

Git Commands with Explanations

1. Git Setup & Configuration

Command	Explanation
git --version	Checks the installed Git version to verify installation.
git config --global user.name "vallabha-dev"	Sets the global username for commits.
git config --global user.email "vallabhd60@gmail.com"	Sets the global email for commits.
git config --list	Displays all configured Git settings.

2. Repository Creation

Command	Explanation
mkdir gitrepos	Creates a directory to store repositories.
cd gitrepos/	Moves into that directory.
mkdir devopsclass	Creates a new project folder.
cd devopsclass/	Navigates into the new project folder.
git init	Initializes a new local Git repository.

3. Basic Git Workflow

Command	Explanation
git status	Shows the working tree status.
git add .	Stages all new and modified files for commit.
git commit -m "message"	Commits staged changes with a message.
git log --oneline	Shows the commit history in short format.
git show <commit-id>	Displays details of a specific commit.

4. Working with Remote Repositories

Command	Explanation
git remote add origin <URL>	Connects the local repo to a remote repository.
git branch -M main	Renames current branch to main.
git push -u origin main	Pushes commits to remote and sets upstream.
git clone <URL>	Clones a remote repository to local machine.
git pull	Fetches and merges changes from remote.

5. Branching & Merging

Command	Explanation
git branch sprint1	Creates a new branch named sprint1.
git checkout sprint1	Switches to the sprint1 branch.
git merge sprint1	Merges sprint1 branch into current branch.
git branch -d sprint5	Deletes local branch sprint5 safely.
git push origin --delete sprint5	Deletes remote branch sprint5.

6. Rollback & Comparison

Command	Explanation
git diff	Shows changes between working directory and last commit.
git restore --staged <file>	Unstages a file from the staging area.
git revert HEAD	Creates a new commit to undo last commit.
git reset --hard <commit-id>	Resets repository to a specific commit.

7. Useful Linux Commands

Command	Explanation
pwd	Displays current working directory.
clear	Clears terminal screen.
df -h	Shows disk space usage.
free -m	Displays memory usage.
uptime	Shows system uptime.