**ASSIGNMENT**

1. **Git Commands and Their Uses**
2. Git merge: Combines changes from one branch to another.
3. Git commit: Records the changes made to the repository with a message.
4. Git log: It displays commit history.
5. Git config: Sets user configuration (like username and email) for Git.
6. Git diff: Shows the difference between unstaged change and the last commit.

**2. Create Your First Repository.**

Repository "my-first-project" https://github.com/Brainiegal/My-first-project

**3.Share Your GitHub Profile.**

GitHub Profile: https://github.com/Brainiegal.

1. **What is a Repository?**

A repository in Git is a storage space where your project's files, revision history, and configuration data are stored. It helps track changes and collaborate with others efficiently. It can be hosted locally or on platforms like GitHub**.**

**5. What are GitHub Branches?**

A branch in GitHub (and Git) is essentially a separate line of development that allows you to work on different tasks without affecting the main code. It is used to develop new features, to fix bugs and also to work with teams without conflicts.

They are important because it:

* Supports parallel development
* Prevents breaking the main project
* Simplifies testing and reviewing changes before merging

GitHub branches are crucial for collaborative projects because:

**i. Isolation:** Different team members can work on different features simultaneously on separate branches without interfering with each other's work or the stable main product.

**ii. Feature Development:** Each new feature can be developed in its own branch. This keeps the main branch clean and deployable at all times.

**iii. Controlled Integration:** Once work on a branch is complete and tested, it can be merged back into the main branch through a Pull Request. This process allows for code review and discussion, ensuring quality and team awareness before changes are incorporated.

**iv. Experimentation:** Branches provide a safe space to try out new ideas. If an experiment fails, you can simply abandon the branch without any impact on the main project.