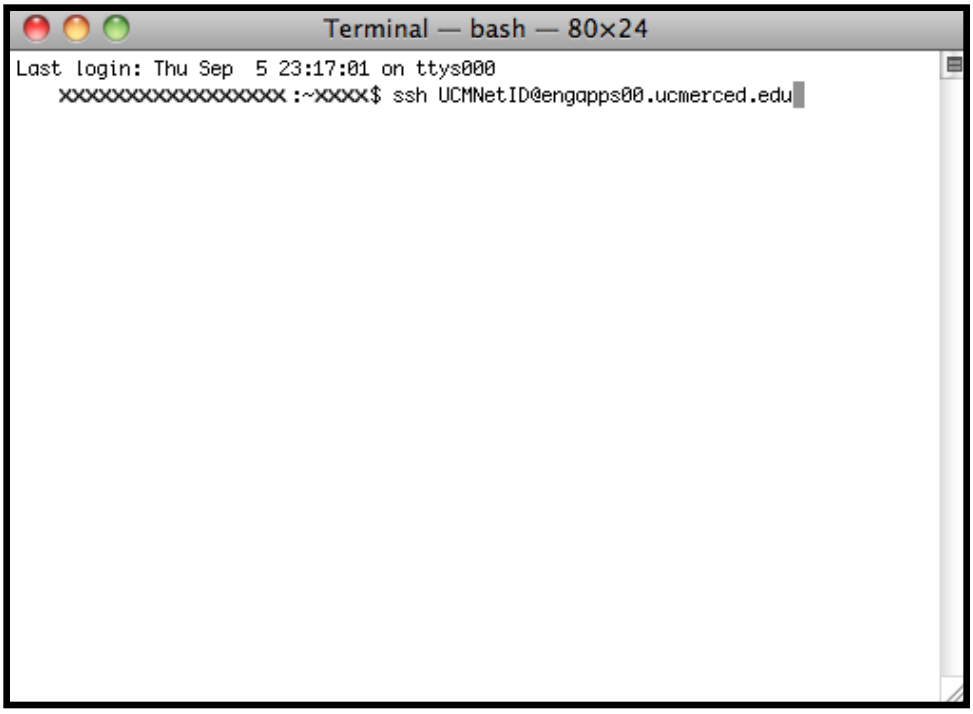
Working from an Apple Computer

Connecting to your UCMerced Linux Computer

In order to connect to your UCMerced Linux Computer (the same one that you use during the lab session), you need to "ssh" into the machine. SSH stands for Secure SHell and will allow you to use a terminal in Mac, while you are securely connected to your UCMerced Linux Computer. The steps to connect to your UCMerced Linux Computer are as follows:

1. Open the Terminal app (/Applications/Utilities/)

2. Type “"ssh ***your_UCMNetID***@engapps00.ucmerced.edu”



3. When prompted, enter your UCMNetID password (don't worry if the cursor does not move, this is a typical Unix protection so that people cannot count how many characters are in your password), and press Enter.

Congratulations! You are now officially connected to your UCMerced Linux computer.

What now?

Going to the Desktop

At this point you are connected to your UCMerced Linux computer. Every time you connect, you probably want to navigate to your Desktop (or wherever you placed your working directory). In order to do so, you would have to type the command:

