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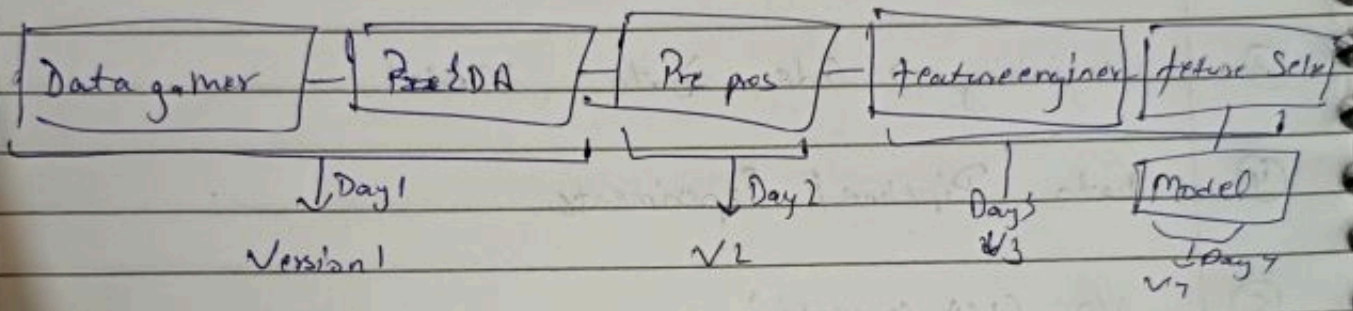
Git - Github

Git is a VCS/SCM.

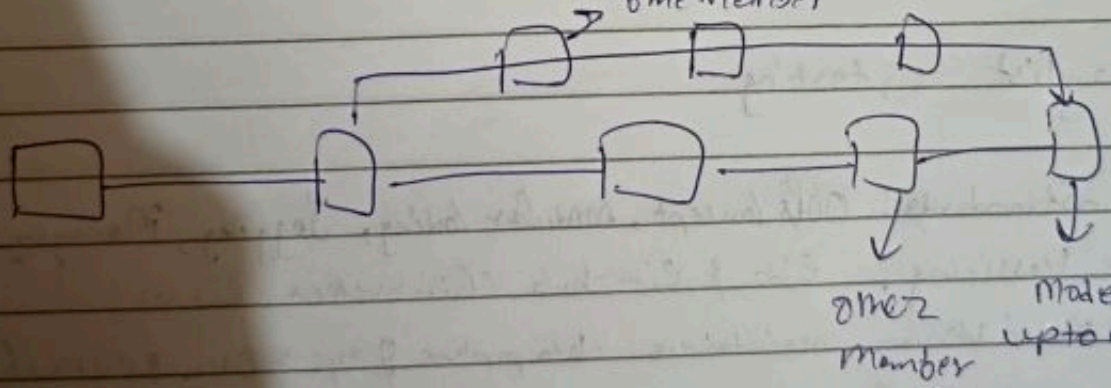
Why is the need ? Why should we learn?

