Chapter-5

Microsoft Windows

5.1 Windows

Nowadays, windows operating system is being used on most of the computers, whether it is Laptop or Desktop. Most common windows operating systems are Windows XP, Windows 7, Windows 8 and Windows 8.1. These operating systems are developed by American company Microsoft Corporation. Operating system is a system software which works between the user and computer hardware and run hardware devices properlyby understanding user's instructions.

Characteristics of Windows

(i)   GUI Based

All windows operating systems are based on Graphical User Interface (GUI). It means, no need to remember commands for users. To get the work done by the computer, the user simply has to place the cursor on the related icon and click it. In this way, it has become very simple to work on computers.

(ii)   Plug and Play

Most of the peripheral devices to be connected with computers are based on Plug-and-Play concept. It means the device comes in immediate working as it gets connected in the concerning computer port. The device driver programs of most of devices are in-built in windows operating system.

(iii)   Hardware Support

Most of devices available in market like Printers, Pen Drives, Scanners, Digital Cameras, Card Reader, etc. are directly supported by windows operating systems. No need to install driver programs separately.

(iv)   Multitasking

Multi means more than one. Windows operating systems provide us such an environment in which we can open more than one application in separate windows. For instance, a MS Word document is open in one window, a MS-Excel workbook is open in second window and a MP3 music file is played in the third window etc.

(v)   User-friendly

Windows operating systems are user friendly. It means the title and picture of each icon are simple to understand and use. For instance, create a folder, delete, re-store, copy and paste operations are very simple.

Mouse

Mouse is an input device which also known as Pointing device. We know that the mouse is used only in GUI environment. It is not used in CLI (Command Line Interface) environment.

Structure of Mouse

The structure of a mouse is palm-shaped. It has two or three buttons knows as left, right and scroll button. Scroll button is placed in between left and right buttons. In earlier mouse, no scroll button was there and they had a ball to move mouse pointer in all directions. Modern mouses are known as optical mouse and they have light source instead of ball. Modern mouse is connected to USB port of computer using cable.
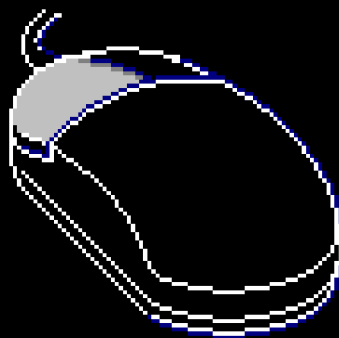
Diagram 5.1 : Mouse

Use of Mouse

To use a mouse, it is placed on an even surface or on mouse pad and then it can be moved in any direction. During its move, arrow shape mouse pointer is also moved on the computer screen. It can be placed on the desired location on the screen and then click or double clicked as needed.

To select a text, place the mouse pointer at the beginning of the text and then drag it by clicking and holding the left button up to the end of the text. Then release the left button.

To directly select a text, place the mouse pointer on the text and just double-click the left button. By using this process, we can select a window, folder and also execute programs.

To move an icon from one place to another place on the screen, simply place the mouse pointer on the icon and click and hold the left button and now move the icon in the desired direction. This is known as dragging the mouse.

Creating Shortcut

Shortcut is a process by which we can use programs frequently and easily. By using shortcut, we can make use of folders, Disk drives, Printers, Modems and Faxes etc.

To create a shortcut, following method is used. Mouse pointer is placed on the concerning object and the right button is clicked then a pop-up menu would appear. After select Create Shortcut option from this menu, a new shortcut icon of this object would appear on desktop.

Diagram 5.2: Creating Shortcut

The right mouse button is commonly used in displaying shortcut menu. To check spellings, place the mouse pointer on the word and right click it. Then spelling related many options would appear in the pop-up window. We can select the most appropriate one.

My Computer or Computer or This PC

Using this icon, we can get information about the hardware devices and installed software programs on the computer.

Working method. We can use it in two ways: either by using start menu or using icon on desktop.

