

WINDOWS OPERATING SYSTEM

Q1. What is an Operating System? What is its purpose? Discuss types of Operating System.

OPERATING SYSTEM:

- An operating system (OS) is a set of computer programs that manage the hardware and software resources of a computer. An operating system performs basic tasks such as:
- Controlling and allocating memory
- Prioritizing system requests
- Controlling input and output devices
- Facilitating networking and managing file systems.
- **Example:** Examples of operating system are DOS, Windows 98, 2000, XP, Linux and UNIX etc.

PURPOSE/OBJECTIVES OF OPERATING SYSTEM:

There can be many objective of an operating system but a few important are discussed below:

- It manages the hardware resources (processor, memory, disk space etc) of the system.
- It manages the software resources (application programs, utilities etc) of the system.
- It provides a user interface.
- It provides the facility to use the hardware without knowing its detail.

TYPES OF OPERATING SYSTEM:

On the basis of user interface there are two types of operating system.

GRAPHICAL USER INTERFACE OPERATING SYSTEM:

- In GUI operating system icons, windows and buttons are used as visual components.
- These components or objects are used to perform different tasks.

- Users of these operating systems need not to memorize commands.
- User can perform a task like copying a file without writing a command.
- **Example:** Examples of GUI operating systems are windows, Linux, and Solaris etc.

COMMAND LINE OPERATING SYSTEM:

- In Command Line operating system user need to write a command to perform a certain task.
- To write commands user need to memorize them.
- These operating systems are providing textual interface.
- **Example:** Examples of Command Line operating system are DOS (Disk Operating System), Unix etc.

A Comparison of Command Line and GUI Operating System:

Command Line Interface Operating System	GUI Operating System
Ease	
It is difficult to remember its commands. It s also difficult to type commands for different tasks.	It is easy to use. It is very easy to remember different sequence of activities to perform a certain task.
Control	
Users have excellent control on the file system.	Users have better control on the file system. But in some cases they need to use the command line interface to complete a task.
Multitasking	
Many command line interfaces are multitasking but they don't have the ability to display multiple tasks on the screen at the same time.	In GUI multiple tasks can be performed at the same time. These tasks are also displayed on the screen. GUI operating systems are faster in multitasking.
Speed	
Command line interface is fast to perform a task.	GUI is slower while performing a certain task.
Scripting	
In command line operating system a user can write the commands in a sequence and use them to perform a certain task.	GUI operating system provides shortcuts to perform task fast, but it doesn't come close in comparison to what is available

Starting to Use Windows Operating System:

- Windows is a Graphical User Interface operating system. It is used in many businesses, research organizations and educational institutes.
- The first version was windows 1.01 and it was released in 1985.
- After five years, in 1990 windows 3.0 was introduced. It was a complete operating environment. It was providing GUI that runs on top of DOS.
- In 1995 Microsoft released Windows 95. It was a complete operating system.
- Meanwhile Windows NT (New Technology) was also introduced for networks. In 1998 a new version of windows was launched.
- Now today's most commonly versions of windows like 2000 (server and professional) and XP are based on NT Technology.

Q2. What are the Objects of Windows Operating System?

OBJECTS OF WINDOWS OPERATING SYSTEM

To control windows working there are many objects. These objects help in providing multitasking environment to the users. Following are the basic components of windows operating system.

Desktop

- The work area of a windows operating system is called desktop.
- Different icons, menus and dialog boxes appear on the desktop.
- It is the main screen from where user can interact with the system.

My Computer

- It is a special icon on the desktop. It shows all the disks installed in a computer.
- Drives are displayed as icons in My Computer folder.
- Using my computer folder we can access our files and folders to store and retrieve data.

Recycle Bin

- A recycle bin, or trash can, is a temporary storage for files and folders that have been deleted.
- These files and folders are not permanently erased from the physical media.

- Typically, a recycle bin allows the user to browse deleted files, undelete those that were deleted by mistake, or delete them permanently (either one by one, or all at once).

My Documents

- On Microsoft Windows operating systems, My Documents is the name of a special folder. It is commonly used to store documents, music, pictures, downloads, and other files.
- It is the default storage location for a lot of application programs.
- This folder is visible on the desktop.

