5. What is a central processing unit ?

6. What is RAM ?

7. What is ROM ?

8. What is nibble ?

◆ Long Answer Type Question

1. Write characteristics of computer system.

2. Drscribe any five input devices.

3. What is printer ? Describe the types of printer.

4. What is primary memory ? What is its types ?

5. What are the various types of ROM ?

6. Write a note on the unit of memory.

>>>>> **Answers Key** <<<<<

1. Instruction, 2. bits, 3. Mouse, 4. CPU,

1. False, 2. False, 3. True, 4. True, 5. True.

2

BASICS CONCEPT OF OPERATING SYSTEM

Objective of Learning

◆ 2.1 INTRODUCTION OF MS WINDOW

MS Windows is a multitasking operating system which uses a Graphical User Interface (GUI) to link the user to the computer. A GUI is an interface that helps users to interact with the computer by use of windows, icons and menus. The interaction between the user and the computer heavily relies on the use

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of a mouse and keyboard which make it possible to enter data into the computer and also manipulate it the way we want.

## ◆ 2.2 BASIC CONCEPTS OF OPERATING SYSTEM & ITS FUNCTIONS

2.2.1 Basic concepts of Operating System

The operating system is system that acts as in interface between the software and hardware. The user can only communicate with hardware with the help of operating system. So, we can say that computer hardware always required software to perform important useful tasks.

Examples of Operating System :

There are many examples of operating systems. Some common examples of operating system are as follows :

Windows XP, Windows 7, Window 8, Windows 10, Android, IOS, MacOS, Disk Operating System (DOS).
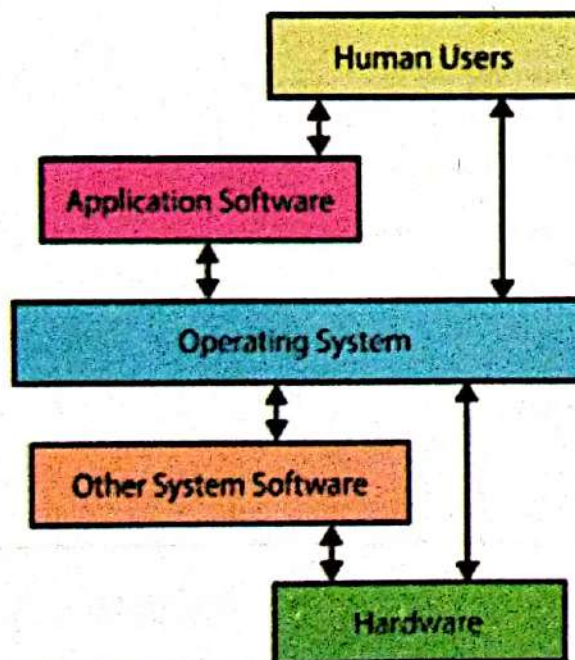
Basic Functions of the Operating system

The five basic functions of any operating system are :

(9th)

1. Interface between the user and the hardware

2. Coordinate hardware components

3. Provide environment for software to function

4. Provide structure for data management

5. Monitor system health and functionality

Advantages of Operating System : There are many advantages to operating systems. Some advantges are mentioned here for having a basic understanding.

1. Operating System provides Graphical User Interface (GUI) in the form of menu, icons and buttons.

2. Operating System manage the memory by memory management techniques. e.g. paging, swapping etc.

3. Operating System manage the input and output. All I/O devices are managed by Operating System.

4. Operating System manage resource allocation. Operating System gives the resources to the process in such a way that all processes can use the resources in an efficient way. A resource can be a file or in the form of software or hardware etc.

5. Operating System convert a program into the process.

6. Operating System is responsible to synchronize the processes.

7. Operating System the interrupts and handle the interrupts.

◆ 2.3 DESKTOP, ICONS ON THE DESKTOP (My Computer, Recycle Bin, Task Bar, Start Menu and Menu Selection using mouse) Running an Application

2.3.1 Desktop Icons on the Desktop

Desktop is the area on which your work can be laidout. You can change the appearance of the desktop to just about anything. If you right click any where on the desktop, windows shows different popup menu.

Fig. Desktop

You can doubleclick on a desktop icon to launch that program, folder or file. Below are some common desktop icons.

PM65 - Shortcut | Mozilla Firefox | Computer

2.3.2 Icons

Icons are small pictures that represent files, folders, programs and other items on desktop or in folder. Icons represent files and folders. Icons act like button. To open a program file or folder, click its icon twice. For example if you double click Computer icon then Computer window will open. Following are some icons on Desktop.

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| Computer | Network | User's Files | Recycle Bin |

Fig. Icons

(i) Computer;   (ii) Network;

(iii) User's Files;   (iv) Recycle Bin

(i) Computer : With the help of Computer Icon you can see everything available in Computer. It has many files, folders and drives. Computer window opens when you double click on Computer Icon.

(ii) Network : You can see your network setting by opening this icon.

(iii) User's Files : It is used to save the files created or downloaded. You can save your files and folders in this folder. When you double click on this icon, you will see the following display :
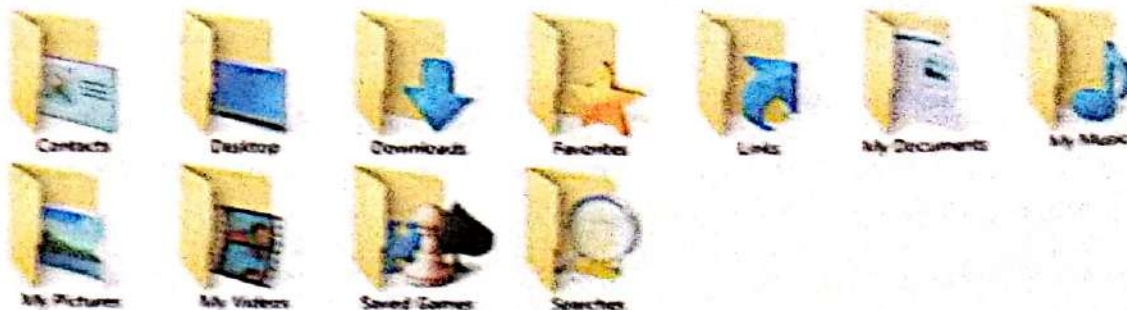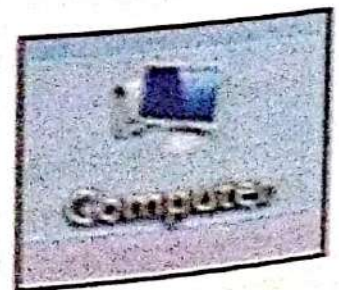

Fig. User's Files

2.3.3 My Computer

My Computer icon provides access to the different parts on your computer. You can access the different derives (Hard Drive, Floppy Drive, Network Drivers) inside My Computer.

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2.3.4 Recycle Bin

All the deleted files and folders are moved to the Recycle Bin. Whenever you don't need a file or folder you delete it from its location, but it is not deleted permanently from the computer but it goes to Recycle Bin. To delete a file or folder permanently you have to delete it from Recycle Bin also.

In case you have deleted a file or folder by mistake then you need not to worry about it. You can get back the deleted file or folder from Recycle Bin. **This process is called Restore.** To do this you need to open Recycle Bin and then select deleted file or folder in it. Then press 'Restore this item' as shown in the figure below, the selected file or folder will go back to its original location.
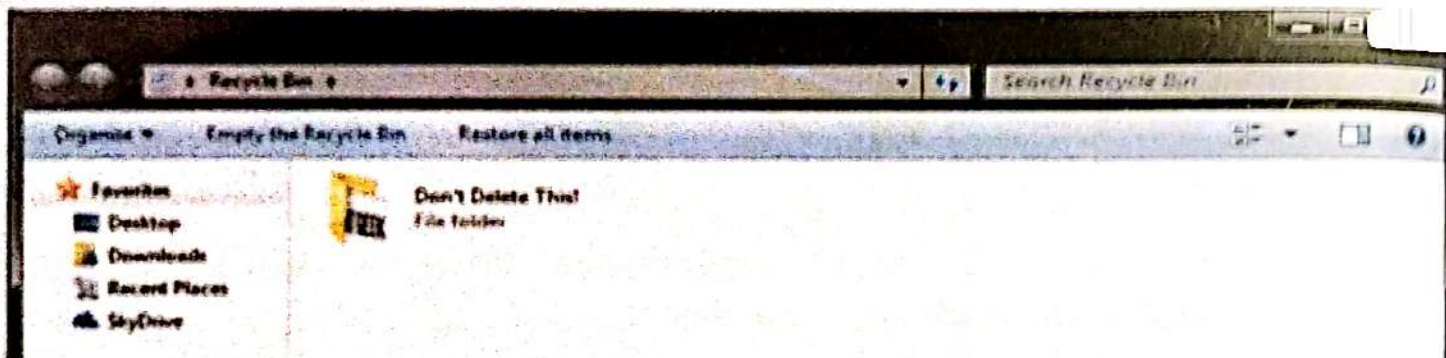

Fig. *Recycle Bin*

2.3.5 Task Bar

The taskbar is the long horizontal bar at the bottom of your screen. It contains the start button and buttons for all other programs.

