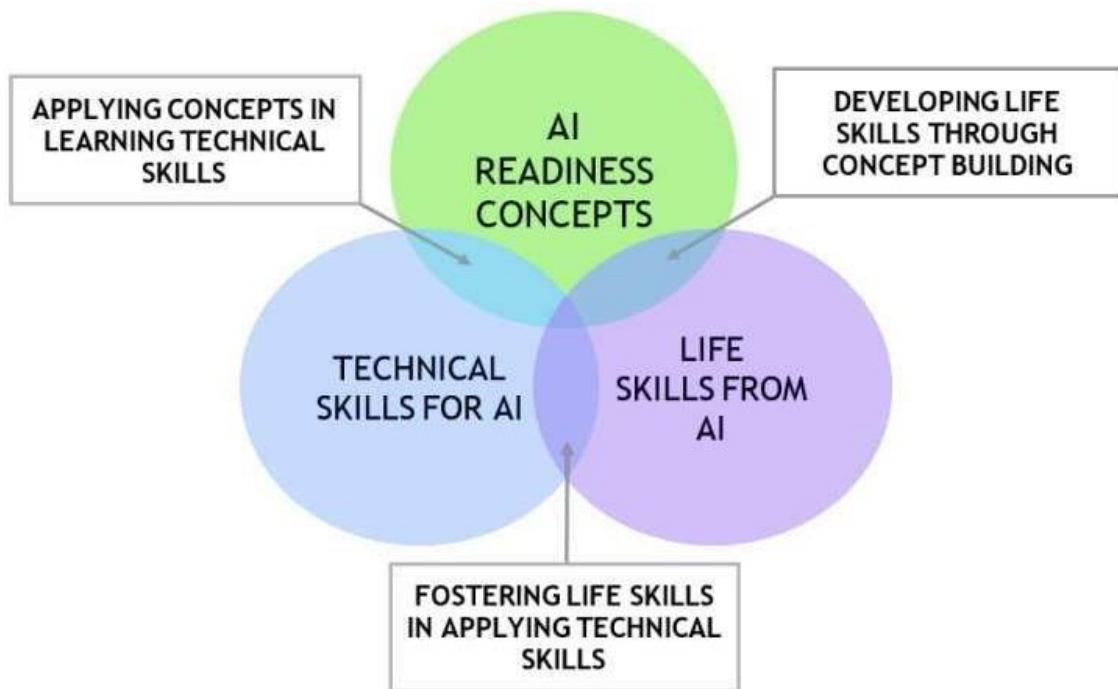


## UNIT 3: ICT SKILLS



### TYPES OF OPERATING SYSTEMS

An Operating System (OS) is an interface between a computer user and computer hardware. An operating system is a software which performs all the basic tasks like file management, memory management, process management, handling input and output, and controlling peripheral devices such as disk drives and printers.

**Some popular operating systems are:**

- DOS (Disk Operating System)
- Windows It is an operating system developed by Microsoft.
- Linux It is an operating system designed for personal computers. It is a free and Open Source Software
- Mobile operating Systems
  - ✓ Android
  - ✓ Symbian
  - ✓ Windows Phone
  - ✓ iOS

**Following are some of important functions of an operating System.**

- Memory Management
- Processor Management
- Device Management
- File Management
- Security
- Control over system performance
- Job accounting
- Error detecting aids
- Coordination between other software and users

**The different types of operating systems are as follows:**

**Interactive (GUI-based)** A graphical user interface is a user-friendly operating system in which commands can be entered by clicking/double-clicking/right-clicking a mouse. Windows operating system is an example of an interactive operating system.

**Single-user, single-task operating system:** This type of operating system allows only one user to do a task on the computer and one thing at a time.

**Single-user, multi-task operating system:** This type of operating system is used on Desktop computers, laptops, where a single user can operate on several programs at the same time. For example, Windows, Apple MacOS are examples of single-user multi task operating system.

**Multi-user:** A multi-user operating system enables multiple users to work on the same computer at different times or simultaneously.

**Real Time:** A real time operating system is used to control machinery, scientific instruments, like robots, in complex animations and computer controlled automated machines. A real-time operating system is a computing environment that reacts to input within a specific period of time. It manages the resources of the computer so that any particular operation is executed in the same amount of time every time it is executed.

Windows CE and Lynx OS are examples of real-time operating systems.

**Distributed:** A distributed operating system runs on a set of computers that are interconnected by a network. It combines the different computers in the network into a single integrated computer and storage location. Windows, UNIX, and LINUX are examples of distributed operating systems.

**Windows 7 operating system:**

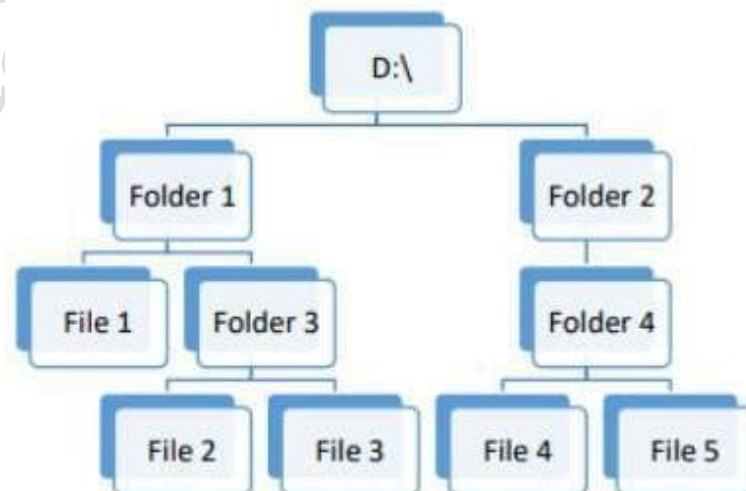
Windows 7 is an operating system developed by Microsoft and is used on personal computers. After loading Windows 7, the first screen that appears on the monitor is called desktop. From the desktop, you can access different components of Windows 7.

