Course Name: O Level (1st Sem) Subject: ITTNB

Topic: File and Folder Management Date: 26-03-20

File:

A **file** is a named collection of related information which has been written to our computer's hard drive. These can be a picture, a sound, text, or a set of instructions for a program to perform certain actions. In general, a file is a sequence of bits, bytes, lines or records whose meaning is defined by the files creator and user. Identification to a file's type is given by its Icon or by its file extension.

File Structure:

A File Structure should be according to a required format that the operating system can understand.

- A file has a certain defined structure according to its type.
- A text file is a sequence of characters organized into lines.
- A source file is a sequence of procedures and functions.
- An object file is a sequence of bytes organized into blocks that are understandable by the machine.
- When operating system defines different file structures, it also contains the code to support these file structure. Unix, MS-DOS support minimum number of file structure.

Folder:

- Folders are containers for anything on a computer including files and other folders. A folder is the virtual location for applications, documents, data or other sub-folders. Folders help in storing and organizing files and data in the computer.
- Folders in computers function similarly to real-world physical folders. Folders can store and organize different types of applications, files or libraries. Folders can also contain other folders, which in turn could contain other folders or files.
- Folders are also known as file directories or **directories**.
- There is no limit on the number of folders or sub-folders that can be created.
- Although folders can contain large amounts of data, they do not take up any disk space itself (files under folders contain disk space). The reason for this is because folders are pointers to file locations within the file system of the computer. Folders can also be hidden from users, just as files can.
- A folder does not have an extension like a file.
- Thus, Folders provide a useful way in organizing the data found in the system according to the user preferences. It also helps in searching for data, if properly organized.

File Type:

File type refers to the ability of the operating system to distinguish different types of file such as text files source files and binary files etc. Many operating systems support many types of files.

Ordinary files:

- These are the files that contain user information.
- These may have text, databases or executable program.
- The user can apply various operations on such files like add, modify, delete or even remove the entire file.

Directory files:

- These files contain list of file names and other information related to these files.

Special files:

- These files are also known as device files.
- These files represent physical device like disks, terminals, printers, networks, tape drive etc.

File Access Mechanisms:

File access mechanism refers to the manner in which the records of a file may be accessed. There are several ways to access files −

- Sequential access
- Direct/Random access
- Indexed sequential access

Sequential access:

A sequential access is that in which the records are accessed in some sequence, i.e., the information in the file is processed in order, one record after the other. This access method is the most primitive one. Example: Compilers usually access files in this fashion.

Direct/Random access:

- Random access file organization provides, accessing the records directly.
- Each record has its own address on the file with by the help of which it can be directly accessed for reading or writing.
- The records need not be in any sequence within the file and they need not be in adjacent locations on the storage medium.

Indexed sequential access:

- This mechanism is built up on base of sequential access.
- An index is created for each file which contains pointers to various blocks.
- Index is searched sequentially and its pointer is used to access the file directly.

File Operations:

- Use the Explorer Window
- Change the Explorer Window View
- Open and View the My Computer/ This PC
- Work with Libraries
- Navigate Between Folders
- View the Folders List
- Customize the Navigation Pane
- Sort Files by their different attributes (such as name, date modified, type, size etc.)
- Search for Files and Folders
- View Properties of files and folders
- Create and Rename Files and Folders
- Copy/ Cut and Paste Files and Folders
- Delete and Restore Files and Folders
- Create a Shortcut to a File or Folder
- Change Folder Options
- Change File and Folder List Views
- Customize Personal Folders
- Share Folders or Files with Others
- Compress Files and Folders
- Manage Files Using External drive (such as Pen drive or CD/ DVD)

Assignments:

A. **Define files and folders. Write some basic differences between them. Also explain the ways to access a file.**

B. **Write steps with diagram of following:**

   - **Sort Files by their different attributes (such as name, date modified, type, size etc.**
   - **Customize Personal Folders.**