It has three main sections :

(i) The **Start button,** on the left side of the taskbar, which opens the Start menu and Quick launch icons.

(ii) The middle section, which shows you which programs and files you have opened.

(iii) The notification area, on the right hand side of the taskbar, which includes system Try button Notification area, Computer Network Icon, System Sound icon and Date and Time icons that tells the status of certain programs and computer settings.

(9th)

The image below shows where the different areas are located :

Fig. *Task bar*

With the help of Start button ![icon] we can run any program. There is one more area on the Taskbar that is easily overlooked-the Show Desktop button. In the above image you will find a narrow rectangle to the right of the clock. By clicking on this button you can minimize all opened programs and access the desktop.
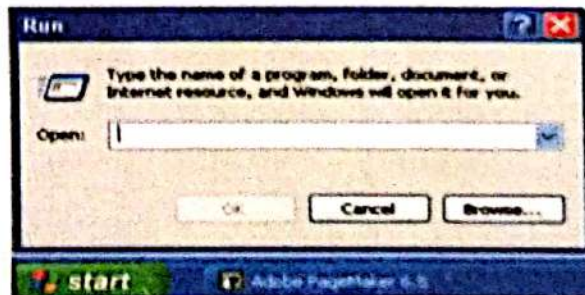
2.3.6 Running an Application

The Run command on operating system such as Microsoft Windows and Unix-like system is used to directly open an application or document whose path is known.

The Run command is accessible through the Start menu and also through the shortcut by Win+R. Although the Run command is still present in Windows Vista and later, it no longer appears directly on the Start menu by default, in favour of the new search box and a shortcut to the Run command in the Accessories sub-menu.

To run an application, choose one of the following:

Click on Run → Run or Continue or click the Run or Continue button.

If you need to enter arguments, select Run → Restart With Arguments ....
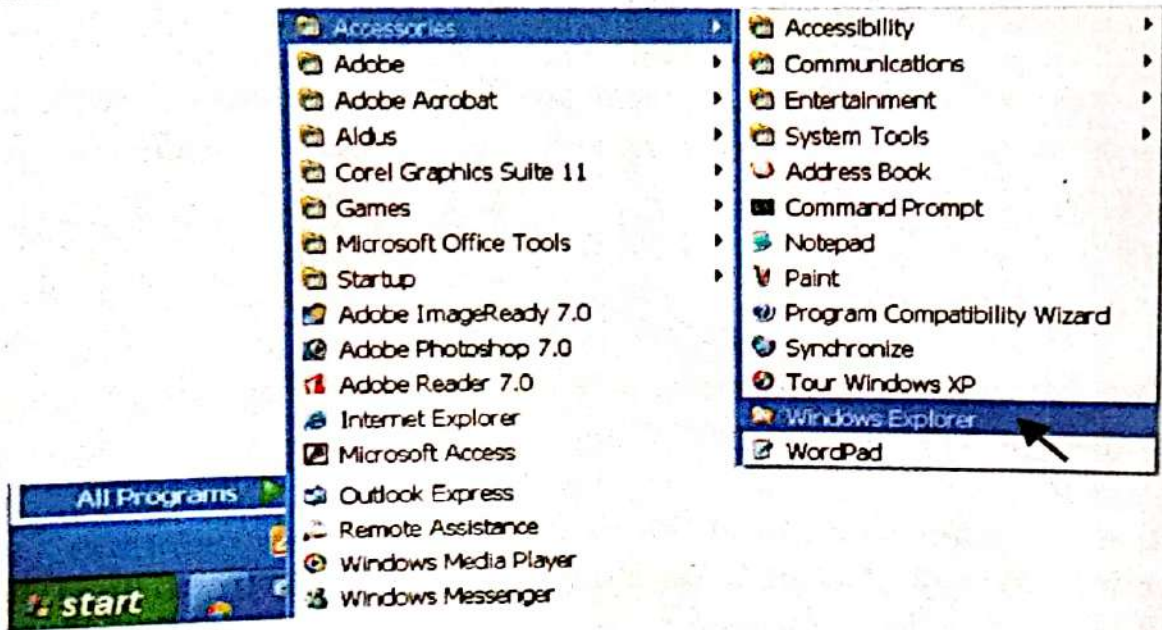
Enter the run command in the Console window.

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The application begins running and the debugger creates and executes a new process.
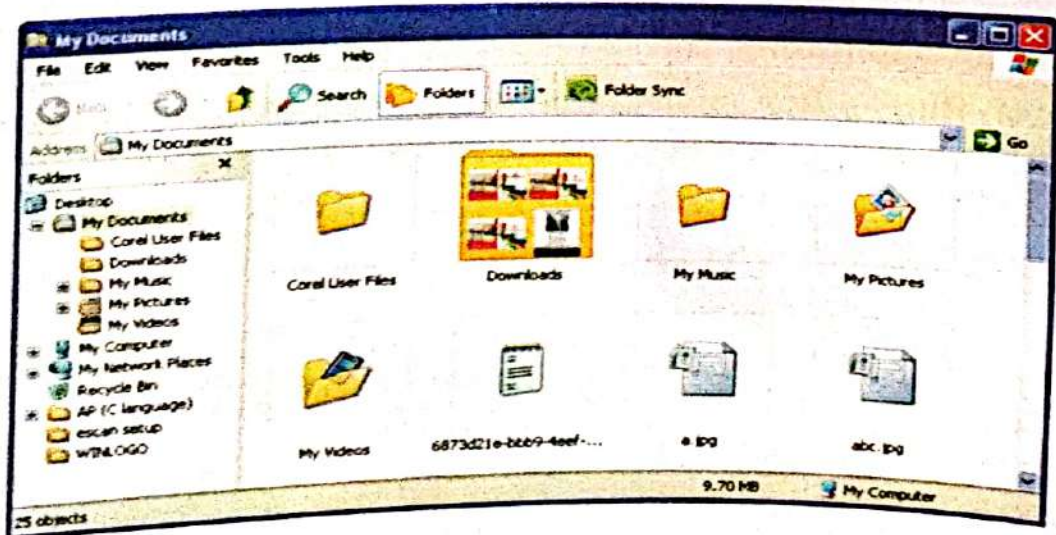
2.3.7 Start Menu

Open windows explorer with start menu :
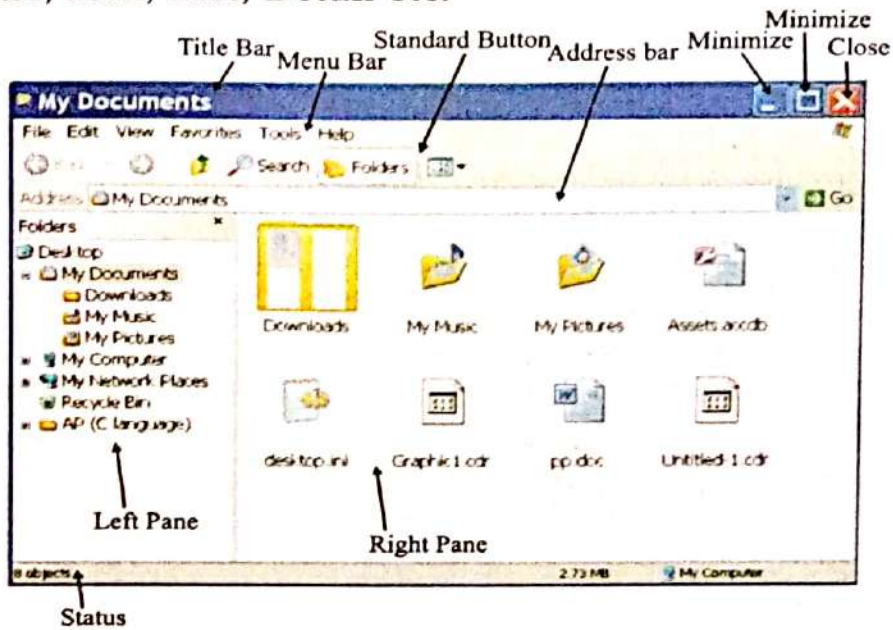
1. Click on Start button → All Programs → Accessories → Windows Explorer

2. **Different parts of windows explorer :**

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3. See files and folders of My Documents with different views like Thumbnails, Title, Icon, List, Detail etc.

