

Assignment 1 : Initialize a new git repository in a directory of your choice. Add a simple text file to the repository and make the first commit.

- Depend upon operating system open the terminal.
- Use the `cd..` command to navigate to the directory where you want initialize the git repository.

EX: location/path/directory

- Use **"git init "** command to initialize the git repository in current directory.
- Create one text file
Demo.txt → **"Hello Good Morning"**
- Add the text file to the repository
git add Demo.txt
- Use the **"git commit"** command to commit the changes to the repository.
git commit -m "file is added"

Assignment 2: Branch Creation and Switching Create a new branch named 'feature' and switch to it. Make changes in the 'feature' branch and commit them.

- **Create a new branch named 'feature' and switch to it:**

`git branch feature`

- **checkout:**

`git checkout feature:` checkout is command to switch the branches/create new one

- **Make changes in the 'feature' branch:**

Make the any thing in this project using preferred text editor

- **Add the changes to the staging area:**

`Git add <file1> <file2>` that will be replace with the names of the files.

'git add .' this command add the file

- **Commit the changes:**

- **git commit -m "new file is added":** This command creates a new commit with the changes staged in the previous step.

committing changes frequently and writing descriptive commit messages is essential for maintaining a clear and understandable history of your project. It helps you and your collaborators understand why certain changes were made and makes it easier to revert or review changes later on.

Assignment 3: Feature Branches and Hotfixes

Create a 'hotfix' branch to fix an issue in the main code. Merge the 'hotfix' branch into 'main' ensuring that the issue is resolved.

- **Create a 'hotfix' branch:**
Git branch hotfix : this command is used to create the branch
- **Make changes to fix the issue:**
You can make changes to the codebase to fix the issue you encountered.
- **Add and commit the changes:**

Git add <file>

Git commit -m "fixed the issue"
- **Switch back to the 'main' branch:**
'git checkout main' : back to the main branch
- **Merge the 'hotfix' branch into 'main':**
'git merge hotfix' : used this command we have to merge the branch.
- **Commit the marge:**
'git commit -m 'merged the hotfix': using this command we have to commit
- **Push changes to the remote repository:**
'git push origin main' : finally we have to push the file into repository.