1.   First, open the My Computer icon using any one method.

2.   Now select the disk drive, folder or file and get the desired information by double clicking it.

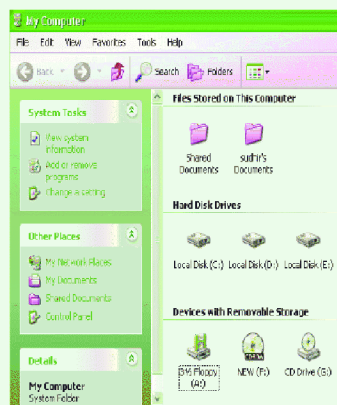Diagram 5.3 : My Computer Window

With the help of a new feature in Windows XP, the complete information of an object can be obtained by clicking the drive or program icon in the left task pane. The complete information would be displayed in the right task pane. This process is context-sensitive, that is complete information would display about the selected object only.
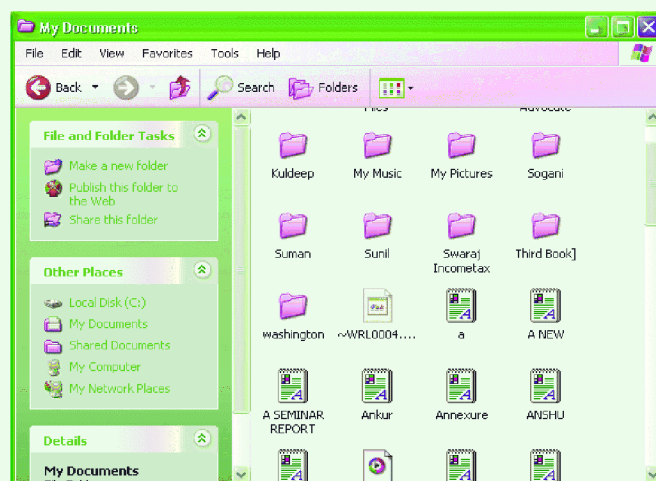

Diagram 5.4 : Task Pane

Recycle bin

It is a place in computer where deleted files get stored. These files are no longer useful. Recycle bin icon is displayed as dustbin shape on the desktop.

If, by mistake useful files are deleted, we can get back them from Recycle bin. Getting back the deleted files from Recycle bin is known as Restore. But if we delete files from the Recycle bin also, then we cannot get them back. As the time passes, Windows remove deleted files from Recycle bin.

Restoring deleted file from Recycle bin:

1.   Open Recycle bin by double-clicking its icon on desktop.

2.   Select file(s) to be restored. Use Ctrl or Shift keys from keyboard to select more than one file.

3.   Now, right-click on the final selection and select Restore option from the pop-up menu.
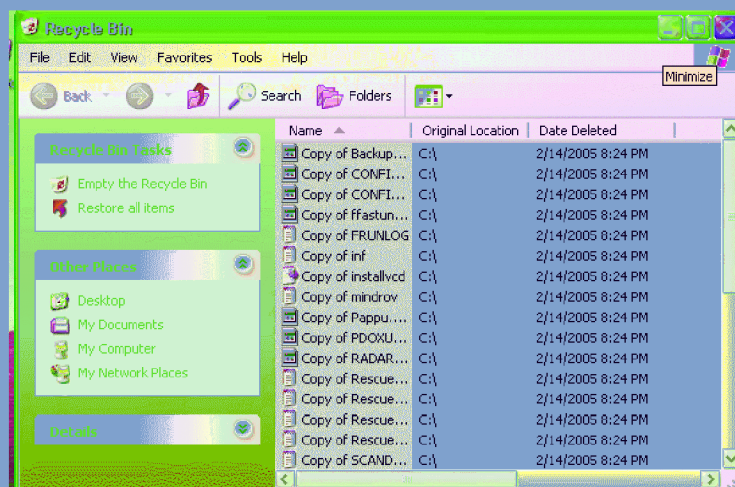
Diagram 5.5: Restore option in Recycle bin

Emptying Recycle bin

1.   Open the Recycle bin by double clicking its icon.

2.   Now, select Empty Recycle bin option from shortcut menu or button in window panel.

3.   Or simply right click at Recycle bin icon and then select Empty Recycle bin.
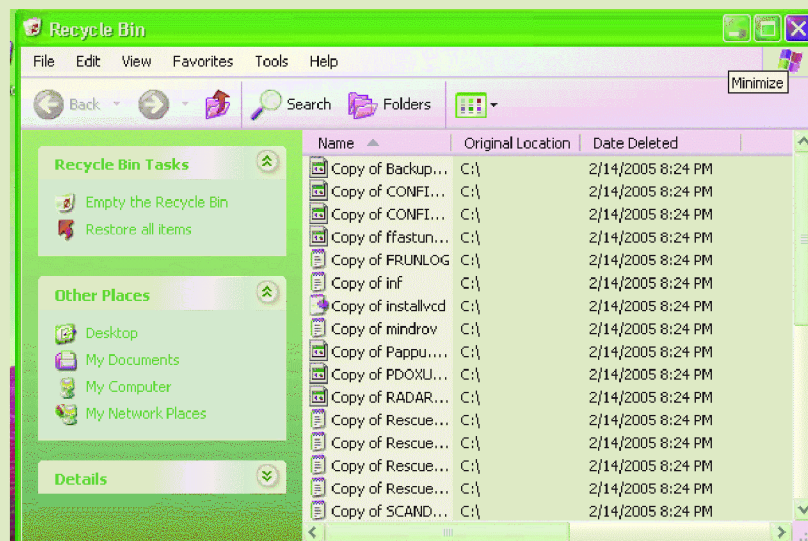
Diagram 5.6: Emptying Recycle bin

