

# \* Git+Hub \*

\* What is version control ?

→ version control is system that helps manage changes to files and documents over time.

→ The primary purpose of version control is to track modification made to file or a set of files and enable collaboration between multiple users.

## Git vs GitHub.

- Git is version control tool (software) to track the file

→ GitHub is a platform to host the Repository.

Git  
version control system  
to track files

Git Hub  
website to  
host the  
Repositories.



## \* Creating a git Repo.

git init :- To Initialize the git Repo

→ go to the directory of the file

→ `git init`

→ `git status` (to see the file.)

ls - list

cd - change directory

git folder would be hidden by default to see that folder use command

⌘ + shift + .

Window

Period

Command

Window to see git folder

use `ls -la`

git clone

git clone

git clone is Basically used to clone the someone other's Repository into own System.

Command.

`git clone <url> Foldername`

copy the

url of

the Repository which you want to clone.

Provided by you



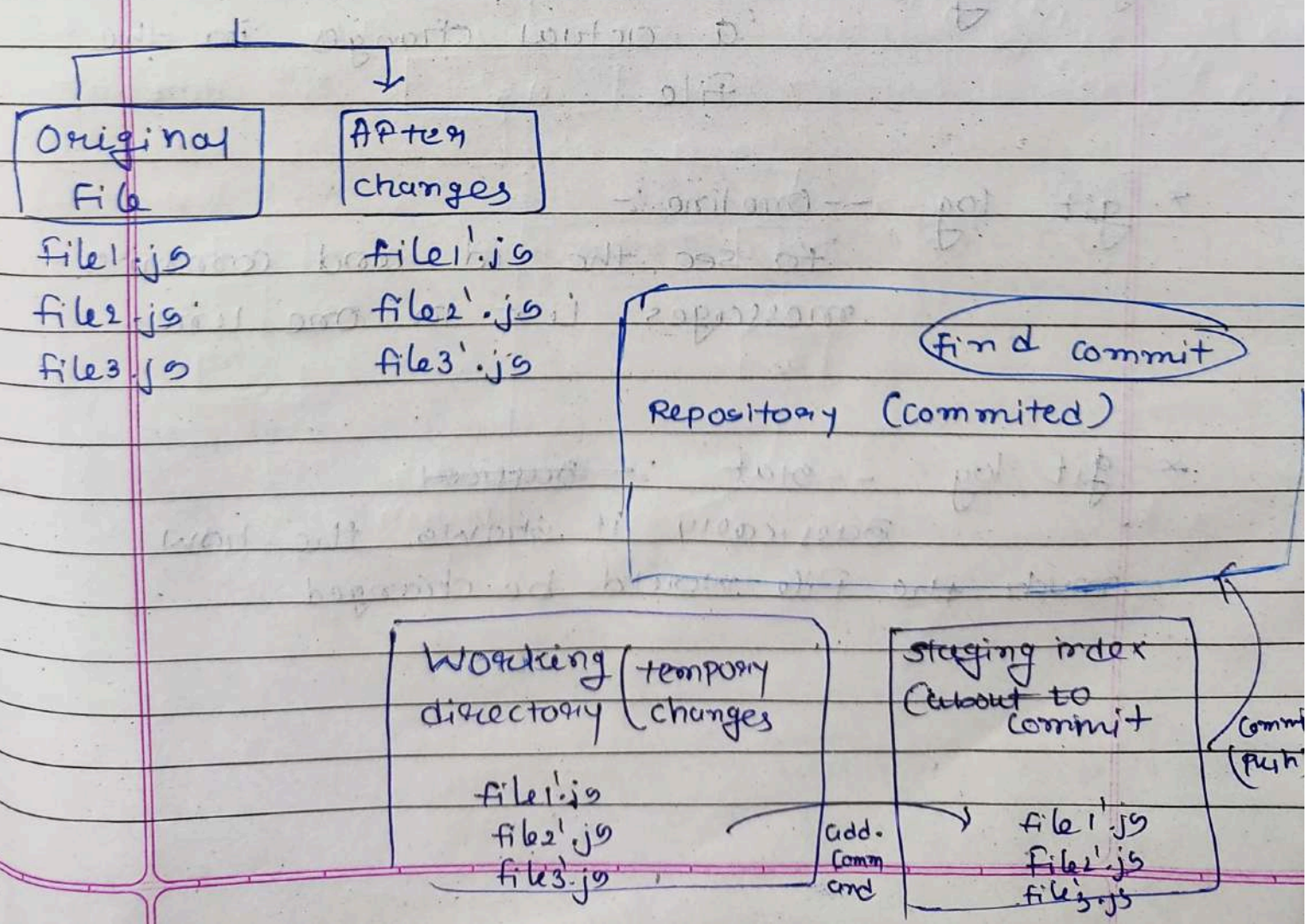
# \* git diff

It show us to see the which things we have changed in Repository after cloning

## \* Life cycle of change

→ suppose you are working on one Project dot-dummy-Repo

dot-dummy-Repo





## \* Reviewing A Repo History

\* `git log` :-

So Basically `git log` provides a  
a commits by id. (by latest)

Press q to go  
out from  
commit list

\* `git log -3` → latest 3 } commits.  
`git log -2` → latest 2 }

\* `git log -p` : Basically it provides  
a actual changes in the  
File

\* `git log --oneline` :-  
to see the id and commits  
messages list in one line.

