Booting Process

1. BIOS

BIOS stands for Basic Input/Oput System. In simple terms, the BIOS loads and executes the master Boot Record boot loador.

2. MBR

MBR stands for master Boot Record, and is responsibe for loading & executing the GRUB boot loader.

3. GRUB

Sometimes called GNU GRUB, which is short for GNU GRand Unified Bootloader, is the typical boot loader for most modern Linux Systems

4. Kernel

The kernel is often referred to as the core of any operating system, Linux included. It has complete control over everything in your system.

5. Init

Used to deare the Linux run level.
/etc/inittab

6. Runlevel programs

There are 6 run level

Run level 0 - /etc/rc0.d/
Run level 1 - /etc/rc1.d/
Run level 2 - /etc/rc2.d/
Run level 4 - /etc/rc4.d/
Run level 5 - /etc/rc5.d/
Run level 6 - /etc/rc6.d/

Functions of operating System

1. Memory Management
   - Allocates & deallocates memory
   - Keeps a record of which part of primary memory is used by whom & how much.
   - Distributes the memory while multiprocessing

2. Processor management / Scheduling
   - Allocates and deallocates processor to the processes.
   - Keeps record of CPU status.

3. Device management
   - Allocates & deallocates devices to different processes.
   - Keep records of the devices.
   - Decides which process can use which device for how much time.

4. File Management
   - Keeps records of the states & locations of files
   - Allocates and deallocates resources

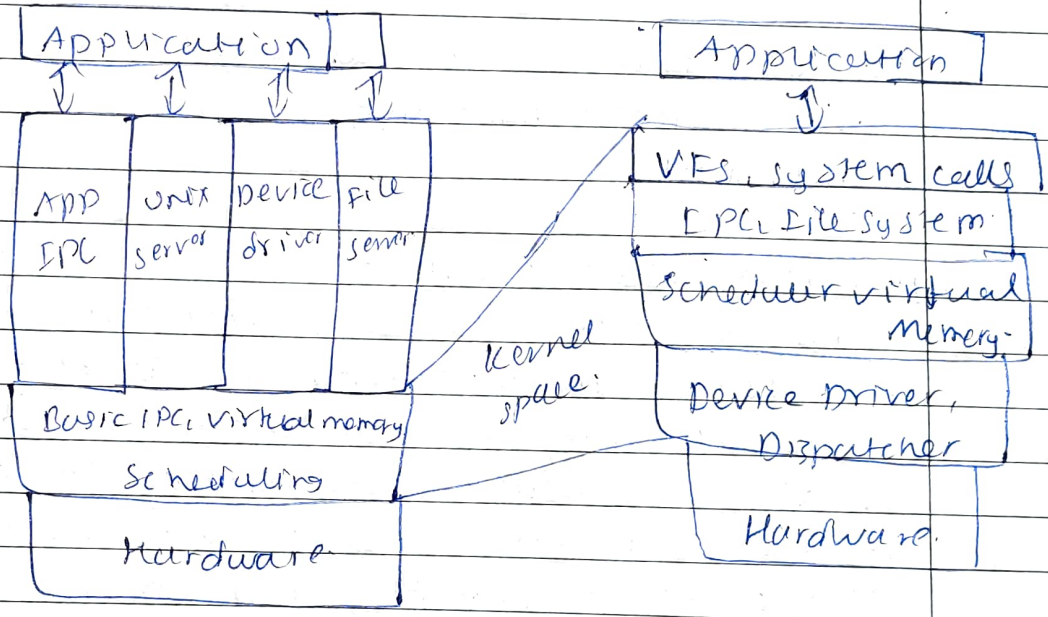
5. Security
   The OS keeps the system & programs safe & secure through authentication & user id & password decide the authenticity of the user.

6. Accounting
   As the operating system keeps track of all the functions of a computer system hence, it makes a record of the

activities taking place on the system

7- Other Functions
- Error detection.
- keeping a record of system performance.
- Communication between different software etc.

Microkernel and Monolithic kernel.



Legacy Operating System

A legacy platform, also called a legacy operating system, is an operating system no longer in widespread use, or that has been supplanted by an updated version of earlier technology. Many enterprises that use computers have legacy platforms, as well as legacy applications, that serve critical business needs.

Both UEFI & BIOS are low-level software that starts when you reboot your PC before booting your operating system, but UEFI

is more modern solution, supporting larger hard drives, faster boot times, more security features, and conveniently - graphics & mouse cursors.

Disk partition command prompt.
→ diskpart.
→ list disk. → sel disk 0 → list partition

To check the services running
open command prompt.
net start.

Windows, Mac & Linux
windows - this follows a directory structure to store the different kinds of files of the user It has logical drives & cabinet drawers. It also has folders. Some common folders like documents, pictures, music, videos, & downloads All these files can be stored in these folders, & also new folders can be created. It also has files which can be a spreadsheet or an application program.

Mac - the file structure of MAC is commonly known as MAC OS X - If you go to dig into your MAC's hard disk through the finder, you will see many directories the root directory of MAC may encounter when they visit their own MAC book. You can explore the file system & directory structure by going to directories like /Application, /Developer, /sbin, /tmp, etc.