**Linux, what is it:**

It is a operating system that is quite popular, particularly with those that work within technology. It is highly customisable and flexible to suit many needs, whether you want to use it to host a server, or do automations, etc.

**What language does Linux use:**

Linux uses something called shells, which is essentially binaries that allow you to interact with the Linux system through a terminal. The default is called BASH (i.e. Borne Again Shell), but there are other different shells such as ZSH which are essentially different ‘flavours’ of BASH, in terms of their layout. The choice of shell depends on your preference, but BASH will typically be the most used shell with those that work within Tech.

**What are some typical commands that you may use within BASH:**

ls – allows you to view the current directory contents. A directory is essentially a folder

cd – allows you to change between directories

cp – allows you to copy files across directories

mv – allows you to move and rename files

mkdir – allows you to create directories (i.e. folders)

rm – allows you to delete files

rmdir – allows you to delete EMPTY directories

grep – allows you to search files for strings (i.e. words)

cat – allows you to read the contents of the file

echo – displays the contents of the file

touch – allow you to create an EMPLY file

chmod – allows you to amend the permissions of the file for the user (i.e owner of the file), the group (i.e. the group that owns the file), and non-owners of the file). You can also use this command for directories too

head – displays the first lines of the file (by default this is the first 10 lines)

less – displays the last lines of the file (by default this is the last 10 lines)

sudo – allows you to perform privilege actions e.g. making modifications to systems files that would normally be locked if you do not use this command in conjunction with another command

**File/Folder Permissions:**

To expand upon the chmod command. You are able to use this command to edit file permissions. There are three levels of access for a file/directory:

* Read (r)
* Write (w)
* Execute (x)

You can use the letter notations when changing file/folder permissions.

Or you can use number notations:

* 4 means write
* 2 means read
* 1 means execute

For example, if I want to give myself read and write permissions on a particular file, it will be the number 3 (2 + 1). If I wanted to give myself read, write, and execute, it will be 7 (4 + 2 + 1)

You are also able to change the owner of the file/directory by using the following:

chown – changes the user owner

chgrp – changes the group owner