Start Menu & Menu Selection

Start Button: With the help of this, we can load any program installed in the computer. This button appears in left most corner of Taskbar. When this button is clicked, a menu comes into action which is known as start menu. Many program name options and sub options are available in start menu. Any program can be started by clicking at its option. Some other options like Search, Run, My Recent Documents and Turn-off Computer etc. They work as their names suggest.

Diagram 5.7: Start button

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In Windows XP environment, control panel customization, getting Help and using various Internet related options can be done in addition to above said functions.

Running an Application

To run a desired application, simply click its icon from the start menu.

Steps:

1.   Click at Start button.

2.   Click at All Programs option.

3.   Click at the appropriate program icon from the program list to start it.

We can also run a program from Run window by specifying the path of its executable file.

Setting System Date and Time

If we want to change date or time of our computer system, we simply click at Date/Time property icon available on the task bar or Date and Time icon in the control panel. The Date and Time properties icon would appear. Now, we can set date or time in this dialogue box.

Windows Explorer

When we click at any folder or drive name in Windows explorer, then the window appears in two parts. Drive names, folders and files appear in one part and other information about the selected drive name, folder or file is displayed in the other part.

Windows Explorer provides the complete information about various windows elements. We can also perform windows explorer work through Start menu.

Viewing files and folders

Following are the steps to view various elements of a file or folder:

Start Button - All Programs - Accessories - Windows Explorer

          Or

If your keyboard has a "Windows Key", then +E brings up Windows Explorer.

          Or

Right click at Start button and select the Explore option.

Or

Click on Start button, then Run, and type explorer in the box.

| **Open** |
| Explore |
| Browse with Paint Shop Pro |
| Find... |
| Play in Winamp |
| Enqueue in Winamp |
| Add to Winamp's Bookmark list |

Diagram 5.8: Opening Windows Explorer

Using any one of above mentioned methods, we can see various elements of files or folders.

Steps to create a file using Notepad:

1. Click Start.

2. Choose All Programs Accessories Notepad.

3. Notepad opens.

4. Type, "This is my new document".

5. Choose File Save from the menu bar (Ctrl + S).

6. The Save As dialog box appears.

7. Save your file to the desktop.

8. Name your document new document.

9. In the Save as type drop-down box, be sure your document is saved as a text document.

10. Click option Save. Your file is now saved to the desktop.
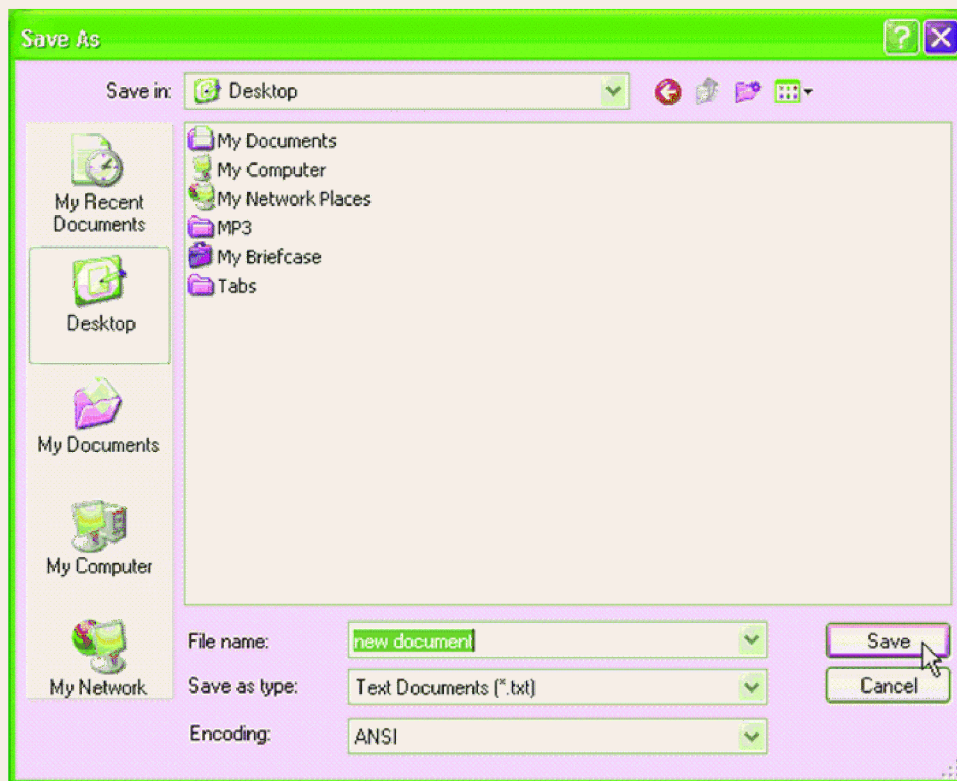
Diagram 5.9: Steps to create a file using Notepad

What is a folder?

