

Git Commands Quick Reference

Setup and Config

Command	Description
git config --global user.name "name"	Set the name attached to commits
git config --global user.email "email"	Set the email attached to commits
git config --global color.ui auto	Enable colorization of command output
git config --list	List all configured settings
git help <command>	Get help for a Git command

Sharing and Updating Projects

Command	Description
git remote -v	List all configured remotes
git remote add <name> <url>	Add a new remote
git remote remove <name>	Remove a remote
git fetch	Download objects and refs from remote
git fetch <remote>	Fetch from specific remote
git pull	Fetch and merge from remote
git pull --rebase	Fetch and rebase from remote
git push	Push changes to remote
git push <remote> <branch>	Push branch to remote
git push -u <remote> <branch>	Push and set upstream
git push --force-with-lease	Safely force push
git push --tags	Push all tags to remote

Patching

Command	Description
git cherry-pick <commit>	Apply a commit to current branch
git cherry-pick --abort	Abort cherry-pick
git rebase <branch>	Rebase current branch onto another
git rebase -i HEAD~<n>	Interactive rebase last n commits
git rebase --continue	Continue after resolving conflicts
git rebase --abort	Abort rebase
git revert <commit>	Create new commit that undoes a commit
git revert --no-commit <commit>	Revert without auto-committing

Getting and Creating Projects

Command	Description
git init	Initialize a new Git repository
git init <directory>	Create a new local repository in specified directory
git clone <url>	Clone a repository from a remote source
git clone <url> <directory>	Clone a repository into a specific directory

Branching and Merging

Command	Description
git branch	List all local branches
git branch -a	List all branches (local and remote)
git branch <branch>	Create a new branch
git branch -d <branch>	Delete a branch
git branch -m <new-name>	Rename current branch
git checkout <branch>	Switch to a branch
git checkout -b <branch>	Create and switch to new branch
git switch <branch>	Switch to a branch (modern)
git switch -c <branch>	Create and switch to new branch (modern)
git merge <branch>	Merge a branch into current branch
git merge --no-ff <branch>	Merge with a merge commit
git merge --abort	Abort a merge in progress
git log	Show commit history
git log --oneline	Show compact commit history
git log --graph --all	Show branch graph
git stash	Temporarily save uncommitted changes
git stash pop	Apply and remove most recent stash
git stash list	List all stashes
git tag <name>	Create a lightweight tag
git tag -a <name> -m "msg"	Create an annotated tag

Debugging

Command	Description
git bisect start	Start binary search for bad commit
git bisect bad	Mark current commit as bad
git bisect good <commit>	Mark commit as good
git bisect reset	End bisect session
git blame <file>	Show who changed each line
git blame -L 10,20 <file>	Blame specific line range
git grep <pattern>	Search for pattern in tracked files

Basic Snapshotting

Command	Description
git status	Show the status of the working directory
git add <file>	Add a file to the staging area
git add .	Add all new and changed files to staging
git add -p	Interactive staging - choose hunks to add
git diff	Show unstaged changes
git diff --staged	Show staged changes
git commit -m "message"	Commit staged changes with a message
git commit -am "message"	Stage all tracked files and commit
git commit --amend	Amend the last commit
git restore <file>	Discard changes in working directory
git restore --staged <file>	Unstage a file
git reset <file>	Unstage a file (keep changes)
git reset --hard HEAD	Discard all local changes
git rm <file>	Remove file from working directory and staging
git mv <old> <new>	Rename or move a file

Inspection and Comparison

Command	Description
git show <commit>	Show changes of a commit
git show HEAD	Show last commit
git log	Show commit history
git log --follow <file>	Show commit history for file
git log --author="name"	Filter commits by author
git log --grep="pattern"	Search commit messages
git log --since="2 weeks ago"	Filter by date
git diff <branch1>..<branch2>	Compare two branches
git diff <commit1> <commit2>	Compare two commits
git shortlog	Summarized commit history

Administration

Command	Description
git clean -n	Show what would be deleted
git clean -f	Delete untracked files
git clean -fd	Delete untracked files and directories
git gc	Cleanup and optimize local repository
git fsck	Verify database integrity
git reflog	Show reference log (recovery tool)
git reflog show <branch>	Show reflog for specific branch