

Shell Commands with Purpose and Use

NAVIGATION

- `pwd` : Show your current directory location.
- `ls` : List files and folders.
- `ls -l` : Detailed listing with permissions & size.
- `ls -a` : Show hidden files.
- `cd folder` : Move to folder.
- `cd ..` : Move up.
- `cd ~` : Go to home.

FILES & DIRECTORIES

- `touch file` : Create empty file.
- `mkdir folder` : Create directory.
- `cp src dest` : Copy files.
- `cp -r src dest` : Copy folders.
- `mv src dest` : Move or rename.
- `rm file` : Delete file.
- `rm -r folder` : Delete folder with contents.

VIEWING CONTENT

- `cat file` : Print file contents.
- `less file` : Scroll through file.
- `head file` : Show first 10 lines.
- `tail file` : Show last 10 lines.

SEARCHING

- `grep "text" file` : Search inside file.
- `grep -r "text" folder` : Search recursively.
- `find /path -name pattern` : Search for files by name.

REDIRECTION

- `command > file` : Redirect output (overwrite).
- `command >> file` : Append output.
- `command 2> file` : Redirect errors.
- `command &> file` : Send both output and errors to file.
- `command | other` : Pipe output to another command.
- `command | tee file` : View & save output.

PROCESS MANAGEMENT

- `ps` : List running processes.
- `top` : Live process viewer.
- `kill PID` : Stop a process.
- `kill -9 PID` : Force stop.

NETWORK

- `ping site.com` : Test connectivity.
- `curl url` : Fetch webpage content.
- `wget url` : Download file.
- `ip a` : Show network interfaces.

SYSTEM INFO

- uname -a : System & kernel info.
- hostname : Show computer name.
- df -h : Disk usage.
- free -h : Memory usage.
- uptime : System running time.

PERMISSIONS

- chmod 755 file : Change permissions.
- chown user:group file : Change file owner.

PACKAGE MANAGEMENT (APT)

- sudo apt update : Refresh package list.
- sudo apt upgrade : Install updates.
- sudo apt install pkg : Install package.
- sudo apt remove pkg : Uninstall package.