Getting Started With Unix

A. First, get connected!

Connection Using Windows

- Use an SSH client, such as MS Secure Shell Client or putty, and click for a new connection
- **http://www.clemson.edu/ccit/software_applications/software/licenses/ssh.html**
- If you are ***off campus***: the host name should be `access1.cs.clemson.edu` or `access2.cs.clemson.edu`
  - Login in using your user name and password
  - ***Once you are connected to `access1` or `access2` ->*** you need to SSH to one of the machines in 110 Lab using the command `ssh <machine name>` for example: `ssh hornet6.cs.clemson.edu` and then you'll have to enter your password again (*machine names are below)
- If you are ***on campus***: you can log directly into one of the named machines bypassing the `access1` or `access2` gateway, so the host name would be `machine_name.cs.clemson.edu`
  - Login in using your user name and password

Connection Using Mac or Linux

- Open a shell (terminal – if it's not in your dock, you can find in Utilities)
- If you are ***off campus***: type the following: `ssh user_name@access1.cs.clemson.edu` or `ssh user_name@access2.cs.clemson.edu`
  - ***Once you are connected to `access1` or `access2` ->*** you need to SSH to one of the machines in 110 Lab using the command `ssh <machine name>` for example: `ssh hornet6.cs.clemson.edu` and then you'll have to enter your password again (*machine names are below)
- If you are ***on campus***: `ssh user_name@machine_name.cs.clemson.edu`

Machine Names

- The machines in the department that you have access to have names – they are named hornet, joey, or imp. There are 24 "hornet" machines (hornet1, hornet 2, hornet 3, … hornet 24). The joeys are joey1, joey2, … joey27. And the imps are imp1, … imp24. So pick any one of those when you are logging into a machine. If the one you pick doesn't work, try another one.

NOTE: Don't forget to exit using the **logout** or **exit** command from your shell

B. Ok, you're connected… Now What?

Once you log in, you will be using a command-line interface, so you'll need to use the **Unix commands (table below)**. The first lab has you do a few things, like type `pwd` at the prompt, and that will show you what directory you are in (when you log in, you start out at your "root directory" or "home directory"). Then the lab has you create a new directory (the command for that is `mkdir`) and then you enter the name of your new directory, like the following: `mkdir 101` and then hit the enter key. Type `pwd` again and now you'll see that new directory that you just created. To "get into" that directory (change directories), type the following: `cd 101` and then hit the enter key. Type `pwd` again to make sure you are now in that directory (it should be empty until you create content inside that directory).

If you have already had the first lab, you have done these steps in lab on those computers, using the Linux operating system, which in lab, is the GUI version of Linux. But if you are logging in remotely on your laptops, you have to use SSH on Windows (or terminal for Macs) and then you'll be using the command-line interface with the Unix commands.

There are many more Unix (Linux) commands than what appears in the table below, but these are a good subset of the most common ones to get you started. There are also what are called "man pages" that you can use if you forget the format of a command. Those are like help pages, but instead of typing `help mv` for help with the mv command, you would type `man mv`.

Useful Unix Commands to get started

Command	Purpose
`ls`	list all contents in your current directory
`cd`	takes you back to your home directory
`cd ..`	takes you back one directory
`cd dir_path`	takes you to the directory specified by the path provided
`mv src_file dest_file`	renames `src_file` to `dest_file`
`mv src_file dest_path`	moves `src_file` to the folder specified by the `dest_path`
`mv src_file dest_dir/dest_file`	moves `src_file` to the folder specified by `dest_path` and gives it the name `dest_file`
`cp src_file dest_file`	copies `src_file` to `dest_file`
`cp src_file dest_path`	copies `src_file` to the folder specified by `dest_path`
`cp src_file dest_dir/dest_file`	copies `src_file` to the folder specified by `dest_path` and gives it the name `dest_file`
`rm file_name`	deletes the file named `file_name`
`mkdir dir_name`	creates a directory name `dir_name` in your current directory
`rmdir dir_name`	deletes the directory named `dir_name` if it is empty
`rm -rf dir_name`	deletes the directory named `dir_name`
`ps`	shows a listing of processes that are running
`kill -9 [pid]`	kills the process you specify with the pid (process id #) which is shown when you type ps