

Git Cheat Sheet

1. Git configuration

- **Git config**

Get and set configuration variables that control all facets of how Git looks and operates.

Set the name:

```
$ git config --global user.name "User name"
```

Set the email:

```
$ git config --global user.email "himanshudubey481@gmail.com"
```

Set the default editor:

```
$ git config --global core.editor Vim
```

Check the setting:

```
$ git config -list
```

- **Git alias**

Set up an alias for each command:

```
$ git config --global alias.co checkout
```

```
$ git config --global alias.br branch
```

```
$ git config --global alias.ci commit
```

```
$ git config --global alias.st status
```

2. Starting a project

- **Git init**

Create a local repository

```
$ git init <Repo Name>
```

- **Git clone**

Make a local copy of the server repository.

```
$ git clone <remote Url>
```

3. Local changes

- **Git add**

Add a file to staging (Index) area

```
$ git add Filename
```

Add all files of a repo to staging (Index) area

```
$ git add*
```

- **Git commit**

Record or snapshots the file permanently in the version history **with a message**

```
$ git commit -m "Commit Message"
```

4. Track changes

- **Git diff**

Track the changes that have not been staged:

```
$ git diff
```

Track the changes that have staged but not committed:

```
$ git diff --staged
```

Track the changes after committing a file:

```
$ git diff HEAD
```

Track the changes between two commits:

```
$ git diff <commit1-sha> <commit2-sha>
```

Git Diff Branches:

```
$ git diff <branch 1> <branch 2>
```

- **Git status**

Display the state of the working directory and the staging area.

```
$ git status
```

- **Git show**

Shows objects:

```
$ git show <options> <objects>
```

5. Commit History

- **Git log**

Display the most recent commits and the status of the head:

```
$ git log
```

Display the output as one commit per line:

```
$ git log --oneline
```

Displays the files that have been modified:

```
$ git log --stat
```

Display the modified files with location:

```
$ git log -p
```

- **Git blame**

Display the modification on each line of a file:

```
$ git blame <file name>
```

6. Ignoring files

- **.gitignore**

Specify intentionally untracked files that Git should ignore.

Create .gitignore:

```
$ touch .gitignore
```

List the ignored files:

```
$ git ls-files -i --exclude-standard
```

7. Branching

- **Git branch**

Create branch:

```
$ git branch <branch name>
```

List Branch:

```
$ git branch --list
```

Delete Branch:

```
$ git branch -d<branch name>
```

Delete a remote Branch:

```
$ git push origin -delete <branch name>
```

Rename Branch:

```
$ git branch -m <old branch name><new branch name>
```

- **Git checkout**

Switch between branches in a repository.

Switch to a particular branch:

```
$ git checkout <branch name>
```

Create a new branch and switch to it:

```
$ git checkout -b <branchname>
```

Checkout a Remote branch:

```
$ git checkout <remotebranch>
```

- **Git stash**

Switch branches without committing the current branch.

Stash current work:

```
$ git stash
```

Saving stashes with a message:

```
$ git stash save "<Stashing Message>"
```

Check the stored stashes:

```
$ git stash list
```

Re-apply the changes that you just stashed

```
$ git stash apply
```

Track the stashes and their changes:

```
$ git stash show
```

Re-apply the previous commits:

```
$ git stash pop
```

Delete a most recent stash from the queue:

```
$ git stash drop
```

Delete all the available stashes at once:

```
$ git stash clear
```

Stash work on a separate branch:

```
$ git stash branch <branch name>
```

- **Git cherry pic**

Apply the changes introduced by some existing commit:

```
$ git cherry-pick <commit id>
```

8. Merging

- **Git merge**

Merge the branches:

```
$ git merge <branch name>
```

Merge the specified commit to currently active branch:

```
$ git merge <commit>
```

- **Git rebase**

Apply a sequence of commits from distinct branches into a final commit.

```
$ git rebase <branch name>
```

Continue the rebasing process:

```
$ git rebase --continue
```

Abort the rebasing process:

```
$ git rebase --skip
```

- **Git interactive rebase**

Allow various operations like edit, rewrite, reorder, and more on existing commits.

```
$ git rebase -i
```

9. Remote

- **Git remote**

Check the configuration of the remote server:

```
$ git remote -v
```

Add a remote for the repository:

```
$ git remote add <short name><remote URL>
```

Fetch the data from remote server

```
$ git fetch <Remote>
```

Remove a remote connection from the repository:

```
$ git remote rm <destination>
```

Rename remote server:

```
$ git remote rename <old name><new name>
```

Show additional information about a particular remote:

```
$ git remote show <remote>
```

Change remote:

```
$ git remote set-url <remote name><newURL>
```

- **Git origin master**

Push data to remote server:

```
$ git push origin master
```

Pull data from remote server:

```
$ git pull origin master
```

10. Pushing Updates

- **Git push**

Transfer the commits from your local repository to a remote server.

Push data to remote server:

```
$ git push origin master
```

Force push data:

```
$ git push <remote><branch> -f
```

Delete a remote branch by push command:

```
$ git push origin -delete edited
```

11. Pulling updates

- **Git pull**

Pull the data from the server:

```
$ git pull origin master
```

Pull a remote branch:

```
$ git pull <remote branch URL>
```

- **Git fetch**

Downloads branches and tags from one or more repositories.

Fetch the remote repository:

```
$ git fetch< repository Url>
```

Fetch a specific branch:

```
$ git fetch <branch URL><branch name>
```

Fetch all the branches simultaneously:

```
$ git fetch --all
```

Synchronize the local repository:

```
$ git fetch origin
```

12. Undo changes

- **Git revert**

Undo the changes

```
$ git revert
```

Revert a particular commit:

```
$ git revert <commit-ish>
```

- **Git reset**

Reset the changes:

```
$ git reset --hard
```

```
$ git reset --soft
```

```
$ git reset --mixed
```

13. Removing files

- **Git rm**

Remove the files from the working tree and from the index:


```
$ git rm <file Name>
```

Remove files from the Git But keep the files in your local repository:

```
$ git rm --cached
```

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