PRE-JOINING LEARNING PATH

VERSION CONTROL

Q. What is Git?

Ans. Git is a version control system, It is a tool that helps to track changes in code.

Q. Commands used mostly in GitHub.

(i) git clone [url]: retrieve an entire repository from a hosted location via URL

(ii) git status: show modified files in working directory, staged for your next commit git

(iii) add [file]: add a file as it looks now to your next commit (stage)

(iv) git commit -m "[descriptive message]": commit your staged content as a new commit snapshot

(v) git push [alias] [branch]: Transmit local branch commits to the remote repository branch

(vi) git pull: fetch and merge any commits from the tracking remote branch

Q. How to create Repository from local environment?

Step 1: Run "git init" command.

Step 2: go to github.com and create a new repository without readme.md file.

Step 3: Run "git remote add origin [link]" command.

(Run "git remote -v" command for checking the remote origin)

Step 4: Run "git branch" to check branch of repository where code is going to push. And then run "git branch -M main" command to change name of master branch to main branch.

Q. How to merge branch in github?

=> Follow this step:

git branch (to check branch)

git branch -M main (to rename branch)

git checkout <branch name> (to navigate)

git checkout -b <new branch name> (to create new branch)

git branch -d <branch name> (to delete branch)

git merge [branch] (merge branch)

git diff: diff of what is changed but not staged

Q. How to undo changes in github?

Ans: git reset : clear staging area, rewrite working tree from specified commit

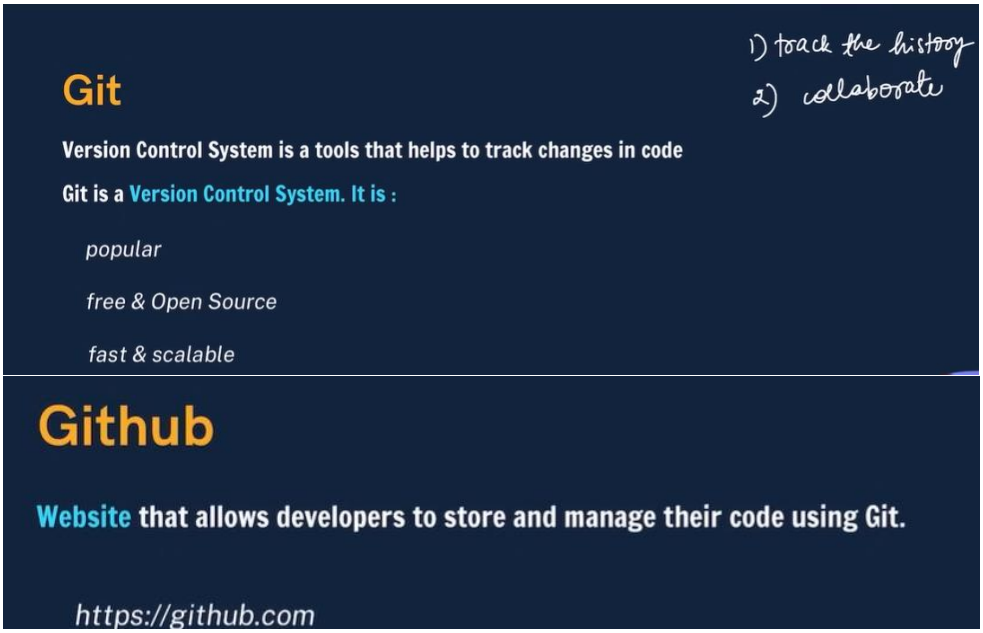
With tutorial:

