***What is git***

=> It is version control system.

=> It is a tool that helps mutiple people to work on same code project or document tracing and manging changes to the file.

=> It is popular, free & open Source, fast & scalable.ls

***Features of GIT***

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

2. Collabration : Multiple people work on single code simultaneoulsy.

3. Branching & Merging :

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

***What is VCS***

=> Every time we make changes adding a sentence to a document or altering a line of code, the VCS records and save.

***What is Github***

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

***What is FORK***

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

***What is Pull request***

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

***What is Pull Command***

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

***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 integranting them into local branches.

***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.

***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 ..............dwonload content from remote repo to local repo.