PROGRAM 1

Initialize a new Git repository in a directory. Create a new file and add it to the staging area and commit the changes with an appropriate commit message.

Creating a New Directory and Navigating to It.

STEP 1: mkdir folder_name:

- Creates a new directory with the specified name.
- For example, mkdir my_project creates a directory named "my_project".

STEP 2: cd folder_name:

- Changes the current directory to the specified directory.
- For example, cd my_project changes the current directory to "my_project". Listing Directory Contents and Checking Current Directory

STEP 3: ls:

- Lists the contents of the current directory.
- This shows files and subdirectories within the current directory.

STEP 4: pwd:

- Prints the current working directory path.
- This tells you where you are in the file system. Initializing a Git Repository

STEP 5: git init:

- Initializes a new Git repository in the current directory.
- This creates a .git hidden directory to store Git's metadata.

Configuring Git User Information.

STEP 6: git config --global user.name "your_name":

- Sets your name globally for all Git commits.

- Replace "your_name" with your actual name.

STEP 7: git config --global user.email "your_email@example.com":

- Sets your email address globally for all Git commits.
- Replace "your_email@example.com" with your actual email address.

Creating and Tracking Files

STEP 8: touch file1.txt:

- Creates a new file named "file1.txt" in the current directory.

STEP 9 : ls

- Lists the contents of the current directory.
- This shows files and subdirectories within the current directory

STEP 10: git status:

- Shows the current state of the working directory.
- It indicates which files are tracked, untracked, modified, or staged.

STEP 11: git add file1.txt:

- Stages the changes in "file1.txt" for the next commit.

- Staged changes are included in the next commit.

STEP 12: git status:

- Shows the current state of the working directory.
- It indicates which files are tracked, untracked, modified, or staged.

STEP 13: git commit -m "file created":

- Creates a new commit with the specified message.
- The staged changes are committed to the repository.Editing and Committing a File

STEP 14: git status:

- Shows the current state of the working directory.
- It indicates which files are tracked, untracked, modified, or staged.

STEP 15: vi file2.txt:

- Opens the file "file2.txt" in the vi text editor.
- You can edit the file's content.

STEP 16: git add .:

- Stages all changes in the current directory for the next commit.

STEP 17: git commit -m "added file":

- Creates a new commit with the specified message.
- All staged changes are committed to the repository.

Viewing Commit History

STEP 18: git status:

- Shows the current state of the working directory.
- It indicates which files are tracked, untracked, modified, or staged.

STEP 19: git log:

- Shows the commit history of the current repository.

It displays information about each commit, such as the commit hash, author, date, and commit message.

These commands are fundamental to using Git for version control. By mastering these commands, you can effectively manage your projects and collaborate with others.