M : modified – u : unmodified

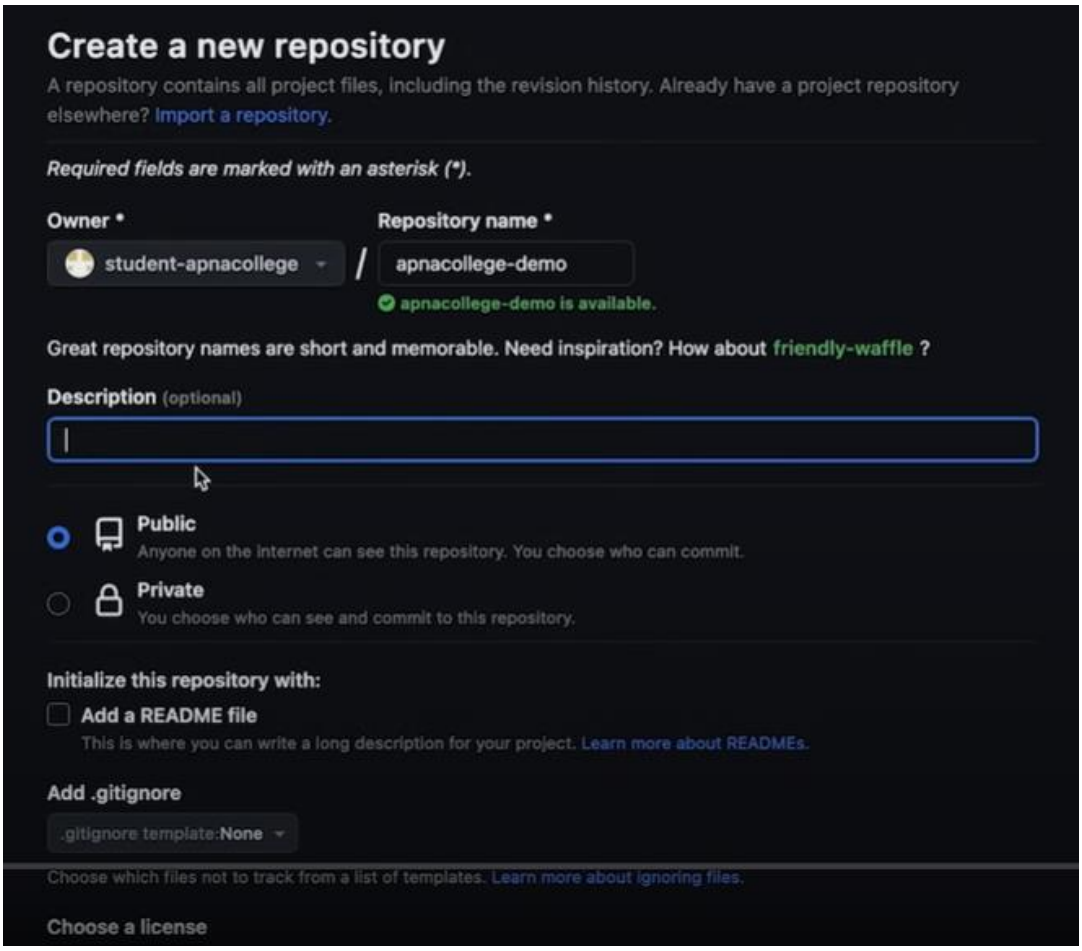
README.MD -> mark down

cd- change directory

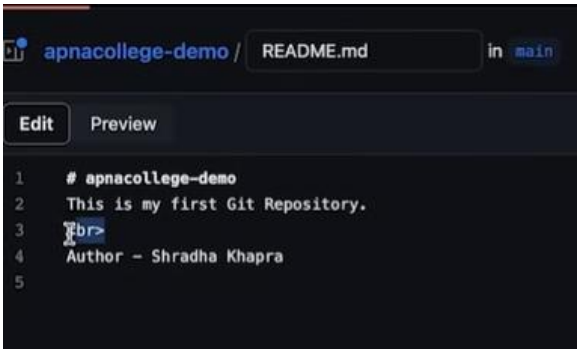
ls:list – md :make directory


1) track the history
2) collaborate
Git
Version Control System is a tools that helps to track changes in code
Git is a Version Control System. It is :
popular
free & Open Source
fast & scalable
Github
Website that allows developers to store and manage their code using Git.
https://github.com

New repo:


Create a new repository
A repository contains all project files, including the revision history. Already have a project repository elsewhere? Import a repository.
Required fields are marked with an asterisk (*).
Owner *
Repository name *
student-apnacollege
/
apnacollege-demo
apnacollege-demo is available.
Great repository names are short and memorable. Need inspiration? How about friendly-waffle ?
Description (optional)
Public
Anyone on the internet can see this repository. You choose who can commit.
Private
You choose who can see and commit to this repository.
Initialize this repository with:
Add a README file
This is where you can write a long description for your project. Learn more about READMEs.
Add .gitignore
.gitignore template: None
Choose which files not to track from a list of templates. Learn more about ignoring files.
Choose a license

:

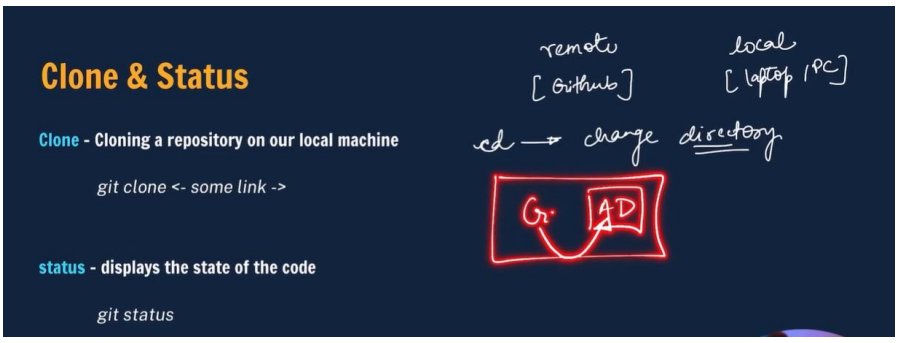


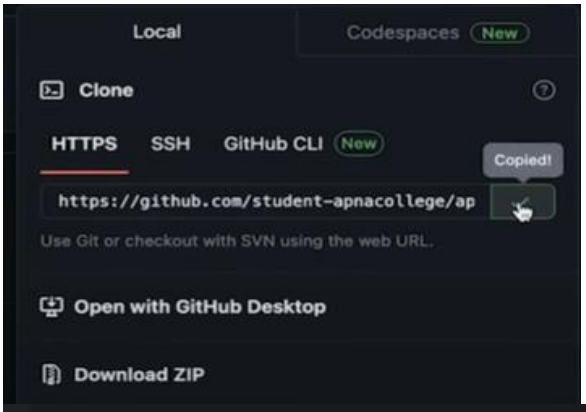
Download:

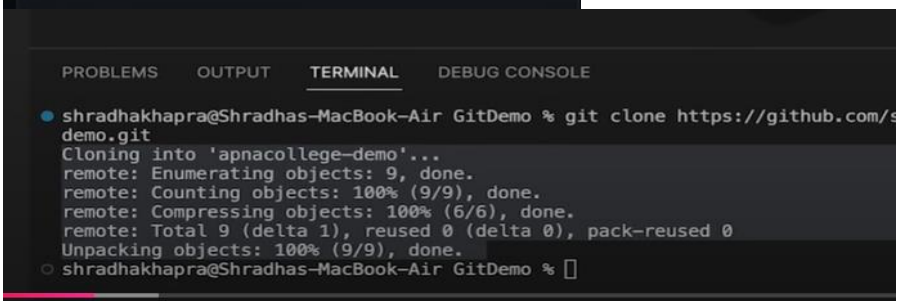
Setting:


```
shradhakhapra@Shradhas-MacBook-Air ~ % git config --global user.name "Student Ap
naCollege"
shradhakhapra@Shradhas-MacBook-Air ~ % git config --global user.email "student@a
pnacollege.in"
shradhakhapra@Shradhas-MacBook-Air ~ % git config --list
credential.helper=osxkeychain
user.name=Student ApnaCollege
user.email=student@apnacollege.in
```

Clone & status :







All file add:

```
shradhakhapra@Shradhas-MacBook-Air apnacollege-demo % git add .
shradhakhapra@Shradhas-MacBook-Air apnacollege-demo % git status
On branch main
Your branch is up to date with 'origin/main'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   README.md
        new file:   index.html

shradhakhapra@Shradhas-MacBook-Air apnacollege-demo %
```

Complete Git and GitHub Tutorial for Beginners

Add & Commit

add - adds new or changed files in your working directory to the Git staging area.

git add <- file name ->

commit - it is the record of change

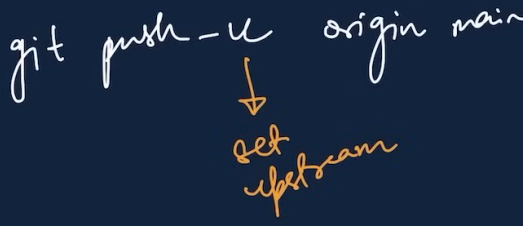
git commit -m "some message"

Push Command

push - upload local repo content to remote repo

git push origin main

Init Command



init - used to create a new git repo

git init

git remote add origin <- link ->

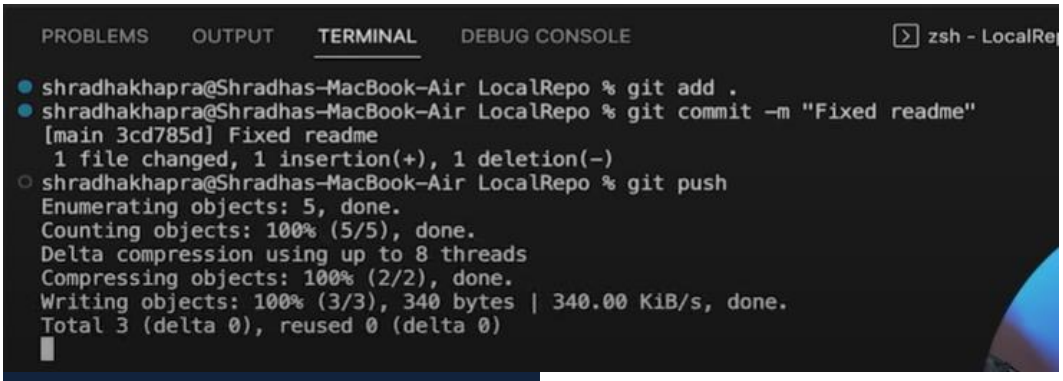
git remote -v (to verify remote)

