Lab #4

**Part 1:**

My preferred way to SSH to Brooklyn College’s server so I can establish a connection and run a linux environment via their hardware is through virtualbox to Ubuntu 20.04.1. To SSH, all I have to do is type the following cmd in the terminal:

*ssh username@servername*

It authenticates my username then asks for my password provided to me by the IT admin of the school. It authenticates my password and I am in. From there I can navigate through the directories available to me via BC’s server to complete my tasks.

**Part 2:**

Check the manual for a given command. The manual provides a description of the actions the command executes. You can use a ***flag*** with the ***head*** command to modify the output.

For starters lets say you want to see a description and available flags for ***head.*** Type the following into the terminal:

*man head*

Any command can be used with man to output the manual.

The ***head*** command shows the first couple of lines in this text file.

*head /var/log/syslog*

In the manual, it says we can use the ***n flag*** like so

*head -n 15 /var/log/syslog*

It modifies the line count to whatever you choose, in this case the first 15 lines instead of the default 10 lines. Similarly we can check the manual for the tail command.

*man tail*

This outputs the manual for tail.

The tail command lets you see the last 10 lines of a file by default. We can use the following to see the last 10 lines of this file.

*tail /var/log/syslog*

In the manual you can see a number of flags. We can again use the ***n flag*** like so

*tail -n 10 /var/log/syslog*

You can also use is the *-f (follow) flag*, this will follow the file as it grows. Since the syslog changes as you interact with the system, the ***f flag*** will continue to update. So you can type the following.

*tail -f /var/log/syslog*

Similarly we can check the manual for an application which will provide a description, synopsis, options/flags etc by using the following

*man application name*

So for example we can use this to check the manual for librewriter office by typing the following

*man LibreOffice Writer*

We can check the version of the application with the following

*Application\_name –version*

They would come into use perhaps if a user encounters a bug and wants to check if there is a newer version of the application available.

Part 3:

There are many different types of text editors available. On the BC server we have VIM available. You can use a VIM cheat sheet at

[*https://vim.rtorr.com/*](https://vim.rtorr.com/)

for shortcuts including

* **h** - move cursor left
* **j** - move cursor down
* **k** - move cursor up
* **l** - move cursor right
* **H** - move to top of screen
* **M** - move to middle of screen
* **L** - move to bottom of screen
* **w** - jump forwards to the start of a word
* **W** - jump forwards to the start of a word (words can contain punctuation)
* **Te** - jump forwards to the end of a word

To enter VIM type the following

*vim*

For quick text entry into VIM, we can simply use q to begin entering text write away. An ***i*** to insert then save the file with ***w*** then ***q*** to exit. Often times, it is easier to save and then quit VIM after creating to editing a file by using the ***wq*** option.

A couple of useful options available for editing text

* x - used to cut the selected text also used for deleting characters
* dd - used to delete the current line
* y - yank or copy whatever is selected
* yy - yank or copy the current line
* p - paste the copied text before the cursor

Useful options available when saving and/or exiting

* w - writes or saves the file
* q - quit out of vim
* wq - write and then quit
* q! - quit out of vim without saving the file
* ZZ - equivalent of :wq, but one character faster