◆ 2.4 SETTING SYSTEM DATE AND TIME

Following are the steps of setting system date and time :

1. Press the Windows key on your keyboard to display the taskbar if it isn't visible.

2. Right-click the Date/Time display on the taskbar and then choose Adjust Date/Time from the shortcut menu. ...

3. Click the Change Date and Time button. ...

4. Enter a new time in the Time field.

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◆ 2.5 WINDOW EXPLORER TO VIEW FILE, FOLDER DIRECTORIES

Windows Explorer is an important part of Operating System. It connects us with the files and folders present in computer. Explorer is of two types Windows Explorer and Internet Explorer. Internet Explorer is used in Internet applications.

1. Windows Explorer : Windows Explorer is an important part of Operating System. Windows explorer is also known as file explorer. It is used to view files and folder which are present in our Computer. We can browse or search the contents of disks, folders and libraries. We can use it to open files, delete files and folders, rename them, copy and move them around, and creating new folders.

Parts of Windows Explorer

Whenever you open a program, file, or folder, it appears on your screen in a box or frame called a window (that is from where the Windows operating system gets its name).
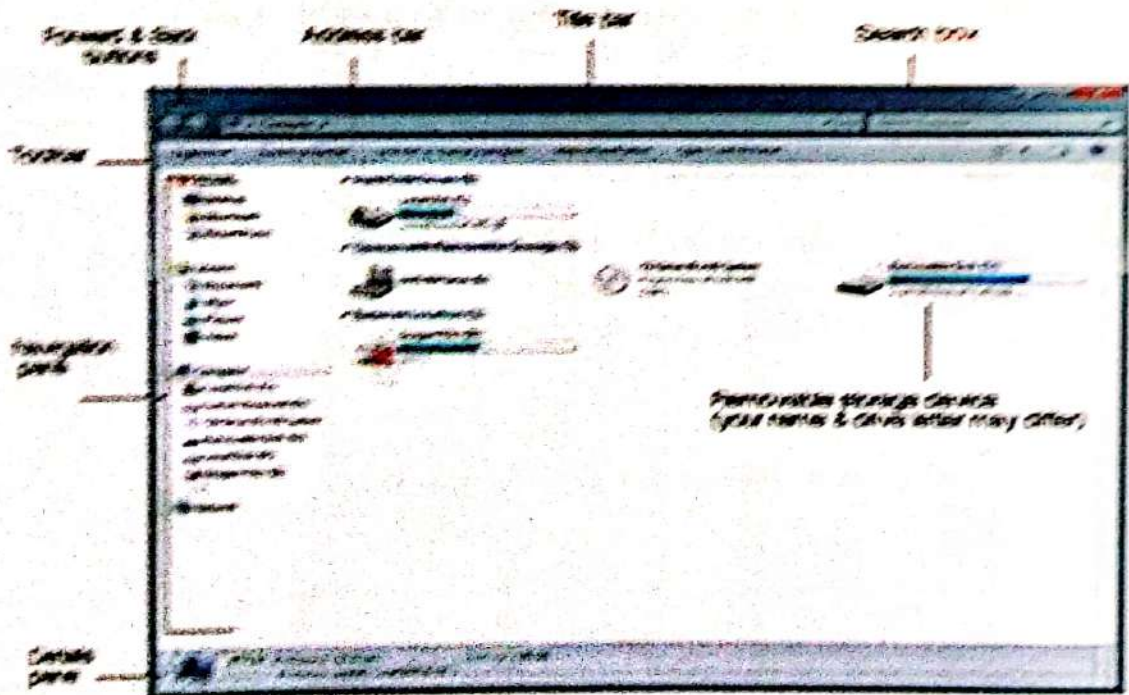

Fig. Parts of Window

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A window has many components. Different programs open in their different window. Although the contents of every window are different, all windows share some things in common. For one thing, windows always appear on the desktop the main work area of your screen. In addition, most windows have the same basic parts.

The different components of My Computer window are : Title Bar, Menu Bar, Tool Bar, and Scroll Bar :

(i) **Title Bar** : Title bar is the first bar of a window. It displays the name of the document and program on its left side. It also has the following three buttons on its right corner :

1. **Minimize button** : It hides the window. It is used to minimize the windows. When you click on it the windows attains the shape of a button on the taskbar.

2. **Maximize Button** : This button is located in the middle. It enlarges the window to fill the whole screen.

3. **Restore Button** : You can change the window to its old shape by clicking on this Button (before maximizing the windows).

4. **Close Button** : It closes the window.

(ii) **Menu Bar** : Menu bar is the second bar of a window. It contains the menu items. When you click on a menu a list of options will appear that you can select.
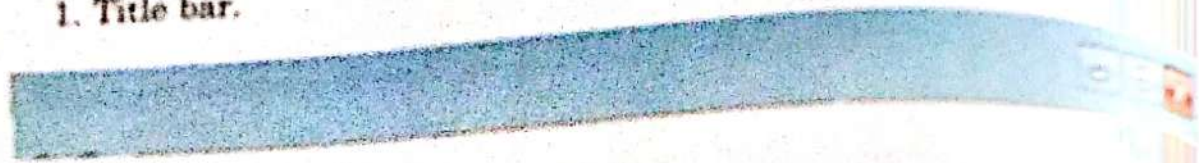
(iii) **Toolbar** : It contains buttons for the commands which are commonly used.

(iv) **Scrollbar** : It allows you to scroll the contents of the window to see information that is currently out of view.

(v) **Borders and Corners** : You can drag these with your mouse pointer to change the size of the window.

Parts of Windows Explorer windows are given below :

1. Title bar.

2. Back and forward buttons

3. Address bar

4. Search box

Search Computer

5. Menu bar

File Edit View Tools Help

6. Toolbar

Organize ▼   System properties   Uninstall or change a program
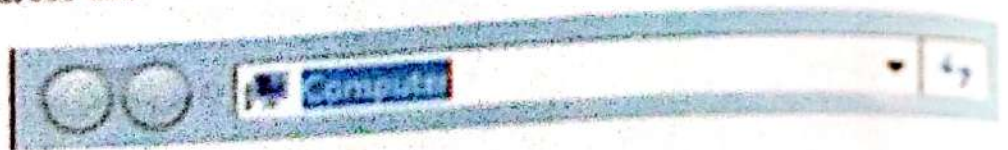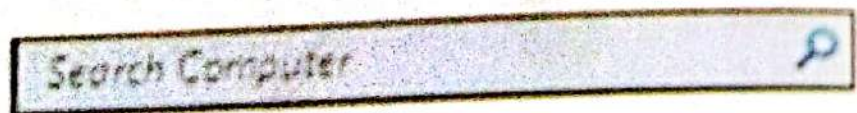
Left pane of windows explorer is also called Navigation Pane. We can see
Drives, files and folders in left pane. We can select any object opened in left
pane. The selected object can be a drive, file or a folder. When a drive, file or a
folder is selected the detail of the same appears on the right pane of windows
explorer.

2.5.2 WINDOWS EXPLORER VIEWS
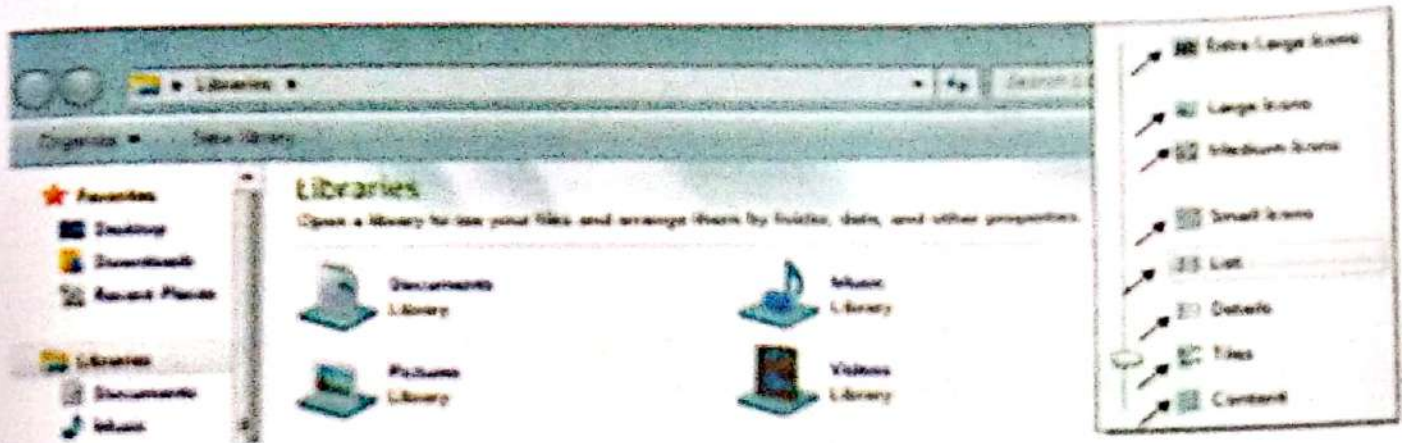
Each location has a view setting, which determines the layout of the items on the screen and the sort of information which is displayed for each item.

