**List of Git Commands with Description**

**🔹 Basic Git Commands**

| **Command** | **Description** |
| --- | --- |
| git version | Check installed Git version |
| git config --global user.name "Your Name" | Set user name for commits |
| git config --global user.email "your.email@example.com" | Set user email for commits |
| git config --list | View current Git configurations |

**🔹 Repository Management**

| **Command** | **Description** |
| --- | --- |
| git init | Initialize a new Git repository |
| git clone <repo\_url> | Clone an existing repository |

**🔹 Tracking & Committing Changes**

| **Command** | **Description** |
| --- | --- |
| git status | Check the status of changes |
| git add <file> | Add a file to the staging area |
| git add . | Add all changes to staging |
| git commit -m "Message" | Commit changes with a message |
| git commit -am "Message" | Add and commit in one step (only for tracked files) |

**🔹 Branching & Merging**

| **Command** | **Description** |
| --- | --- |
| git branch | List all branches |
| git branch <branch\_name> | Create a new branch |
| git checkout <branch\_name> | Switch to another branch |
| git checkout -b <branch\_name> | Create and switch to a new branch |
| git merge <branch\_name> | Merge a branch into the current branch |
| git branch -d <branch\_name> | Delete a branch |

**🔹 Remote Repositories**

| **Command** | **Description** |
| --- | --- |
| git remote add origin <repo\_url> | Add a remote repository |
| git remote -v | View remote repositories |
| git push origin <branch\_name> | Push changes to remote repo |
| git pull origin <branch\_name> | Pull updates from remote repo |
| git fetch origin | Fetch changes without merging |

**🔹 Undo Changes**

| **Command** | **Description** |
| --- | --- |
| git checkout -- <file> | Undo unstaged changes |
| git reset <file> | Unstage a file |
| git reset --soft HEAD~1 | Undo last commit (keep changes) |
| git reset --hard HEAD~1 | Undo last commit and discard changes |

**🔹 Viewing History**

| **Command** | **Description** |
| --- | --- |
| git log | View commit history |
| git log --oneline --graph --all | View simplified commit history |
| git diff | Show differences between commits |
| git blame <file> | Show who changed each line of a file |

**🔹 Stashing Changes**

| **Command** | **Description** |
| --- | --- |
| git stash | Temporarily save changes |
| git stash list | Show stashed changes |
| git stash apply | Apply the most recent stash |
| git stash drop | Delete the most recent stash |

**🔹 Tagging**

| **Command** | **Description** |
| --- | --- |
| git tag <tag\_name> | Create a new tag |
| git tag | List all tags |
| git show <tag\_name> | Show tag details |

**🔹 Resolving Merge Conflicts**

| **Command** | **Description** |
| --- | --- |
| git mergetool | Open merge conflict resolution tool |
| git commit -m "Resolved conflict" | Commit after resolving conflicts |

**🔹 Git Ignore**

| **Command** | **Description** |
| --- | --- |
| echo "node\_modules/" >> .gitignore | Ignore files/folders |
| git rm --cached <file> | Remove a file from Git but keep locally |