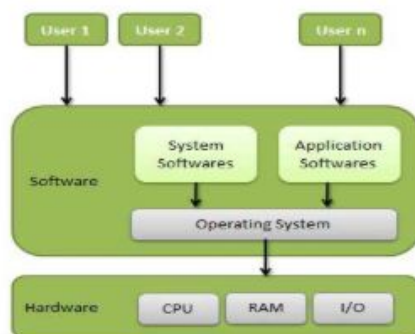# OPERATING SYSTEM: MS DOS AND MS WINDOWS

OPERATING SYSTEM

The computer system is a collection of different hardware components. So we need software that could perform the basic tasks such as recognizing input from the input devices, sending output to the output devices, keeping tracks of files and directories on the disk and control computer peripheral devices like mouse, printer, scanners etc. An OS is a collection of system program that controls the operations of the computer system. It activates and recognizes the hardware devices and provides the operating environment for other application software. It acts as the intermediary between a user and the computer hardware. It has major two objectives, first is to activate the hardware devices and other is to provide an interactive interface to the user and interpret commands so that it can communicate with the hardware. Example UNIX, MS-DOS, MS-Windows, Linux etc.

Functions of Operating System

> File and folder management
> Device management
> Memory management
> Security management
> Help to run application software for user
> Process and management

Types of Operating System

Operating system are categorized into different types on the basis of mode of use and user.

Based on mode of user, operating system are classified into two types:

> **Single user operating system:** This is the type of computer system which is mostly used in desktop and laptop. It generally provides a simple computer system, which facilitates the running of a variety of software packages as well as it allows users to develop and execute programs of their own.
> **Multi-user operating system:** The multi-user operating system allows concurrent access by multiple users of a computer. It allows many different users to take advantage of the computer resources simultaneously. It is often used in business and offices where different users need to access the same resources, but these resources cannot be installed on every system.

We can classify the operating system on the basis user interface like command or character user interface operating system and graphical user interface operating system.

1. Command or Character-based User Interface (CUI)

CUI is a traditional user interface. It provides the interactive terminal where a user could enter the command to interpret. It was the only common place to communicate between a program and its user. Now a day also, we are using this command based interface.

2. Graphical User Interface (GUI)

With the advancement of technology, the computer system has become quicker and cheaper. Operating environment has also changed. This lead the development of graphical user interface where users can interact with the computer using picture and graphs, rather than character and commands. It displays the icon, buttons, dialog box etc. Popular GUI is Microsoft Windows.

MS DOS (Microsoft Disk Operating System)

MS-DOS stands for Microsoft Disk Operating System. It has three essential files and many command files. These essential files are: IO.SYS (Input Output System), MSDOS.SYS (Microsoft Disk Operating System), and COMMAND.COM. These files are called system files of MS-DOS

Advantages/ Features of MS-DOS

It supports various computer languages.
It supports different disk like floppy, hard disk, CD etc.
It is small sized operating system.
It initiates the concept of operating system during the time of booting.

Disadvantages of MS-DOS

It has a command line user interface so it is totally command based operating system.
It has limited features to work with the modern computer system.
It is not so user-friendly like windows system and cannot support advance computer peripheral devices even mouse.
It is a single user, single tasking operating system.

Some terms used in DOS

Booting: The process of loading system files into computer's memory from disk is called booting. It starts when the computer is turned on. It makes computer ready to work. In the booting process, the command interpreter and system files are loaded into computer's memory. There are two types of booting: cold booting and warm booting.

Cold Booting: Booting process from off stage to on stage of the computer is performed by the switch on the computer.
Warm Booting: Booting process during the time of running the computer system is warm booting. We have to perform this process when the computer hangs up. We can perform it by pressing the reset button or pressing Alt+Ctrl+Del (Hold down the Ctrl key and Alt key and press Del key).

File: The systematic collection of related data or information or program instructions is known as file. A unique name is given for each file to identify. Such unique name is known as a file name. A file name contains name and extension. The name helps to identify the file and extension helps to identify the type of file.

Directory: Directory is the location to store files and sub-directories. It contains information about files stored on the disk like name, size, last date of modification, time of creation and disk volume label.

DOS Commands

Instructions given to the computer to work are called commands. These are the common words between the computer and the user. It gives the orders to the computer system to work. DOS Commands are categorized into two types: Internal and External commands.

Internal commands: Internal commands are built in the COMMAND.COM files. It can be executed from any DOS prompt because each of the internal commands are memory resident. As long as the computer is running, we are ready to give internal commands. Some of the examples of internal commands are DIR, CLS, COPY etc.
External commands: Commands that need external additional files with command.com are external commands. We need additional corresponding files to run these commands. For example, we need tree.com file to run tree command. Example: XCOPY, CHKDSK, LABEL, TREE etc.

