hariharane01@gmail.com

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GIT-Assignment 01

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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.

Answer:

- Open your terminal or command prompt.
- Navigate to the location where you want to create your new directory.
- Create a new directory and navigate into it.
  - ➢ **mkdir my_git_repo**
  - ➢ **cd my_git_repo**
- Initialize a new Git repository in the directory.
  - ➢ **git init**
- Create a simple text file in the directory. You can use any text editor to create the file, or you can use a command in the terminal.
  - ➢ **echo "Hello, Git!" > demo.txt**
- Stage the file for commit using the git add command
  - ➢ **git add demo.txt**
- Commit the staged file with a commit message using the git commit command
  - ➢ **git commit -m "Initial commit with demo.txt"**

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.

Answer:

- Open your terminal or command prompt.
- Navigate to the repository directory you initialized in Assignment 1.
  - ➢ **cd my_git_repo**
- Create a new branch using the git branch command.
  - ➢ **git branch feature**
- Switch to the feature branch using the git checkout command.
  - ➢ **git checkout feature**
- Create or modify a file in the feature branch. For example, let's add a new line to example.txt.

  - ➢ **echo "This is a feature branch change." >> demo1.txt**
- Stage the changes using the git add command.

- ➢ **git add demo1.txt**
- Commit the staged changes with a commit message using the git commit command.
  - ➢ **git commit -m "Add a line in the feature branch"**

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.

Answer:

- Create a new branch using the git branch command.
  - ➢ **git branch hotfix**
- Switch to the hotfix branch using the git checkout command.
  - ➢ **git checkout hotfix**
- Edit the relevant file(s) to fix the issue. For example, let's fix a typo in example.txt.
  - ➢ **echo "This is a hotfix." >> example.txt**
- Stage the changes using the git add command.
  - ➢ **git add example.txt**
- Commit the staged changes with a commit message using the git commit command.
  - ➢ **git commit -m "Fix typo in example.txt"**
- Switch to the main branch using the git checkout command.
  - ➢ **git checkout main**
- Merge the hotfix Branch into main
  - ➢ **git merge hotfix**
- Check that the issue is resolved and the changes from the hotfix branch are present in the main branch.
  - ➢ **cat example.txt**
- Delete the hotfix Branch
  - ➢ **git branch -d hotfix**