

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 free, open-source version control system (VCS) that helps you track changes to your code and projects
- It was created by Linus Torvalds in 2005, and has been maintained by Junio Hamano since then.
- Features:
 1. Creates backups
 2. Supports non-linear development
 3. Supports collaboration

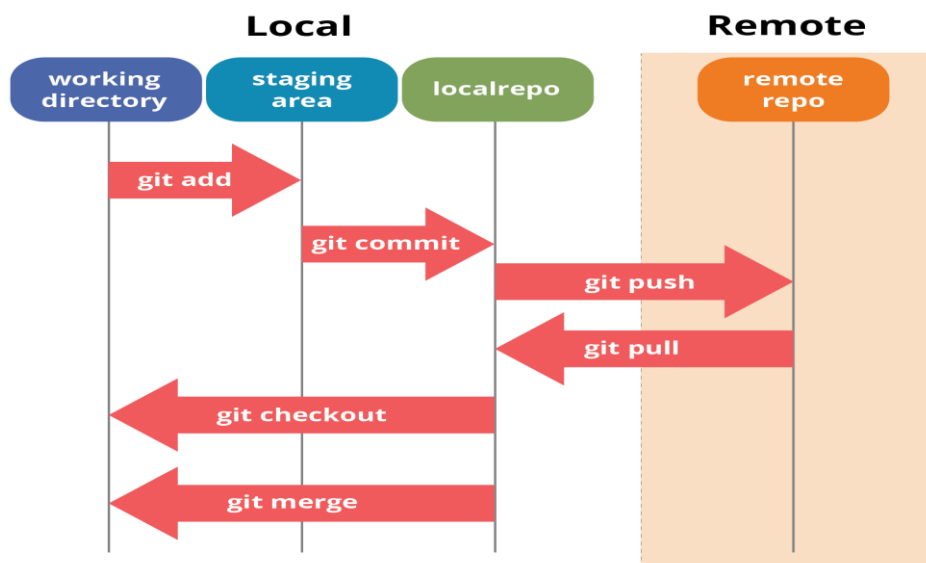
What is GitHub?

- GitHub is a website that lets developers store, manage, and share their code.
- GitHub was founded in 2008 and has been a subsidiary of Microsoft since 2018. Microsoft acquired GitHub for \$7.5 billion
- GitHub also offers tools for collaboration, such as bug tracking, task management.

Difference of Git And GitHub :

Git	GitHub
It is a version control system.	It is a cloud platform for hosting Git repositories.
Works locally to track code changes.	Stores and manages Git repositories online.
Does not require the internet to work.	Requires the internet to access repositories.
Helps in managing different versions of code.	Allows collaboration, issue tracking, and project management.
Open-source and free to use.	Owned by Microsoft, offers free and paid plans.

Git Architecture:

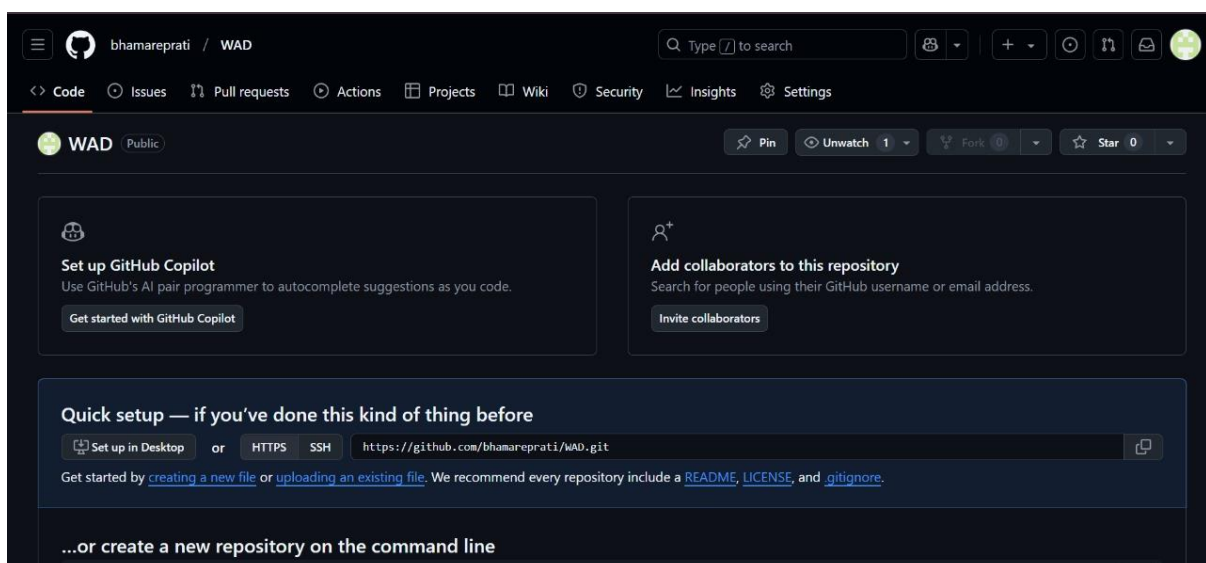


Component of Git :

- **Working Directory:** This is where your project files are stored and modified before tracking them with Git. Changes here are untracked until added to the staging area.
- **Staging Area:** A temporary storage where files are added using `git add` before committing. It helps organize changes before finalizing them in the repository.
- **Local Repository:** A Git repository stored on your computer where committed changes are saved. You can work offline and push updates to a remote repository later.
- **Remote Repository:** A shared repository (like on GitHub) that allows multiple developers to collaborate by pushing and pulling changes.

Git Commands:

Before Push:



```
MINGW64/c/Users/Admin/Desktop/CLG-Project/WAD/Assignment3
Admin@DESKTOP-PMHVS45 MINGW64 ~/Desktop/CLG-Project/WAD/Assignment3 (main)
$ git init
Initialized empty Git repository in C:/Users/Admin/Desktop/CLG-Project/WAD/Assignment3/.git/

Admin@DESKTOP-PMHVS45 MINGW64 ~/Desktop/CLG-Project/WAD/Assignment3 (master)
$ git status
On branch master

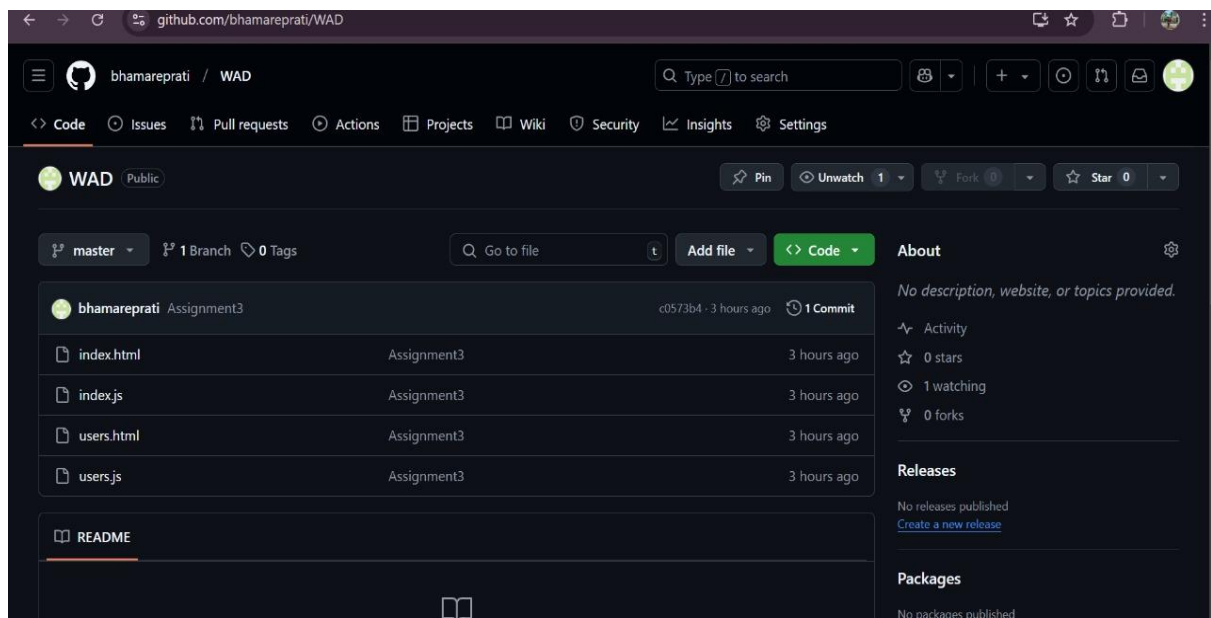
No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        index.html
        index.js
        users.html
        users.js

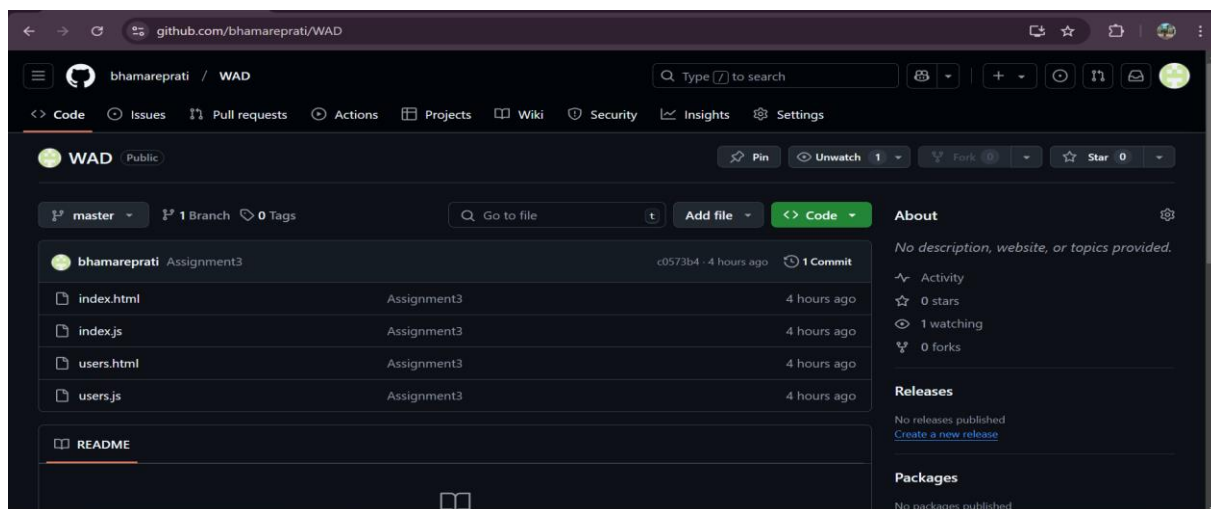
nothing added to commit but untracked files present (use "git add" to track)
Admin@DESKTOP-PMHVS45 MINGW64 ~/Desktop/CLG-Project/WAD/Assignment3 (master)
$ git add *
Admin@DESKTOP-PMHVS45 MINGW64 ~/Desktop/CLG-Project/WAD/Assignment3 (master)
$ git commit -m "Assignment3"
[master (root-commit) c0573b4] Assignment3
 4 files changed, 77 insertions(+)
 create mode 100644 index.html
 create mode 100644 index.js
 create mode 100644 users.html
 create mode 100644 users.js

Admin@DESKTOP-PMHVS45 MINGW64 ~/Desktop/CLG-Project/WAD/Assignment3 (master)
$ git remote add origin https://github.com/bhamareprati/WAD
Admin@DESKTOP-PMHVS45 MINGW64 ~/Desktop/CLG-Project/WAD/Assignment3 (master)
$ git push -u origin master
Info: please complete authentication in your browser...
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 8 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (6/6), 1.45 KiB | 1.45 MiB/s, done.
Total 6 (delta 3), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), done.
To https://github.com/bhamareprati/WAD
 * [new branch]      master -> master
```

After Push:



Before Pull:



```
MINGW64:/c/Users/Admin/Desktop/CLG-Project/WAD/Assignment3
error: remote origin already exists.

Admin@DESKTOP-PMHVS45 MINGW64 ~/Desktop/CLG-Project/WAD/Assignment3 (master)
$ git fetch origin

Admin@DESKTOP-PMHVS45 MINGW64 ~/Desktop/CLG-Project/WAD/Assignment3 (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean

Admin@DESKTOP-PMHVS45 MINGW64 ~/Desktop/CLG-Project/WAD/Assignment3 (master)
$ git log origin/master
commit c0573b4900f4004dd4ab536410dcc43a088d031b (HEAD -> master, origin/master)
Author: Pratiksha Bhamare <bhamareprati@gmail.com>
Date: Thu Feb 13 14:38:12 2025 +0530

    Assignment3

Admin@DESKTOP-PMHVS45 MINGW64 ~/Desktop/CLG-Project/WAD/Assignment3 (master)
$ git pull origin
Already up to date.
```

After Pull:

