**Q1: Set up a Git repository, create a new branch, commit changes, and merge the branch back into the main branch.**

**Steps to Complete:**

1. **Initialize a Git Repository**:
   * Open a terminal or command prompt.
   * Navigate to your project directory:

cd path/to/your/project

* + Initialize the Git repository:

git init

1. **Create a New Branch**:
   * Create a branch named feature-branch:

git branch feature-branch

* + Switch to the new branch:

git checkout feature-branch

* + Alternatively, you can create and switch to the branch in one command:

git checkout -b feature-branch

1. **Make Changes and Commit**:
   * Make changes to files in the project directory.
   * Stage the changes:

git add .

* + Commit the changes:

git commit -m "Added new feature"

1. **Merge the Branch Back into the Main Branch**:
   * Switch back to the main branch:

git checkout main

* + Merge the feature-branch into main:

git merge feature-branch

1. **Verify the Merge**:
   * Check the Git log to verify the merge:

git log --oneline

1. **Optional Cleanup**:
   * Delete the feature branch after merging (optional):

git branch -d feature-branch