(a) Small, medium, large and extra large icons views. The items are laid out as one or more rows, and each item consists of an icon with its name.

Fig. *Small Icons View*
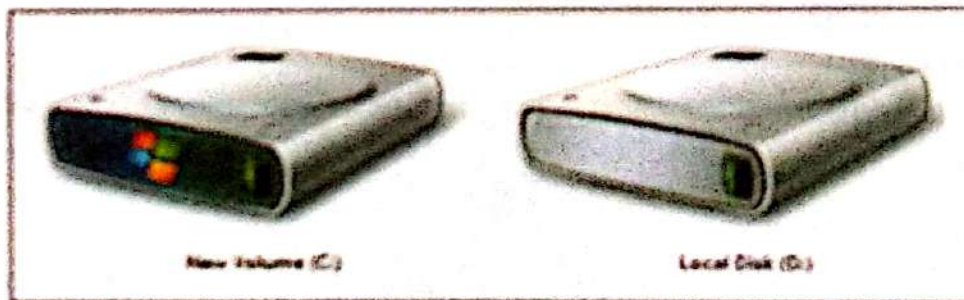
Fig. *Extra Large Icon*

(b) **Tiles Icons view** : The items are laid out as one or more rows, and each item consists of an icon. Each item contains a name. It has some other information like type of file and size.
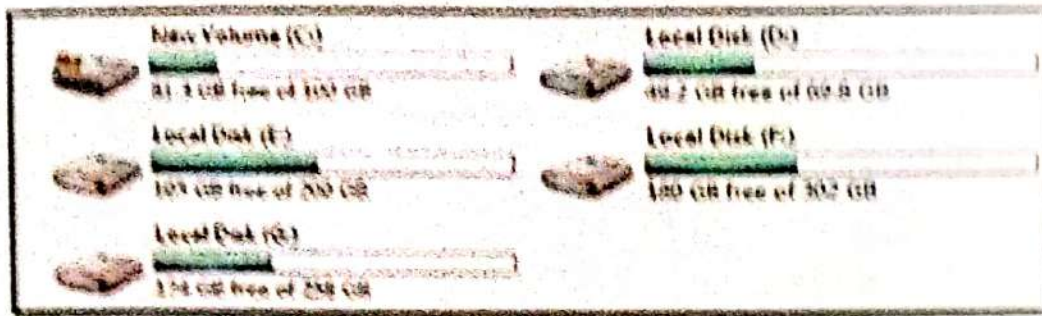
Fig. Tiles Icons View

(c) List Icons view : The items are laid out as one or more columns, and each item consists of a name, with a small icon just to its left.

(d) Details Icons view : Each item consists of a row in a table. The first column contains a name, together with a small icon and the other columns contain various properties such as size and date modified.

Fig. Details Icons view

(e) Content Icons view : This view is used by default for searching files and folders. The items are laid out column wise. Each item consists of an icon. It has a name and type of item, written below. Some other properties like modified date and size is shown below :
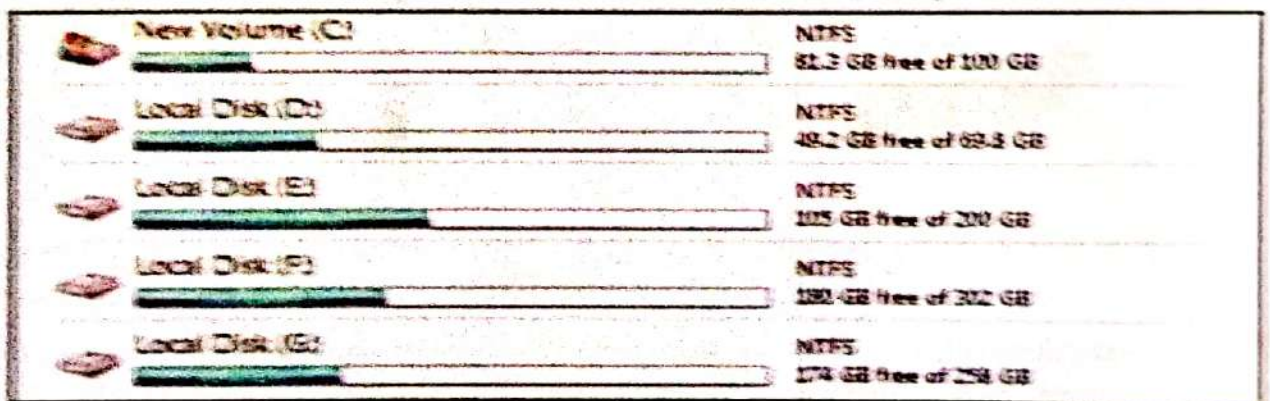
Fig. Content Icons View

2.5.3 Directories/Folder

A directory is a location for storing files on your computer. Directories are found in a hierarchical file system, such as Linux, MS-DOS, OS/2, and Unix. Microsoft Windows, directories are referred to as folders.

1. Open Computer or Windows Explorer.

2. Open the drive or folder in which you'd like to create the new folder; for example, the C: drive. If you do not want to create a folder in the root directory, browse to the location of your choice.

3. In Windows 10 on the Home tab, click the New folder icon. In Windows 7 and earlier on the file menu bar, select File and then Folder.

Fig. Folder

2.5.4 File

A file is an object on a computer that stores data, information, settings, or commands used with a computer program. In a GUI (graphical user interface), such as Microsoft Windows, files display as icons that relate to the program that opens the file. For example, the picture is an icon associated with Adobe Acrobat PDF files. If this file was on your computer, double-clicking the icon in Windows would open that file in Adobe Acrobat or the PDF reader installed on the computer.

◆ 2.6 CREATING, RENAMING AND DELETING OF FILE & FOLDERS

We can make a new file and folder also. Files and folders can be cut and copied. We can change the name of folders, files.

2.6.1 Creating folder

Perform the following steps to create folder :

1 Click the right button of the mouse on the desktop.

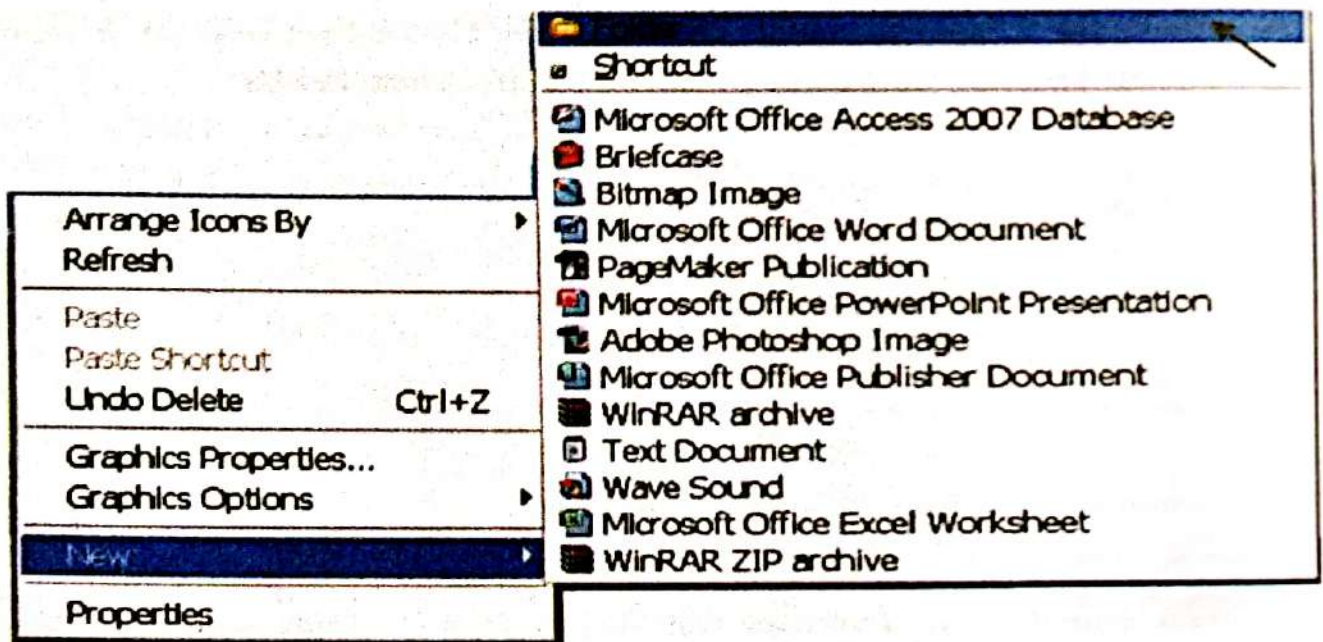|	
Arrange Icons By ▶ Refresh	⊞ Shortcut
	▣ Microsoft Office Access 2007 Database
	▣ Briefcase
Paste	▣ Bitmap Image
Paste Shortcut	▣ Microsoft Office Word Document
Undo Delete Ctrl+Z	▣ PageMaker Publication
	▣ Microsoft Office PowerPoint Presentation
Graphics Properties...	▣ Adobe Photoshop Image
Graphics Options ▶	▣ Microsoft Office Publisher Document
	▣ WInRAR archive
New ▶	▣ Text Document
	▣ Wave Sound
Properties	▣ Microsoft Office Excel Worksheet
	▣ WInRAR ZIP archive