When you first start using Windows XP, you may only create a few files. Over time, you'll create many files. To keep your files organized, create folders. Windows XP uses various folders to store and manage files. Folder is a place where we store our files.

Create a New Folder

New folders can be created anywhere in the computer, but three methods are shown below.

New Folder On Desktop

Right click anywhere on an open area of the desktop. Select New and then click Folder.

A new folder with the default name New Folder will be created on the desktop. Type a name for the folder and then press enter on the keyboard.

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New Folder Using Windows Explorer in Hierarchical View

On the Menu bar select File?> New? Folder and the folder will be created in the right hand pane. The new folder will always be created as a subfolder of whatever location you have selected.

Creating New Folder Using Windows Explorer in Task View

Make sure that you are in the location where the new folder is to be created. In the File and Folder Tasks section, click the Make a New Folder selection. The New Folder is created in the right hand pane as shown in the second screen capture.

Opening and closing of Window

There are many ways to open a window. Different options are available in different ways. For instance, a window can be open in following steps:

1.   Place the mouse pointer on the File or Folder icon and right click it.

2.   Select 'Open', option from the pop-up menu.

3.   If file was created in a particular application program, then it will open in that application automatically.

Diagram 5.10: Option for opening a window

To Minimize, Restore and Maximize Window

After you have opened a window, you can maximize it to display full-screen. You can also minimize it so that it disappears from the desktop and resides as a button on the Windows Taskbar, and you can close it completely.
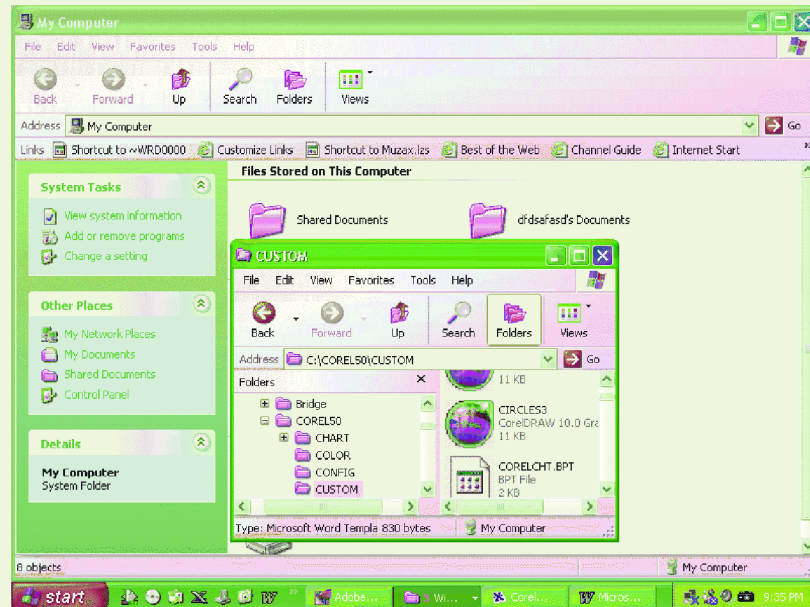
Diagram 5.11: Minimize, Maxmize & Restore Window

Restoring a Window

If a window is already maximized, the Maximize button changes to a Restore Down button. When you click the Restore Down button, the window resumes its previous (premaximized) dimensions.

Basic Components of a Window

Desktop

Diagram 5.12-A: Desktop

Example of a Microsoft Windows window
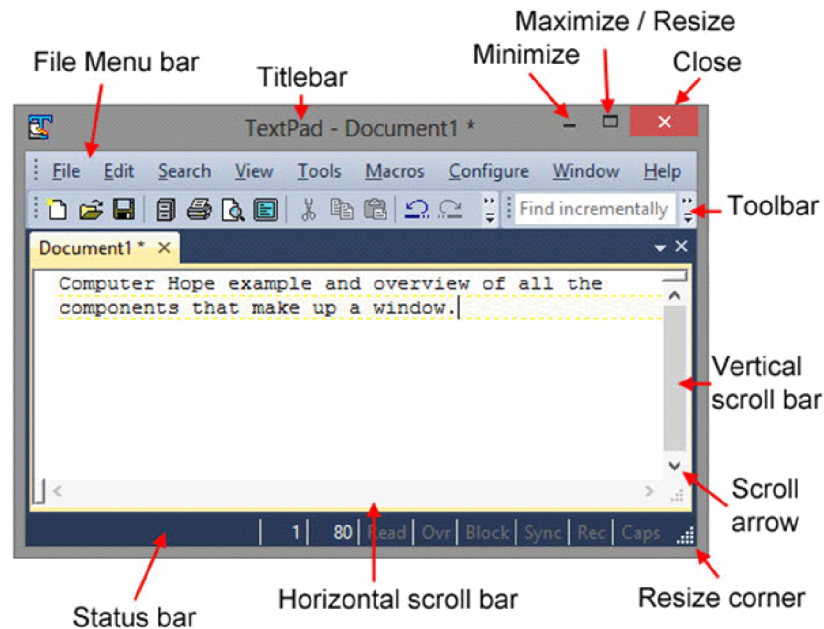
Diagram 5.12-B: Desktop

The Scroll Bar

At the right side of the window is the scroll bar, which appears only if there is information to be displayed beyond the bottom range of the current window size. Clicking and dragging on the slider in the scroll bar moves the contents of the window up or down so you can view all of the data available.
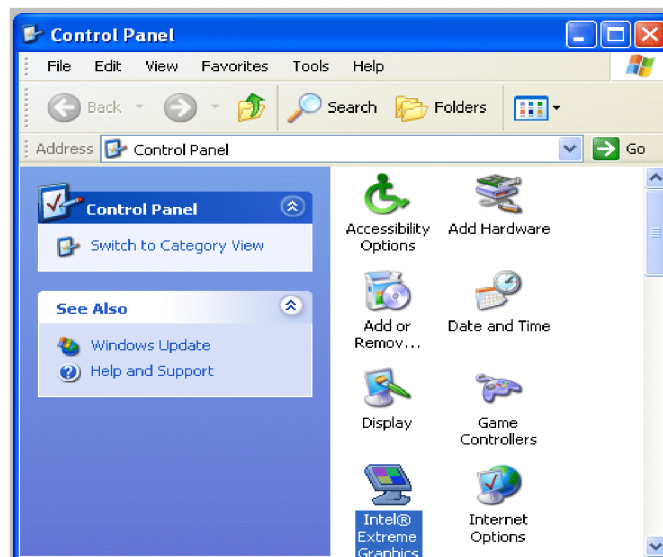
Diragram: 5.13 Scrolling

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The Menu Bar

Most programs will have a menu bar visible in the upper left-hand corner of the window. The menu bar appears as text for most programs, and usually starts with "File" at the far left. Accessing the menu allows you to view various commands available to that program, including closing the program or the window.

Frame

The part that displays the outermost part of a window is called the frame of this window. All the parts of any window can make it smaller or bigger according to our requirement. When we want to make it smaller or bigger it will bring the mouse on the corresponding edge line, so that the position of the mouse pointer will look like this ($\Longleftrightarrow$). From this we know that we can increase the edge of the window right or left, small. Similarly, the column at the bottom of the window can also be changed.

The task above can be moved in vertical or horizontal direction by pressing the button by bringing the mouse to the respective position.

The Title Bar

At the top of every window is the title bar. The center of the title bar displays the name of the program you are currently working in. When the window is not maximized, this is where you can click and drag to move the window to a new location on the screen.
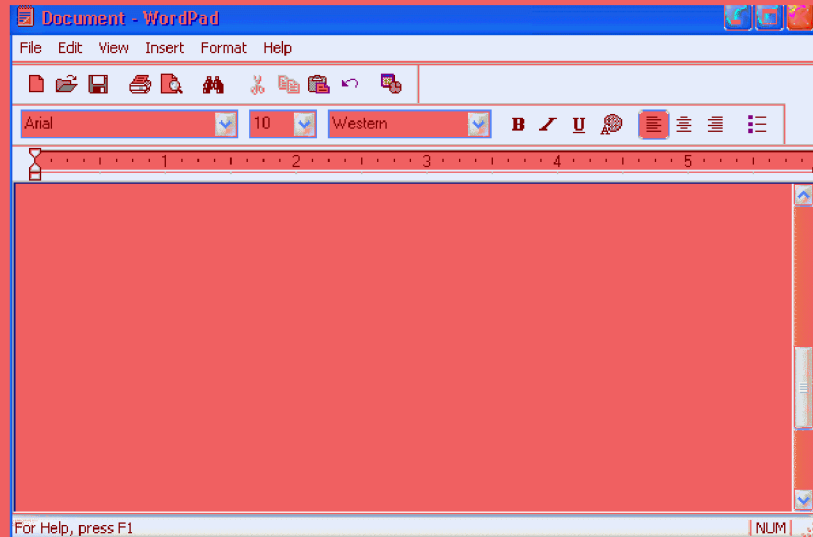
Diagram : 5.14 Title Bar

The Work Space

The work space is all of the area inside the window where data for the current program is displayed. Usually the work space will have a white background, but it is possible to customize this in all versions of Windows, and it may vary by program.

