

Windows Operating System

Features of windows:

- 1) Windows Operating is a software program which operate the functions of computer system.
- 2) It act as a mediator between users and computer system. It enable the user to interact with computer system.
- 3) Windows Operating System is developed by Microsoft. Windows provide GUI which make the interaction very easy & user-friendly.
- 4) Windows basically perform following function:
 - a) It coordinate how the different program work with hardware of the system.
 - b) It manage all the files which are stored in the program system.
 - c) It act as a (mediator) between user and hardware.
 - d) It load all program in computer memory so that one can use them.

User interface: Interface allow the user to interact with the user with the system. There are two types of interface.

- 1 CUI (Character User Interface) / CLI
- 2 GUI (Graphical User Interface)

a) GUI (Graphical User Interface):

- 1 - It is the type of interface that user the pictorial representation of various compound of hardware & software.
- 2 GUI is a collection of various small pictures called icons through which a user operate the computer system.
- 3 GUI makes the use of system easy - It provide user-friendly environment to user because the functioning command are display on the screen as icon.
- 4 In GUI the interface is done mainly with the mouse.
- 5 We prepare icon as per the work want to perform.

b) CUI (Character User Interface) / CLI (Command Line Interface).

- 1 - In CLI we have to use some command to interact with the system. These commands are execute one at a time.

This interface is not user friendly because we have to use command to perform any task.

DESKTOP

When we open the system, the main screen or the first screen which opens that particular screen is known as Desktop. This screen contains various icons which provide the first interaction of the user with the system. After clicking on the icon user opens the desire content.

Icon: Icons are the pictorial representation of the program or a part of a program, technically icon is known as a image on the screen.

Each Icon has following features

1. **Visual** - The look of icon
2. **Textual** - The name below the icon
3. **Functional** - The action that is carried out when the icon is activated
4. **Positional** - The location of icon on the screen

* **Paint :**

- 1) The paint application software allows a user to create image using simple tools.

Q) The paint brush window contains three selections

- 1) Menu Bar
- 2) Tool Box
- 3) Canvas (Drawing area)

a) Tool box: Tool box contains various drawing tool that helps us to draw a image

1. Select - Use to select definite area

2. Eraser - Erase portions of the image

3. Fill with color - If fill the entire area with select color

4. Pick color - Pick the selected colors

5. Pencil - We can write anything using pencil

6. Brush - Use to paint the image

7. Air Brush - To spray the desired color

8. Text Use to type text within the image

9. Line - It draws a straight line
 10. Curve - It draw a curve line
 11. Rectangle - Use to draw a rectangle
 12. Polygon - Use to draw an empty polygon
 13. Ellipse - Use to draw an empty ellipse
 14. Magnified - It is use to zoom any part of a image
- 6) Menu Bar: Menu bar of paint contain menu file, edit, view, image, color, help
1. File - The file menu list the basic option for saving, executing, opening, printing a file.
 2. Edit - In the menu list the editing option is use to edit image for cut, copy, select all etc
 3. View - It display tool bar, color bar, & status bar
 4. Image This option is use to make the image rotating, inverting etc

5 Colors - This menu allows us to create our own shade or color with the help of basic colors.

6 Help - This menu provides the basic description of all tools and how to use them.

Canvas bar:- This area frame in a window with two scroll bars - Horizontal & Vertical - This is the selection where we can draw our image.

NotePad: NotePad is the text editor which is used for creating simple text files.

It is based on Single Document Interface (SDI). It means we can open only a single document. The notePad window has four menu: File, Edit, Format, Help (Edition). As MS Word, we programming Java on notePad. In NotePad supports Java.

1. File - File menu provide option for creating, opening and saving a file.

a) "New" Option: New option in file is used for file creation

b) "Open" Option : Open option in file is used to open the file.

c) "Save" and "Save as" Option - These option in file is used for saving a file.

2) Edit - It is used to edit the content of document

3) Format : The text entered in the notepad can be made more attractive by using font option under format menu.

4) Help - Help menu is used to describe the tool of notepad and also used to tell how to use them.

Anatomy of Window

1. Title bar : It is the area at the top of the window containing the name of folder or the documents.

2. Menu bar : It contains all the functionality available in window. It can be under various option and provide shortcut way to open it

3. Tool bar : These are the small icon which provide the shortcut way to execute some standard option like : cut, copy, paste, print, open etc.

4. Window border : It is the area that frames the window. It can be used to resize the window.

scroll bars: it enable to view the part of window that do not fit on the window.

5 Scroll bars: It enable to view the part of window that do not fit on the window. It is of two type

- a) Vertical bars - These are used to move the window↑↓
- b) Horizontal bars - " " " " ← →

6 Minimize - It is used to minimize the window

7 Restore - Use to restore the window to its previous size

8 Maximize - It is used to maximize the window

9 Close - It is used to close the window

Task Bar: - In the graphical user interface for a computer operating system or application.

A Taskbar is a visual device on the desktop that shows the use of which application are currently active and running.

A running program can easily be made current when many programs are running concurrently. Icon in the taskbar that represent running application also serve as toggle button that allow switching windows for running between the minimized state and the maximize state.

The Windows task bar has four main sections.

- 1 - Start button.
- 2 Quick Launch - It allows application to be launched with a single click.
- 3 Running program - It allows easy access to running programs.
- 4 Notification area - It contains icons for small running programs such as the clock, calendar etc.

Different types of icons available in Windows

- 1 - Application Icon - Every application has its own unique icon which represents the application.
- 2 Shortcut Icon - These icons point to a particular application or a document or a folder.
- 3 Document Icon - This icon is related to a document file.
- 4 Disk Drive Icon - There are different types of storage devices available in a system such as floppy, hard drive, etc. Each type of disk drive has its own icon which are called Disk Drive Icons.

Control Panel - The control panel is a part of the MS Windows GUI which allows users to view and manipulate basic system setting and control.

Multitasking

Differentiation b/w
multiprogramming

Multitasking

In multiprogramming multiple processes run concurrently at the same time on a single processor.

Multitasking is when more than one task is executed at a single time utilizing multiple CPU's

It is based on the concept of context switching

It is based on the concept of time sharing

If utilizes single CPU for execution of processes

If utilizes multiple CPU's for task allocation

It takes more time to execute the processes

It takes less time to execute the tasks on processes.

The idea is to reduce the CPU idle time for as long as possible

The idea is to allow multiple processes to run time sharing