

Assignment: Fridge?

Three types of operating system are:

- **UNIX:** Is a proprietary software operating system so it is not open sourced it is owned by someone or company. EG: AIS BSD IRIS. Mac OS is based on UNIX. Developed by AT&T. No portable (multitasking operating system)
- **Linux:** Is essentially a UNIX clone. At its core it is a kernel (command line interface) but with many user-land GNU/GUI features added. Very portable can be executed on many hard drives
- **Windows:** Based on MS-DOS. Single task operating system designed to do one thing at a time

<https://www.quora.com/What-is-difference-between-UNIX-and-Linux>

Advantages of UNIX:

- Have majority of web server market
- 95 percent of the world supercomputer runs linux
- Runs on majority of embedded device: ios android tivo
- Some UNIX is free generally
- Free vendor lock in
- Copy left licence
- Open sourced allowed for modification to suit your needs if necessary

Advantages of windows:

- Familiarity
- Large Hardware and software support. Because most people use windows (Linux lacks support)
- More technical support than Linux
- Managed environment so easy deployment and easily managed.

Summary: right tool for the right place.

Differences between application and service:

- Anything program running on your computer that does something. Just on your own machine Eg: terminal
- Service: something that is offered by your machine to other machines and lots of other machines via network. EG: webserver such as apache website. (HTTP) server eg: samba.
- A **service** is a **process which runs in the background** and does not interact with the desktop
- An **application** is a **program which you interact with on the desktop.**

Ports: offer a webpage to rest of world it needs to open up a port. It allows a service port to be scanned if it server opened to go in. (not application).

- Nmap (IP Address] shows all ports open (http) (ssh etc)

Firewall: The firewall will act as a barrier stopping unauthorised access to and from unauthorised private networks.

- **Software firewall:** monitors and detects integrity the incoming and destination of the ip address and kills connections that don't meet expectation

Generally many companies will pay/donate for the development of an Linux operating system because it is cheaper than making a new os. Possible to influence direction of Linux with payment.

SSH vs SCP client:

- Program that allows remote terminal to another machine. In order to do this you need to enable ssh by doing:
 - `sudo apt-install openssh-server` (opens ssh port so world can access it)
 - scp copy files between machines
 - ssh (ip) to enter
 - nmap (ips) to see ports opened
- It allows transfer of files from machines

Binaries: All the software you want is stored in apt repository (website distributed around the world is free). All software in repository is checked by open sourced community. Individual computer points to repository geographical close download quicker.