Git and GitHub

What is Version Control?

Version control systems are software tools that help software team to manage their changes in code over time. Version control keeps track of every modification to the code, if a mistake is made, developers can revert back the changes or compare the code with earlier version of the code. One of the popular and widely used version control system is GIT.

What is GIT?

GIT is by far the most widely used version control system in the world used by the developer community and other professionals. GIT is a mature, actively maintained open source project developed by Linux Trovalds(creator of LINUX). Because of it's reliablity and vast features, a staggering number of software projects reply on GIT for version control, including huge commercial software companies as well as open source projects.

What is GitHub?

GitHub is Git's cloud-based publishing tool and hosting platform. It qlso has a desktop application for locally storing projects.

With GitHub, you can:

> **Bring projects to life**. Git repositories are hosted on GitHub and made "live." This enables developers to post a site or application when it's in development stages. By sending a link

to a GitHub project, clients can easily test-drive a site in progress with functionality, rather than just looking at flat mockups.

Browse the most popular development projects. Browse GitHub for "trending" repositories—an interesting way to check out other developers' work and check out "starred" projects that are recommended by GitHub staff members. Public repository files can be downloaded as zip files and saved locally on your computer.

Work in a Collaboration You can work with your team in any small or big scale projects.

Why use GIT

GIT is a fast, scalable, distributed version control system with an unusually rich command set that provides both high-level operations and full access to the internals.
Here are some of the major features of GIT:

Distributed in Nature

GIT is a distributed version control system where each developer gets their own local repository, complete with a full history of commits and branches.

Save Time

GIT is lightning fast, although we're talking about only a few seconds per command, it quickly adds up to your day.

Work Offline

GIT allows you to work while you're offline, with GIT, almost everything is possible to do on your local machine, be it committing the code, browsing the code history, create branches.

Undo Mistakes

It's almost inevitable that developers make mistake while working on a project. A good thing about GIT is that we can undo almost every havoc we created in GIT. Since GIT rarely deletes the event history, this provides great peace of mind to developers.

Configure Git Setup Command

- git config --global user.name " Username "
- git config --global user.email "example@gmail.com"

Pushing Files to Github

1. git init ➔ initialize an empty git repository
2. git add filename ➔ adds filename to the staging area
   git add • **OR** git add * ➔ adds all files to the staging area
3. git commit -m "message" ➔ confirms the changes in staging area
4. git push -u origin main ➔ pushes data/files to the github account

Pulling Project from Github to System

1. git init ➔ initialize an empty git repository

2. git remote add origin " url of project in github" ➔ enables the url to add files in the repository
3. git pull origin main ➔ pulls files and folder from github
4. git checkout main ➔ switches current branch to branchname

Clone any Project

- Git clone " url of project from github"

Work in Collaboration
Publishing Frontend Project