GIT

Git is a **version control system** that helps developers manage and track changes to their code over time.

### Key Features:

* **Version Control:** Tracks every change made to files in a project.
* **Collaboration:** Multiple developers can work on the same project simultaneously without overwriting each other's changes.
* **History Tracking:** Every change is recorded, so you can go back to any previous version if needed.
* **Branching and Merging:** Developers can work on different features or fixes in **branches**, and later merge them into the main project.

### Common Commands:

* git init: Initialize a new git repository.
* git add: Stage changes for a commit.
* git commit: Save changes to the repository.
* git status: Check the current state of the working directory.
* git push: Upload local changes to a remote repository (like GitHub).
* git pull: Download changes from a remote repository.

### Example Flow:

1. Edit a file.
2. Run git add <filename> to stage the changes.
3. Run git commit -m "message describing changes" to save it.
4. Run git push to send changes to a remote server.

GIT HUB

**GitHub** is a **platform** that hosts **Git repositories** online, making it easy for developers to:

* **Store** code.
* **Collaborate** with others.
* **Track changes** (using Git).
* **Review code** and manage projects.

**\* Git = Tool**  
\* **GitHub = Service/Platform that uses Git**