Git

It is version control system. It is a tool that helps multiple people to work on same code project or document tracing and manging changes to the file. It is popular, free & open Source, fast & scalable.

Features

1. Backup and restore : Files are safe against accidental loss or mistakes

2. Collaboration : Multiple people work on single code simultaneously.

3. Branching & Merging :

4. Tracking Changes : We can see specific changes made and by whom.

Github?

It is a website that allows user to store and manage their code using git.

Q What is FORK ?

=> It is rough copy of repository. .....if we want another users repository in our repository with same settings and code.

Q What is Pull request ?

=> A pull request is to merge a set of changes from one branch into another in GitHub.

Q What is Pull Command ?

=> Used to fetch and download content from a remote app to local computer.

Q Difference between Pull & clone & Fetch ?

=> Clone : get snapshot of remote repository to local repo (laptop)

Pull : get update from remote repository to local repo integrate those changes into local branches.

=> it will show real time changes in repo.

fetch : To download objects and refs (branches,tags etc) from remote repo to local remo without integrating them into local branches.

Q Diff between Merge and rebase ?

Merge : To combine the changes from two branches into a single branch.

Rebase : To integrate changes from one branch into another by moving.

Q What is Merger Conflict ?

=> When Git is unable to automatically resolve differences in code between two commits.

eg : in one branch in second line have different statemnt and another branch in second line have another statement. So git unable to solve.

$ git --version .....To know the verion

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

$ git config --global user.email "email id" .....git should now who are you.

$ git init ..... initialize empty git repository.

used to create a new git repo.

=> After init it creates a hidden file .....(.git)

$ git add <file name> .....It will go in stage .....Git will tracked.

$ git commit -m "message" .....it is the record of change in the file.

$ git status ..... To check the status

Tracked - files that Git knows about and are added to the repository.

Untracked - new files that git doesn't yet track

modified : changed

staged : File is ready to commit

unmodified : Unchanged

$ git commit -a -m "message" .....In one commmand add in stage and commit.

IMP : Whenever we edit the file everytime we have to add and commit .

$git show commitid:filename …….it will show content of the file.

$ git log ..... To check every commit , ID, Author name who has edit the file.

$ git merge branchname filename .....to merge file.

---if we have to merge in main from dev1.... so we have to be main branch.

$ git clone ..... to get repository from remote to local (laptop).

$ git push origin <branch name> .....upload local repo content to remote repo.

origin - remote repo which we have clone repo.

$ git remote add origin <remote repo link> .....adding the origin in git

$ git remote -v .....to verify the remote.

$ git branch .....To check branch

$ git branch -M <branch name> .....To rename branch

$ git branch name .....creating a new branch

$git checkout branchname .....navigate the branch

$ git checkout -b <new branch name> .....to create a new branch and navigate to branch.

$ git branch -d <branch name> .....To delete a branch

$ git push origin <branch name>.....

$ git pull origin main .....download content from remote repo to local repo.