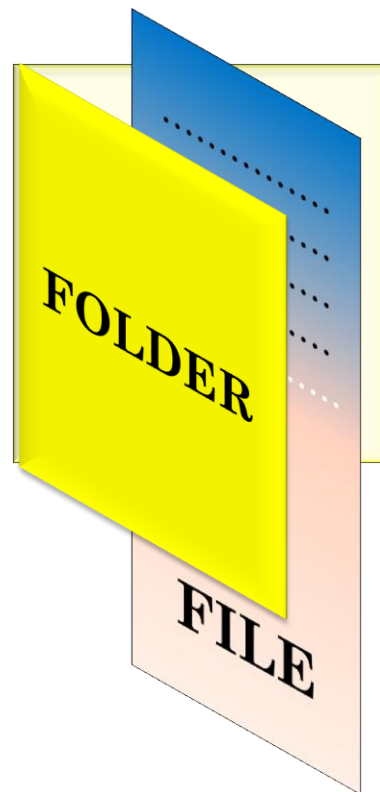


# COMPUTER MANAGEMENT



# COMPUTER BOOTING

This is the process of starting or resetting a computer, which involves loading an operating system into memory.

## TYPES OF BOOTING

There are 2 methods of booting a computer namely;

- a) Cold booting
- b) Warm booting

# 1. COLD BOOTING

**Cold booting** is the initial process of turning on a computer after it has been powered off completely.

Or

Cold booting is when computer starts from the state of completely being off

# BASIC COLD BOOTING STEPS

1. **Powering the computer** – this involves pressing the power button to allow power distribution to all other parts of the computer through the mother board.

2. **Basic input- output system**

When a computer is turned on, the Basic Input-Output System (BIOS) on the computer system's Read-Only Memory (ROM) chip is initiated and takes charge

### 3. Power on self-test(POST)

The BIOS then performs POST initial hardware checks to make sure all the computer's components are operational.

### 4. Boot loader –This is a computer program that loads the main operating system or runtime environment for the computer after completion of the self-tests.

### 5. Loading of the operating system

BIOS looks for the Operating System files on the hard disk, copies them and loads them into RAM

## WARM BOOTING

**Warm booting** is the process of restarting a computer that is already working/ switched on.

This is usually done when

- a) When the computer hangs.
- b) When the computer freezes/does not respond to instructions.
- c) After installing new a software/program/driver.

- d) After uninstalling new a software/program/driver.
- e) After performing a system update.
- f) After performing a system restore.
- g) When the computer fails to recognize some hardware.
- h) After installing a hardware.
- i) After uninstalling a hardware.
- j) After computer configuration.
- k) During troubleshooting a computer.

## HOW TO PERFORM A WARM BOOT

i. Press **CTRL + ALT + Delete** at once

ii. Choose end task

or

i. Clicking the **Start button**,

ii. click **shut down**

iii. select **restart**



# STARTUP ERRORS

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# FILE MANAGEMENT

- The *file management system (FMS)* is the subsystem of an operating system that manages the data storage organization on disk, and provides services to processes related to file access.
- File management describes the fundamental methods for naming, storing and handling files.

# FMS TYPICALLY PROVIDES THE FOLLOWING FUNCTIONALITIES:

- File creation, modification and deletion.
- User's (or user groups') ownership of files, and access control on the basis of ownership permissions.
- Facilities to structure data within files (predefined record formats, etc).
- Facilities for maintaining data redundancy against technical failure (back-ups, disk mirroring, etc.).
- Logical identification and structuring of the data, via file names and hierarchical directory structures.

# WHAT IS A COMPUTER FILE?

- A ***computer file*** is a specific piece of data that is held on a *computer* always identified with a name.
- A collection of data or information that has a name, called the *filename*.

# TYPES OF FILES:

- System files- these files contain information that is critical for the operation of the computer.
- *data files*
- *text files*,
- *program files* / *application files- hold programs or application files.*,
- *directory files* etc

**NB:** Different types of files store different types of information. For example, program files store programs, whereas text files store text.

# TERMS RELATED TO FILE MANAGEMENT

- (i) Drive:** Is a piece of hardware that is used to read and store information on the **computer**. The Hard disk (hard drive ) is usually designated with the letter “C”.
- (ii) Folder :** Is a virtual location where programs, files, and other folders can be located. It is used to put related files together under one name. A folder, unlike a file, is a storage unit or container. Like a file, it also has a name.
- (iii) Directory:** is an organisation unit or container used to organise folders and files into a hierarchical structure.

