# **GIT ASSIGNMENT**

## Assignment :2(a)

Create version control account on GitHub and using Git Commands to Create a repository and push your code on github.

### What is Git?

- Git is a distributed version control system (DVCS) used for tracking changes in source code during software development.
- It helps developers collaborate efficiently, maintain code history, and manage different versions of a project.
- Key Features:

o Distributed System o Version Control o Branching and Merging

#### What is GitHub?

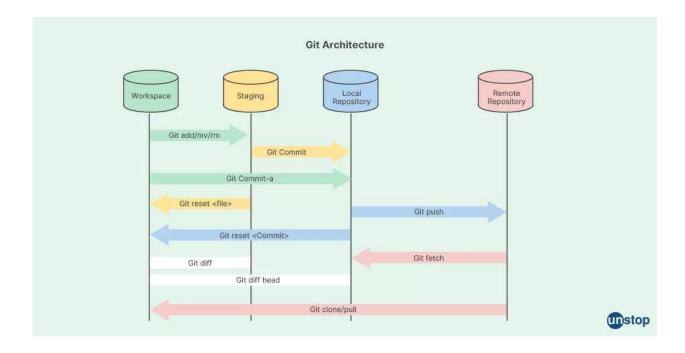
- GitHub is a cloud-based platform for version control and collaboration, built on Git.
- It allows developers to store, manage, and share their code while working on projects with others.
- Key Features o Repository Hosting o Security & Access Control o Pull Requests & Code Review

#### Difference between Git And Github:

Feature	Git	GitHub
Definition	A version control system (VCS) used to track changes in code.	A cloud-based platform for hosting and managing Git repositories.
Purpose	Helps developers track	Provides a remote storage

	code changes, collaborate, and manage versions.	space for Git repositories, enabling collaboration.
Installation	Needs to be installed locally on your computer.	Web-based service; no installation required.
Access	Works offline	Requires the internet to access repositories online
Commands	Uses commands like git init, git add, git commit, git push, etc	Provides UI-based controls and Git-based commands like git push origin main

# **Git Architecture:-**



## **Components of Git Architecture:**

- 1. Working Directory
- Stores the current version of your project files.
- Any modifications made here are untracked until staged.
- 2. Staging Area (Index)
  - Holds changes before committing to the repository.
  - Allows selective commits by staging specific files.
- 3. Local Repository
  - A hidden .git folder storing all commit history.
  - Enables version control even without internet access.
- 4. Remote Repository
  - A shared Git repository hosted on platforms like GitHub.
  - Used for collaboration and code sharing among developers.

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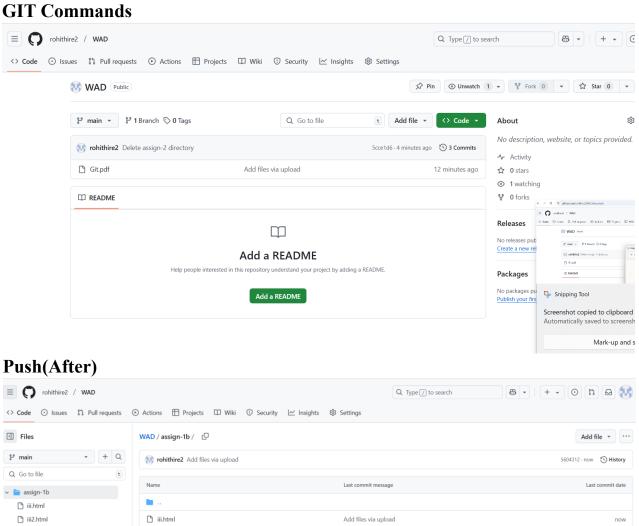
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# **Pull(After)**

