

Assignment 1: Git Basics (Local Repository)

Problem Statement

You are starting a new project called Student-Management-System and want to track code changes using Git.

Tasks

1. Create a new folder named student-management-system
2. Initialize Git repository
3. Create a file README.md and add project description
4. Check Git status
5. Stage and commit the file

```
arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (main)
$ git init
Initialized empty Git repository in C:/Users/arjun/OneDrive/Desktop/Student-Management-System/.git/
arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (main)
$ cat > README.md
This is my first git repo

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (main)
$ git status
On branch main

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    README.md

nothing added to commit but untracked files present (use "git add" to track)

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (main)
$ git add .
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (main)
$ git status
On branch main

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file:   README.md

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (main)
$ git commit -m "readme file added"
[main (root-commit) 43e2d1f] readme file added
 1 file changed, 1 insertion(+)
 create mode 100644 README.md
```

Assignment 2: Working with Branches

Problem Statement

You need to add a new feature without affecting the main code.

Tasks

1. Create a branch named feature-login
2. Switch to the branch
3. Add file login.txt
4. Commit changes
5. Merge branch into main

```
arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (main)
$ git checkout -b feature-login
Switched to a new branch 'feature-login'

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (feature-login)
$ git branch
* feature-login
  main

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (feature-login)
$ cat > login.txt
This is a file which contains login credentials

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (feature-login)
$ git add .
warning: in the working copy of 'login.txt', LF will be replaced by CRLF the next time Git touches it

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (feature-login)
$ git commit -m "new file login.txt added"
[feature-login c09574a] new file login.txt added
 1 file changed, 1 insertion(+)
 create mode 100644 login.txt

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (feature-login)
$ git checkout main
Switched to branch 'main'

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (main)
$ git merge feature-login
Updating 43e2d1f..c09574a
Fast-forward
  login.txt | 1 +
  1 file changed, 1 insertion(+)
 create mode 100644 login.txt

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (main)
$ ls
README.md  Login.txt
```

