Assignment

1) Booting Process

Booting is basically the process of starting the computer. When the CPU is first switched on it has nothing inside the memory. In order to start the Computer, load the OS into the Main Memory and then Computer is ready to take commands from the user.

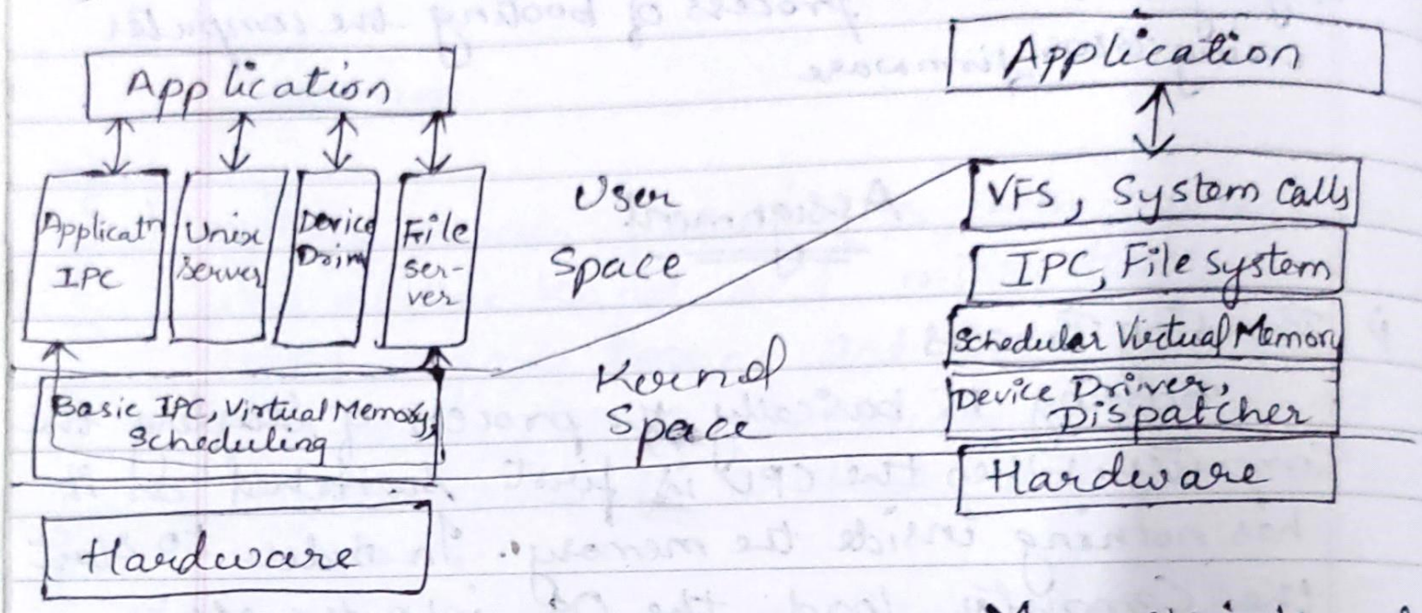
2) Functions of OS :

- Provide Security
- Control over system performance
- Job accounting
- Error detecting aids
- Coordination between other Software and users
- Memory management
- Process Management
- Device management.

3) Unified Extensible Firmware Interface (UEFI)

It is a publicly available Specificatn that defines a software interface between an Operating System and platform firmware UEFI can support remote diagnostics and repair of computers, even with no operating system installed.

4) Microkernel and Monolithic Kernel



Microkernel

1) In microkernel user services and kernel services are kept in separate address space
2) Microkernel are smaller in size
3) Slow execution
4) The microkernel is easily extendible
5) If a service crashes, it does effect on working of microkernel
6) More code is required
7) Ex: QNX, Symbian, L4Linux, Singularity, K42, Mac OSX, Integrity, PikeOS, HURD, Minix and Cayotos.

Monolithic Kernel

1) In monolithic kernel, both user services & kernel services are kept in the same address space.
2) Monolithic Kernel is larger than microkernel
3) Fast execution
4) The monolithic kernel is hard to extend.
5) If a service crashes, the whole system crashes in monolithic kernel
6) Less code is required.
7) Ex: Linux, BSDs (Free BSD, OpenBSD, Net BSD) Microsoft Windows (95, 98, Me), Solaris, OS-9, AIX, HP-UX, DOS, OpenVMS, XTS-400 etc.

