Version Control System – Git

Git\_>VCS(Application of a VCS)  
Attendancce Project->(5) guys in Team  
A person will write a code upload his files in Gdrive   
Al this process becomes hectic for indicidual to maintain even andding a security concern  
Why Should we Use git  
1. Easy collaboration  
2. Secured acess  
3. Realtime updates   
4. Branching System(Helps individuals to proceed with there workings without affecting others contribution)  
5. Required restricted acess(Collaborators, Contributors)  
Collaborators->generally have more acess and can directly push to the repository,  
Contributors-> PR process(pull request process)  
the basic system of git works three principle  
1. Work in individual branches avoid conflict issues  
2. Always check the upstream updates before pushing anything in the repository  
3. Never force any code on a individual repository  
Technical aspects  
The process is()  
to make normal folder-> VC Folder  
1. Git needed to installed and authorized  
3. git init  
you have a repo in your github and now you want to setup your local folder with that repo  
git init  
git add .

Git remote add origin repolink  
git commit -m “first commit”  
git push origin branch name(generally for non restricted repo it is master or main)  
git pull upstream  
git checkout -b “branch name”(will create new branch and then switch to it)  
git checkout branchname(just switch to existing branch)

Acess in github(protecting a branch)

If consider I am working with my team and there is a guy who always pushes in the main branch   
creating trouble for the whole team  
we can protect the main branch(it will simply restrict acess in commiting to the main branch)

Version Control System -

Login.html

Git - Git is a [free and open source](https://git-scm.com/about/free-and-open-source) distributed version control system

Version control system – It helps to track the different versions of a same file.

Its helps to manage, track changes & add codes in a collaborative manner.

Git – Linus Torvalds is the creator (He also created Linux OS Kernel)

Download & Install

<https://git-scm.com/downloads> - Download & install for Windows Platform

(during Installation, default editor – choose notepad [vim editor] )

Repository

1. Local Repository (Folder in our system)
2. Remote Repository (Location/URL path in a server) – Public/private

Creating a Local repo in any folder

Git init (Initialize empty git local repository)

1. Local Area (untracked files)
2. Staging Area (tracked but uncommited)
3. Repo Area (Committed area) – Tracked and committed

**Quick setup — if you’ve done this kind of thing before**

[Set up in Desktop](https://desktop.github.com/)

**or**

Top of Form

HTTPS

Bottom of Form

Top of Form

SSH

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Get started by [creating a new file](https://github.com/syskantechnosoft/MAR2025INTERNS/new/main) or [uploading an existing file](https://github.com/syskantechnosoft/MAR2025INTERNS/upload). We recommend every repository include a [README](https://github.com/syskantechnosoft/MAR2025INTERNS/new/main?readme=1), [LICENSE](https://github.com/syskantechnosoft/MAR2025INTERNS/new/main?filename=LICENSE.md), and [.gitignore](https://github.com/syskantechnosoft/MAR2025INTERNS/new/main?filename=.gitignore).

**…or create a new repository on the command line**

echo "# MAR2025INTERNS" >> README.md

git init

git add README.md

git commit -m "first commit"

git branch -M main

git remote add origin https://github.com/syskantechnosoft/MAR2025INTERNS.git

git push -u origin main

**…or push an existing repository from the command line**

git remote add origin https://github.com/syskantechnosoft/MAR2025INTERNS.git

git branch -M main

git push -u origin main

git config –global user.name Sivakumar

git config –global user.email “syskantechnosoft@gmail.com”