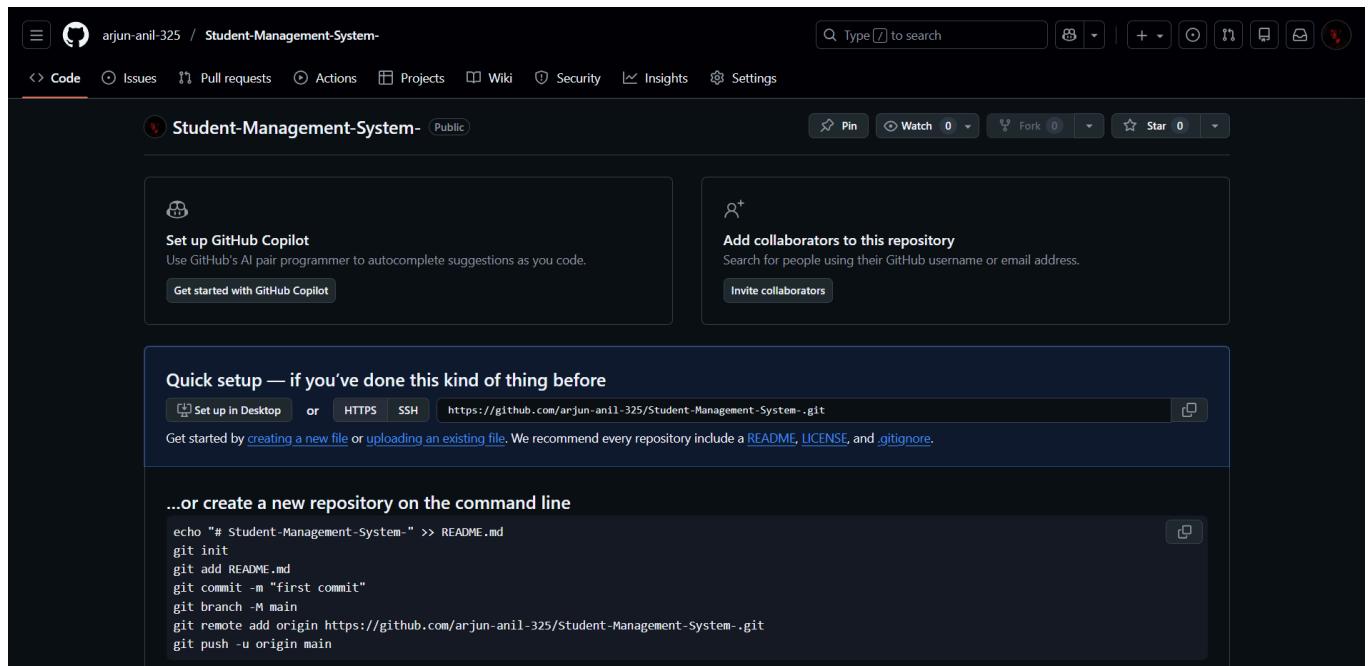
Assignment 3: GitHub Integration

Problem Statement

Your project must be stored in GitHub for collaboration.

Tasks

1. Create a GitHub repository
2. Connect local repo to GitHub
3. Push code to GitHub
4. Verify files online



```

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (main)
$ ls
README.md  login.txt

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (main)
$ git add .

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (main)
$ git commit -m "connecting local repo to remote repo"
On branch main
nothing to commit, working tree clean

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (main)
$ git remote add origin https://github.com/arjun-anil-325/Student-Management-System-.git

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (main)
$ git push -u origin main
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (6/6), 544 bytes | 544.00 KiB/s, done.
Total 6 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/arjun-anil-325/Student-Management-System-.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.

```

The screenshot shows a GitHub repository page for a repository named 'Student-Management-System-' owned by 'arjun-anil-325'. The repository is public and contains two commits:

- Commit 1: 'arjun-anil-325 new file login.txt added' (c09574a, 7 minutes ago)
- Commit 2: 'arjun-anil-325 README.md readme file added' (11 minutes ago)

The 'Code' tab is selected. The README file content is displayed as:

```
This is my first git repo
```

On the right side, there are sections for 'About', 'Releases', and 'Packages'. The 'About' section notes 'No description, website, or topics provided.' The 'Releases' section says 'No releases published' and has a link to 'Create a new release'. The 'Packages' section indicates 'No packages published' and has a link to 'Publish your first package'.

At the bottom, there is a footer with links to GitHub's Terms, Privacy, Security, Status, Community, Docs, Contact, Manage cookies, and a link to 'Do not share my personal information'.

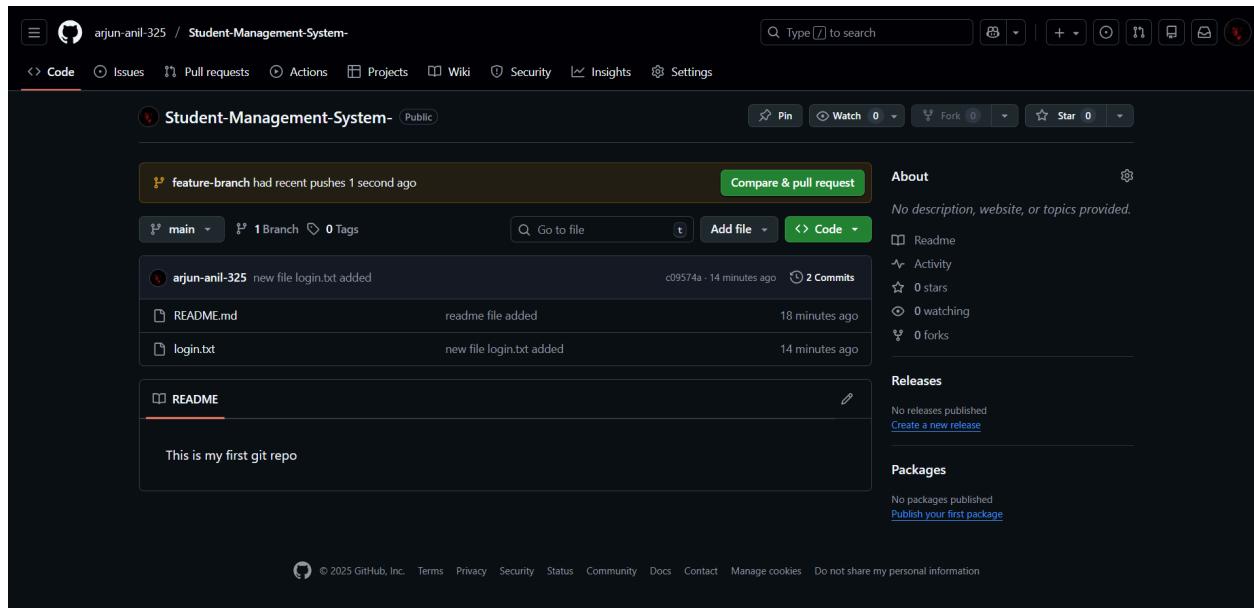
Assignment 4: GitHub Pull Request (PR)

Problem Statement

Changes must be reviewed before merging.