\* `git log --stat` : ~~Basic~~  
Basically it shows the how  
much the File would be changed.



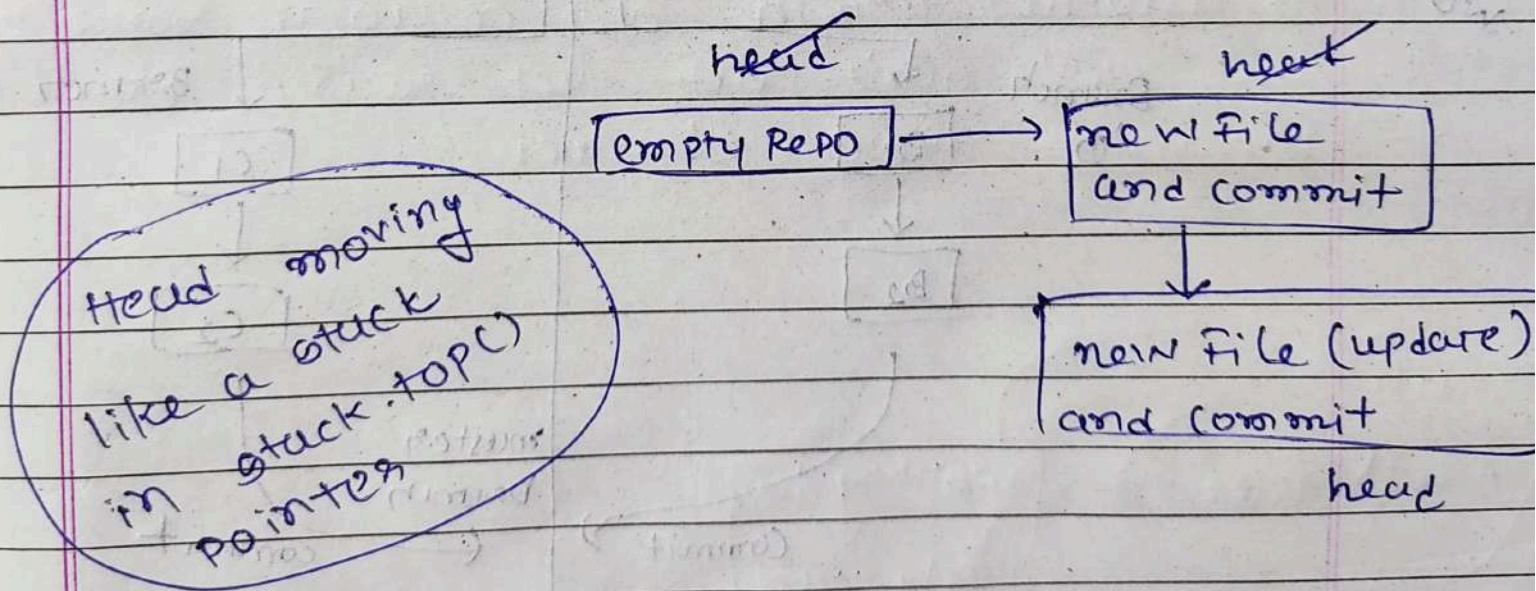
\* `git show <commitId>`  
Basically It shows the what is the changes made in that Particular Commit.

\* Let's make a Commit.

\* `git add`  
Basically It adds files to track.

