

**\*\*Part 1 2 points\*\***

Two directories are described below. For each, cd into the directory, run the command ``pwd`` and take a screenshot.

1. The directory where most of the systems configuration files are.
2. The directory where binaries for many of the utilities we have used, like ``mkdir``, *\*\*\*really\*\*\** are.

```
vagrant@ubuntu2210:~$ cd /etc
vagrant@ubuntu2210:/etc$ pwd
/etc
```

```
vagrant@ubuntu2210:/usr/bin$ pwd
/usr/bin
```

**\*\*Part 2 3 points\*\***

For **\*\*\*three\*\*\*** of the directories below, write a paragraph, in your own words, about the purpose of that directory. What type of files are stored there, what is special about it...?

/etc

The '/etc' directory, which houses files for system-wide configuration, is an essential directory in the Linux file system hierarchy. To configure their behaviour and settings, various programmes and services on the system use these files. Configuration files, include files for system-wide initialization scripts, network configuration, system users and groups, security settings, SSH server, Apache web server, and the system's login manager. It is special because many programmes and services on the system read from it during startup or operation. Altering the '/etc' may have significant effect on the system.

/dev

A wide range of device files, including block devices like hard drives and removable storage, character devices like serial ports and terminals, and network devices like Ethernet and wireless interfaces, are all present in the /dev directory. Additionally, it includes unique files that serve as representations of system resources like memory, random numbers, and system log files. special because the kernel uses it to access and manage hardware attached to the system.

/usr/bin

In the Linux file system hierarchy, the executable files for user-level programmes and utilities are kept in the standard directory called `/usr/bin`. To carry out tasks like file management, text editing, and network configuration, users and system administrators use these files.

`/usr/bin` also contains many of the standard Linux utilities such as `ls`, `mkdir`, `cat`, and `grep`. Special because it is where the majority of user-level programme and utility executables are kept. By ensuring that the executables in this directory are located in a common location, this enables the system administrator to easily manage and monitor the system's user-level programmes and utilities and also contributes to the system's smooth operation. Additionally, users can easily run the executables without having to specify the complete path to the file because the `/usr/bin` directory is frequently included in the system's `PATH`.

### **\*\*Part 3 1 point\*\***

Write a `grep` command that will find all the files in your home directory that contain the word 'alias'.

The output should only show the files, not every instance of word 'alias'. You can find out how to do this in the man page for `grep`.

```
vagrant@ubuntu2210:/$ grep -rl 'alias' /home  
/home/vagrant/.bashrc
```

### **\*\*Part 4 3 points\*\***

Create a new `week3` directory in your home directory copy the script below into your shell and hit enter. You don't have to create a file, you can just copy this directly into the shell and hit enter

```
vagrant@ubuntu2210:~/week3$ find . -name "*.pyc" -exec rm -f {} +  
vagrant@ubuntu2210:~/week3$ |
```

### **\*\*Part 5: 3 points\*\***

Inside of the `week3` directory create an **`index.html`** file using `vi(m)` and copy and paste the HTML file below into the new file you just created. Use `vi(m)` to remove all of the comments in the code below.

There is more than one way to perform this task. the full 3 points will be awarded to one of the more efficient methods.

```
vaḡrant@ubuntu2210:~/week3$ vim index.html
```

```
~  
~  
~  
:g/^\\s*<!--/s/<!--\\|-->//g|
```

The command used will search globally (g) for any line that starts with whitespace (^\\s\*) in the html provided, followed by <!-- and substitute (s) <!-- and --> with nothing (//g). This will remove all the comments from the file.