cd UCMEng_Collaboratory03/Desktop/

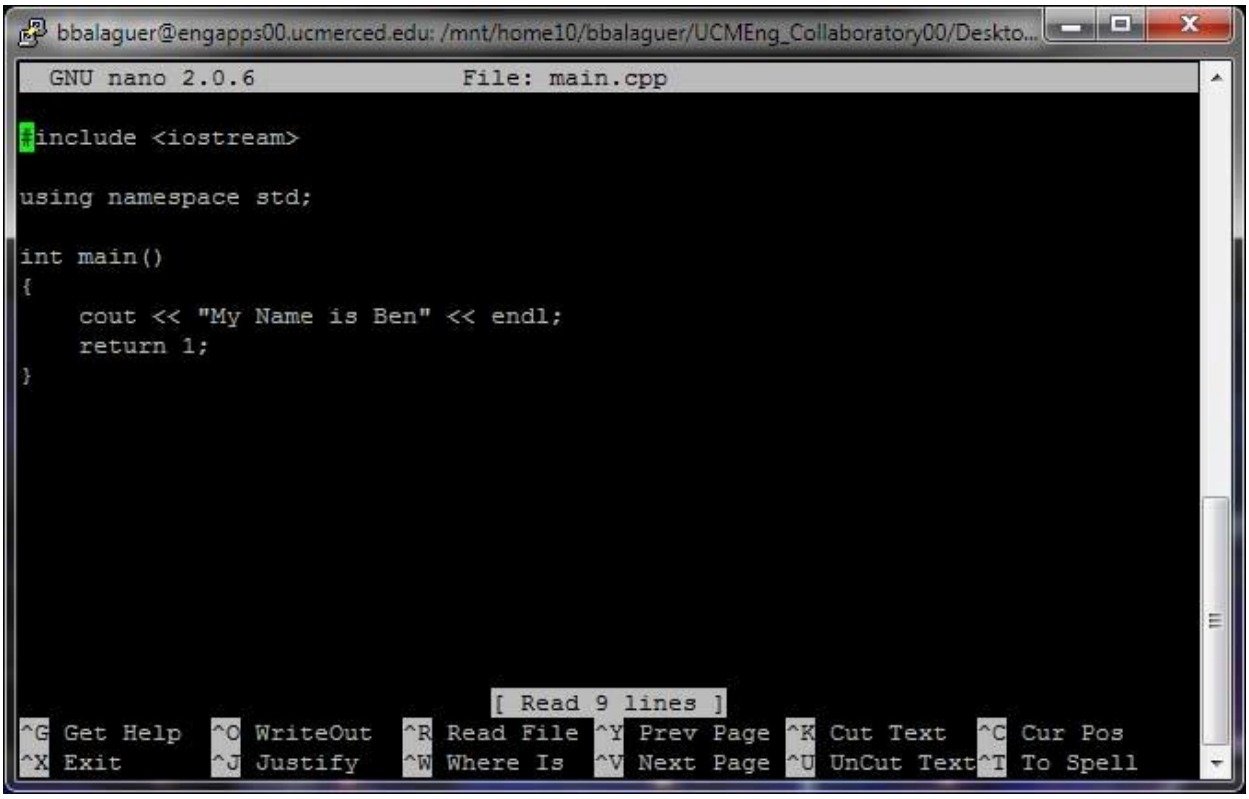
This command will place you on your Desktop. From there, you should know how to move (using cd) to an appropriate directory (one where you have files for your lab).

Editing Your Source Files

You can use any other command-line editor, like VI, EMACS, or NANO. The nano editor, the editor is probably the quickest to learn but not the fastest.

Once you have navigated to the directory containing a file you want to modify, you can type:

nano *filename*



This command will open the file named *filename* if it exists, or create a new file named *filename* if the file does not exist. A screenshot of the editor is shown below.

The editor is very easy to use. Use the arrow keys to navigate throughout your file. The menu is given at the bottom of the terminal, where the ^ sign means that you should press CTRL. For example, in order to go down one page (i.e. page down), you would press CTRL+V. Similarly, CTRL+Y will go up one page (i.e. page up). To save your file, you can press CTRL+X to exit, in which case the editor will ask you if you want to save your modifications (press y) or cancel your modifications (press n). If you choose to save your modifications, the editor will ask you want

name you want to give the file (just press Enter to save it with the same filename).

For a more detailed tutorial on the nano editor, I recommend the following website:

http://www.howtogeek.com/howto/42980/the-beginners-guide-to-nano-the-linux-command-line- text-editor/.

Being Efficient with this Framework

Just like most things, it takes practice to get good at using these tools. Additionally, there is a lot of information online about ssh, command-line editors such as nano, terminal commands, etc... My personal suggestion and preference to code remotely is to open at least two terminals (note that there is no limit to the number of terminals you can have opened at the same time). I would have one terminal with the file I am currently editing and the other terminal to compile, run, test, debug, and grade it.

Transferring Files To/From Your Computer

So far, we have shown how to connect to your UCMerced Linux machine so that you can work remotely. Evidently, you might also want or need to transfer files from your computer to the Linux machine, or vice-versa (for example, you might want to download your final tar to your computer file once you are done with one of your labs, so that you can submit it to UCMCROPS). In order to do so, you need to use a program capable of making SFTP connections (most FTP clients have that option). There are a lot of programs you can use in this section. I will show how to use a free and popular FTP client called FileZilla.

1. Download FileZilla, by going to

https://filezilla-project.org/download.php?show_all=1

and selecting the appropriate FileZilla version (Mac OS X) for your computer.

2. Install FileZilla and open it.

3. In the Quickconnect bar, enter *engapps00.ucmerced.edu* for the "Host", your UCMNetID for the "Username", your UCMNetID password for the "Password", and *22* for the Port.

4. Click on "Quickconnect" to connect.

5. FileZilla is very easy to use. The left side represents your computer and the right side represents your UCMerced Linux machine. Once you have navigated to your desired locations (on your machine and the Linux machine), you can transfer files by simply dragging and dropping them.

[Acknowledgements: thanks to Benjamin Balaguer, for this manual]