INTERNAL AND EXTERNAL COMMAND USED IN MS DOS

Internal Commands
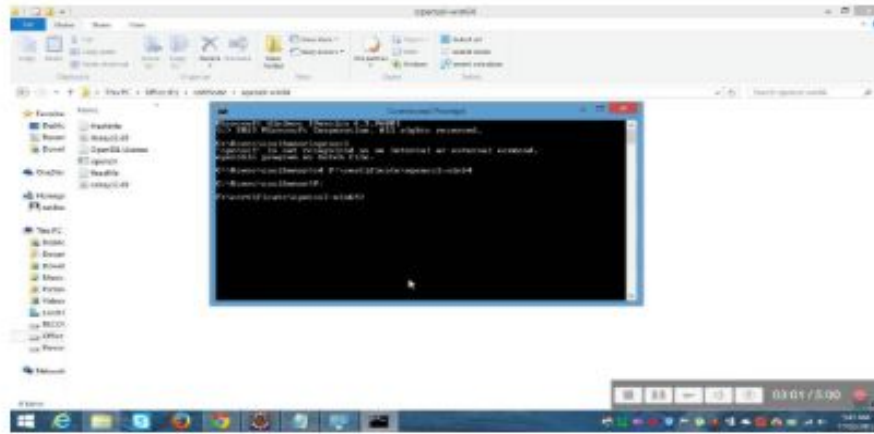
CLS

This command clears the screen.

Syntax: CLS

Example: C:/> CLS

DIR

Syntax:DIR [drive] [switches]
where switches and their meanings are given below:

SwitchMeaning
/P   Page-wise pausing
/W   Wide-wise pausing
/AD   Directories
/AH   Hidden files
/0   Displays files/directories in sorted order with following specifications

Use: Displays files, directories and sub-directories.
Example: dir d: /p
Output: Displays list of directory page wise

COPY

Syntax:COPY
Use: This command copies file(s) from one location to another.
Example:C:\>COPY C:\Nepal C:\china

TYPE

Syntax: TYPE
Use: Used to display the content of a file.
Example:C:\>TYPE Nepal.txt
Output: This command display the information contained in the file name Nepal.txt

Other Examples:
C:\>Type REED.txt
Now you can view the content of REED.txt

REN

Syntax: REN
Use: Used to rename a file.
Example:A:\> REN nepal.doc patan.doc
Output: This will rename the old file nepal.doc into patan.doc

Other Examples:
C:\>REN * .COM *.EXE
To rename all the files having .com as an extension into the extension .exe with the same primary file name of drive C.

DEL

Syntax: DEL filename
Use: Used to delete file(s)
Example: C:\>DEL try.exe
Output: It deletes try.exe file from drive C.

MD

Syntax: MD< directory- name>
Use: Used to create a directory
Example: C:\>MD School
Output: A directory named "School" is created in root directory C.

Date

Syntax: Date
Use: This command is used to display and change system date of the computer.
Example: C:\>DATE
Output: Current date is sat 08-04-2004
Enter new date (mm-dd-yy):

Time

Syntax: TIME
Use: This command is used to change and display the current system time of the computer.
Example:C:\>TIME
Output: Current time is 7:15:01.91
Enter new time:

CD

Syntax: CD
Use: Used to change or get into the directory.
Example:C:\> CD School
Output: This command let us get into directory School and we will be in C:\ School>
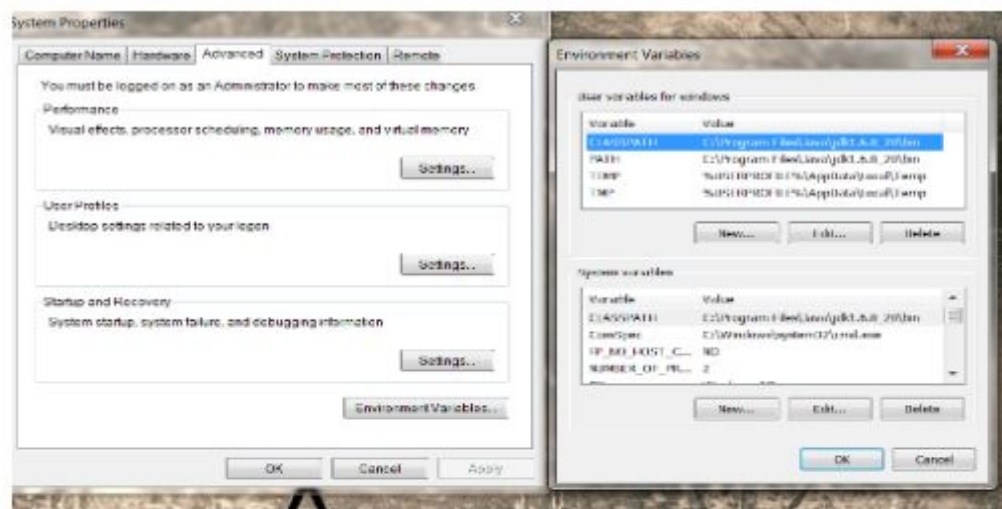
RD

Syntax: RD [directory]
Use: Used to remove a directory, but the directory must be empty.
Example: C:\>RD School
Output: It removes directory School, which is in C drive.

