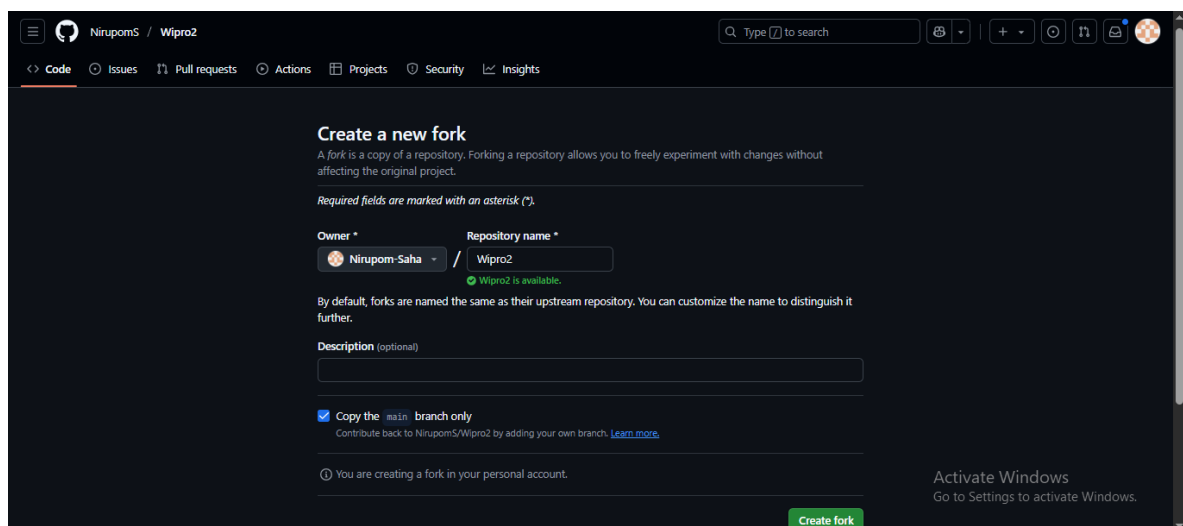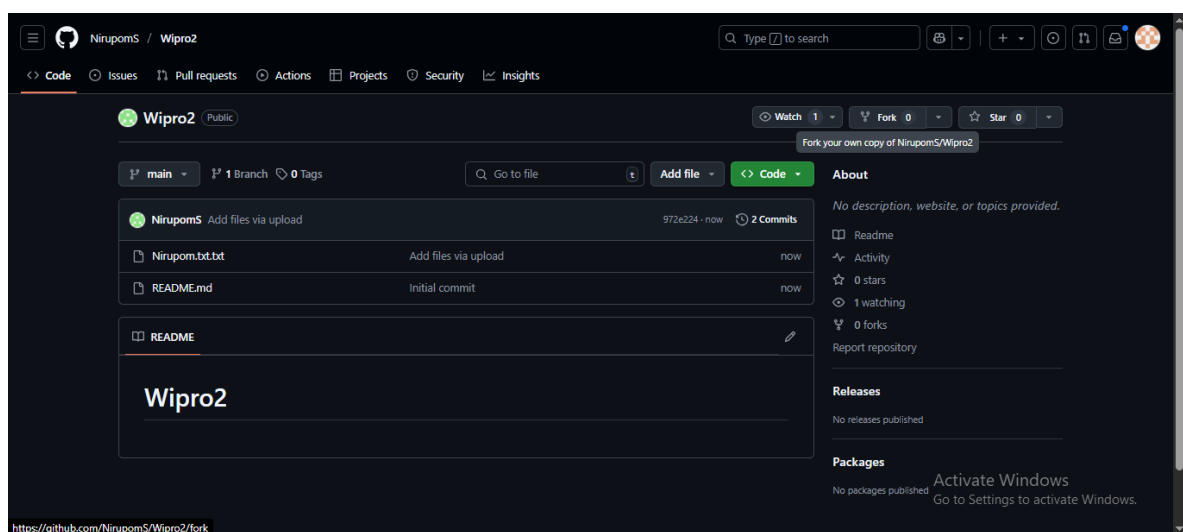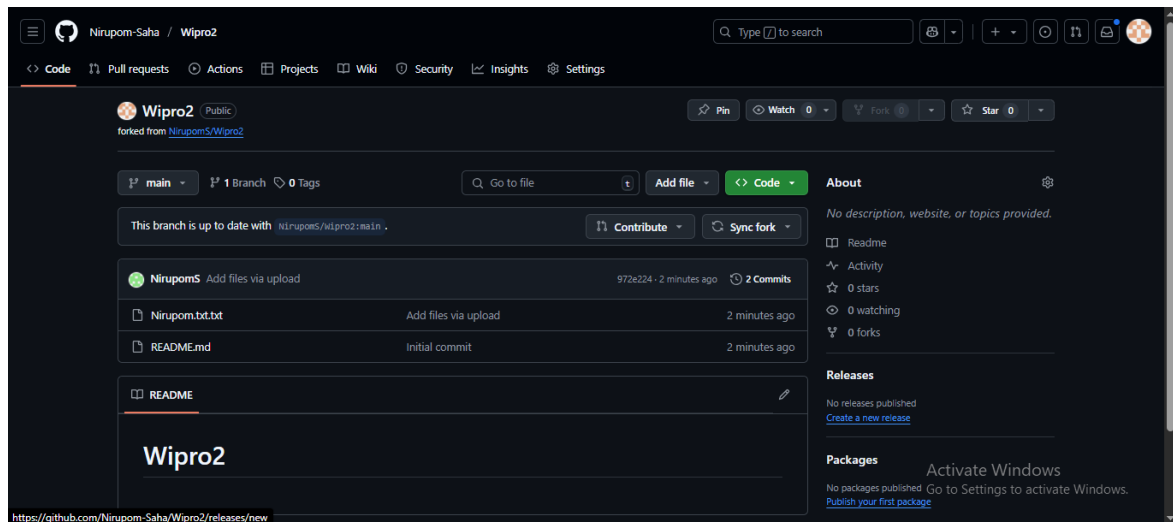**Name: Nirupom Saha**

