

ASSIGNMENTS(1-3) 17-05

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.

Git Commands:

```
$ mkdir testdir  
$ cd testdir  
$ git init  
$ vi sample.txt  
$ git add sample.txt  
$ git commit -m "first commit"
```

Explanation:

1. Creating a new directory named testdir.
2. Initialize a new Git repository within the testdir directory.
3. Create a new text file named sample.txt within the testdir directory.
4. Add the newly created sample.txt file to the staging area.
5. Commit the changes to the repository with a commit message "first commit".

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.

Git Commands:

```
$ git branch feature  
$ git checkout feature  
$ vi newfeatures.txt  
$ git add .  
$ git commit -m "new features are modified"
```

Explanation:

1. Create a New Branch named feature.
2. Switch to the newly created feature branch.
3. Creating a new file named newfeature.txt and modifying in that file within the feature branch.
4. Add all changes within the branch to the staging area.
5. Commit the changes made in the feature branch with a commit message "new features are modified".

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.

Git Commands:

```
$ git branch hotfix  
$ git checkout hotfix  
$ vi newfeature.txt  
$ git add .  
$ git commit -m "issues are resolved"  
$ git checkout main  
$ git merge hotfix
```

Explanation:

1. Create a New Branch named hotfix.
2. Switch to the newly created hotfix branch.
3. Make the necessary changes in the codebase to resolve the identified issue.
4. Add all changes within the hotfix branch to the staging area.
5. Commit the changes made to fix the issues with a commit message "issues are resolved".
6. Switch to main branch.
7. Merge the changes from the hotfix branch into the main branch. This integrates the hotfix changes into the main codebase, ensuring that the issue is resolved.