Git & Github

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Git :- version control system is a tools that helps to track changes in our code.

→ Git is a version control system

→ It is :- • Popular
• Free & open source
• Fast & scalable

Github :- Github is a website that allows developers to store and manage their code using Git.

Github Account :-

- Create a new repository.
- Make our first commit.

Commit :- Commit means, changes the code.

Example :-
Add something new in our repository.

Add ⟶ commit

- **Repository** :⟶ Folder
↳ collection of file.

Setting up Git

- visual studio code.
- windows (Git BASH)

} check current version of Git → Git -- version

Configuring Git

- git Config -- global user.name "My name"
- git Config -- global user.email "someone@gmail.com"
- git config -- list

~ → Root directory
↳ folder

some Basics of Git Commands

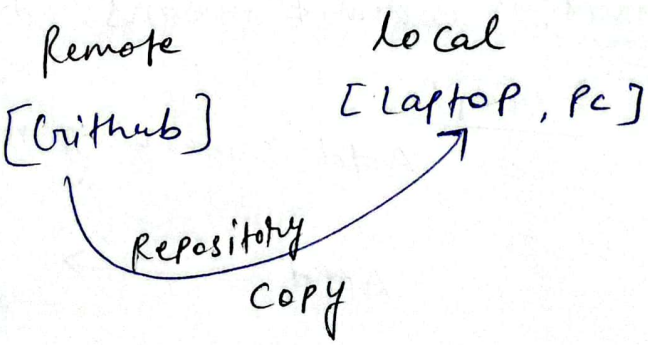
① clone & status

- clone :- cloning a repository on your local machine.

→ clone means duplicate.

Command :-

→ git clone <link>



→ CD ⇒ change directory
↓
folder

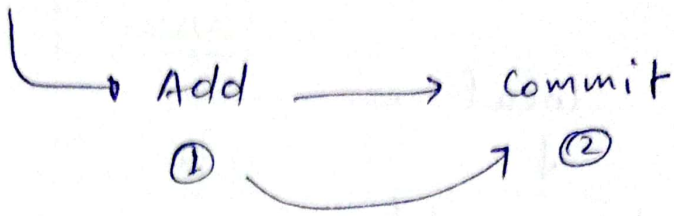
→ clear

→ LS → list files. of all files in Terminals

→ LS-a → list hidden files.

status :- Display the state of the code.

Command :- git status



⇒ If any changes in local machine before commit there are many error shows in our terminal.

① untracked files :- Add new file in our folder

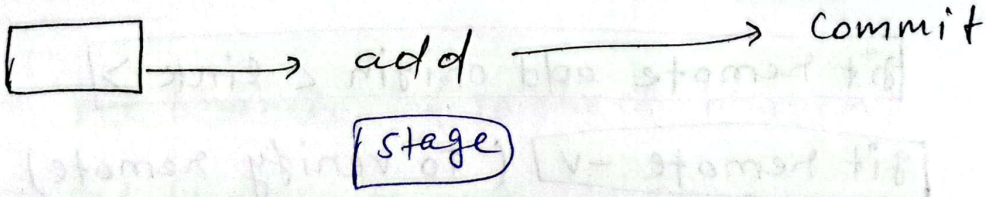
② modified :- changed in any code or text.

③ staged :- files ready to be committed.

④ unmodified :- unchanged

Add & Commit

add :- adds new or changed files in your working directory to the Git staging area.



Command :- git add <file name>

commit :- It is the record of change.

Command :- git commit -m "some message"

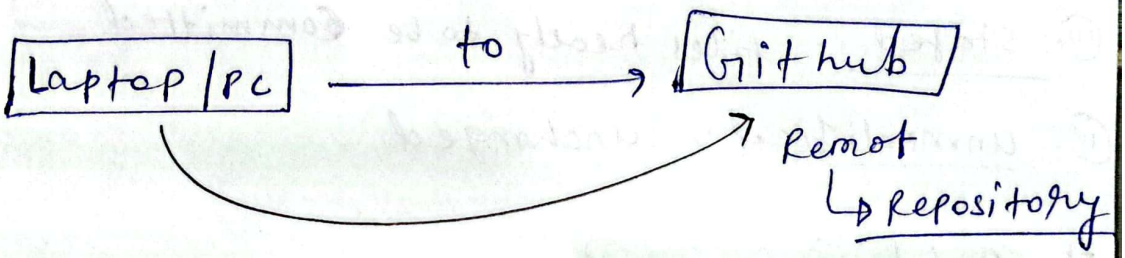
Push Command

Push :- Upload local reposatory to remote repo.