Tasks

1. Create a branch
2. Push branch to GitHub
3. Create Pull Request
4. Merge PR



Open a pull request

Create a new pull request by comparing changes across two branches. If you need to, you can also compare across forks. [Learn more about diff comparisons here.](#)

base: `main` compare: `feature-branch` ✓ Able to merge. These branches can be automatically merged.

Add a title
new file test.txt added

Add a description

Write Preview

Add your description here...

Markdown is supported Paste, drop, or click to add files

Create pull request

Remember, contributions to this repository should follow our [GitHub Community Guidelines](#).

Reviewers
No reviews

Assignees
No one—assign yourself

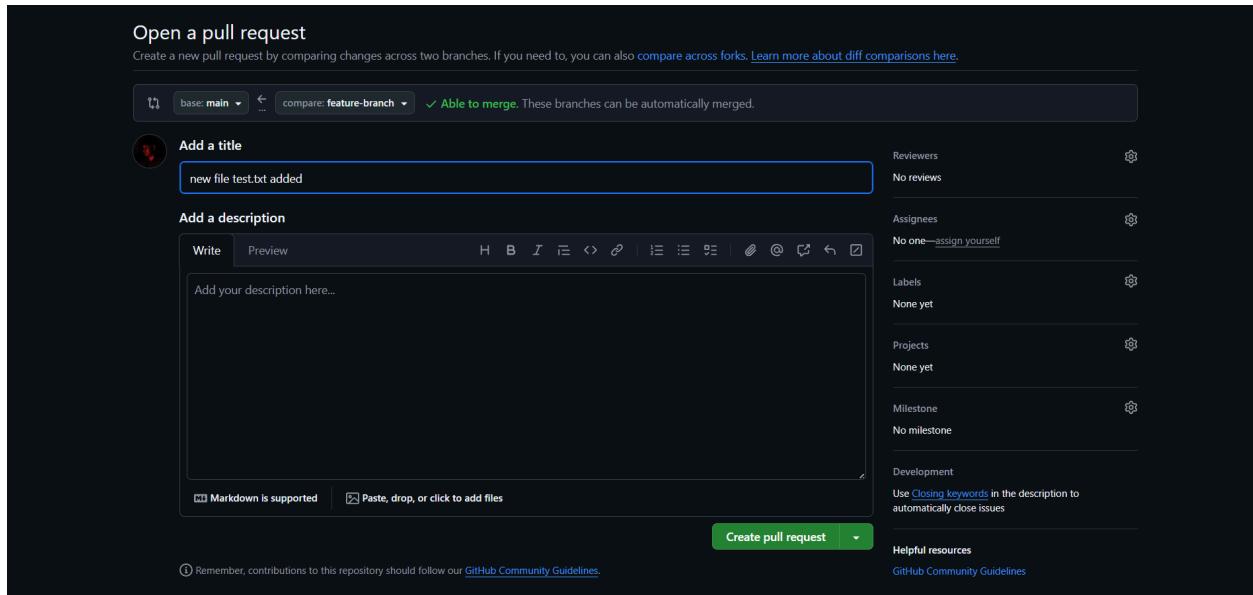
Labels
None yet

Projects
None yet

Milestone
No milestone

Development
Use [Closing keywords](#) in the description to automatically close issues

Helpful resources
[GitHub Community Guidelines](#)



new file test.txt added #1

Open arjun-anil-325 wants to merge 1 commit into `main` from `feature-branch`

Conversation 0 Commits 1 Checks 0 Files changed 1

arjun-anil-325 commented 3 minutes ago

No description provided.

new file test.txt added

No conflicts with base branch
Merging can be performed automatically.

Merge pull request

Still in progress? Convert to draft

Add a comment

Write Preview

Add your comment here...