Registration No: 2141019011

Assignment 3: Collaborative Development Using Git - Fork an existing repository (this can be a simulated action if no actual repository is available), clone it locally, and demonstrate managing updates from the original repository. Create a pull request to the original repository with changes made in the forked repository, and outline a simple code review process.

1. **Forking an Existing Repository**

➢ Local Simulation


```
nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3
$ mkdir original-repo

nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3
$ cd original-repo

nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3/original-repo
$ git init
Initialized empty Git repository in C:/Users/nirup/Desktop/ASS3/original-repo/.git/

nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3/original-repo (master)
$ echo "# Original Project" > README.md

nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3/original-repo (master)
$ git add README.md
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it

nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3/original-repo (master)
$ git commit -m "Initial commit"
[master (root-commit) fd7f463] Initial commit
 1 file changed, 1 insertion(+)
 create mode 100644 README.md

nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3/original-repo (master)
$ cd ..

nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3
$ git clone original-repo forked-repo
Cloning into 'forked-repo'...
done.

nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3
$
```

2. Cloning the Forked Repository Locally


```
nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3
$ git clone https://github.com/Nirupom-Saha/Wipro2.git
Cloning into 'Wipro2'...
remote: Enumerating objects: 6, done.
remote: Counting objects: 100% (6/6), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 6 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (6/6), done.
```

3. Adding the Original Repository as a Remote

```
nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3 (master)
$ git remote add upstream https://github.com/Nirupom-Saha/Wipro2.git
```

MINGW64:/c/Users/nirup/Desktop/ASS3

```
nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3 (master)
$ git remote -v
upstream        https://github.com/Nirupom-Saha/Wipro2.git (fetch)
upstream        https://github.com/Nirupom-Saha/Wipro2.git (push)

nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3 (master)
$
```

4. Fetching and Merging Updates from Original Repository

```
nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3 (master)
$ git fetch upstream
remote: Enumerating objects: 6, done.
remote: Counting objects: 100% (6/6), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 6 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (6/6), 1.74 KiB | 27.00 KiB/s, done.
From https://github.com/Nirupom-Saha/Wipro2
 * [new branch]      main       -> upstream/main

nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3 (master)
$
```

```
nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3 (master)
$ git checkout main
branch 'main' set up to track 'upstream/main'.
Switched to a new branch 'main'

nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3 (main)
$
```

```
nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3 (main)
$ git merge upstream/main
Already up to date.

nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3 (main)
$ |
```