Fig. *Folder Option*

2. Select New Folder.

3. Type the name of the Folder.

4. Press Enter key.

2.6.2 To Rename

You can change the name of file/folder. It is called Renaming.

Perform the following steps to Rename file/folder :

1. Right click on the file/folder to be renamed, a menu will display.

(9th)

2. Click on Rename.

Scan for viruses
Check reputation in KSN
Kaspersky Application Advisor

Open With...
Add to archive...
Add to "Untitled-1.rar"
Compress and email...
Compress to "Untitled-1.rar" and email

Send To   ▶

Cut
Copy

Create Shortcut
Delete
Rename
Properties

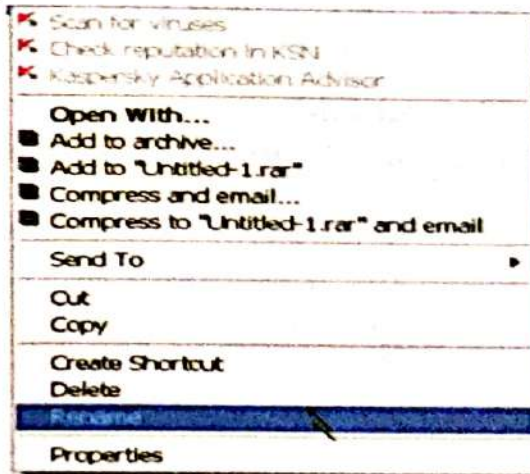**Fig.** *Rename Option*

3. Type new name and press Enter key.

2.6.3 To Delete file / folder :

The Delete option is used to delete a file/folder. Deleted file/folder moves to Recycle bin.

Perform the following steps to Delete file/folder :

1. Click on the file/folder to be deleted.

2. Press the delete key of keyboard.

Scan for viruses
Check reputation in KSN
Kaspersky Application Advisor

Open With...
Add to archive...
Add to "Untitled-1.rar"
Compress and email...
Compress to "Untitled-1.rar" and email

Send To   ▶

Cut
Copy

Create Shortcut
Delete
Rename
Properties
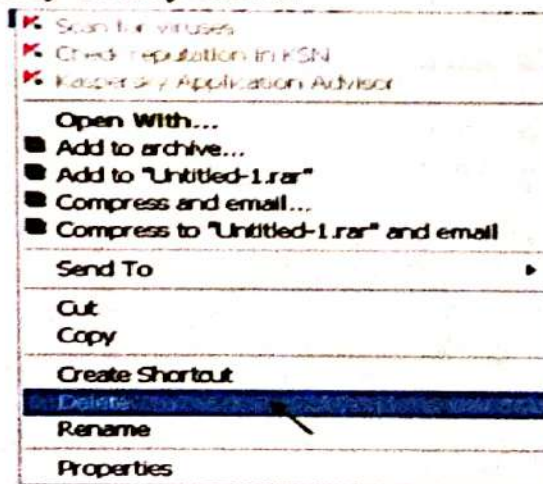
Fig. *Delete Option*

3. A message will display which will confirm the file to be deleted.

4. Click on 'Yes'.

Confirm File Delete

Are you sure you want to send 'Untitled-1.cdr' to the Recycle Bin?

| Yes | No |
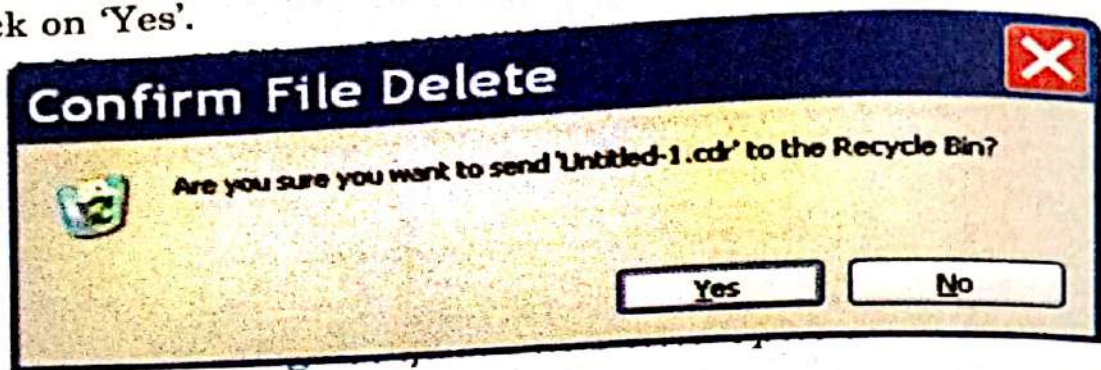
2.6.4 To Cut the folder :

File and folder can be sent from one place to another with cut option. Cut file or folder leaves its place and moves to the next place.

Perform the following steps to cut the folder :

1. Right Click the required file, a menu, called Popup will open.

2. Click on Cut option.

```
Open
Edit
Scan for viruses
Check reputation in KSN
Kaspersky Application Advisor
Open With               ▶
Add to archive...
Add to "1.rar"
Compress and email...
Compress to "1.rar" and email
Send To                 ▶
Cut
Copy
Create Shortcut
Delete
Rename
Properties
```
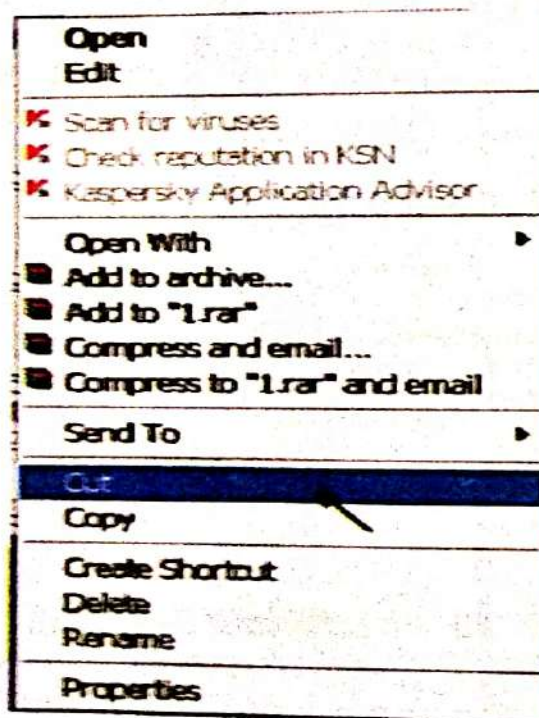
Fig. : Cut Option

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2.6.5 To Copy :

We can copy a file or folder. Copy file is present at both new and original place.

Perform the following steps to copy file/ folder :

1. Right Click the required file or folder, a menu will open.
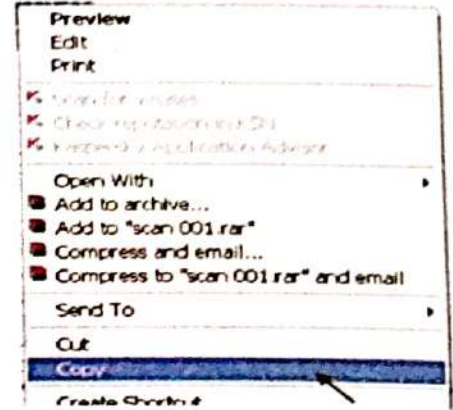
2. Click on 'Copy' option.

