Exercise: Branches and Pull Requests on GitHub
prerequise create your own github account to do this exercise

Objective:

Practice creating branches, making changes, and opening pull requests using only GitHub's web interface. Simulate a collaborative development environment without using the command line.

Steps:

1. **Setup the Repository:**

   - Create a new GitHub repository for your web application.

   - Initialize the repository with a basic web application codebase.

2. **Define Branching Strategy:**

   - Choose a branching strategy (e.g., **main** as the primary branch, feature branches for development).

3. **Create a Feature Branch:**

   - Navigate to your GitHub repository.

   - Click on the "Branch" button and create a new branch for a specific feature (e.g., **feature-login**).

4. **Make Changes:**

   - Navigate to the new branch and make changes to the codebase related to the login feature.

   - Commit the changes directly on the branch.

5. **Open a Pull Request:**

   - Go to the "Pull Requests" tab on your GitHub repository.

   - Click on the "New Pull Request" button.

   - Set the base branch as **main** and the compare branch as **feature-login**.

   - Add a description of the changes and open the pull request.

6. **Code Review:**

   - Review the changes in the pull request.

   - Comment on specific lines of code or the overall changes.

   - Discuss any concerns or suggestions with team members using GitHub comments.

7. **Merge the Pull Request:**

- If the code review is successful, merge the pull request into the **main** branch.

- Confirm the merge on GitHub.

8. **Repeat for Other Features:**

   - Repeat the process for other features or bug fixes by creating new feature branches and opening pull requests.

9. **Handle Merge Conflicts (Optional):**

   - Introduce a conflicting change in the **main** branch using GitHub's web interface.

   - Attempt to merge a feature branch with conflicting changes.

   - Resolve the merge conflict using GitHub's built-in tools.