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
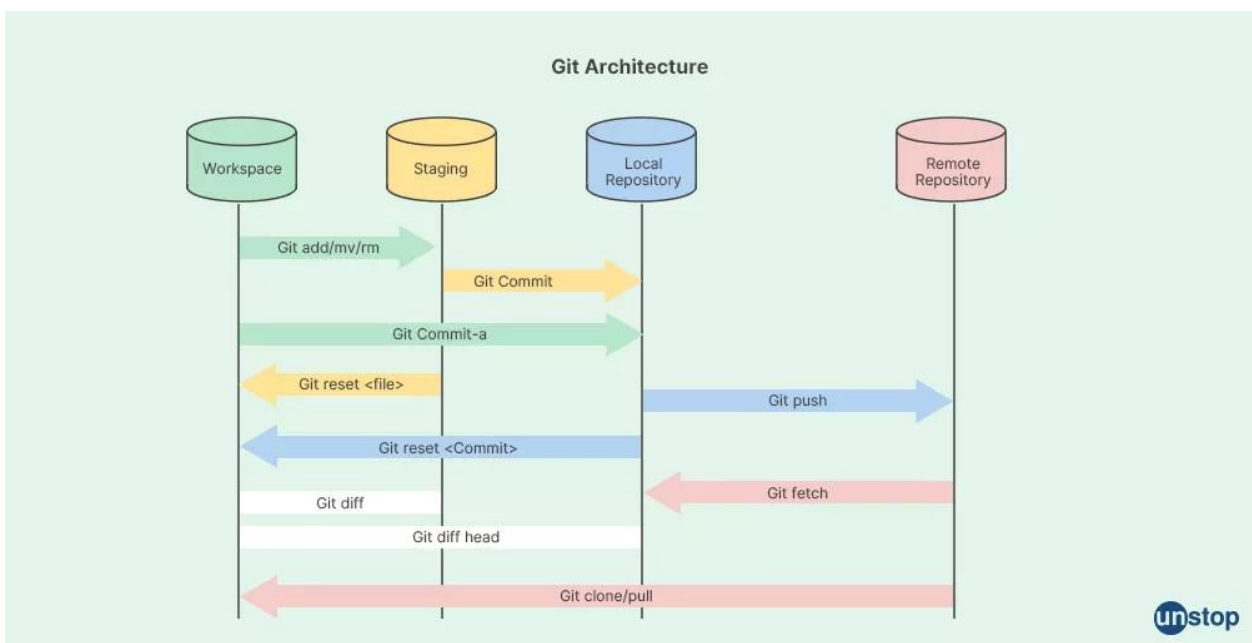 - Branching and Merging

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)

Name	Date modified	Type	Size
iii	12/02/2025 19:33	Microsoft Edge HTM...	1 KB
iii2	12/02/2025 19:33	Microsoft Edge HTM...	1 KB
new_doc	12/02/2025 20:14	File	1 KB
script	12/02/2025 19:50	JavaScript File	1 KB
users	12/02/2025 19:50	JavaScript File	1 KB

```
MINGW64:/d/New Ajaxfolder                                    ─  □  ✕

mange@Mangesh MINGW64 /d/New Ajaxfolder (master)
$ git pull origin master
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 921 bytes | 51.00 KiB/s, done.
From https://github.com/adityaam2904/Wad
 * branch            master     -> FETCH_HEAD
   21a6df1..4e17c17  master     -> origin/master
Updating 21a6df1..4e17c17
Fast-forward
 new_doc | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 new_doc

mange@Mangesh MINGW64 /d/New Ajaxfolder (master)
$
```