2.6.5 To Paste

When we cut or copy a file/folder then it moves to clipboard. Paste command is given to take it to new place.

Clipboard : A clipboard is a temporary storage area for data that the user wants to copy from one place to another.

Perform the following steps to Paste file/ folder:

1. Right click the required drive or folder, a menu will display.

2. Click on Paste option.

Fig. : *Copy Option*

Fig. : *Paste Option*

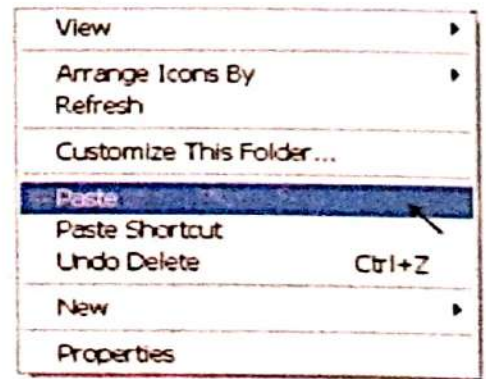## ◆ 2.7 OPENING AND CLOSING OF WINDOW, MINIMIZE AND MAXIMIZE FORM OF A WINDOW

2.7.1 Opening and Closing of Window

You can maximize a window, which enlarges the window to occupy the entire screen, and you can restore a window, which reduces the window to the size it was before being maximized. You can also minimize a window, which reduces the window to a button on the taskbar, removing it from the screen

entirely without actually closing it. When you need to view the window you can click the taskbar button to bring it back into view.
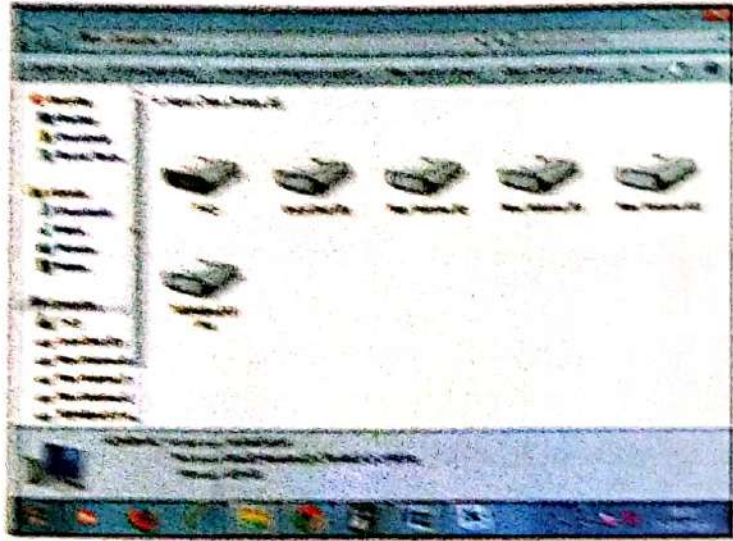
2.7.2 Maximize button

In the upper right corner of the Computer window, on the Computer title bar, point to the Maximize button and then compare your screen. The Maximize button is the middle button in the group of three buttons.

2.7.3 Minimize button

On the Computer title bar, click the Minimize button and then compare your screen. The Computer program is still running but the window is minimized. It is represented by a button on the taskbar at the bottom of the screen. The window is not closed, only temporarily hidden from view. On the taskbar, click the My Computer button. The window redisplays in the same size and location it occupied when you clicked the Minimize button.

2.7.4 Close button

In general, close is the action performed to terminate a program or exit file. If a file has changed since it was opened, and the program is closed,

changes to that open file may be lost unless they are saved before closing. If the program closes without performing the close action, this is usually referred to as a crash.

◆ 2.8 BASIC WINDOW ACCESSORIES

2.8.1 Basic Window Accessories :

The Accessories folder, accessible through the Windows Start menu, is home to multiple useful programs. These programs include Calculator, Notepad, Wordpad, Paint, Remote Desktop Connection, and various System utilities.

2.8.2 NotePad

Notepad is a basic text editor that you can use to create the simple text documents. It supports few basic formatting features such as font and word wrap formatting only. You can type and edit text in this application. You can also use some options like cut, copy, paste, delete find, replace, go to, date and time etc. The extension of notepad file is .txt.

(@) How to start the Notepad :

Start → All Programs → Accessories → Notepad
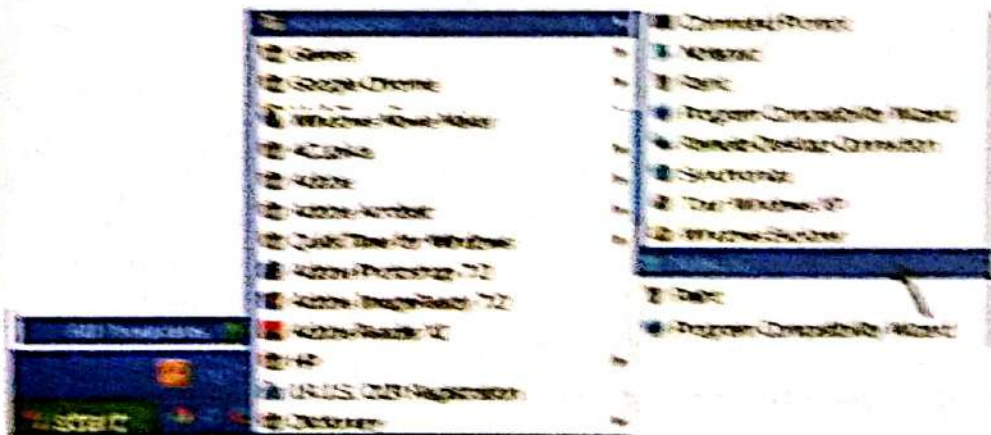
Type "Notepad" in search bar and press enter button from keyboard.

Search programs and files

(ii) Parts of Notepad Window : Following are the parts of Notepad Window :

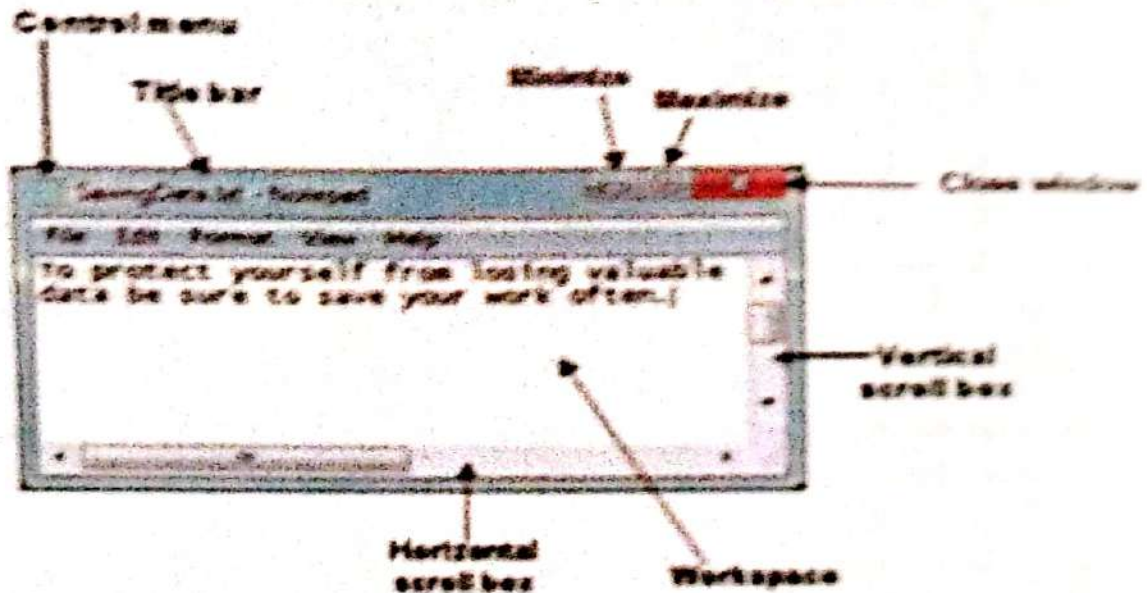1. Title bar 2. Menu bar 3. Text Area 4. Status Bar

Fig. *Notepad Window*

2.8.3 Wordpad

WordPad is a Microsoft Windows program that you can use to create documents such as letters, notes and posters. It's less complicated than a full word processor but still lets you perform a range of tasks: create, open, and save documents

Perform the following steps to open WordPad :

