

## TOPIC : CONFUSED LINUX COMMANDS

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### 1. File and directory navigation

#### cd vs pwd vs ls

- **cd [directory]** → Changes the current directory.
- **pwd** → Prints the current working directory.
- **ls** → Lists the contents of a directory.

#### ls vs ll

- **ls** → Lists files in the directory (default format).
  - **ll** → Detailed listing (long format, often an alias for **ls -l**).
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### 2. File manipulation

#### cp vs mv vs rm

- **cp source destination** → Copies files or directories.
- **mv source destination** → Moves or renames files or directories.
- **rm file** → Removes a file (permanent deletion).

#### rm vs rmdir

- **rm -r directory** → Removes a directory and its contents.
  - **rmdir directory** → Removes an empty directory only.
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### 3. File viewing

#### cat vs tac vs less vs more

- **cat file** → Displays file content from start to end.
  - **tac file** → Displays file content in reverse order.
  - **less file** → Opens file for scrolling (allows backward movement).
  - **more file** → Opens file for viewing but cannot scroll backward.
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### 4. File permissions & ownership

## chmod vs chown vs chgrp

- **chmod 755 file** → Changes file permissions.
  - **chown user file** → Changes file owner.
  - **chgrp group file** → Changes file group ownership.
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## 5. Process management

### ps vs top vs htop

- **ps** → Displays running processes (static snapshot).
- **top** → Displays real-time running processes.
- **htop** → Interactive version of top (if installed).

### kill vs pkill vs killall

- **kill PID** → Kills a specific process by PID.
  - **pkill name** → Kills processes matching a name.
  - **killall name** → Kills all processes with a matching name.
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## 6. Disk & space management

### df vs du

- **df -h** → Displays available disk space.
  - **du -sh directory** → Displays space used by a specific directory.
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## 7. Networking commands

### ping vs traceroute

- **ping domain.com** → Checks connectivity by sending ICMP packets.
- **traceroute domain.com** → Shows the path taken to reach the destination.

### wget vs curl

- **wget URL** → Downloads a file from a URL.
  - **curl URL** → Fetches content (more versatile for APIs and headers).
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## 8. User management

### who vs w vs whoami

- **who** → Shows currently logged-in users.
  - **w** → Shows logged-in users with activity details.
  - **whoami** → Displays the current user's name.
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## 9. Archiving & compression

### tar vs zip vs gzip

- **tar -cvf archive.tar directory/** → Creates an archive without compression.
  - **tar -czvf archive.tar.gz directory/** → Creates a compressed tarball.
  - **zip -r archive.zip directory/** → Compresses files into a ZIP archive.
  - **gzip file** → Compresses a file, replacing it with .gz.
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## 10. Searching & text processing

### grep vs egrep vs fgrep

- **grep pattern file** → Searches for a pattern in a file.
- **egrep pattern file** → Extended grep (supports more regex).
- **fgrep pattern file** → Fast grep (searches fixed strings, no regex).

### find vs locate

- **find /path -name filename** → Searches for a file in a directory.
- **locate filename** → Searches using an indexed database (faster).