Navigation

- **pwd** – Displays the current working directory path.

- **ls** – Lists files and directories in the current location.

- **ls -l** – Shows detailed information like permissions, owner, size, date.

- **ls -a** – Lists all files including hidden files starting with dot.

- **ls -lh** – Shows long listing with human-readable sizes (KB/MB).

- **cd** – Changes from current directory to specified directory.

- **cd ..** – Moves one level up to parent directory.

- **cd ~** – Switches to user's home directory.

- **cd -** – Returns to previously used directory.

File & Directory Operations

- **mkdir** – Creates a new directory.

- **mkdir -p** – Creates nested directories in a single command.

- **rmdir** – Deletes an empty directory only.

- **touch** – Creates an empty file or updates file timestamp.

- **cp** – Copies file from source to destination.

- **cp -r** – Recursively copies directories with contents.

- **mv** – Moves or renames a file/directory.

- **rm** – Removes a file.

- **rm -rf** – Force deletes directory and contents without confirmation.

File Content

- **cat** – Displays entire content of a file.

- **less** – Views file page by page with scrolling.

- **head** – Shows first 10 lines of a file.

- **tail** – Shows last 10 lines of file.

- **tail -f** – Displays file updates in real time.

- **wc** – Counts lines, words, and characters in file.

- **wc -l** – Counts only number of lines.

Permissions & System

- **chmod** – Changes file access permissions.

- **chown** – Changes file owner and group.

- **whoami** – Shows current logged-in username.

- **uname -a** – Displays complete system information.

- **df -h** – Shows disk space usage in readable format.

- **ps aux** – Lists all running processes.

- **kill** – Terminates a process using its PID.

Text Processing

- **grep** – Searches for a pattern inside files.

- **sed** – Edits and replaces text in stream/file.

- **awk** – Column-wise text processing tool.

- **sort** – Arranges file lines in order.

- **uniq** – Removes adjacent duplicate lines.

- **find** – Searches files in directories by name/type.

Redirection & Pipes

- **>** – Redirects output to file and overwrites it.

- **>>** – Appends output to existing file.

- **|** – Sends output of one command as input to another.

- **2>** – Redirects error messages to file.

Repository

- **git init** – Initializes a directory as a new Git repository.

- **git clone** – Copies a remote repository to local machine.

- **git status** – Shows current state of working/staging area.

- **git add** – Stages files for next commit.

- **git commit** – Saves staged changes to repository with message.

- **git log** – Displays commit history.

- **git diff** – Shows changes between versions/files.

- **git revert** – Undoes a commit by creating new opposite commit.

- **git reset** – Moves HEAD to previous commit, can delete history.

Branching & Merge

- **git branch** – Lists or creates branches.

- **git checkout / git switch** – Changes active branch.

- **git merge** – Integrates one branch into another.

- **git merge --abort** – Cancels merge during conflicts.

- **git mergetool** – Opens conflict resolution tool.

- **git rebase** – Reapplies commits on new base rewriting history.

Remote

- **git remote -v** – Lists configured remotes.

- **git push** – Uploads local commits to remote repo.

- **git pull** – Fetches and merges remote changes locally.

- **git fetch** – Downloads remote changes without merging.

- **git branch -r** – Shows remote branches.

- **git push --delete** – Removes branch from remote.

GitHub

- **Fork** – Creates personal copy of another GitHub repository.

- **Pull Request** – Proposal to merge changes after review.

- **Issues** – GitHub feature to track bugs/tasks.

- **GitHub Actions** – Automates CI/CD workflows.

- **.gitignore** – File specifying untracked patterns.

Advanced

- **git tag** – Marks specific commit as release version.

- **git stash** – Temporarily saves uncommitted work.

- **git cherry-pick** – Applies selected commit to current branch.

- **git submodule** – Includes external repository inside another.