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
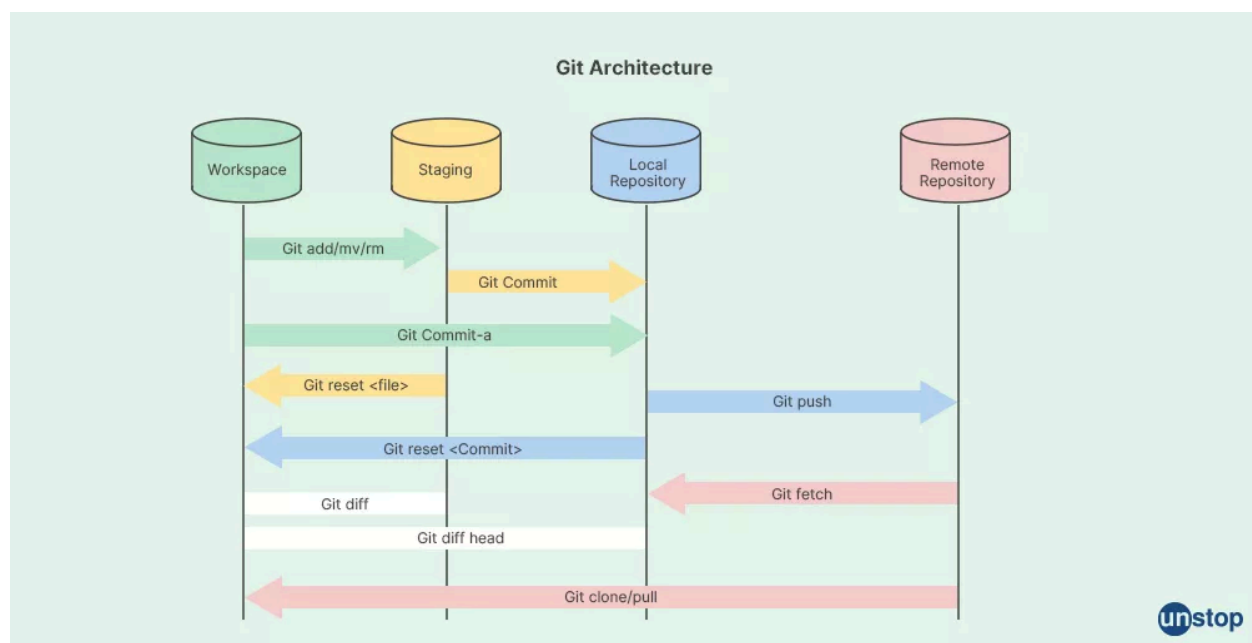   - o Branching and Merging

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 (Before)

Push(After)

Pull(Before)

Pull(After)