**Lab Exercise -1 (Git Practice):**

1. Create a new directory called "git-practice" and navigate into it: 2. Initialize a new Git repository:

3. Create a new file called `index.html` with the following content: 4. Check the status of your repository:

5. Add the file to the staging area and make your first commit:

**Branching and Making Changes**

1. Create and switch to a new branch called "feature-navbar": 2. Modify `index.html` to add a navigation bar:

3. Stage and commit your changes:

**Creating a Merge Conflict**

1. Switch back to the main branch:

2. Modify the same file differently ( html file)

3. Stage and commit these changes:

4. Try to merge the feature branch:

5. Resolve the merge conflict by editing the file manually

**Questions for Understanding**

1. What is the purpose of the staging area in Git?

2. Why do we create branches in Git?

3. What causes merge conflicts and how can they be prevented? 4. What's the difference between git merge and git rebase?

**Submission Requirements**

- Screenshot of your commit history (git log)

- URL to your GitHub repository

- Brief explanation of any challenges encountered and how you resolved them