

Linux.

LINUX: name given to OS built around the open source linux kernel.

Linux distributions: Different OS that use linux kernel

Free, open-source = source code can be viewed, edited/changed to suit our needs.

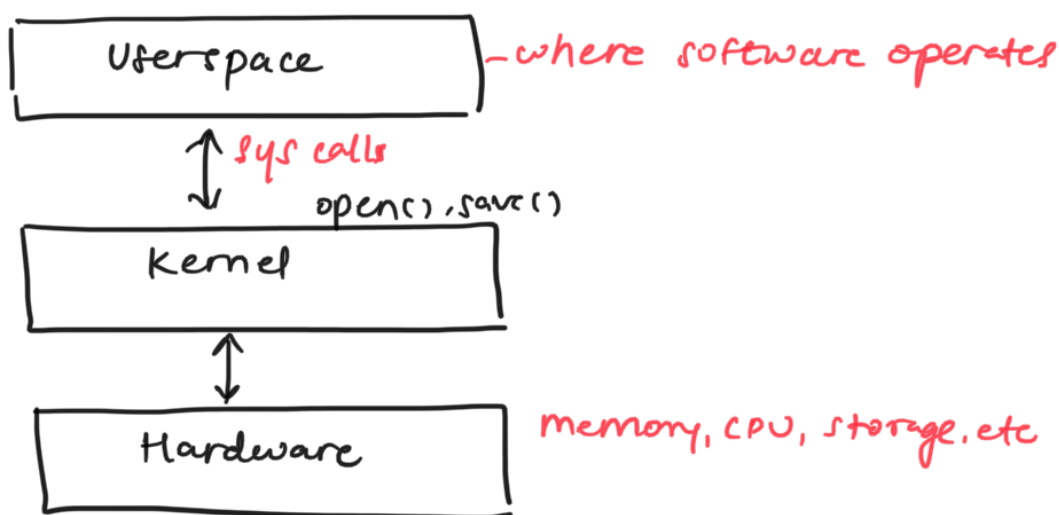
Linux → think of it as kernel of OS

Linux Kernel:

- Core of linux distributions
- Opensrc, with many contributors
- Originally released by Linus Torvalds in 1991
- Permissive licensing enables broad use

Kernel

- is a software that communicates with computer hardware so that they can do whatever they want
- can run on its own, but not very useful that way.
- we cant run programs without a kernel taking requests and information and translating them to the system's hardware.



Linux kernel can run on a wide range of hardware

Source code - kernel.org

A linux system -

- requires linux kernel
- additional software to control the system's boot process and manage running programs.