Windows Explorer

- Windows Explorer is an application that provides detailed information about your files, folders, and drives.
- You can use it to see how your files are organized and to copy, move, and rename files, as well as perform other tasks pertaining to files, folders, and drives.
- There are several ways to get to Windows Explorer.
- The simplest way is to right-click the Start menu or the My Computer icon and selects Explore. Alternatively, you can access it from the Start menu as described below.
- The difference between windows explorer and my computer is of tree view control.
- In windows explorer tree view control is present on the left side of the window.

Internet Explorer

- Internet explorer is a web browser. It is used to browse different web sites.
- It is the part of windows operating system. It has very power full features with high security.

The Window

- It is a rectangular box.
- It is resizable object.
- In Microsoft Windows operating system most of the objects are displayed in window.
- It is the basic building block of all the graphical objects.
- Different applications have their own windows.

Control Panel

- Control Panel is a part of the Microsoft Windows graphical user interface which allows users to view and manipulate basic system settings and controls, such as adding hardware, adding and removing software, controlling user accounts, and changing accessibility options.

- The control panel is an independent program, not a folder as it appears, which is accessed from the start menu, and is stored in the system32 directory as control.exe under Windows XP.

Start Button

- The Start Menu and Start Button are user interface elements in the Microsoft Windows, which serve as the central launching point for applications. Start Menu provides
 - A customizable nested list of programs for the user to launch
 - A list of most recently opened documents
 - A way to find files and get help, and access to the system settings.

Q3. Discuss use of Mouse and Keyboard events in windows.

USE OF MOUSE AND KEYBAORD

- Mouse and keyboard are two very basic input devices.
- These two devices are used with almost every computer.
- Mouse is a point and draw device and used with GUI environment.
- Keyboard is a textual input device and used with both GUI and command line systems.

MOUSE EVENTS

- Mouse events are those actions which are performed by the mouse.
- Following are three common events initiated with mouse.

Left Click

- This event triggers when we press left click button of the mouse.
- Windows perform certain tasks against this action e.g. it is used to select an item.
- Another example can be to activate the start button by using left click button of the mouse.

Right Click

- This event triggers when we press right click button of the mouse.
- Windows perform certain tasks against this action e.g. it is used to display the context menu about a particular object on which our mouse pointer lies.
- Another example can be to view the properties of an object right click option is used.

Drag

- Select an item, press the left click button and drag it to from one location to another while keeping the left mouse button pressed.
- This facility is available only in GUI environment. Mouse is the best device used to perform such tasks.

KEYBOARD EVENTS

- Keyboard events are those which occur with the help of keys of the keyboard. Different application programs perform different actions against these events.

Key Up

- This event triggers when we release already pressed key of the keyboard.

Key Down

- This event triggers when we press a key from the keyboard

Q4. What are features of Windows?

FEATURES OF WINDOWS

- Microsoft Windows is a Graphical User Interface operating system.
- In early versions of windows there was no network support but later ones have this feature. Here we are discussing a few features of windows.

Multitasking

- Performing more than one tasks at the same time is called multitasking e.g. while typing we are enjoying the music on our computer.
- Windows 2000 has this capability to load multiple programs in memory at the same time and execute them concurrently.

Multiprocessing

- The ability to manage more than one microprocessor is called the multiprocessing.
- Windows 2000 has the capability to manage more than one microprocessor.
- In this environment operating system assigns different jobs to different microprocessors to perform. Multiprocessing system are fast than uni-processor systems.

Multi-User

- A multi-user operating system allows more than one users to use it at the same time.
- Windows 2000 is a multi-user operating system.

Plug and Play

- Plug and play refers to the capability to attach a device with computer and start to use it.
- Operating system will automatically installs and configure its drivers.
- Windows 2000 has this feature. A mechanism is defined in windows 2000 that automatically detects a new hardware device.
- There is a long list of drivers available with windows 2000.

Networking

- Windows 2000 provides complete networking support.
- It provides the features of establishing, maintaining and troubleshooting the network.

Q5. What is Disk Management feature of Windows?

DISK MANAGEMENT

- Disk management is a process of organizing the disks attached to a computer system.
- Windows operating system has this capability.
- To keep the data managed at separate locations a disk can be divided into different partitions.
- There are two types of disk partitions.

