

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.

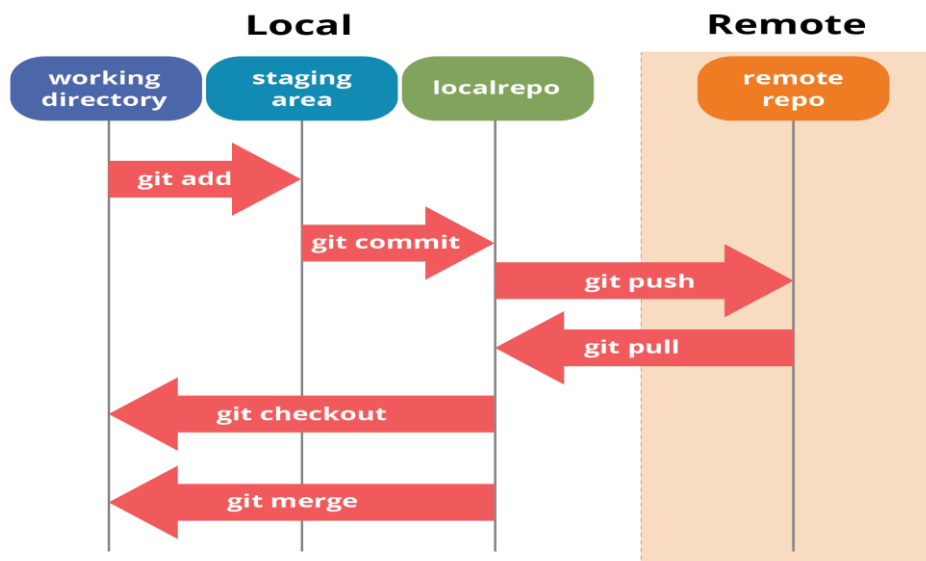
Microsoft acquired GitHub for \$7.5 billion

□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:

The screenshot shows the GitHub repository setup page. It includes sections for setting up GitHub Copilot, adding collaborators, and quick setup instructions. The quick setup section provides a command line sequence for creating a new repository.

```
echo "# WAD-" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/Asmita362/WAD-.git
git push -u origin main
```

```

Sunil Pawar@LAPTOP-7T7KRBE2 MINGW64 ~/MPLABXProjects/OneDrive/Desktop/WAD_LAB-main/Nodejs Assignment (main)
$ git init
Reinitialized existing Git repository in C:/Users/Sunil Pawar/MPLABXProjects/OneDrive/Desktop/WAD_LAB-main/Nodejs Assignment/.git/

Sunil Pawar@LAPTOP-7T7KRBE2 MINGW64 ~/MPLABXProjects/OneDrive/Desktop/WAD_LAB-main/Nodejs Assignment (main)
$ git add .

Sunil Pawar@LAPTOP-7T7KRBE2 MINGW64 ~/MPLABXProjects/OneDrive/Desktop/WAD_LAB-main/Nodejs Assignment (main)
$ git commit -m "Assignment_7"
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean

Sunil Pawar@LAPTOP-7T7KRBE2 MINGW64 ~/MPLABXProjects/OneDrive/Desktop/WAD_LAB-main/Nodejs Assignment (main)
$ git branch -M main

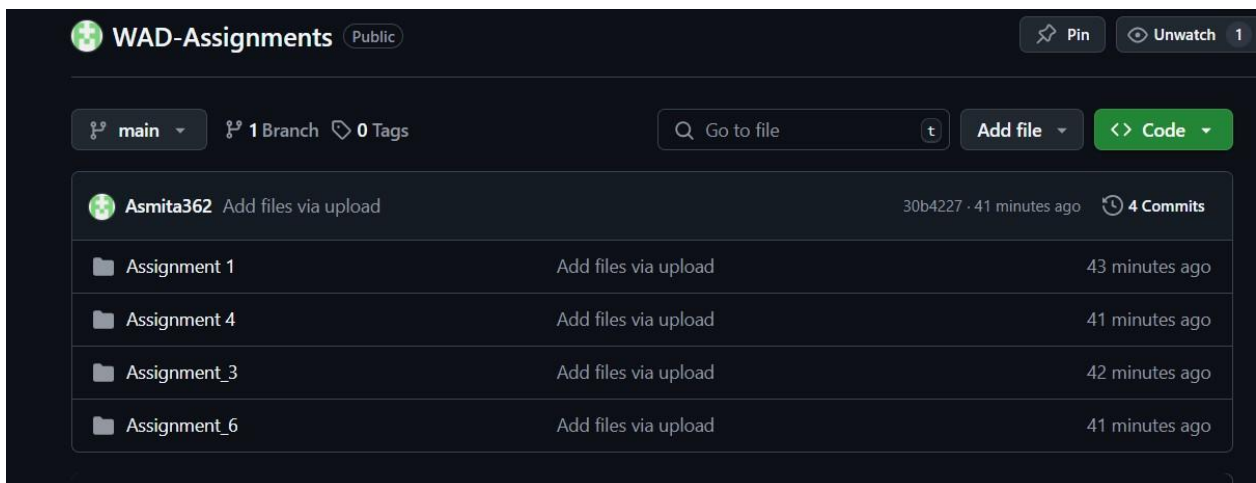
Sunil Pawar@LAPTOP-7T7KRBE2 MINGW64 ~/MPLABXProjects/OneDrive/Desktop/WAD_LAB-main/Nodejs Assignment (main)
$ git remote add origin https://github.com/Asmita362/Frontend.git
error: remote origin already exists.

Sunil Pawar@LAPTOP-7T7KRBE2 MINGW64 ~/MPLABXProjects/OneDrive/Desktop/WAD_LAB-main/Nodejs Assignment (main)
$ git remote set-url origin https://github.com/Asmita362/Frontend.git

Sunil Pawar@LAPTOP-7T7KRBE2 MINGW64 ~/MPLABXProjects/OneDrive/Desktop/WAD_LAB-main/Nodejs Assignment (main)
$ git push -u origin main
Enumerating objects: 2049, done.
Counting objects: 100% (2049/2049), done.
Delta compression using up to 4 threads
Compressing objects: 100% (1769/1769), done.
Writing objects: 100% (2049/2049), 3.81 MiB | 2.38 MiB/s, done.
Total 2049 (delta 335), reused 1817 (delta 203), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (335/335), done.
To https://github.com/Asmita362/Frontend.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.

```

After Push:



WAD-Assignments Public

main 1 Branch 0 Tags

Go to file Add file Code

Asmita362 Add files via upload 30b4227 · 41 minutes ago 4 Commits

File	Action	Time
Assignment 1	Add files via upload	43 minutes ago
Assignment 4	Add files via upload	41 minutes ago
Assignment_3	Add files via upload	42 minutes ago
Assignment_6	Add files via upload	41 minutes ago

Before Pull:

WAD-Assignments / Assignment_3 /

Asmita362 Add files via upload

fd90ec2 · 44 minutes ago History

Name	Last commit message	Last commit date
..		
form1.html	Add files via upload	44 minutes ago
form1.js	Add files via upload	44 minutes ago
users.html	Add files via upload	44 minutes ago
users.js	Add files via upload	44 minutes ago

```
Sunil Pawar@LAPTOP-7T7KRBE2 MINGW64 ~/MPLABXProjects/OneDrive/Desktop/WAD_LAB-main/Nodejs Assignment (main)
$ git fetch origin

Sunil Pawar@LAPTOP-7T7KRBE2 MINGW64 ~/MPLABXProjects/OneDrive/Desktop/WAD_LAB-main/Nodejs Assignment (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean

Sunil Pawar@LAPTOP-7T7KRBE2 MINGW64 ~/MPLABXProjects/OneDrive/Desktop/WAD_LAB-main/Nodejs Assignment (main)
$ git log origin/main
commit 77ffb30c5a9b86c07ad4dd2eb126741165416760 (HEAD -> main, origin/main)
Merge: f681c75 80b3489
Author: Asmita362 <asmitapawar@141@gmail.com>
Date:   Wed Apr 23 22:11:44 2025 +0530
```

After Pull:

WAD-Assignments / Assignment_3 /

Asmita362 Add files via upload

fd90ec2 · 44 minutes ago History

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form1.html	Add files via upload	44 minutes ago
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