

■ Linux Bash Commands Used (with Purpose & Examples)

■ File & Directory Navigation

- `cd` — Change directory. Example: `cd /home/user`
- `pwd` — Show current directory. Example: `pwd`
- `ls` — List files. Example: `ls`
- `ls -l` — Detailed list. Example: `ls -l`
- `ls -ld` — Directory permissions. Example: `ls -ld Desktop`
- `tree` — Tree view. Example: `tree`
- `tree -d` — Directories only. Example: `tree -d`
- `tree -f` — Full paths. Example: `tree -f`

■ File & Directory Management

- `mkdir` — Create directory. Example: `mkdir test`
- `mkdir -p` — Create nested dirs. Example: `mkdir -p a/b/c`
- `rmdir` — Remove empty dir. Example: `rmdir test`
- `touch` — Create file. Example: `touch file.txt`
- `cp` — Copy file. Example: `cp a.txt b.txt`
- `cp -r` — Copy directory. Example: `cp -r dir1 dir2`
- `mv` — Move/rename. Example: `mv old.txt new.txt`
- `rm` — Delete file. Example: `rm file.txt`
- `rm -r` — Delete dir. Example: `rm -r folder`
- `rm -rf` — Force delete. Example: `rm -rf folder`
- `cat` — Show content. Example: `cat file.txt`
- `less` — Paginated view. Example: `less file.txt`

■ Text & Content Handling

- `echo` — Print text. Example: `echo Hello`
- `grep` — Search text. Example: `grep linux file.txt`
- `grep -i` — Ignore case. Example: `grep -i linux file.txt`
- `wc` — Count text. Example: `wc file.txt`
- `head` — First lines. Example: `head file.txt`
- `tail` — Last lines. Example: `tail file.txt`
- `diff` — Compare files. Example: `diff a.txt b.txt`
- `sed` — Modify text. Example: `sed 's/a/b/' file.txt`
- `cut` — Extract fields. Example: `cut -d: -f1 /etc/passwd`

■ Search & Location

- `find` — Search files. Example: `find / -name '*.txt'`
- `locate` — Fast search. Example: `locate passwd`
- `updatedb` — Update locate DB. Example: `sudo updatedb`
- `whereis` — Find binary. Example: `whereis ls`

- `which` — Command path. Example: `which python`

■ Environment Variables & Shell

- `env` — Show variables. Example: `env`
- `export` — Set variable. Example: `export VAR=1`
- `unset` — Remove variable. Example: `unset VAR`
- `alias` — Shortcut. Example: `alias ll='ls -l'`
- `whoami` — Current user. Example: `whoami`
- `uname -a` — System info. Example: `uname -a`
- `uname -n` — Hostname. Example: `uname -n`

■ Permissions & Ownership

- `chmod` — Change permissions. Example: `chmod 644 file`
- `chmod +x` — Make executable. Example: `chmod +x script.sh`
- `chown` — Change owner. Example: `sudo chown user file`
- `chgrp` — Change group. Example: `sudo chgrp staff file`
- `sudo` — Run as root. Example: `sudo apt update`
- `su` — Switch user. Example: `su root`

■■ Package Management

- `apt update` — Update lists
- `apt upgrade` — Upgrade packages
- `apt install` — Install pkg. Example: `sudo apt install net-tools`
- `apt remove` — Remove pkg
- `apt purge` — Remove pkg+config
- `apt autoremove` — Clean deps
- `dpkg -i` — Install .deb
- `dpkg -l` — List packages

■ System & Resources

- `date` — Show date
- `cal` — Calendar
- `uptime` — System time
- `df -h` — Disk usage
- `free -h` — RAM usage
- `timedatectl` — Time mgmt
- `timedatectl set-timezone Europe/Madrid`

■ Networking

- `ip a` — Interfaces
- `ifconfig` — Network config
- `ping` — Connectivity test
- `netstat -tuln` — Listening ports
- `netstat -tun` — Active connections

■ Process Management

- `ps aux` — Processes
- `top` — Live monitor
- `kill` — Kill PID
- `kill -9` — Force kill
- `pkill` — Kill by name
- `bg` — Resume background
- `&` — Run background

■■ GUI / Desktop

- `firefox &` — Launch browser
- `thunar &` — Open file manager
- `pkill thunar` — Close Thunar

■ Utilities & Verification

- `lsblk` — Block devices
- `mount` — Mounted FS
- `cat /etc/os-release` — OS info
- `which` — Verify binary