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5.2   Windows Accessories

Window has several small programs grouped in the accessories folder. Some of the programs discussed in this chapter are as follows:

(1) Paint   (2) Notepad   (3) Wordpad   (4) Calculator

5.2.1   Microsoft Paint (MS Paint)

Microsoft Paint is a drawing tool you can use to create drawings that you can save as bitmap (.bmp) files. You can also use Paint to send your drawing in email, set the image as a desktop background, and save image files using different file formats. The Paint program can be used to create simple to detailed drawings. The best thing is that these drawings can be done either in black and white in color

Steps to open Paint

Click Start button - All Programs - Accessories - Paint.

For information about using Paint, click the Help menu in Paint. Now you can draw some by holding the left mouse button down and drag inside the white work area.

MS Paint Window   Various tools in MS Paint
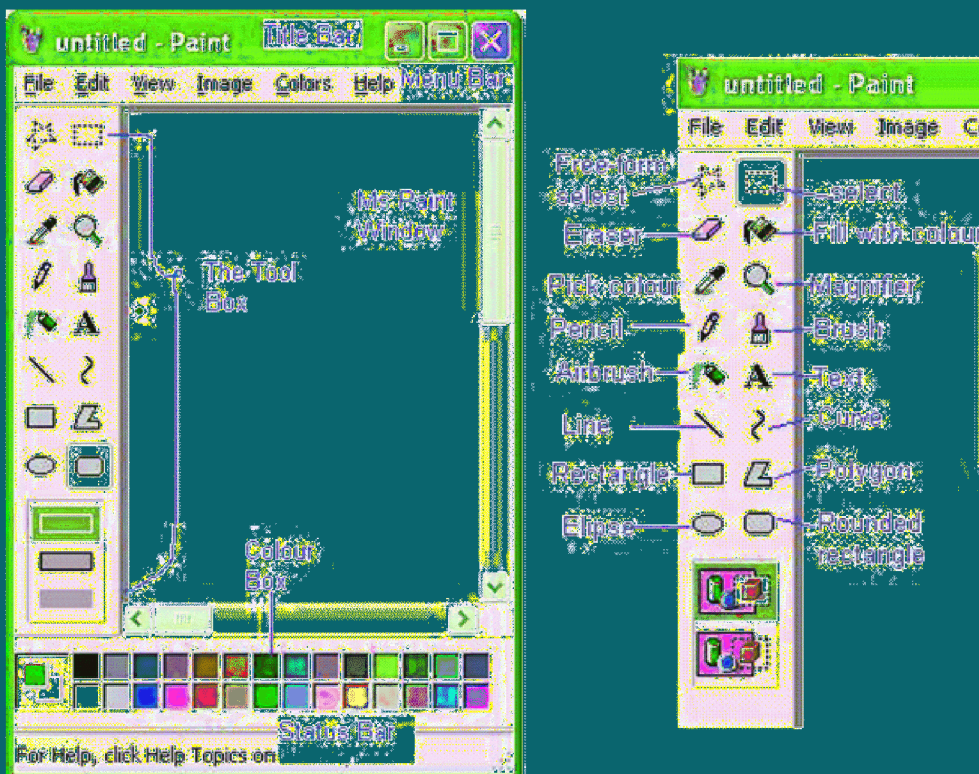
Diagram 5.15: MS-Paint Menu and Tools

Use of various Paint Tools in Tool Box

The tool box is very useful because it contains the tools you will use in order to come up with your drawing. It contains the following tools:

1.   Free-form select and select tool - for selecting a specific object which then you can copy and paste in another location, or you can opt to delete that selection.

2.   Eraser/color eraser - this is for erasing your drawing or the colour you have applied.

3.   Pick color - this picks a specific color you want and makes it the active color, meaning that whatever you do next will have that color.

4.   Pencil - you will use it for drawing.

5.   Airbrush - for spraying your object with color.

6.   Line tool - for drawing a line. To make your line straight, hold down the shift key and then drag your mouse holding the left button. Select the thickness of the line below the toolbox.