Primary Partition

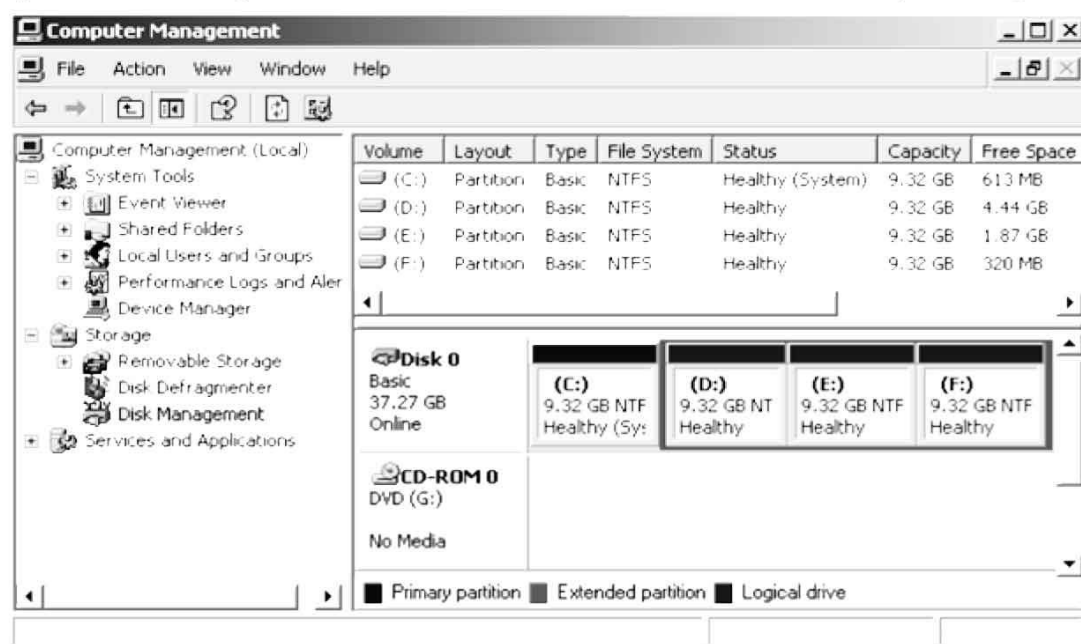
- This partition is used as system partition.
- Files required to boot a system are located on this partition.
- A maximum of four primary partitions or three primary and one extended partition can be created on a hard disk.
- Primary partitions can be created only on basic disks and cannot be further partitioned.

Extended Partition

- Extended partition is a partition that can contain further partitions.
- One out of four on a physical disk can be an extended partition, and no primary partitions needs to be present to create an extended partition.

Disk Management Utility

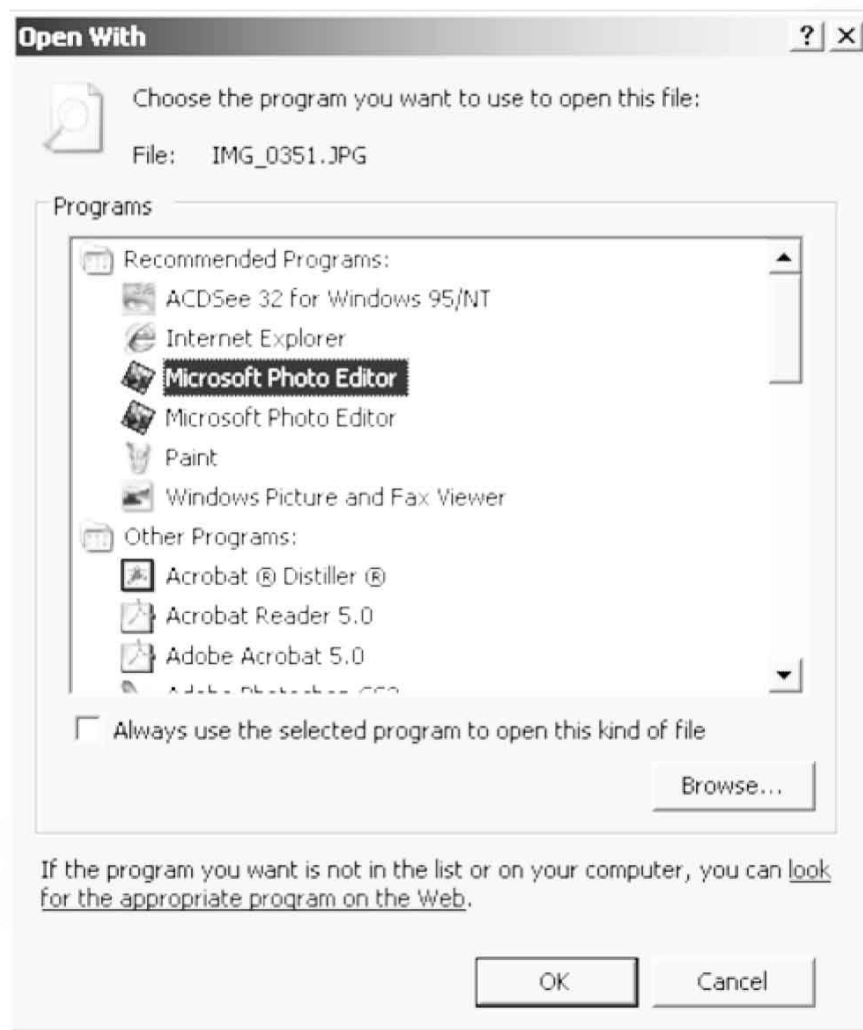
- Disk management utility provides a graphical interface to view and manage disks and their partitions.
- All information about disks can be viewed in a single window.
- This utility is used to perform disk related tasks, such as creating partitions, formatting them and assigning drive letters.
- Disk management utility also tells which drive contains the system partition.



Q6. What is File Management feature of Windows? Discuss Windows Explorer.

FILE MANAGEMENT

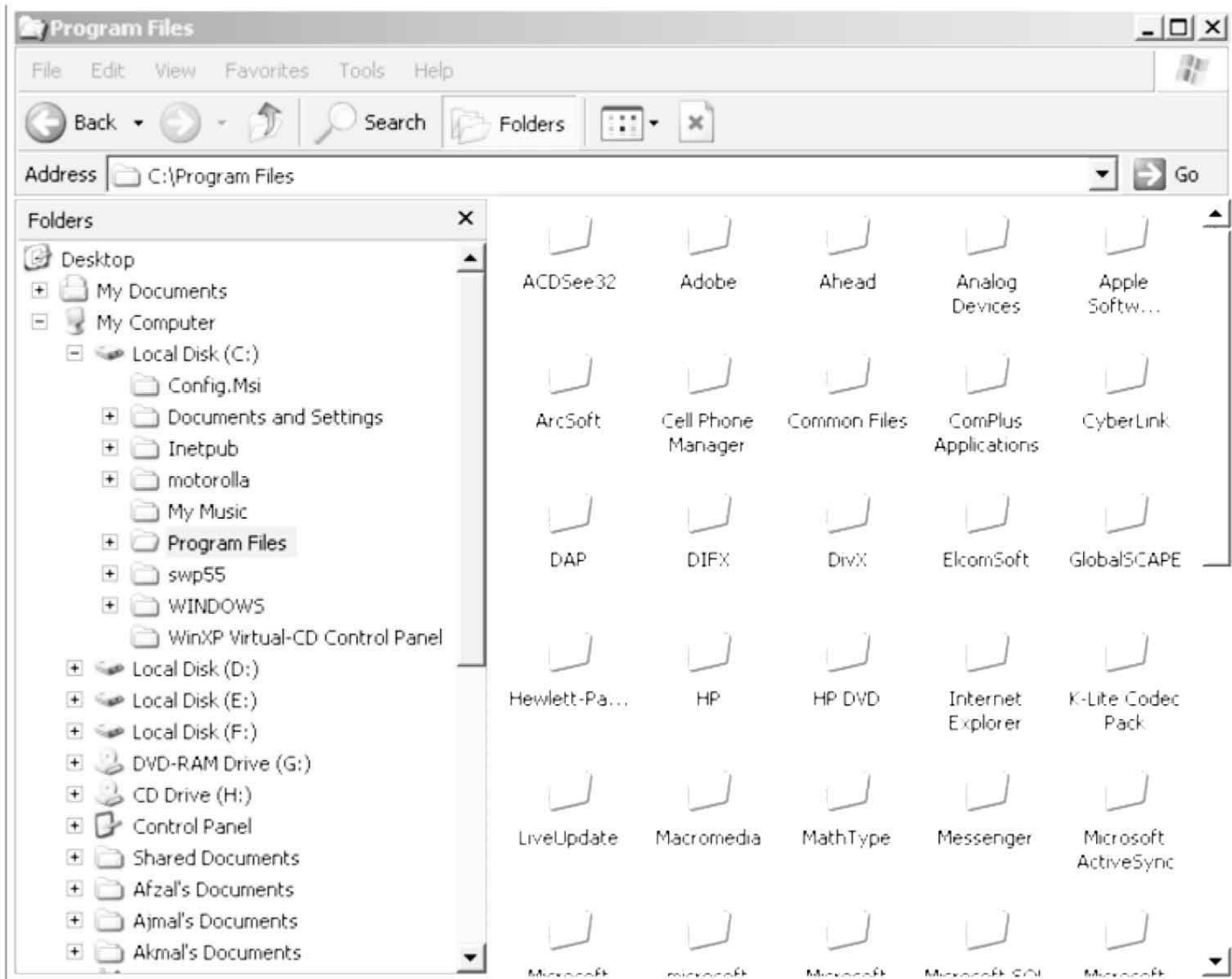
- In Microsoft windows operating system files are recognized by their extensions. Extensions are the characters, usually three or four letters such as .doc, .txt, or .html, that follow the period at the end of a file name.
- Windows checks the file extensions against a database of registered files.
- From this database of registered files it is determined that which program will be used to open or edit a file.
- If windows encounter a new file type which is not already registered it will open a dialog to let you choose a program of your choice to open the file.