① Bug fixing and Version Control



② Collaboration → Same Project Mutiple Members

③ Non-linear Dev : Making Branches ~~of non~~



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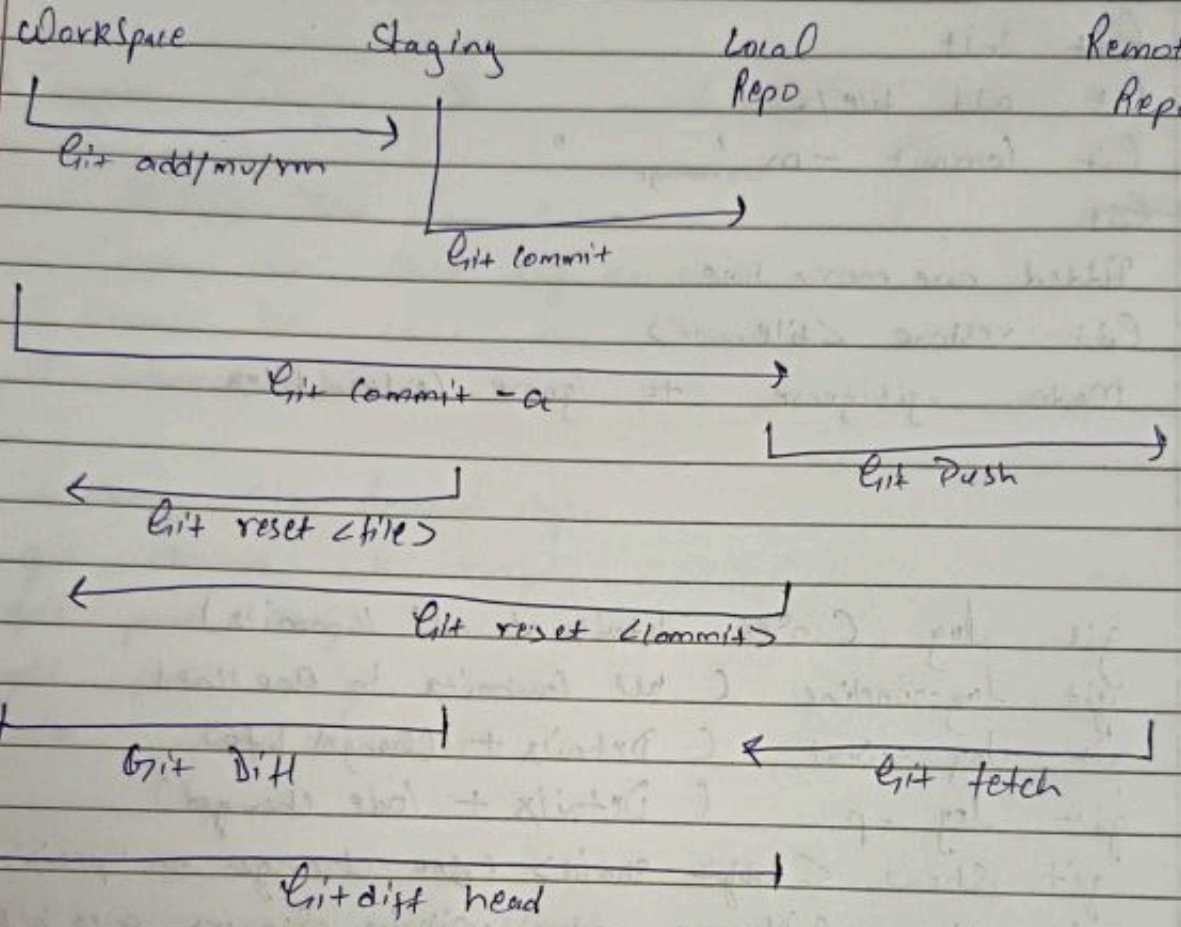
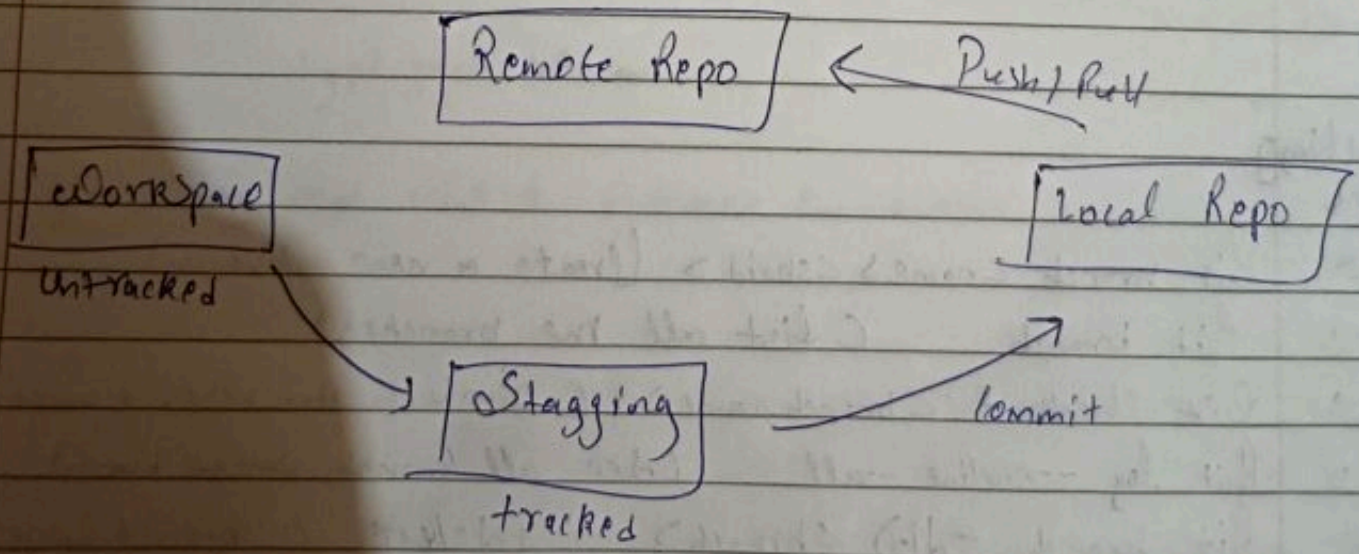
Git Architecture





