# TRAINING DAY 9 REPORT:

- ## Linux User Administration & File Permissions

  Today, I studied how **Linux handles users, file ownership, and permissions**, which are important for system security and administration.

## 1. Linux User Administration

- Every action in Linux is performed by a **user**.
- Linux has **three types of users**:

  **1. User** (Owner of the file)

  **2. Group** (A set of users)

  **3. Others (Everyone else**

## 2. Ownership of Files

Each file/directory in Linux is owned by:
- A **user (owner)**

- A **group**

**Check ownership using:** ls -l filename

**Example output:** -rwxr-xr-- 1 **user group** 1234 date filename

## 3. Permissions of Files

Linux files have **three types of permissions** for **user, group, and others**:

| Permission | Symbol | Meaning |
|---|---|---|
| **Read** | r | View file or list directory |
| **Write** | w | Modify file or directory |
| **Execute** | x | Run file as program or script |

Example:  -rwxr--r--

Means:

- Owner can read/write/execute

- Group can read

- Others can read

# 4. Changing Permissions

## a) Symbolic Mode

| Symbol | Meaning |
|---|---|
| u | user (owner) |
| g | group |
| o | others |
| a | all (user+group+others) |
| + | add permission |
| - | remove permission |
| = | set exact permission |

## b) Absolute Mode (Octal Mode)

Permissions are set using **numbers**:

- r = 4, w = 2, x = 1

So:

| Number | Meaning |
|---|---|
| 7 | rwx (read+write+execute) |
| 6 | rw- |
| 5 | r-x |
| 4 | r-- |
| 0 | --- |

## • Windows Run Commands:

## Why Use Run Commands?

- Saves time

- Opens hidden or advanced settings

- Useful in troubleshooting

- Works on almost all versions of Windows

# Commonly Used Run Commands:

| Command | What It Opens |
|---|---|
| cmd | Command Prompt |
| powershell | PowerShell |
| control | Control Panel |
| msconfig | System Configuration |
| regedit | Registry Editor |
| appwiz.cpl | Add/Remove Programs |
| notepad | Opens Notepad |
| calc | Calculator |
| explorer | Opens File Explorer |
| taskmgr | Task Manager |
| devmgmt.msc | Device Manager |
| services.msc | Windows Services |
| compmgmt.msc | Computer Management |
| ncpa.cpl | Network Connections |
| inetcpl.cpl | Internet Options |
| diskmgmt.msc | Disk Management |
| sysdm.cpl | System Properties |
| gpedit.msc | Group Policy Editor *(not in Home Edition)* |
| dxdiag | DirectX Diagnostic Tool |

## How to Use:

1. Press **Win + R** on your keyboard.

2. Type the command (e.g., cmd)

3. Hit **Enter**

- # DOS Commands (Disk Operating System)

  **DOS (Disk Operating System) commands**, which are used to interact with the operating system using the **command-line interface (CLI)** — especially in older Windows or during system recovery.

  ## What is DOS?

  - **DOS** is an **early operating system** based on text commands.

- Even today, many **DOS commands still work** inside **Command Prompt (cmd.exe)** in Windows.

## Types of DOS Commands:

### 1. Internal Commands

These are built into the **command interpreter (COMMAND.COM)** and don't need any external files.

| Command | Description |
|---------|-------------|
| DIR | Lists files and folders |
| CD | Changes directory |
| CLS | Clears the screen |
| COPY | Copies files |
| DEL | Deletes files |
| REN | Renames files |
| TYPE | Displays content of a text file |
| DATE | Displays or sets system date |
| TIME | Displays or sets system time |
| VER | Shows DOS version |

### 2. External Commands

These require **separate executable files (.exe, .com, .bat)** and are stored on disk.

| Command | Description |
|---------|-------------|
| FORMAT | Formats a disk |
| DISKCOPY | Copies content of one disk to another |
| CHKDSK | Checks disk for errors |
| XCOPY | Advanced file and folder copy |
| DELTREE | Deletes folder and contents |
| FDISK | Disk partition management |
| EDIT | Opens simple text editor |
| MODE | Configures system devices |
| LABEL | Changes disk label |

## Examples:

DIR          → Lists files in current directory

CD folder     → Goes into the specified folder

COPY a.txt b.txt → Copies a.txt to b.txt

DEL old.txt   → Deletes the file old.txt

**Key Points:**

- DOS is **case-insensitive** (`DIR`, `dir`, `Dir` all work).

- Commands are **executed line by line**.

- No GUI – **everything is done through typing**.

- **Hiding & Unhiding Computer Drives in Windows**

   **Hide or unhide drives** (like D:, E:, F:) in my computer using simple methods. This is useful to protect data or keep the desktop clean.

## Method 1: Using Diskpart (Command Line)

### To Hide a Drive:

1. Press `Win + R` → type `cmd` → press **Enter**

2. In Command Prompt, type : `diskpart`

Then : `list volume`

(It will list all drives. Note the volume number of the drive you want to hide.)

select volume X    ← (Replace X with your volume number)
remove letter=E    ← (Replace E with your drive letter)

This hides the drive from **File Explorer**, but it's still safe and data is not deleted.

### To Unhide the Drive:

```
diskpart
list volume
```

select volume X    ← (Same volume as before)

assign letter=E    ← (Reassign the original drive letter)

Your hidden drive is now visible again in **This PC**.

## Method 2: Using Disk Management (GUI)

1. Press `Win + R` → type `diskmgmt.msc` → press Enter

2. Right-click on the drive you want to hide → Click **"Change Drive Letter and Paths"**

3. Click **Remove** → Confirm.
   (Drive gets hidden)

4. To unhide, come back and click **"Add"** to reassign a letter.

### Notes:

- This does **not delete any files**.

- You can still access the hidden drive via Command Prompt if needed.

- Best used for **privacy or system safety** (e.g., hiding recovery partitions).

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