

# **Git Cheat Sheet with Explanation**

title

## **What is Git?**

Git is a distributed version control system used to track changes in source code and collaborate with teams.

### **git init**

Initializes a new Git repository by creating a .git folder.

### **git clone**

Downloads an existing remote repository along with its full commit history.

### **git status**

Shows the current state of the working directory and staging area.

### **git add / git add .**

Moves files from the working directory to the staging area.

### **git commit -m 'message'**

Creates a snapshot of staged changes in the local repository.

### **git log**

Displays commit history with commit id, author, date, and message.

### **git branch**

Lists all local branches and highlights the current branch.

## **git branch**

Creates a new branch for parallel development.

## **git checkout**

Switches to the specified branch and updates the working directory.

## **git checkout -b**

Creates a new branch and switches to it immediately.

## **git merge**

Combines changes from one branch into the current branch.

## **git pull origin main**

Fetches changes from remote repository and merges them into local branch.

## **git push origin main**

Uploads local commits to the remote repository.

## **git fetch origin**

Downloads changes from remote without merging.

## **git reset**

Removes file from staging area but keeps changes locally.

## **git reset --hard**

Deletes commits and changes permanently (use carefully).

## **git revert**

Safely undoes a commit by creating a new commit.

## **git stash**

Temporarily saves uncommitted changes.

## **git stash pop**

Restores stashed changes and removes them from stash list.

## **.gitignore**

Specifies files and folders that Git should ignore (e.g., node\_modules, .env).

## **Common Interview Flow**

clone → branch → add → commit → pull → push