1. Click on the 'Windows' button (right) at the bottom left-hand corner of your screen.

2. In the menu that appears, click All Programs:

3. In the new menu, click Accessories:
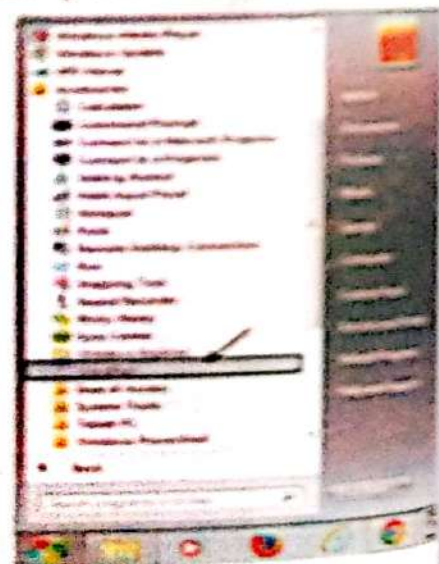
2.8.4 PAINT (Microsoft Paint)

Microsoft Paint is a drawing program. It is developed by Microsoft Corporation. It is often referred to as MS Paint or Paint. You can use paint to draw and color pictures. Paint provides many tools to create and color pictures. You can also save and print pictures drawn in paint. Paint allows you to work with pictures having extension such as .jpg, .gif, or, .bmp.

Steps to start the MS-Paint ? :

Start → All Programs → Accessories → Paint

1. Click on the Start button on taskbar/super bar. Start menu will appear.

2. From this menu click on 'All programs', another menu will appear.

3. Click on Accessories option in this menu. Another menu will appear. This menu has a Paint option.

4. Click on Paint option.

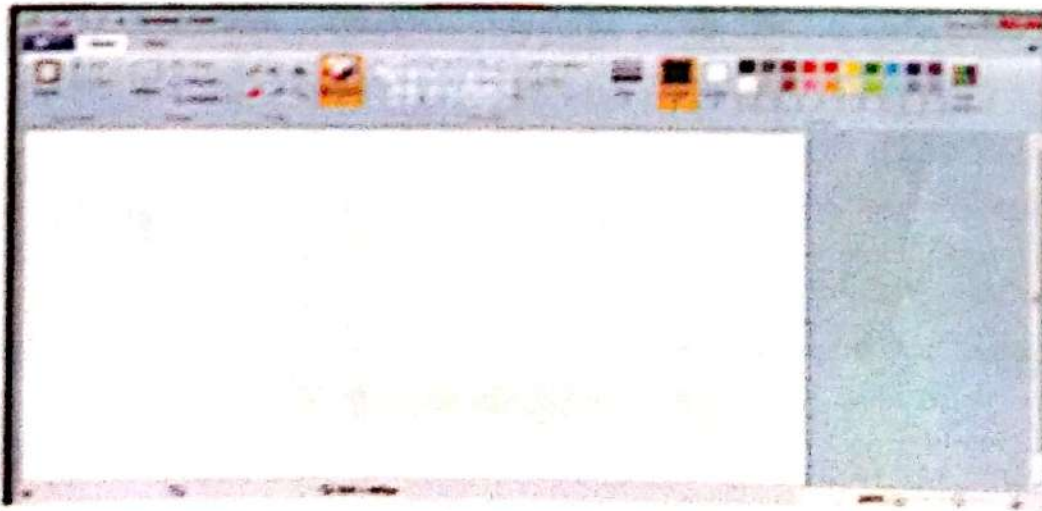Paint window will open up as shown below :

Fig. Paint Window

Paint window has the following parts :

(i) Title Bar

(ii) Quick Access Toolbar

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(iii) Menu Bar

(iv) Vertical and Horizontal Scroll Bar

(v) Status bar

(vi) Zoom in, zoom out

(vii) Work Area

2.8.5 Calculator

Calculator is software capable of performing mathematical calculations such as addition, multiplication, subtraction, or division.

Calculator is used for calculations. Steps to open Calculator through Run Box are as following:

1. Click on Start button.

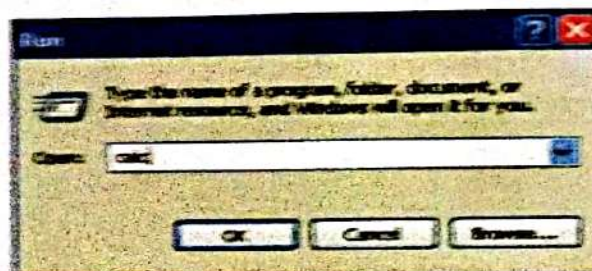2. Choose Run Box. Run box will open.

3. Type "Calc" in it.

Fig. Run Dialogue box

4. Click 'OK' button.

5. Calculator will be displayed.

Fig. Calculator

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2.8.6 Pictures

Picture is a visual capture of an object. Pictures can be created using devices such as a digital camera, scanner, smartphone, or are works of art created on the computer. If visual object is made exclusively on a computer and is not captured by another device, it may be referred to as a clip art, graphic, illustration, render, or a screenshot.

2.8.7 Desktop Background (Picture)

Desktop background basically consists of wallpaper. Wallpaper is a background pattern or picture against which desktop menus, icons, and other elements are displayed and moved around. A wallpaper image can be in a JPEG or a GIF file format. Wallpaper is commonly used in Microsoft Windows. Each operating system provides several pre-installed wallpaper images for the user. A user can also change the wallpaper as per its requirement.
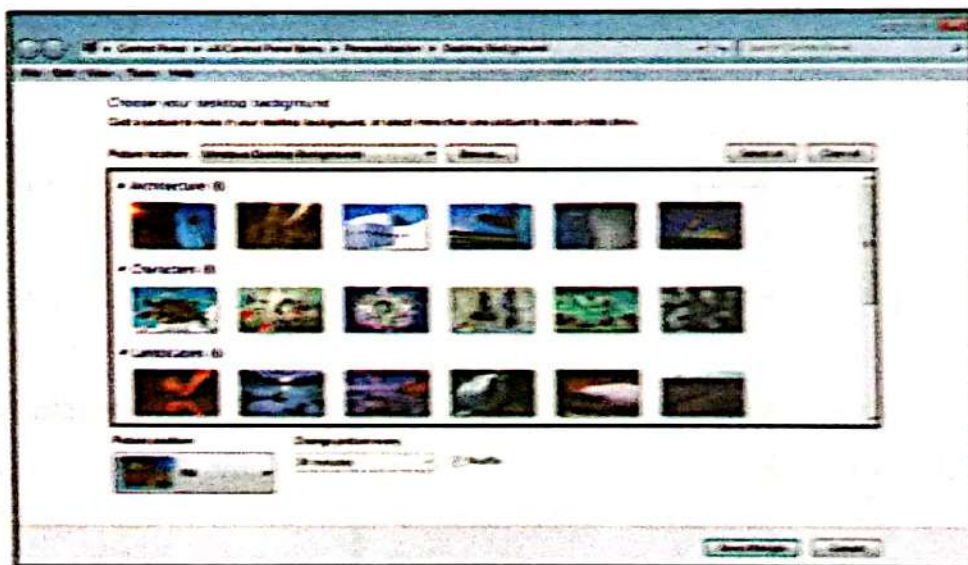

Fig. Customizing Background

Screensaver

It is a software program that becomes activated after the computer is not in use for a specified duration of time. A screensaver basically consists of an animated image. Screensavers were originally designed to help prevent images or text from being burned phosphorus coating into older monitors.