VOL

This command shows volume level in the disk.

Syntax: VOL [Drive:]

Example: c:/> VOL

External Commands

EDIT

Syntax: EDIT
Use: Used to edit files.
Example: C:\>EDIT Suyasha.txt
Output: This command will open the DOS file Suyasha.txt and will allow us to edit the file.

FORMAT

This command is used to format the disk.

Syntax: Format [Drive:] [Path] File name

Example: c:/ format d:/Q/

INTRODUCTION TO WINDOWS

Microsoft Windows is a graphical user interface operating system. It is very easy to operate the computer with windows operating system. In GUI based operating system, we can give commands to the computer by clicking on icons, menus and buttons using a pointing device like the mouse. It is not necessary to remember commands to perform any tasks in the computer.

Desktop

The background area of the windows screen where icon, menu etc. appear is called desktop. The desktop appears with different elements when we start the computer. The desktop appears on the screen when we enter username and password in the computer.

Icon

The small picture buttons that represent commands, programs, files or folders are called icons. My Computer, Recycle Bin, Internet Explorer etc are the desktop icons.

Desktop Icons

My Computer: It is one of the icons seen on the desktop. One can see the drive, files and folders inside it.
Recycle Bin: It is a special folder of windows on the hard disk. Its icon appears on the desktop. It contains files and folders that are deleted from the hard-disk.
Network: Network has the list of computers which are interconnected with each other. Through this, we can utilize the shared folders and devices.
Shortcut: This is linked file of files and folders. We create shortcut files on the desktop to operate files, folders, and programs in a short period of time.
Task-bar: Taskbar is a desktop toolbar that let you perform tasks such as switching between open windows and starting new applications.

How to turn off the computer using Windows 7?

When you've finished using Windows 7, be sure to turn off (or shut down) the computer correctly.

To turn off the computer

Click the Start menu
At Bottom right, Click shut down

Managing Files and Folders

The files and folders can be copied or moved from one location to another. We can also delete or rename files and folders. We can manage files and folders by using " My Computer" and "Windows Explorer" tools.

 Creating file or folder

To create file or folder we should follow the following steps:

Step 1: Open MY Computer or Windows Explorer
Step 2: Open the drive and folder where you want to create a new file or folder
Step 3: Right click on the blank area and choose New Option then, sub menu will appear
Step 4: Click on Folder to create a new folder or click on file types from the list to create a file of that type
Step 5: Type the suitable name for the new file or folder
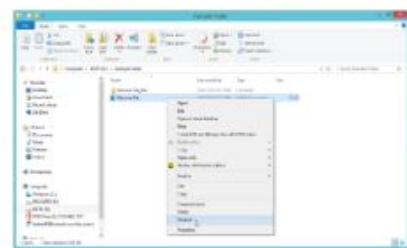
 Renaming a file and folder

To change the name of a file or folder we can follow the following steps:

Step 1: Right click on the file or folder that you want to rename
Step 2: Click on the Rename option
Step 3: Type the new name for the file or folder then press Enter key or click on the blank area

 Copying or moving file and folder

The copy and paste commands are used to copy file or folder. The steps to copy or move any files and folders are as follows:

Step 1: Right click on the file or folder you want to copy or move
Step 2: Click on the Copy option if you want to copy or click on the Cut option if you want to move.
Step 3: Right click on the blank area of the location where you want to copy the file or folder.
Step 4: Click on the Paste option.
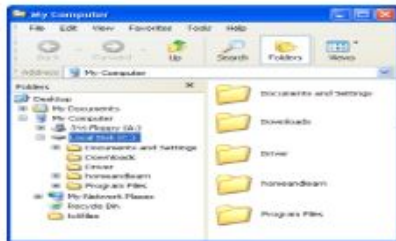
 Deleting the files or folders

You can delete the unnecessary files and folders by using this command. The steps to delete files and folders are as follows:

Step 1: Right click on the file or folder you want to delete

Step 2: Click on delete option

Step 3: Click on Yes option. Then the file or folder will be deleted.

The deleted files and folders go into Recycle Bin.

Searching files and folders

Sometimes we may forget the name or location of the file that we have saved. If we forget the location of our file, we can quickly find it by using Search feature.

Step 1: Click on the start button
Step 2: Click on Search option
Step 3: Click on the For Files and Folders option
Step 4: Click on the All Files or Folders option
Step 5: Type the name of file that you want to search for " All or Part of file name"
Step 6: Click on the Search button.

Introduction to Windows 8

Windows 8 is a newer version of Microsoft Operating System. It was released on October 26, 2012 A.D. It is designed by using different user interfaces than that in Windows 7. This operating system is specially designed for touch screen monitors. Its start screen looks like the screen of windows phone. While swiping the screen from right to left or clicking shortcut keys of windows logo or on clicking right corner (hot spot), we can see the different type of toolbar which is known as charm toolbar. We can find different tools like setting, device management, start, share and search on it. In this operating system, charm bar is used to turn off the computer.