**3. GIT – HOL**

The objective of this lab is to understand the concepts of branching and merging in Git and learn how to create branches, switch between them, and merge changes back to the main branch.

We follow the following steps inside the working Git repository **GitDemo**  which we created in previous handson to complete this handson :-

**Steps :**

1. **Creating a New Branch :-**

* We create a new branch named GitNewBranch from the current master branch using:



* To confirm, list all local branches with :

A black screen with text

AI-generated content may be incorrect.

1. **Switching to the New Branch :-**

* Switch to the newly created branch.

A black background with white text

AI-generated content may be incorrect.

* Add a new file named **newbranchfile.txt** with some content.



* Stage and commit this new file.

A black screen with white text

AI-generated content may be incorrect.

A screen shot of a computer code

AI-generated content may be incorrect.

* Check the status of the branch to ensure everything is committed.

A black background with white text

AI-generated content may be incorrect.

1. **Viewing Differences Between Branches :-**

* Switch back to the master branch.

A black background with white text

AI-generated content may be incorrect.

* View the text differences between master and GitNewBranch.

A computer screen shot of a computer code

AI-generated content may be incorrect.

* Use P4Merge as a visual diff tool to see the differences more clearly.

A computer screen shot of text

AI-generated content may be incorrect.

1. **Merging Branch into Master :-**

* Merge the changes from GitNewBranch into master.

A screenshot of a computer program

AI-generated content may be incorrect.

* Confirm the merge by viewing the commit history graph.

A screen shot of a computer

AI-generated content may be incorrect.

1. **Cleaning Up :-**

* After merging, delete the now-unneeded branch.

A black screen with white text

AI-generated content may be incorrect.

* Verify the branch has been deleted and check the current status.

A black screen with purple and blue text

AI-generated content may be incorrect.

A black screen with white text

AI-generated content may be incorrect.