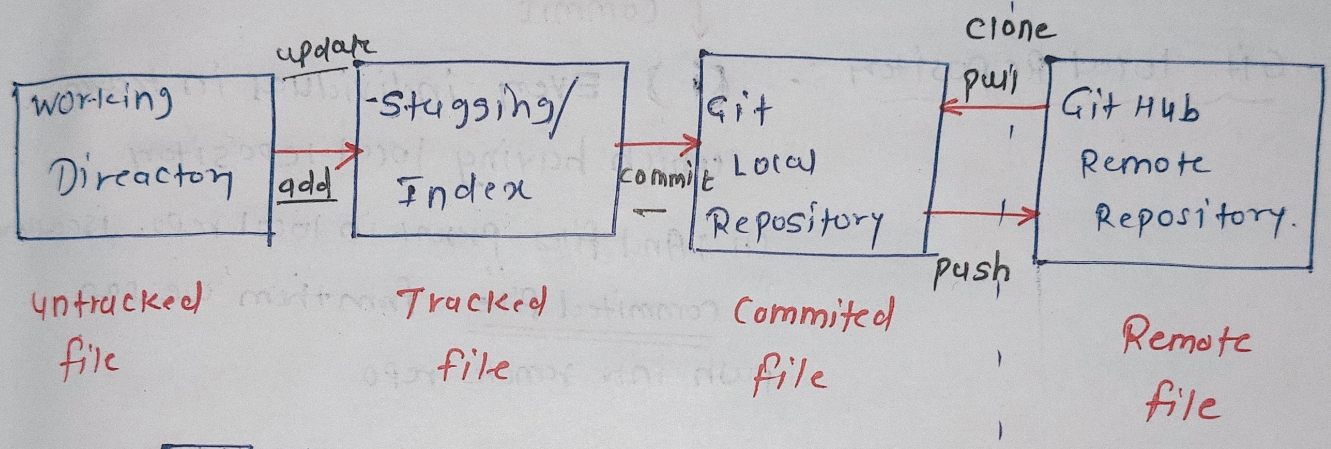
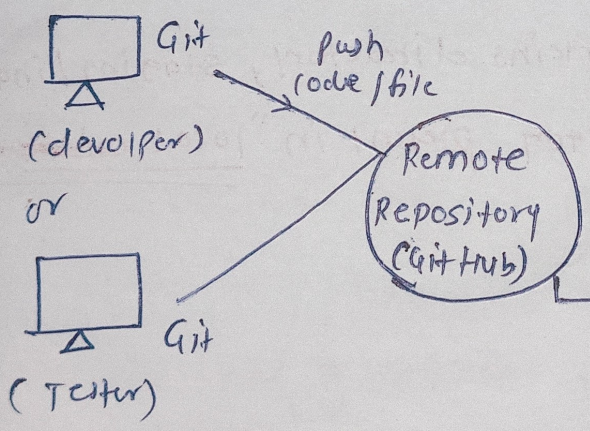
Q) What is Git ?

→ Git is software which support a distributed version control system and it is open source.

* Git life cycle. (Git is nothing but local repositon)





• developer or tester having their own "local repo" & push their code or file daily into "Remote Repo"

→ Here Branching, matching or resolve ~~conflicts~~ conflicts happens

1) Working directory or workspace :- It is location where actual project (i) file, code is implemented / present

(ii) It is workspace.

(iii) whatever files available in working directory is called "untracked file"

↓ add (command)

2) Staging / Index :- (i) It is virtual layer / section betn working ~~repository~~ Directory & Local Repository.

(ii) ~~As~~ when transfer file into local Repo 1st add file in staging and the files added is called "Tracked file".

↓ commit

3) Git local Repository :- (i) Every individual in team which having local repository.

(ii) And files present in local repo. is called "commited file" from them we can push into remote repo.

* All three part like working directory, staging / index, and Git local repository present in "local ~~mission~~ machine itself."

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4) GitHub Remote Repository :- (i) If we any developer or any person required file or some code from "Remote Repo". then we can push from "Local Repo"

* Git is acting as Local Repository.
& GitHub acting as Remote Repository.

* If we want to required some changes or any updation in your file 1st make changes into working directory & then go further.

(ii) The whole project of team present in "Remote Repo" So every team member having access of "Remote Repo"

(iii) Remote Repo basically "shared location".

(iv) Somebody push code / file in "Remote Repo" and those file not available in "Local Repo" then you can transfer those new file in "Local Repo" using pull command. and those updated file directly access by using working direction.

* updation, checkout adding and commiting happens in "local machine"

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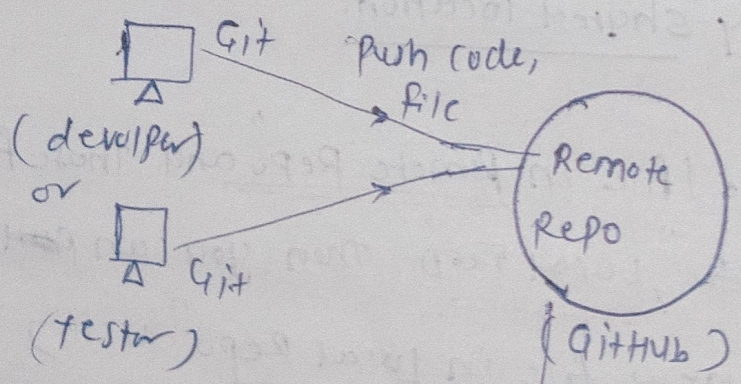
(v) In "remote repo" there are some project available if we want to transfer whole project into "local repo" then directly we can use as "clone command" and clone the whole project into "Local Repo"

All things done using "Git software"

* And above all process continously happened on day to day basis is called "Git Life cycle"

* "GitHub" is popular software which is mostly used to communicate with "Git".

*



developer / tester having their own "local Repo" & push code / file into "remote Repo"

And in this Repo ~~matc~~ matching, Branching & resolving conflicts takes place on day to day basis

- Each individual developer checking their code only in particular branch.

- once all conflicts resolve ~~branch~~ then code goes into "master ~~batch~~ branch" which is last step. It is main branch in "GitHub"

* Git commands:-

(1) **git init** :- (i) It's used for start / initialize the blank repository.

(ii) It creates a git folder in current working directory.

(2) **git commit**:- (i) Used to save changes in local repository.

(3) **Git add**:- (i) Used to add changes in current directory to staging area.

(4) **Git status**:- Used to show the states of current working directory & staging area.

(5) **Git merge**:- Used to combine seprate diff branch into single branch.

(6) **Gitpush**:- Used to upload / transfer file / code from local repo to remote repo.

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(7) <u>git pull</u>:- Transfer / merge new file / code from remote to local repo.

(8) <u>Git clone</u>:- Used create same to same copy of remote repo into local repo

(9) <u>Git branch</u>:- It is used to create, delete and rename the branches.

(10) <u>Git check-out</u>:- It is helps to ~~switch~~ move to ~~switch~~ getter to <u>Git branch</u>.

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