WINDOWS EXPLORER

- It works as a file manager for windows operating system.
- You can have different views of files using this utility.
- A hierarchical tree like structure is displayed on the left side of the windows.
- Using windows explorer files can be copied from one place to other.
- From windows explorer you can also delete, rename or share the files and folders.

- With windows explorer, you can manage the local files, folders and retrieves but also the remote files and folders.



Q7. How printing jobs are controlled in Windows? What are the steps of adding a printer? Discuss printing queue.

CONTROL PRINTING JOBS

- Windows operating system has a feature to control printing jobs.
- Windows maintains a print queue.
- You can add multiple printers to your computer and these printers can be shared on a network so that other users take the advantage of shared printers.
- From many printers there will be a default printer.
- All print jobs send directly to the default printer.
- The status of a printer can be changed to default by right click and select the option of default.

Adding a new printer

- You can add new printer to your computer by following these steps.
- Click Start → Settings → Printer and Faxes
- A window will appear.
- Select Add a Printer

- Follow the steps of wizard to add a new printer.
- Click the Next button to begin to printer installation process.
- Select the Local Printer radio button.
- Click the Next button to continue.
- Select the port to which your printer is connected in the Available Ports list.
- Click the Next button to continue.
- Scroll down in the Manufacturers list and select the manufacturer of your printer. It displays list of printer models.
- Select the model of your printer and click Next button. If your printer is not listed, click the Have Disk button and browse to the location of driver files.
- Enter a name of your printer. By default the system uses the name associated with the printer driver.
- Click the Next button to continue. Print Test Page will appear.
- Select Yes to print a test page or No to skip test page.
- Click the Finish button to complete the installation.

