- ## **VCS**

VCS stands for version control system. It is a software used to track changes in file or multiple files over period of time. It allows programmers to collaborate, go back to previous versions, and manage changes in code effectively.

- ## **Git**

Git is version control system designed to track changes and collaborate easily on a project.

- ## **GitHub**

GitHub is a online collaboration platform used to collaborate on a project using Git.

- ## **Git Commands**

1. **[git init] :** Initializes Git in the project folder.

2. **[git add <file name>] :** Starts tracking the specified file in the folder.

3. **[git add .] :** Starts tracking all the files in the project folder.

4. **[git commit -m "Message"] :** Saves changes as a commit (version).

5. **[git log] :** Shows all the commits.

6. [git status] : shows current status of files, whether they are to be committed or not.

7. [git branch] : Shows all available branches.

8. [git branch <branch_name>] : Creates a new branch.

9. [git checkout <branch_name>] : Switches to specified branch.

10. [git merge <branch_name>] : Merges specified branch in the current branch.

11. [git merge --squah <branch_name>] : Merges all the commits of the specified branch as one commit and merges that in the current branch.

12. [git rebase <branch_name>] : Shifts the current branch to the latest commit of the specified branch.

13. [git add remote origin <URL>] : Connects remote repository to the local system.

14. [git push] : Uploads the changes to the remote repository.

- **Commit Standards :**

1.First letter of the commit should be capital

2.Commit message length should be less than 50 characters.

3.Specify the fix in the description of commit.

4.Do not work on main branch, create new one for each task.
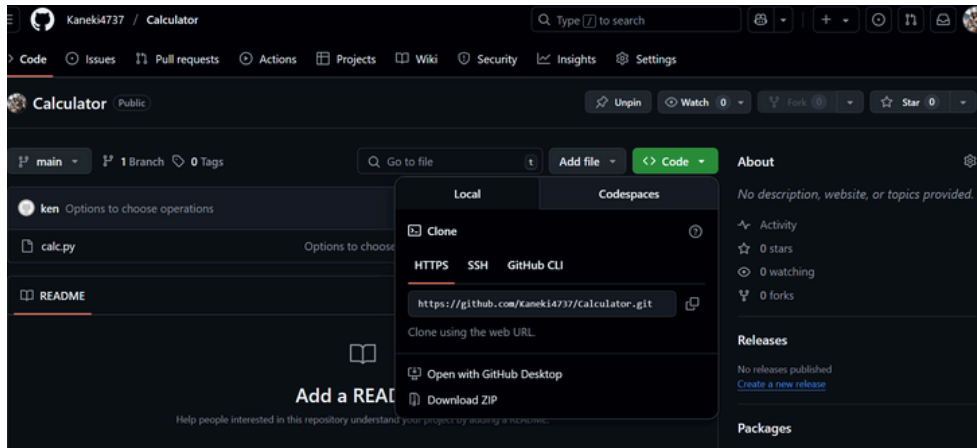

- **Rules for collaboration :**

1.Branch name should match the feature that you are working on.

2.Rebase with main branch before committing.

3.Do not merge and squash, merge all the commits.

- GitHub Basics :

- Use [git remote add origin <URL>] in the terminal of project folders directory to connect with remote repository.

-To get the URL, Go to the specified repository> click on the green code button> Copy the URL from HTTPS and paste it in the command above.

-To make a pull request Go to the specified repository> Click on the pull request> New pull request> Change the branch on the right to your branch.