# IMPORTANCE OF KEEPING FILES IN A FOLDER

- It is easier to locate and access files.
- It enables users to organise work easily.
- It enables users to backup work.
- It is easy to protect files like applying folder locks.

### (III). FILE NAME:

Is a *name* used to uniquely identify a computer *file* stored in a *file* system. Different *file* systems impose different restrictions on *filename* lengths and the allowed characters within filenames.



## (IV) FILE EXTENSION:

Is a group of letters appearing after a period in a file name, indicating the format or type of the file.

**Or A file extension** *is a is the ending of a file name that helps identify the type of file in operating systems such as Microsoft Windows.*

### Examples:

.doc – Microsoft Word document

.jpg- for image files

.exe- executable files/ application/program

.ppt- presentation file.

.jpeg- used for digital images.

- .xls - Ms. Excel file
- .pub - publication file
- .html - webpage
- .pdf - portable document file
- .accdb - Ms. Access file
- .txt - text file
- .zip - compressed file

## (V) FILE SIZE:

- This is the size of a file measured in bytes. Different storage media hold different file capacities. CDs hold approx 700MB, DVD 4.7GB, Flash disk- 1GB, 2GB....etc capacities.

## (VI) FILE PATH:

- Is a directory tree hierarchy expressed in a string of characters in which path components are separated by delimiting characters (comma, colon, etc..) .
- The data that we work with on computers is kept in a hierarchical file system in which directories have files and subdirectories beneath them.
- It is used to provide the exact location of a file.

# EXAMPLE OF FILE PATHS

**C:\Users\Budo\Desktop\Exams\SubICT-BOT,2015.doc**

- **C:\** - Root directory.
- **Users** - Computer Name.
- **Budo** - User Name / privilege / Account.
- **Desktop** - Folder Location.
- **Exams** - Folder name.
- **SubICT-BOT,2015** - File name
- **.doc** - file extension.

# FORMS OF FILE OPERATIONS

- File operations are simply those things that you can do to a file.
- There are many different types of file operations. The main ones that most people use are:
  1. **Creating a file.** Two steps are necessary to create a file.
    - ✓ Space in the file system must be found for the file.
    - ✓ An entry for the new file must be made in the directory.

- 2. Writing a file.**
- 3. Reading a file**
- 4. Repositioning within a file-** This file operation is also known as a file seek.
- 5. Deleting a file.**
- 6.Truncating a file.** The user may want to erase the contents of a file but keep its attributes.

7. Opening a file.
8. Closing a file.
9. Copy the File from one Location to another.
10. Sorting or Arrange the Contents of File.
11. Edit a file.
12. Update a file.
13. Send a file.



14. Combine / split a file.
15. Zip / compress a file.
16. Convert from one format to another e.g.  
From .doc to .rtf.
17. Print a file.
18. Save a file.

# CAUSES OF DATA LOSS

1. Deleting files accidentally.
2. Viruses and damaging malware.
3. Mechanical damages of hard drive.
4. Power failures.
5. Spilling coffee, and other water damages.
6. Fire accidents and explosions.

# SAFEGUARDING COMPUTER FILES

- 1. Back up early and often.**
- 2. Use file-level and share-level security-** To keep others out of your data eg. share permissions to control what user accounts can and cannot access the files across the network.
- 3. Password-protect documents.**

4. **Use EFS encryption-** protects individual files and folders
5. **Use disk encryption.** Protects the entire disk.
6. **Hide data with steganography.** You can use a steganography program to hide data inside other data. For example, you could hide a text message within a .JPG graphics file.
7. **Protect data in transit with IP security.**
8. **Secure wireless transmissions.**

9. **Use rights management to retain control**
10. **Install an antivirus program to protect your computer from viruses.**

# SAVING FILES

- When you chose **File** → **Save As**, three features appear in a dialogue box. ie
  - (i) **Save in:** This feature allows you to browse for a location where to save a file e.g on the desktop, My documents folder etc.
  - (ii) **File name**– This is a feature that allows you to provide a name to a file/ identifier which should be related to the contents of the file.

**(iii) Save as type:** This feature allows you to choose a file format to be saved in. eg a word document can be saved as, **Word document format, Web page, Plain text** etc.

# LOCATING LOST FILES

1. Use a “Find file” facility on your operating system by going to “**Start**” → “**Search for and files**” → -type the name of the program or file and it will show.
2. One can also use the “**Search computer**” option on the Top Right Corner of a Folder.