5. Making Changes in the Forked Repository

```
nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3 (main)
$ git checkout -b my-new-feature
Switched to a new branch 'my-new-feature'

nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3 (my-new-feature)
$
```

```
nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3 (my-new-feature)
$ echo "This is a new feature" > feature.txt

nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3 (my-new-feature)
$
```

```
nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3 (my-new-feature)
$ git add feature.txt
warning: in the working copy of 'feature.txt', LF will be replaced by CRLF the next time Git touches it

nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3 (my-new-feature)
$
```

```
nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3 (my-new-feature)
$ git commit -m "Add new feature"
[my-new-feature 999434e] Add new feature
 1 file changed, 1 insertion(+)
 create mode 100644 feature.txt

nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3 (my-new-feature)
$
```

```
nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3 (my-new-feature)
$ git push origin my-new-feature
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 343 bytes | 171.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'my-new-feature' on GitHub by visiting:
remote:      https://github.com/Nirupom-Saha/Wipro2/pull/new/my-new-feature
remote:
To https://github.com/Nirupom-Saha/Wipro2.git
 * [new branch]      my-new-feature -> my-new-feature

nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/ASS3 (my-new-feature)
$
```
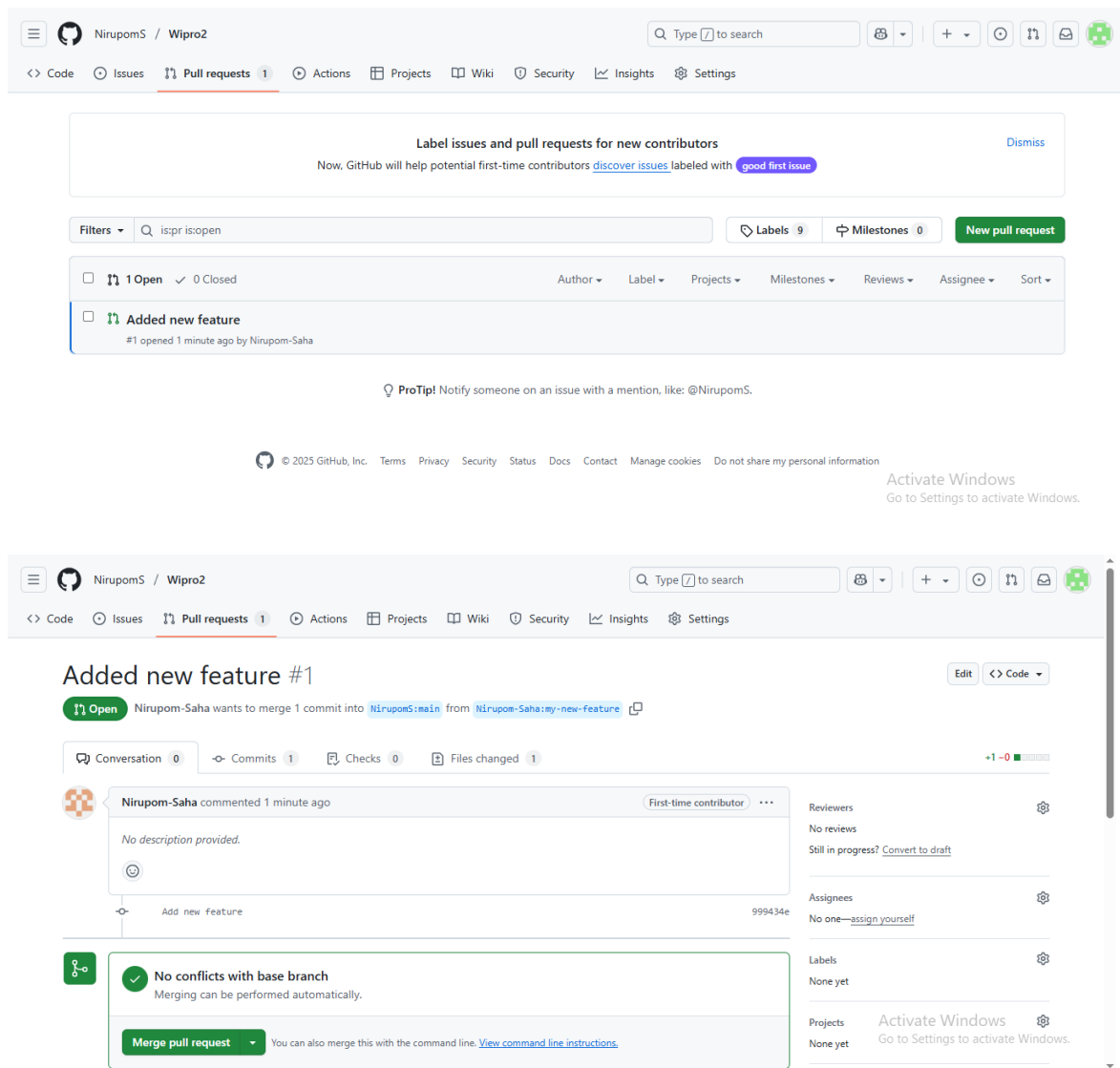
6. Creating a Pull Request (PR) to Original Repository
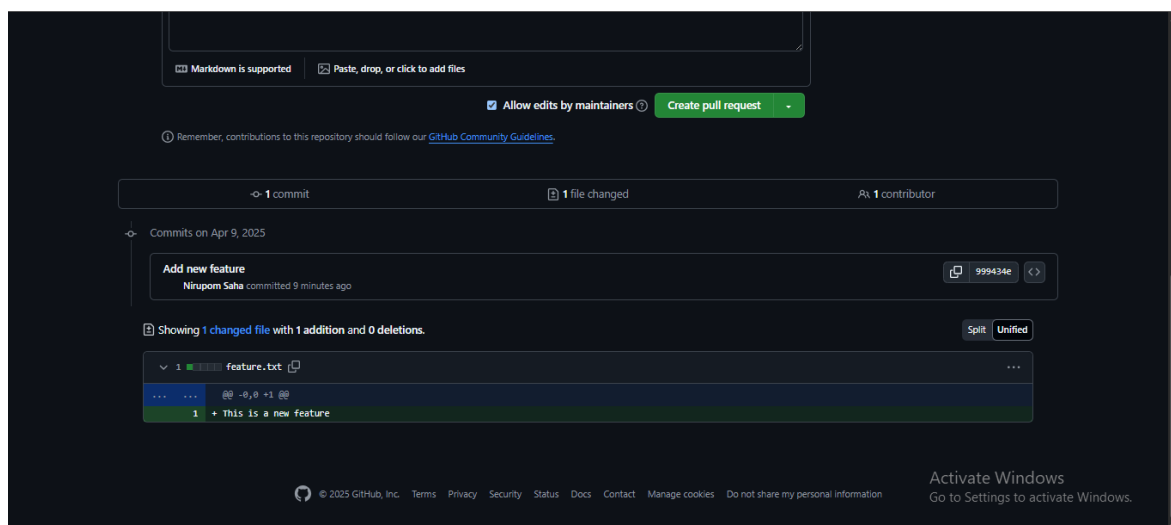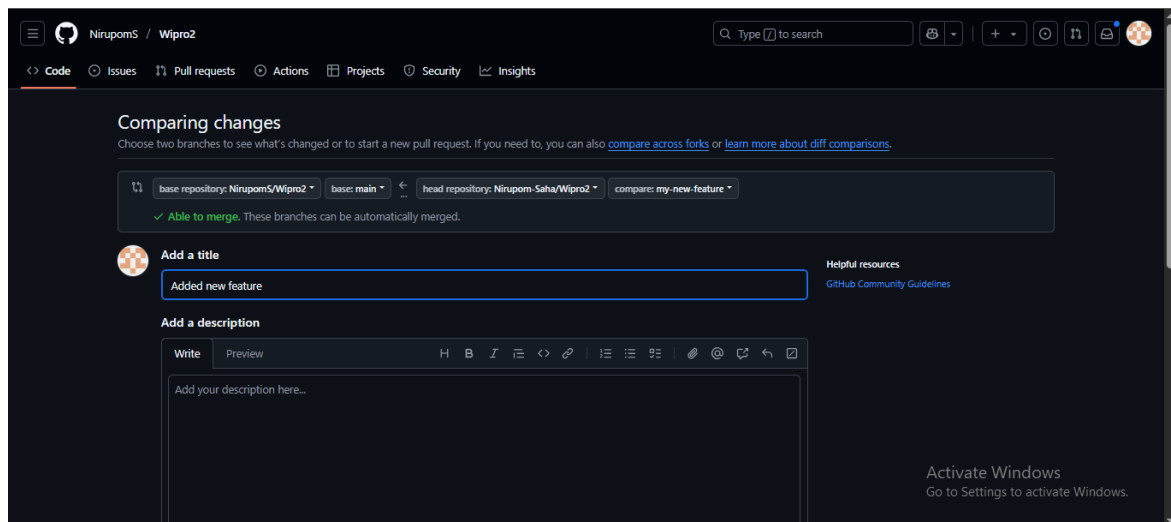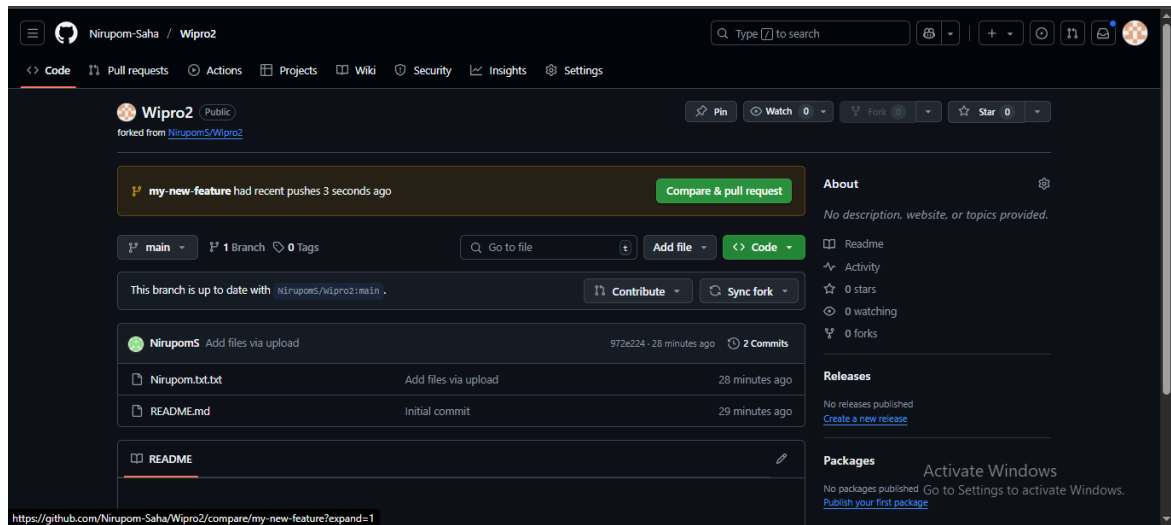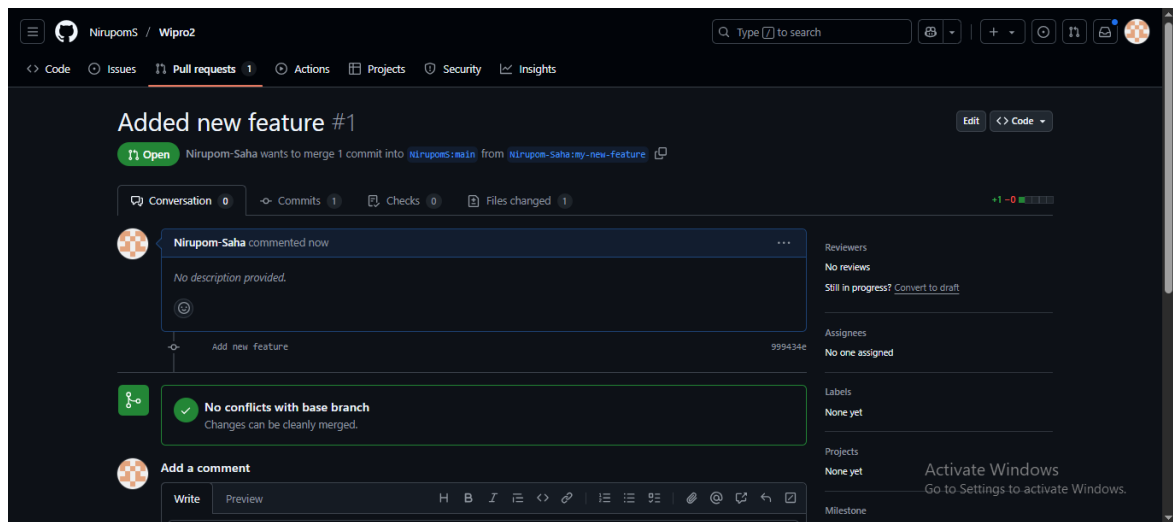
7. Merging Pull request