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Commands I Used Sequentially

Basics

→ Git init
→ Git add file/.
→ Git commit -m "message"
~~→ Git~~
Added one more line
→ Git restore <file name>
→ Made .gitignore to ignore certain files.

Seeing

→ git log (See details of all commits)
→ git log --oneline (all commits in one line)
→ git log --stat (Details + Changes Info)
→ git log -p (Details + code changed)
→ git show <6 digit Shaid> (See changes on specific commit)
→ git diff ('Change made within Staging area before commit)
→ git checkout <6 digit Shaid> (Roll back the work to give Id(Sha))
→ git checkout master (Back to where we left)

Branching Merging

→ Git branch <name> <shaid> (Create a new branch)
→ Git branch (list all the branches)
→ Git checkout <branch name> (Switch to resp. branch)
→ Git log --oneline --all (See all commit for all branch)
→ Git branch -d/-D <branch> (delete a branch (one in Master))
(safe) (actual)
→ Git merge <branch> (always run from main/master)
→ Git log --oneline -all --graph (graphical Seen of all commit)

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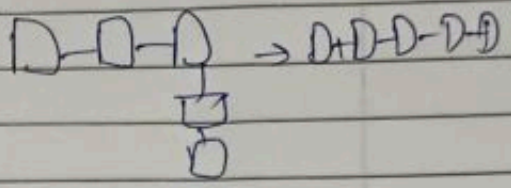
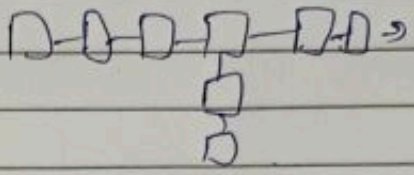
Straight forward Merge. → 
Git merge branch.

Complex Merge → 

In this you can either
→ Choose the code of Master
→ Choose the code of Branch
→ Choose both.

Working with Remote repo
git remote add origin <url> (declaring remote repo)
git push origin master/main (send local repo to origin)
git pull origin master (pull code from remote repo)
git clone <url> (download / copy remote Repo)

Understanding Software Version → V.1.0.0
Setting Version for our code.
1. git tag -a V1.0.0 <sha (optional)>
Vim editor!
type your Version
→ Any bug fix
→ Any new feature add
→ Two Impatible software

2. git tag -d V1.0.0 (delete the mention)