7.   Rectangle tool - for making rectangles. You can also draw a square by holding the shift key.

8.   Ellipse - for drawing an ellipse, you can also draw a perfect circle by holding the shift key before you start dragging your mouse.

9.   Fill with color - as the name suggests, you use this tool to fill an object with color at once.

10.   Magnifier - this is a zoom tool, you can use to magnify a part of your drawing.

11.   Brush - use this for painting, just like you would paint your house.

12.   Text - you will use this for entering text.

13.   Curve tool - for drawing a curve.

14.   Polygon tool - for drawing a polygon but still you can draw a lot of other objects.

15.   Rounded rectangle - this tool helps you to draw a rectangle with rounded corners.

Clipboard

The clipboard is a special location in your computer's memory that temporarily stores data that has been cut or copied from a document. This data can then be pasted to a new location. The clipboard will typically hold its information until you cut or copy something else, or log out of the computer. For example, a user may copy information from MS-Word and paste that information into an e-mail message.

5.2.2 Notepad

Notepad is a basic text editor included with all versions of Microsoft Windows that allows you to create, open, and read plaintext files. If the file contains special formatting or is not a plaintext file, it will not be able to be read in Microsoft Notepad.

Step to open Notepad in Windows

Click at Start button - All Programs - Accessories - Notepad

Or

Click at Start button - Run - type Notepad in box and press enter to execute this.
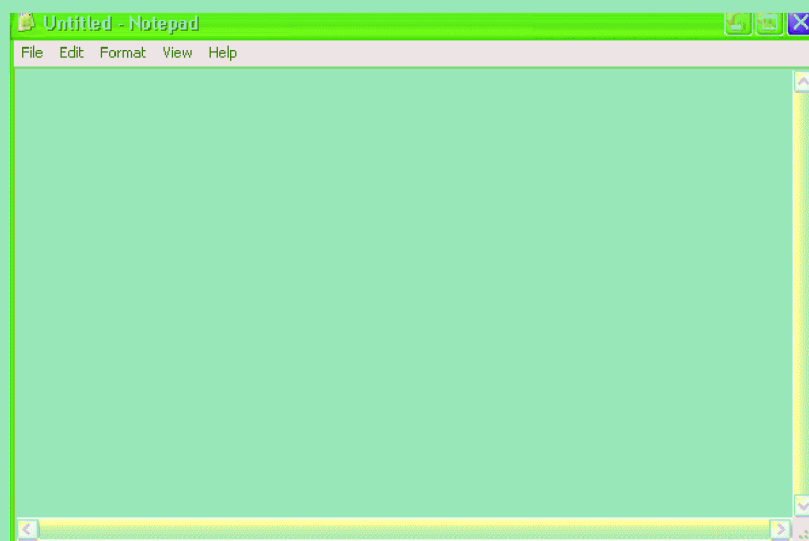
Diagram 5.16: Notepad Window

5.2.3 Wordpad

Microsoft WordPad is a free rich text editor first included with Microsoft Windows 95 and all versions since. Although capable of doing more than Notepad, WordPad is not as advanced as Microsoft Word. However, it does give you additional features, such as the capability of inserting pictures and text formatting. The picture below shows an example of Microsoft WordPad.
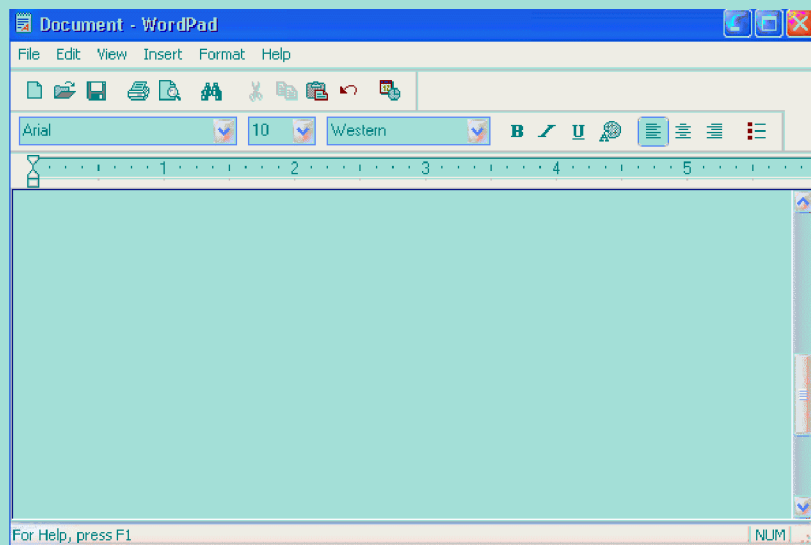
Diagram 5.17: WordPad Window

Microsoft WordPad is capable of editing and saving plain-text file (.txt), Rich Text Format (.rtf), Microsoft Word for Windows (.doc or .docx), and OpenDocument Text (.odt) format files.