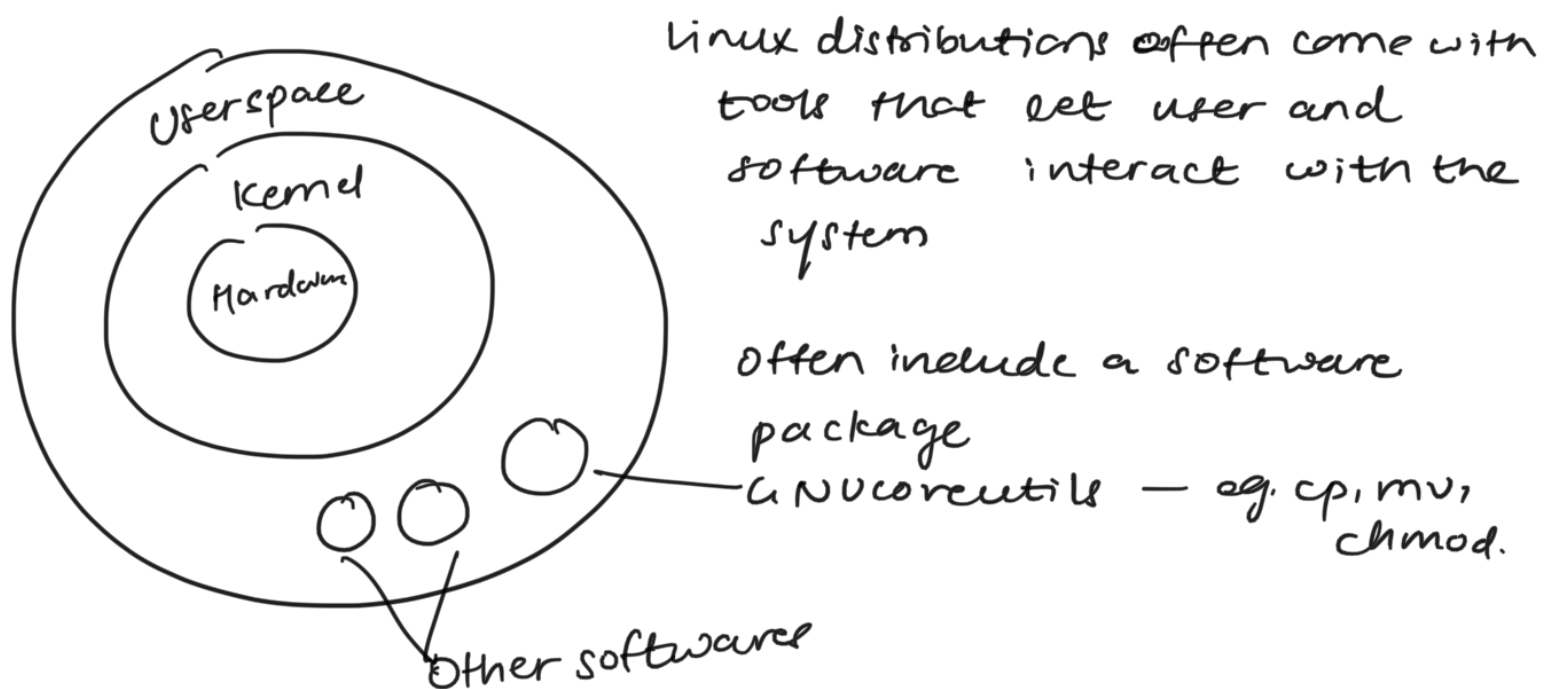
when a linux system starts, kernel is loaded and software called initialization system is called that starts programs - networking, storage etc.

Interaction — 1) Desktop environment

2) Text based shell - console
(bash, zsh, csh, fish, ksh)

Shell is a software u use to type commands and view returned text.

Secure shell (SSH) - enables remote connections to a text based console or terminal



Linux File System

- consists of files and directories
- Filesystem Hierarchy Standard (FHS) - describes how the file system is organized
- The top level of file system is called root and is represented by a / (slash)
- linux systems have only one file system - Root
(windows - C, D, E drive etc)

User and system security:

- multiuser, each user can have their files
- can't access files outside their space
- Superuser (root) has all privileges
su/sudo - to use root's privileges if the user is allowed

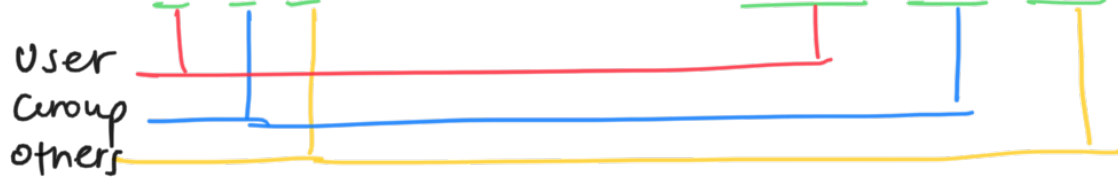
Permissions

numeric

7 5 5

symbolic

rwx r-x r-x



manual/man page
man commandname.
eg man ls.
f, B → ←
Q - Quit

uname -a kernel version
cat /etc/*release distribution info