5) Legacy booting.

It is the boot process used by basic input/output system (BIOS) firmware. The firmware maintains a list of installed storage devices that may be bootable (floppy disk drives, hard disk drives, Optical disk drives, tape drives, etc.) and enumerates them in a configurable order of priority.

6) BIOS (Basic input Output System)

BIOS is a very small piece of code contained on a chip on your system board. When you start your computer, BIOS is the first software that runs. It identifies your computer's hardware, configures it, test it, and connects it to the Operating System for further instruction.

7) Commands to check disk partition in windows

a) diskpart
b) list disk
c) select disk {number}
d) clean
e) create partition primary
f) select partition 1.
g) active
h) format fs=fat32 quick

8. List the Commands on services on Windows.
In command prompt type services.msc you can start and stop services to run.

9) WINDOWS:
- Released in 1985. It was supposed to be a graphical user interface on top of MS-DOS. All features of MS-DOS were later integrated with windows 95 release, this lead to Windows transition.

File structure - Windows follows a directory structure to store the different kinds of the file of the user. It has logical drivers and cabinet drawers. It also has folders like documents, pictures, music, videos and downloads.
New folders can be created. It can have files such as spreadsheet or an applicatn program, which has extensions as .txt, .jpg etc.
Has Recycle bin for deleted files, it can be configured to increase its size.

Registry - Windows registry is a master database that is used to store all settings on your computer. It is responsible for storing all user information with its passwords, and device relate information. The registry also has an editor which allows you to view all keys and values or even drivers if necessary.

Interchangable Interface - Windows interface was not interchangeable until Windows 8. Windows XP had some improvements but not pas. Start menu, taskbar, system tray, and Windows Explorer.

Date / /

Command terminal

A terminal or command prompt is a black box ideally used to execute commands. It is also called the Windows Command Processor. It is used to execute commands and different batch files. It can also be used for administrative functions & troubleshoot & solve all windows issues.

MAC:

- This OS from Apple stands older than Windows. It was first released in 1984. Began as a GUI right from its inceptn. In 2005 the design and structure of MAC OS were changed to Intel x86 based architecture.
- The file structure of MAC is commonly known as MAC OSX. If you go to dig into your Mac's hard disc through the finder, you will see many directories. You can explore the file system and directory structure by going to directories like /Applicatn, /Developa, /sbin, /tmp, etc.
- MAC stores all applicatn settings in a series of .plist files, which have the various preferences folder in MAC. This .plist file contains all properties in either plain text or binary format. These are stored at:
  /Library /Preferences folder
- MAC has a facility to bridge. Virtual network interfaces. This can be done by going to System preferences and managing the interfaces

- MAC provides a console as a terminal app. It has a console, command line, prompt & terminal. A command-line is used to type your commands. Prompt will provide you with some informatn & also enable you to twen commands. A terminal is actual interface that will provide the modern graphical user interface as well.
  Application → Utilities (terminal location)

LINUX

- Developed at Finnish University, released in 1991 & designed for GNU developers. GNU later developers later it into Linux. Consumers use it as per their specificatn.
- Linux has a completely different file structure from Windows and MAC. It was developed with a different code base. It stores data in the form of a tree, and all your drives are mounted over this tree.
- Linux also does not have a specific registry of its own. All application setting is stored on a program basis under the different users in the same hierarchy format of the files being stored. There is no centralized database for storing these details, and so periodic cleaning is also not required
- Linux is easy to switch interfaces. You can switch the environment without having to carry all installations. There are utilities

like GNOME and KDE which help in catering to these needs. They help in focusing on different aspects.
Linux also provides a terminal. You can find terminal at: Application → System or Applications → Utilities. In addition to this, there is also a shell prompt. The most common shell used in bash. It defines how the terminal will behave and look when it is run.

10) List the step to check disk partitions in windows

Step 1: Open file Explore
Step 2: Right click on this PC
Step 3: Choose 'mange' from the pop-up menu
Step 4: Navigate to Storage → Disk management in navigation panel.

11) List the steps to start/stop Services in windows
Step 1: Hit windows key + R to open the run window.
Step 2: Type in services.msc in the open: box
Step 3: Services dialog box/window will open
Step 4: Select the Service to start/stop
Step 5: Choose the relevant option to operate