Note: Not all versions of WordPad support all above formats. Windows 95, Windows 98, Windows ME, and Windows XP does not support the .docx format. Windows 7 introduced the support of .odt files, so early versions of Windows do not support this format as well.

5.2.4 Calculator

Diagram 5.18: Calculator in Windows

Windows Calculator is a calculating application included in all the versions of Windows. It can be used to perform simple calculation, scientific calculation and Programming calculation.

- ♦ Choose Start - Programs - Accessories - Calculator to start Calculator application, or

- ♦ Click Start button - Run - type Calc in the box and press enter to execute this.

- ♦ From View menu choose the required type of calculator - Standard or Scientific.

Shutdown Menu

In Windows XP, there are several ways to shutdown a computer:

- ♦ click on Start and Turn Off Computer, or

- ♦ press CTRL + ALT + DEL and choose Shut Down, or

Important Points

1 Windows: Microsoft re-designed the completer windows interface and launched Windows XP. Windows XP is more colorful and user-friendly.

2 Mouse: A computer mouse is a handheld pointing device and input device used with all Desktop computers that moves the mouse pointer on the screen.

3 Shortcut: Shortcut is a process by which we can use programs frequently and easily. By using shortcut, we can make use of folders, Disk drives, Printers, Modems and Faxes etc.

4 My Computer: Using this icon, we can get information about the hardware devices and installed software programs on the computer.

5 Taskbar: Taskbar allows us to locate and launch programs through the Start button or view any program that is currently open.

6 Start Button: The Start button allows users to access their computer programs or configure Microsoft Windows easily.

7 Running an Application: To run a desired application,

8   Click at Start button - All Programs - Click appropriate program icon.

9   Windows Explorer: It is a file browser found in every version of Microsoft Windows since Windows 95. It is used to navigate and manage the drives, folders, and files on your computer.

10   Minimize, Maximize and Restore a Windows: Minimize, Maximize, Restore, and Close buttons can be found on the right side of the Title Bar. The Minimize button is on the left and looks like a minus sign.

11   Desktop: The first screen which appears on the computer monitor after booting is known as Desktop.

12   Notepad: Notepad is a simple text editor for Microsoft Windows and a basic text-editing program which enables computer users to create simple text files.

13   Wordpad: WordPad is a basic word processor that is included with almost all versions of Microsoft Windows operating systems.

Exercises

Multiple choice questions

1.   Where the file will go when it is deleted?

   (a) In Recycle bin   (b) On Desktop   (c) My Computer   (d) All of these

2.   The extension of MS-Paint file is:

   (a) .BMP   (b) .DOC   (c) .XLS   (d) .JPG

3.   Which of the following is a pointing device?

   (a) Keyboard   (b) Mouse   (c) C.P.U.   (d) Monitor

4.   Windows Explorer provides information about:

   (a) Structure of computer   (b) Files and Folders

   (c) Deleted files and Folders   (d) Computer Memory.

5.   In which windows bar has File option?

   (a) Menu bar   (b) Titlebar   (c) Taskbar   (d) All of these

6.   How many buttons are there in the right of top most bar?

       (a) 2   (b) 3   (c) 5   (d) 9

7.   The process of closing a computer is known as:

       (a) Shutdown (b) Restart (c) Booting (d) Standby

8.   Which of the following is a G.U.I. based operating system?

       (a) DOS   (b) UNIX   (c) Windows XP (d) None of these

Very Short type questions

1.   How a new icon is created on desktop?

2.   How to change the size of a Window?

3.   Write differences between DOS and Windows.

4.   What do you mean shortcut menu?

5.   What do you mean by Task pan?

6.   How a file and folder are searched?

7.   How a program is run?

8.   How a window can be Maximized, Minimized or Closed?

Short type questions

1.   Explain Cut, Copy and Paste operations.

2.   What do you mean by rename operation?

3.   Which one is start up menu?

4.   Where Notepad, Wordpad and Paint applications are found in Windows?

5.   How can we copy multiple files at the same time?

6.   Explain G.U.I.

7.   What is the use of Windows scrollbar?

8.	Write features of Windows XP.

Essay type questions

1.	Explain about windows operating systems and their uses.

2.	Explain the various views of windows calculator along with their uses.

3.	Explain in detail the process of printing a file.

4.	Explain various tools available in the Toolbox of MS-Paint.