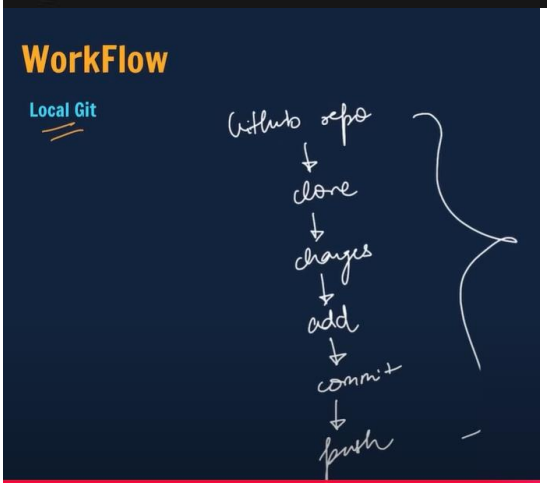
git branch (to check branch)

git branch -M main (to rename branch)

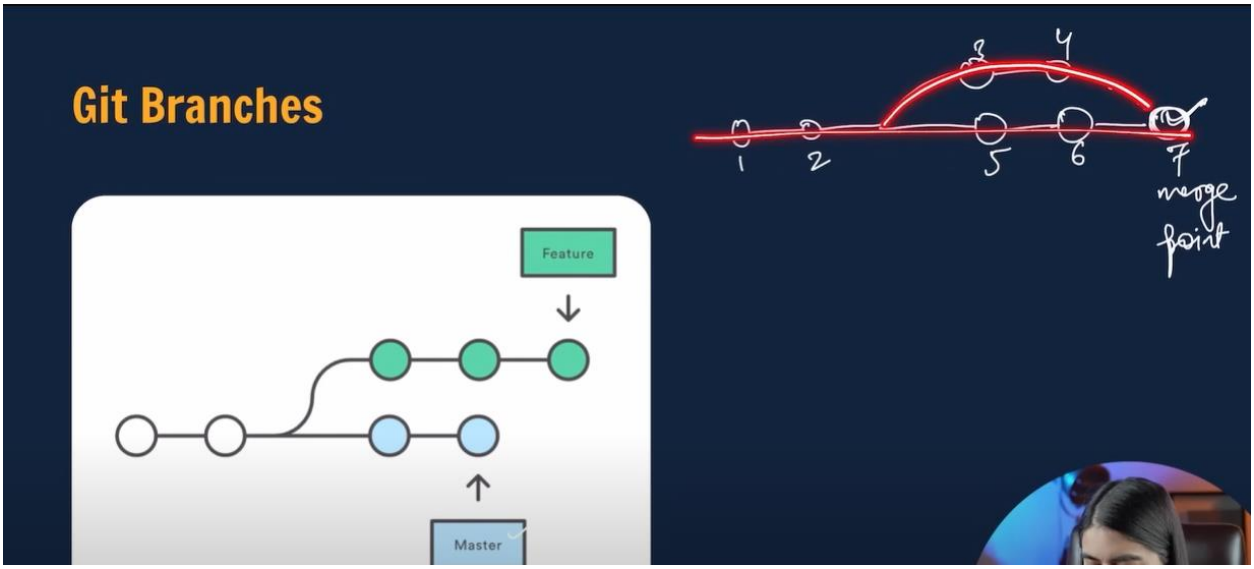
git push origin main

Final command:





Branch:



Branch Commands

git branch (to check branch)

git branch -M main (to rename branch)

git checkout <- branch name -> (to navigate)

git checkout -b <- new branch name -> (to create new branch)

git branch -d <- branch name -> (to delete branch)

Merging Code

Way 1

git diff <- branch name-> (to compare commits, branches, files & more)

git merge <- branch name-> (to merge 2 branches)

Way 2

Create a PR

Pull Command

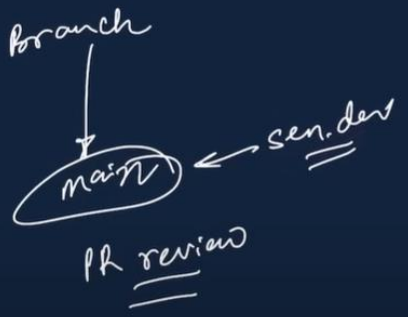
git pull origin main

used to fetch and download content from a remote repo and immediately update the local repo to match that content.

Git to remote :copy

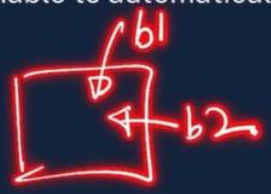
Pull Request

It lets you tell others about changes you've pushed to a branch in a repository on GitHub.



Resolving Merge Conflicts

An event that takes place when Git is unable to automatically resolve differences in code between two commits.



1) PR
2) Auto merge

Fork

A fork is a new repository that shares code and visibility settings with the original “upstream” repository.

Fork is a rough copy.