File System : -

A file can be "free formed", indexed or a structured collection of related bytes having to mean only to the one who created it. Or in other words, an entry in a directory is the file. The file may have attributes like name, creator, date, type, permissions etc.

File Structure

A file has various kinds of structure. Some of them can be:

- **Simple Record Structure** with lines of fixed or variable lengths.
- **Complex Structures** like a formatted document or reloadable load files.
- **No Definite Structure** like a sequence of words and bytes etc.
- **Attributes of a File**
- Following are some of the attributes of a file:
- **Name.** It is the only information which is in human-readable form.
- **Identifier.** The file is identified by a unique tag(number) within the file system.
- **Type.** It is needed for systems that support different types of files.
- **Location.** Pointer to file location on device.
- **Size.** The current size of the file.
- **Protection.** This controls and assigns the power of reading, writing, executing.
- **Time, date, and user identification**. This is the data for protection, security, and usage monitoring.

File Access Methods : -

The way that files are accessed and read into memory is determined by Access methods. Usually, a single access method is supported by systems while there are OS's that support multiple access methods.

Sequential Access : -

- Data is accessed one record right after another is an order.
- Read command cause a pointer to be moved ahead by one.
- Write command allocate space for the record and move the pointer to the new End of File.
- Such a method is reasonable for tape.

Direct Access : -

- This method is useful for disks.
- The file is viewed as a numbered sequence of blocks or records.
- There are no restrictions on which blocks are read/written; it can be done in any order.
- The user now says, "read n" rather than "read next".
- "n" is a number relative to the beginning of the file, not relative to an absolute physical disk location.

Indexed Sequential Access : -

- It is built on top of Sequential access.
- It uses an Index to control the pointer while accessing files.

What is a Directory : -

Information about files is maintained by Directories. A directory can contain multiple files. It can even have directories inside of them. In Windows, we also call these directories as folders.

Following is the information maintained in a directory:

- Name The name visible to the user.
- Type: Type of the directory.
- Location: Device and location on the device where the file header is located.
- Size: Number of bytes/words/blocks in the file.
- Position: Current next-read/next-write pointers.
- Protection: Access control on read/write/execute/delete.
- Usage: Time of creation, access, modification etc.
- Mounting: When the root of one file system is "grafted" into the existing tree of another file system it's called Mounting.

File Systems : -

Provide a means to store data organized as files as well as a collection of functions that can be performed on files.

Maintain a set of attributes associated with the file. Typical operations include:

- **Create**
- **Delete**
- **Open**

- **Close**
- **Read**
- **Write**

File Management System Objectives : -

- Meet the data management needs of the user
- Guarantee that the data in the file are valid
- Optimize performance
- Provide I/O support for a variety of storage device types
- Minimize the potential for lost or destroyed data
- Provide a standardized set of I/O interface routines to user processes
- Provide I/O support for multiple users in the case of multiple user systems

Minimal User Requirements : -

- Should be able to create, delete, read, write and modify files
- May have controlled access to other users' files
- May control what type of accesses on the files
- Should be able to restructure the files in a form appropriate to the problem
- Should be able to move data between files
- Should be able to back up and recover files in case of damage
- Should be able to access his or her files by name rather than by numeric identifier

Device Drivers : -

- Lowest level
- Communicates directly with peripheral devices
- Responsible for starting I/O operations on a device
- Processes the completion of an I/O request
- Considered to be part of the operating system **Introduction to MS word, MS power point, MS Excel: -**

Word processing : -

Word processing software is used to create and maintain electronic documents. Alterations can easily be made to stored documents (instead of retyping them), and multiple copies can be printed. Professional looking results can be obtained by using different fonts, and by incorporating graphics into a document.

The MS Word 2007 window : -

- The old menu system has been replaced by the Ribbon and the Office button. The Office button contains a menu of file-related commands.
- The Quick Access toolbar provides a set of frequently used commands. The default options are to save a file, to undo the last action, and to repeat your most recent action.
- The Ribbon tabs provide you with a set of tools that are relevant to what you are currently doing.
- The Title bar displays the name of the program and the name of the current document. If you haven't named the document yet, then it will be called something like document.
- Window controls are used to change the size of a window or to close it.
- The Vertical scrollbar is used to scroll up and down the page. If your page is wider than the screen display, then you will also see a Horizontal scrollbar across the bottom of the window.
- The Status and information bar displays useful information about your documents, such as the page count and many words.

Options for viewing a document in Word

Word offers five different views

- Print Layout
- Full-screen reading
- Web layout
- Outline view
- Draft view

Non-printing characters are characters that are used to format your document, but that isn't displayed as text on your screen. These symbols can be very useful when you are looking for formatting errors in your document.

Save or Save As Option : -

If you want to keep the same file name and location, then the Save icon and the Save menu option will both save the file with no further comment. If you'd like to save an existing document under a new name, or in a different location, then you need to use the Save As command.

Closing Word : -

- There are several methods you can use to end Word:
- Click the Office button, and then click the Exit Word button in the bottom right corner.

Alternatively, close the window by clicking on the X at the far-right edge of the title bar.