Open   **Added new feature** #1
Nirupom-Saha wants to merge 1 commit into `NirupomS:main` from `Nirupom-Saha:my-new-feature`

Nirupom-Saha commented 3 minutes ago   First-time contributor   · · ·

No description provided.

🙂

-o-   Add new feature   999434e

Commit message

Merge pull request #1 from Nirupom-Saha/my-new-feature

Extended description

Added new feature

This commit will be authored by nirupomsaha011@gmail.com.

Confirm merge   Cancel

Reviewers   ⚙
No reviews
Still in progress? Convert to draft

Assignees   ⚙
No one—assign yourself

Labels   ⚙
None yet

Projects   ⚙
None yet

Milestone   ⚙
No milestone

Development   ⚙
Successfully merging this pull request may close these issues.
None yet

Notifications   Customize

☰   NirupomS / Wipro2   Q Type / to search

<> Code   ⊙ Issues   �յ Pull requests 1   ⊙ Actions   Projects   Wiki   Security   Insights   Settings

Added new feature #1   Edit   <> Code ▾

Merged   NirupomS merged 1 commit into `NirupomS:main` from `Nirupom-Saha:my-new-feature` now

💬 Conversation 0   -o- Commits 1   Checks 0   Files changed 1   +1 −0 ▪

Nirupom-Saha commented 4 minutes ago   First-time contributor   · · ·

No description provided.

🙂

-o-   Add new feature   999434e

NirupomS merged commit 2923926 into `NirupomS:main` now   Revert

Pull request successfully merged and closed
You're all set — the branch has been merged.

Reviewers   ⚙
No reviews
Still in progress? Convert to draft

Assignees   ⚙
No one—assign yourself

Labels   ⚙
None yet

Projects   ⚙
None yet

☰   NirupomS / Wipro2   Q Type / to search

<> Code   ⊙ Issues   �յ Pull requests   ⊙ Actions   Projects   Wiki   Security   Insights   Settings

Added new feature #1   Edit   <> Code ▾

Merged   NirupomS merged 1 commit into `NirupomS:main` from `Nirupom-Saha:my-new-feature` 10 hours ago

💬 Conversation 0   -o- Commits 1   Checks 0   Files changed 1   +1 −0 ▪

Changes from all commits ▾   File filter ▾   Conversations ▾   Jump to ▾   ⚙   0 / 1 files viewed   Review in codespace   Review changes ▾

∨   1 ▪   feature.txt

```
@@ -0,0 +1 @@
+ This is a new feature
```
Viewed   💬   · · ·
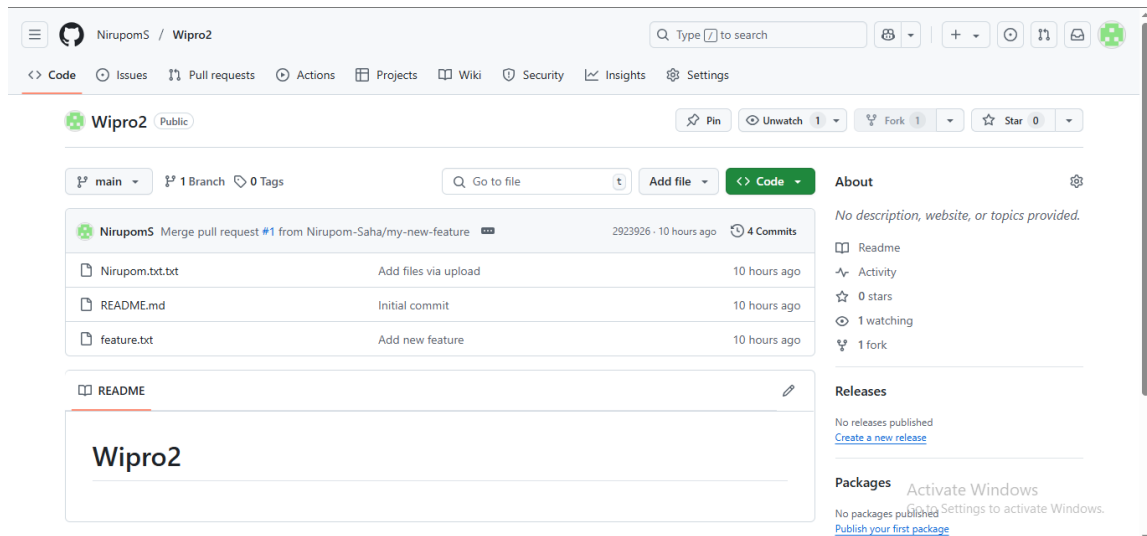
7. Simple Code Review Process

Here's a basic review workflow:

I.   Open Pull Request

- o   Team members are notified.

II.   Reviewer Reviews Code

- o   Check for correctness, coding standards, and readability.

III.   Comments & Suggestions

- o   Use GitHub review tools to add inline comments.

IV.   Author Responds

- o   Pushes new commits to address feedback.

V.   Final Approval

- o   Reviewer clicks "Approve".

VI.   Merge

- o   Author or maintainer merges the PR after approval.