\* `git commit -m "initial"`  
New file

\* ~~git~~ Head provides



\* `git restore filename`

basically backtrack from that ~~file name~~ changes

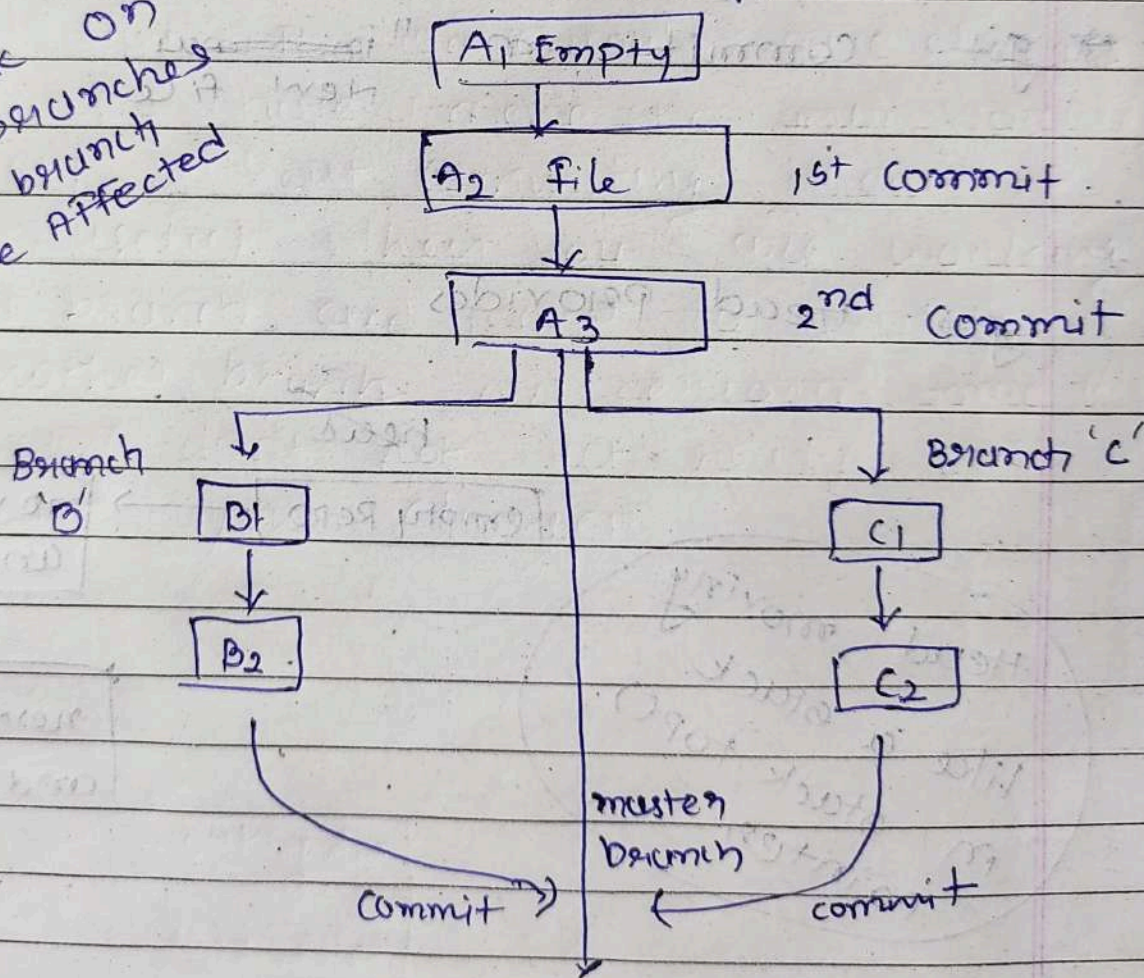


\* How to add a .gitignore file

- create file .gitignore
  - add the file type like (\* .txt)
- (ignore .txt)

\* Branching, Tagging & Merging

People can work on the different branches but the main branch would not be affected





① → `git branch` (check the branches how many branches are there)  
 → create a new branch Run command

② `git branch <branchname>`

③ IF you want to move to the new created branch Run Command.

③ `git checkout <created branchname>`



Now commit like we do in Normal commit because we have changed our working directory.

IF you want to create new branch and move both Run command  
`git checkout -b <branchname>`

→ IF you want merge this branch then Run command.

- move to master branch (`git checkout master`)
- `git merge (branchname)`  
 (branchname which you want to merge with master branch)

\* After committing want to delete branch

`git branch -d branchname`



\* git tag :-

git tag basically we can give a tag to the specific commit

git tag -a <Commit Id> -m "message"

To delete tag :- git tag -d beta V1.0

\* git stash

→ git stash is command in git that allow you to temporarily save changes that you have made to your working directory without committing them. It is useful when you are working on a branch and want to switch to another branch or perform some task but you don't yet ready to commit your changes.

Stash

file1, file2

Working dir

file1, file2



\* Undo Commit.

\* `git commit --amend` → amend the most Recent Commit.

→ `git revert` → Revert given Commit

→ `git Reset` → delete Commit (dangerous command)

`git revert` ~~commit~~ <commit id>



Enter

esc

then ; then Wq

New File changes would be done

→ `git Reset` meaning Commit would be delete and Head change.

`git reset --soft` <commit Id>  
where you want to move



## How to push a commit

Page  
Date

- make git Repo on GitHub web page

→ ~~not~~ go to your folder

→ follow steps as github repo.

→ before push → set username

```
git config --global user.name "username"
```

```
git config --global user.email "useremail"
```

```
git push -u origin master
```