By default, Windows 7 has a picture for the desktop background. This is called **wallpaper**.

Small pictures on the desktop are called **icons**. These icons represent files, folders, 31 applications, etc. At the bottom of the desktop is a long bar called the **Taskbar**. To the left of the taskbar is the Start button.

**File Concept, File Operations, File Organization, Directory Structures And File System Structures**

Everything you store on your computer is stored in the form of a file. There are specific naming conventions for naming files or folders, like characters that can be used, maximum number of characters, etc. Files can be separately placed into groups, called folders/directories. Each directory/folder can contain related files and/or sub-folders.



**The steps to create a new folder are:**

1. Double-click the Computer icon.
2. Select the drive in which you want to create a new folder. Say, Local Disk D:.
3. Window will open up showing files and folders in Local Disc D: Click New Folder on the toolbar.
4. A new folder is created with name New Folder highlighted
5. Type a name for the folder

**To create a new file:**

1. Right-click anywhere in the blank area of the right-column.
2. In the Shortcut menu, click New and select the type of the file you want to create.

**To rename a file or a folder:**

1. Right-click the file or the folder.
  2. From the shortcut menu, select Rename option
  3. Type the new name or edit the existing name and press the Enter key.
- Or Just select the file/folder and press Function key F2.

**To copy a folder or directory**

You can copy a file or a folder in any one of the following ways:

**1. Shortcut menu:**

- a. Right-click the file or the folder you want to copy.
- b. Select Copy option from the Shortcut menu.
- c. Select the drive or the folder where you want to make a copy of the selected file or folder.
- d. Right-click and select Paste option from the Shortcut menu.

**2. Drag and Drop method:**

To copy a file or a folder, hold down the Ctrl key while dragging it to the new location.

**3. Using Keyboard:**

- a. Select the file or the folder.
- b. Press Ctrl + C to copy the file or the folder.
- c. Open the destination folder.
- d. Press Ctrl + V to paste the copied file.

### **To Move Files and folders**

You can move a file or a folder in any one of the following ways:

#### **1. Shortcut menu:**

- a. Right-click the file or the folder you want to copy
- b. Select Cut option from the Shortcut menu.
- c. Select the drive or the folder where you want to move the selected file or folder.
- d. Right-click and select Paste option from the Shortcut menu.

#### **2. Drag and Drop method:**

**To copy a file or a folder, select the file and drag it to a new location.**

#### **3. Using Keyboard:**

- a. Select the file or the folder.
- b. Press Ctrl + X to cut the file or the folder.
- c. Open the destination folder.
- d. Press Ctrl + V to paste the copied file.

### **To permanently delete Files**

You can permanently delete the contents of the Recycle Bin in any one of the following ways:

Right-click the Recycle Bin icon and then click Empty Recycle Bin

OR

1. Double-click the Recycle Bin icon.
2. The Recycle Bin window appears.
3. Click Empty the Recycle Bin.

### **To restore the files and folders**

To recover a file from the Recycle Bin, right-click the file, and then click Restore.

Or

Select the file and click Restore this item

## **CARE AND MAINTENANCE OF COMPUTER**

Regular maintenance of the computer system is very important.

### **Some of the maintenance activities are:**

- Keep the components of the computer, like keyboard, mouse, monitor, etc. clean.
- Replace hardware that is not functioning properly
- Keep food items away from the computer
- Cables and chords should not be messed up
- Removing unauthorized software from the computer
- Take regular backup of the data
- Ensure backups are working properly by periodically restoring or checking of data. You should use external hard drive for backup of data on your computer.
- Run anti-virus periodically
- Keep anti-virus software up to date
- Do not overcharge the batteries
- Do not block the vents
- Always shut down the computer properly

### **Measures to protect Computer**

- Regular scans should be done to check for viruses, malware, etc.
- An effective antivirus software should be installed in your computer.
- Always keep your anti-virus software updated so that it can detect new viruses. Full system scan should be done to periodically, preferably weekly to scan for viruses.
- A regular disk defragmentation should be done to remove all unnecessary information that slows down the computer.
- Disk defragmentation done at regular intervals helps the disc space to be used at an optimal level.
- Take regular backup of the data on your computer. In case the data is lost due to any reason.
- system failure, virus attack, etc., you can easily retrieve your data using backup files till your last update.

- System should be upgraded with new updates that were not there at the time of purchase, like, increasing RAM, to improve the performance. Also storage space should also be increased for storage of more information.
- If you are getting some disc errors, then make sure that temporary internet files are deleted from time to time.
- Software's should be updated regularly so that it works with maximum efficiency

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