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?

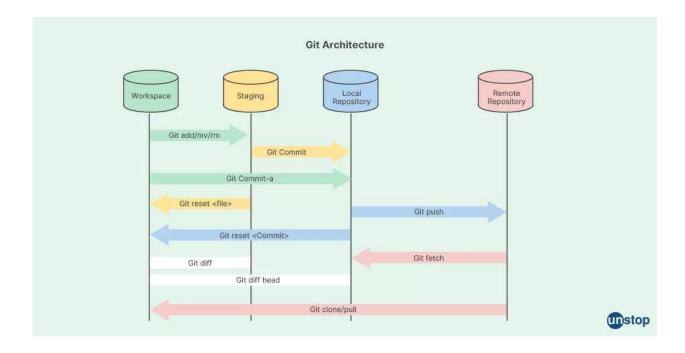
- GitHub is a cloud-based platform for version control and collaboration, built on Git.
- It allows developers to store, manage, and share their code while working on projects with others.
- Key Features o Repository Hosting o Security & Access Control o Pull Requests & Code Review

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

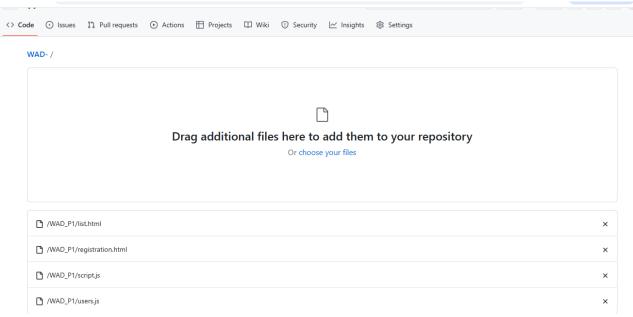
Git Architecture:-



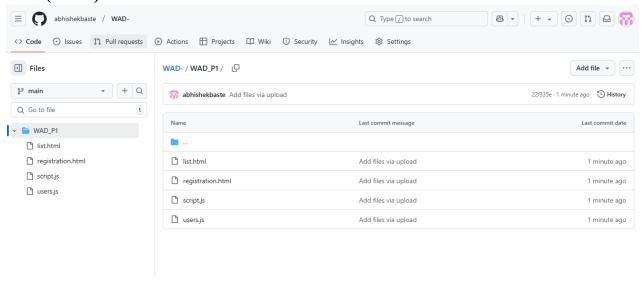
Components of Git Architecture:

- 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.

GIT Commands



Push(After)



Pull(After)