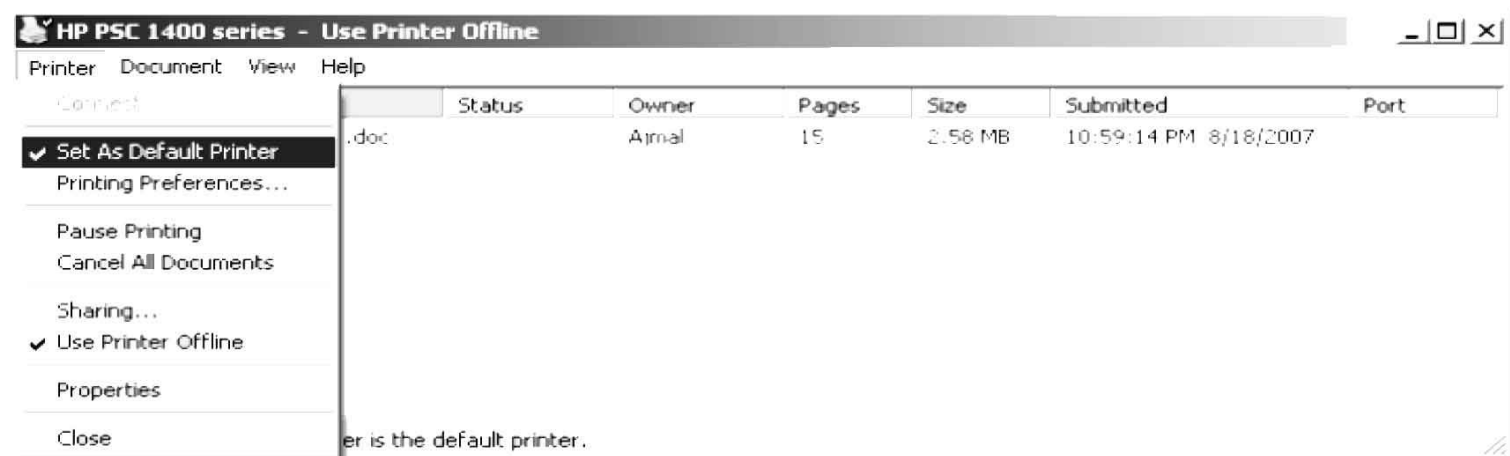
Print Queue

- The print queue shows the documents that are waiting to be printed.
- For each item on the list, information, such as the print status and number of pages, is provided.
- The following table shows the information displayed for each document in the queue.

Column	Description
Document Name	The file name of the document.
Status	The current status of the document, such as Spooling, Paused, or Printing.
Owner	The user name of the person who sent the document to the printer.
Pages	The number of pages that have printed and the total number of pages in the document.
Size	The size of the document in kilobytes.
Submitted	The time and date that the document was sent to the printer.

Port	The port being used by the printer.
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- If you manage a printer, you can control certain operations from the print queue. For example, you can pause or resume operation of the printer, and you can cancel printing of all documents waiting to be printed.
- You can also manage documents you send to the printer.
- You can pause, resume, or cancel printing of a document; restart printing of a document.
- For documents waiting to print, you can view, but not change, settings such as the page orientation, paper source, and number of copies.



Q.8 Explain how to select, rename and delete files and folders in Windows.

Selecting a File or Folder:

The following procedure is used to select a file or folder:

- Click the desired file or folder to select it.
- Press CTRL key and click on desired files or folders to select multiple files or folders.
- Click Edit > Select All OR press CTRL+A to select all files and folders in a windows.

Renaming a File or Folder:

The following procedure is used to rename a file or folder:

- Open Windows Explorer.
- Right click the file or folder to be renamed. A popup menu will appear.
- Click Rename option. A cursor will appear in file or folder name.
- Type the new name and press Enter. The file or folder will be renamed.

Deleting a File or Folder:

The following procedure is used to delete a file or folder:

- Open Windows Explorer.
- Select the file or folder to be deleted.

- Press Delete key. A message will appear to confirm the deletion.
- Click Yes button to delete the selected file or folder. The file or folder will move to the Recycle Bin.

Q.9 Write a short note on finding files in Windows.

- Windows search feature makes it easy to search files and folders, printers, people and other computers on network. It also has an indexing service to maintain an index of all files on computer for faster searches. The user can specify several search criteria.

Searching a File:

The following steps are performed to search a file in Windows:

- Click on Start button. The Start menu will appear.
- Select Find option from the menu. A new window will appear.
- Enter appropriate words in the textboxes and click Search button. Window will start searching the required file.

The user can search the file using the following options:

- Files or folders.
- On the Internet.
- People.
- Using Microsoft Outlook.
- The user can also specify the location for searching the file using Look in: list box. The user can select a particular drive such as C:\ or D:\ etc. The user can also use other options on search pane for advance searching.