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Steps to set screensaver :

(i) Click on Screensaver thumbnail as shown in fig. You will see picture shown below:
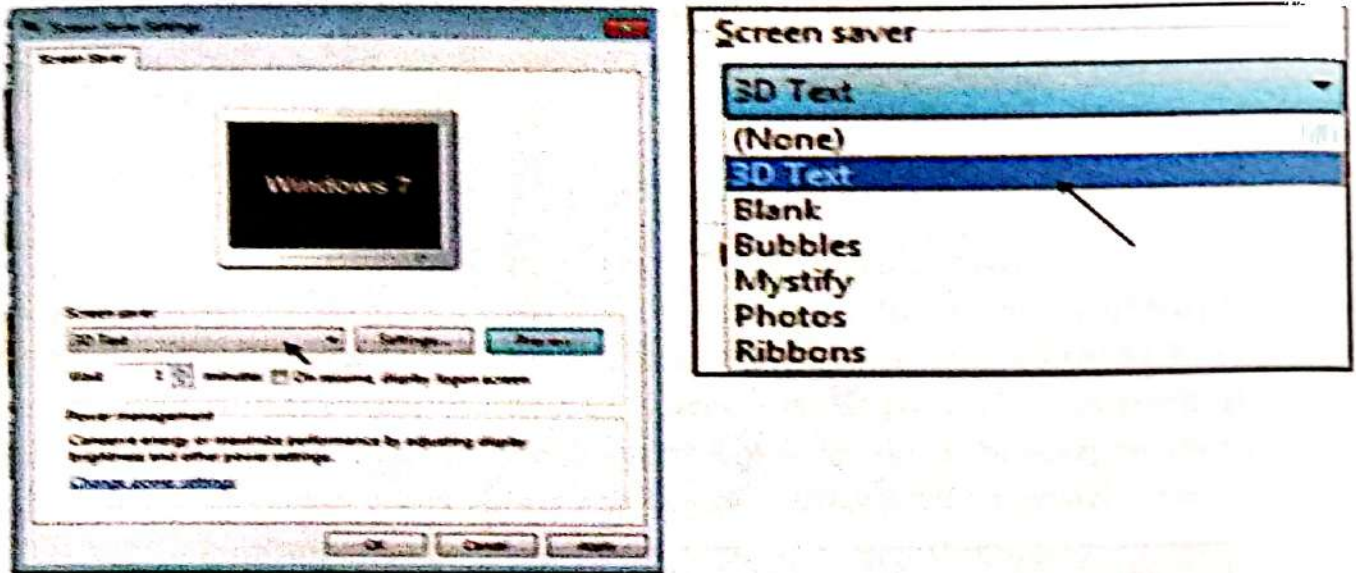

Fig. Screensaver

(ii) To set screensaver of your choice click on Screen saver button as shown in fig. and select a screen saver of your choice from drop down menu. For example 3D Text screen saver is selected in fig.

(iii) To set the Screen saver, click on Settings button and set as per your choice.

(iv) To see preview of your screensaver click on Preview button.

(v) For running a screen saver automatically on your desktop you need to adjust its time. To do this click on Wait option as shown in fig. and type time settings as it is set to 2 minutes.

(vi) Click on Apply button and then on OK button. Screen saver will be set

2.8.8 Control Panel

The control panel, in the context of Windows, is a software module used to perform administrative and management operating system tasks and/or provide access to specific software features.

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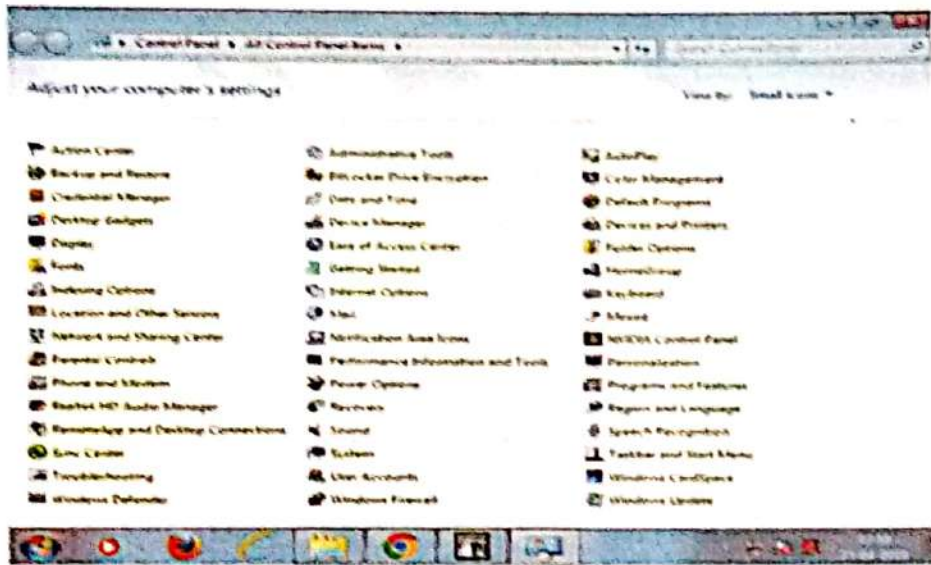
The control panel is used to configure and manage almost all aspects of Windows, including keyboard and mouse functionality, users and passwords, power options, network settings, desktop background, display settings, sound settings, mouse settings, hardware and software options, installation and removal of programs, parental control, speech recognition, etc.

◆ 2.9 MOUSE BUTTON FUNCTIONS (LEFT, RIGHT, SCROLL BUTTON)

The standard mouse has two buttons, plus a scroll wheel in the middle which sometimes is a button.

But most mouse do just two things: right click and left-click.

2.9.1 Left button

Left-click is often referred to as "normal-click" or "regular-click." Most tasks on a computer can be accomplished solely by using the left mouse button. Pressing the left mouse button seems to simulate the mouse cursor being pressed down on the screen: you can drag items or select text or open files.

2.9.2 Double click

Double clicking involves clicking your mouse button quickly two times. To perform a double click, and not just two clicks, the mouse button must be

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pressed twice within a very short time, typically about half a second. Most operating systems allow you to lengthen or shorten the maximum time allowed for a double click, using the Mouse Control Panel or System Preference.

Double-click is a term used to describe the process of quickly pressing a mouse button twice while keeping it still. In most cases, a double-click is with the left mouse button and is used to open or execute a file, folder, or software program.

2.9.2 Right Button

When you press the one on the right, it is called a right click. By default the left button is the main mouse button, and is used for common tasks such as selecting objects and double-clicking. The right mouse button is often used to open contextual menus, which are pop-up menus that change depending where you click.

2.9.3 Scroll Button

A mouse with a rubber or plastic wheel located between the left and right buttons (the "scroll wheel"). Also known as a "wheel mouse," when the wheel is moved back and forth, the active window is scrolled, eliminating the need to aim the pointer at the scroll bar.

Just Remember

1. To link the use with the computer a special type of software is installed in it, which is called operating system.

2. Windows operating system is a graphical user interface.

3. Desktop is the basic screen from where you can run all the program.

4. My Computer icon provides access to the different parts on your computer.

5. When we delete anything send it to the Recycle Bin.

6. Icons with an arrow in the lower left corner are shortcut icons.

7. Window explorer shows files and folders in different scence or sign. These sights are called view.

8. Changing the name of file/folder is called renaming.

9. Notepad is a generic text editor including with all verions of MS windows that allow you to create, open and read text file.

10. Microsoft paint is a drawing program, we can use paint to draw and color pictures.

11. Calculator is an electronic device or software capable of performing mathematically calculation such as addition multiplication substraction or division.

12. A computer document is a file created by a software application.

EXERCISE

◆ Fill in the blanks

1. When we start the computer the very first screen which appears on the monitor is called ....

2. Operating system is a graphically mean ....

3. My computer .... provides access to the different parts on your computer.

4. First screen of the window is called ....

5. Icons with an arrow in the lower left corner are ....

◆ True or False

1. The taskbar is usually located on the top of the desktop. ☐

2. The internet explorer icon starts the internet explorer browser. ☐

3. We cannot change the name of file / folder. ☐

4. Note pad is a generic text editor included with all versions of MS window. ☐

5. To do any thing in paint we do not need Home tab ribbon. ☐

◆ Very Short Answer Type Question

1. What is operatig system ?

2. What is icon ?

3. What is Recycle Bin ?

4. What is window explorer ?

◆ Short Answer Type Question

1. What is the basic concept of operating system ?

2. How you will turn off the computer ?

3. How you will open windows explorer with start menu ?

4. What are the steps for setting system date and time ?

5. What are the steps to open notepad ?

◆ Long Answer Type Question

1. What are the basic functions of operating system ?

2. What is window explorer ? What are the five views of window explorer ?

3. Write the steps to delete file / folder.

4. What is paint ? What are the steps to start MS Paint ?

5. Describe the functions of mouse button ?

>>>>> **Answers Key** <<<<<

1. Desktop, 2. GUI, 3. Icon, 4. Desktop, 5. Shortcut Icons

1. False, 2. True, 3. False, 4. True, 5. False.

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DIGITAL DOCUMENTATION – WORD PROCESSING (ELEMENTARY)

Objective of Learning

3.1 MS Word : Introduction to Word Processor

3.2 Creating, Saving, Opening Document

3.3 Print & Print Preview

3.4 Closing of Document

3.5 Editing Document, Formatting Document

3.6 Bold, Italic, Underline, Font Type, Size, Color Change

3.7 Alignment of Text (Left, Right, Center & Justified)

3.8 Margins – Left, Right, Top and Bototm

3.9 Formatting Paragraphs

3.10 Adding Header and Footer

3.11 Page Numbering

3.12 Using Grammar and Spell Check Utility