**3. Git-HOL**

**Branching and Merging – Hands-on Lab**

**Branching**

**Step 1:** Create a new branch named **GitNewBranch** by typing git branch GitNewBranch in Git Bash.

**Step 2:** View all local and remote branches in the current repository by typing git branch -a. The branch with an asterisk (\*) is the one you are currently on.

**Step 3:** Switch to the newly created branch by typing git checkout GitNewBranch.

**Step 4:** Add one or more new files to this branch using git add <filename>. Put some sample content into the files before adding them.

**Step 5:** Save your changes to the branch by typing git commit -m "Your commit message".

**Step 6:** Check the branch status by typing git status.

**Merging**

**Step 1:** Switch back to the master branch by typing git checkout master.

**Step 2:** Compare the differences between master and **GitNewBranch** by typing git diff GitNewBranch.

**Step 3:** To view the differences visually, use the P4Merge tool by typing git mergetool.

**Step 4:** Merge the changes from **GitNewBranch** into master by typing git merge GitNewBranch.

**Step 5:** Review the commit history after merging by typing git log --oneline --graph --decorate.

**Step 6:** Delete the **GitNewBranch** after merging by typing git branch -d GitNewBranch.

**Step 7:** Verify the repository status again by typing git status.