local → Remot
↓ ↓
Laptop / Pc {Github}

command :- git push origin main

When files push to local machine to Github



Init Command

Init :- used to create a new git repository

git init

git remote add origin < link >

git remote -v (To verify remote)

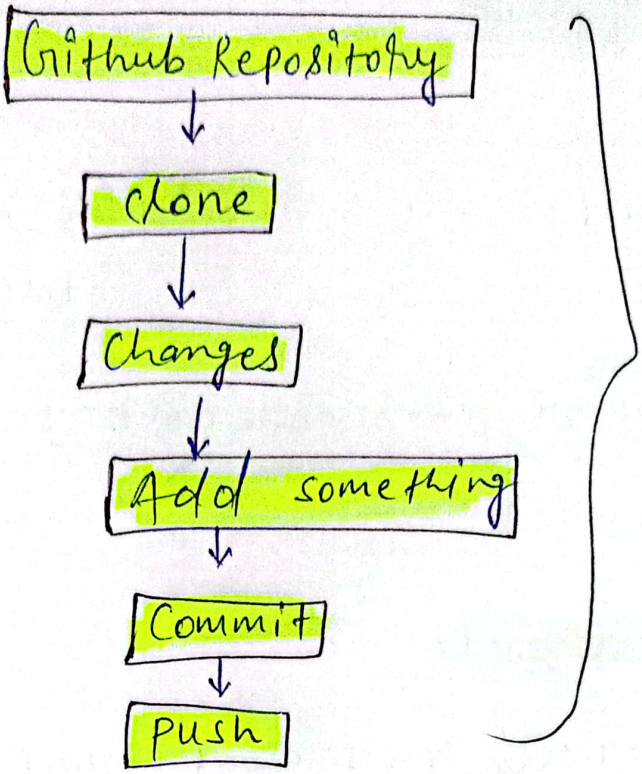
git Branch (To check branch)

git branch -M " something " (To Rename branch)

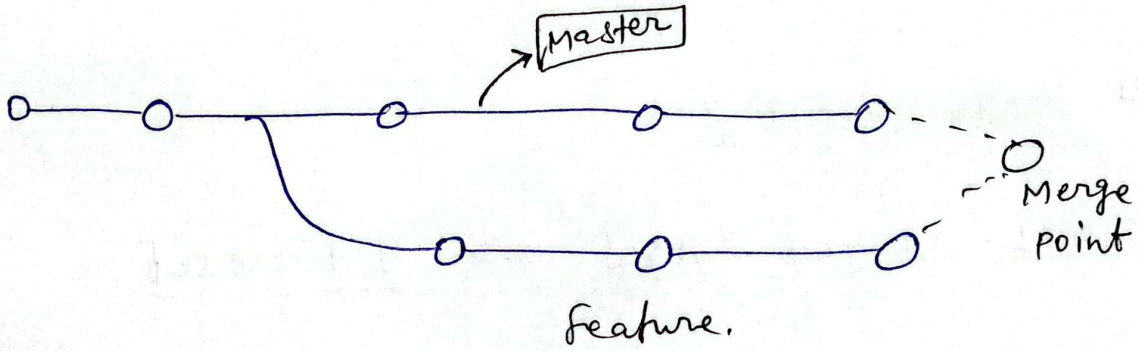
git push origin main

Work flow

Local Git:-



Git Branch



Command

→ git branch (To check branch)

→ git branch -M main (To rename branch)

→ git checkout <-- Branch name -> (To Navigate)

→ git checkout -b <- new branch name -> (To create new Branch)

→ git branch -d <-- branch name -> (To delete branch

Merging Code

Way - 1

`git diff <-- branch name -->` (To compare commits, branches, files & more)

`git merge <-- branch name -->` (To merge 2 branches)

Pull Request

It lets you tell others about changes you've pushed to a branch in a repository on GitHub.

`git Pull origin main`

Undo changing

Case-1 staged changes ⇒ git reset

Case-2 Commited changes (for one commit)

`git reset HEAD~1`

Case-3 Commited changes (for many commits)

`git reset <-- commit hash -->`

`git reset -- hard <-- commit hash -->`

Fork

↳ Fork is a Rough copy.