Reviewers
No reviews

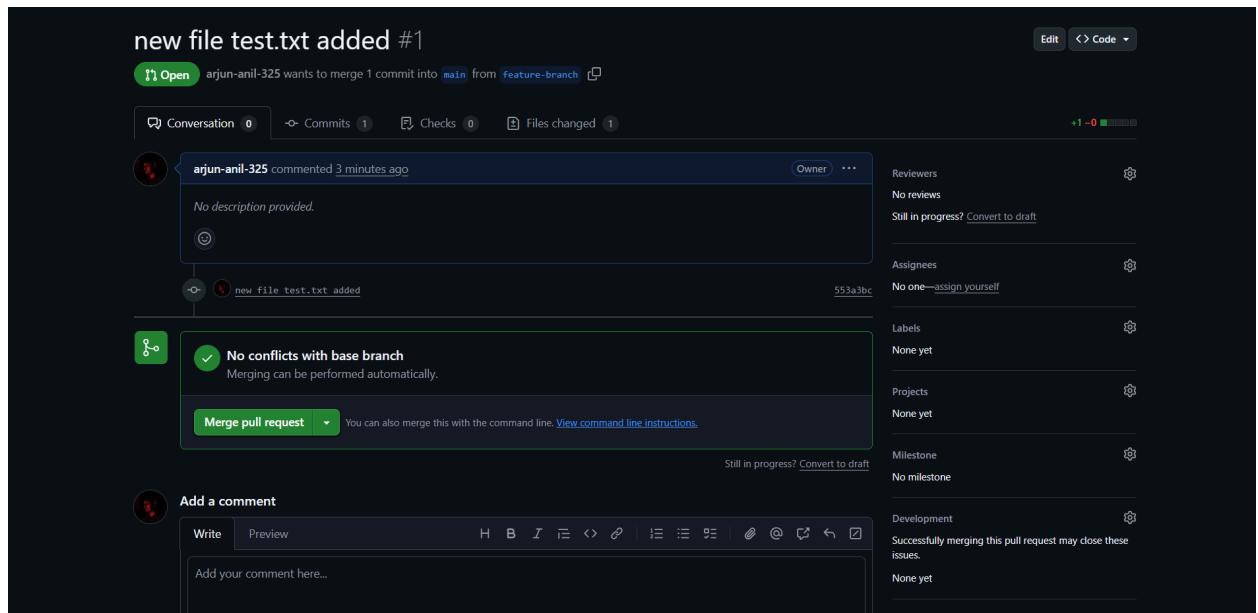
Assignees
No one—assign yourself

Labels
None yet

Projects
None yet

Milestone
No milestone

Development
Successfully merging this pull request may close these issues.



```

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (feature-branch)
$ git branch
* feature-branch
  feature-login
  main

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (feature-branch)
$ cat > test.txt
Pull request assignment

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (feature-branch)
$ git status
On branch feature-branch
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    test.txt

nothing added to commit but untracked files present (use "git add" to track)

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (feature-branch)
$ git add .
warning: in the working copy of 'test.txt', LF will be replaced by CRLF the next time Git touches it

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (feature-branch)
$ git commit -m "new file test.txt added"
[feature-branch 553a3bc] new file test.txt added
 1 file changed, 1 insertion(+)
 create mode 100644 test.txt

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (feature-branch)
$ git push -u origin feature-branch
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 341 bytes | 341.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'feature-branch' on GitHub by visiting:
remote:   https://github.com/arjun-anil-325/Student-Management-System-/pull/new/feature-branch
remote:
To https://github.com/arjun-anil-325/Student-Management-System-.git
 * [new branch]      feature-branch -> feature-branch
branch 'feature-branch' set up to track 'origin/feature-branch'.

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (feature-branch)
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.

```

```

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (main)
$ git pull origin main
remote: Enumerating objects: 1, done.
remote: Counting objects: 100% (1/1), done.
remote: Total 1 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (1/1), 914 bytes | 457.00 KiB/s, done.
From https://github.com/arjun-anil-325/Student-Management-System-
 * branch            main      -> FETCH_HEAD
   c09574a..12439cf main      -> origin/main
Updating c09574a..12439cf
Fast-forward
 test.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 test.txt

arjun@ARJUNANIL MINGW64 ~/OneDrive/Desktop/Student-Management-System (main)
$ ls
README.md  login.txt  test.txt

```

