Assignment 2: Automating Version Control and Code Collaboration of TE Mini Project with Git

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Roll No: 23101A2005

Aim: To Perform Code Collaboration of TE Mini Project using GIT workflow

Problem:

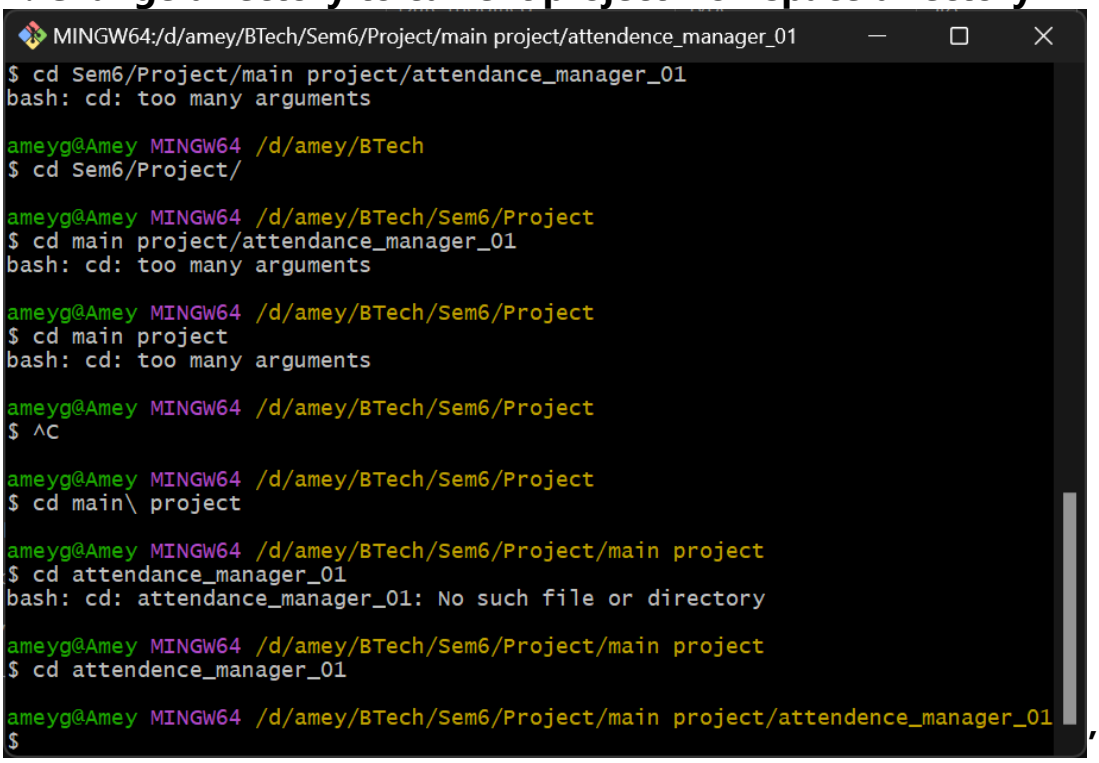
TechCo's development team is collaborating on a new feature for their application. However, multiple developers are working on the same parts of the codebase, causing merge conflicts, inconsistent commits, and errors in version control. The team struggles to manage branches effectively and maintain a clean history. The current workflow relies heavily on manual processes, making it difficult to track and resolve issues efficiently.

Implementation:

- Set up a Git repository for a project (either create a new project or use an existing one).
- Collaborate with a team member by creating multiple branches for different features.
- Implement the following:
    - Create a feature branch and make changes to the code.
    - Push changes to the remote repository.
    - Use a Git cheat sheet to commit, merge branches, and resolve conflicts.
    - Create a pull request (PR) and ensure code review processes are followed.

Step 1: Initialize a Git Repository and Push It to GitHub

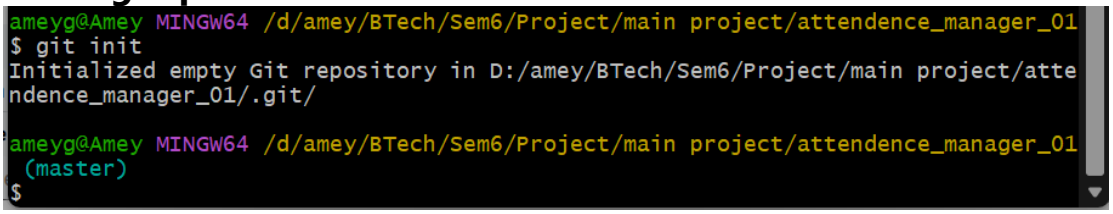
1. Change directory to current project workspace directory



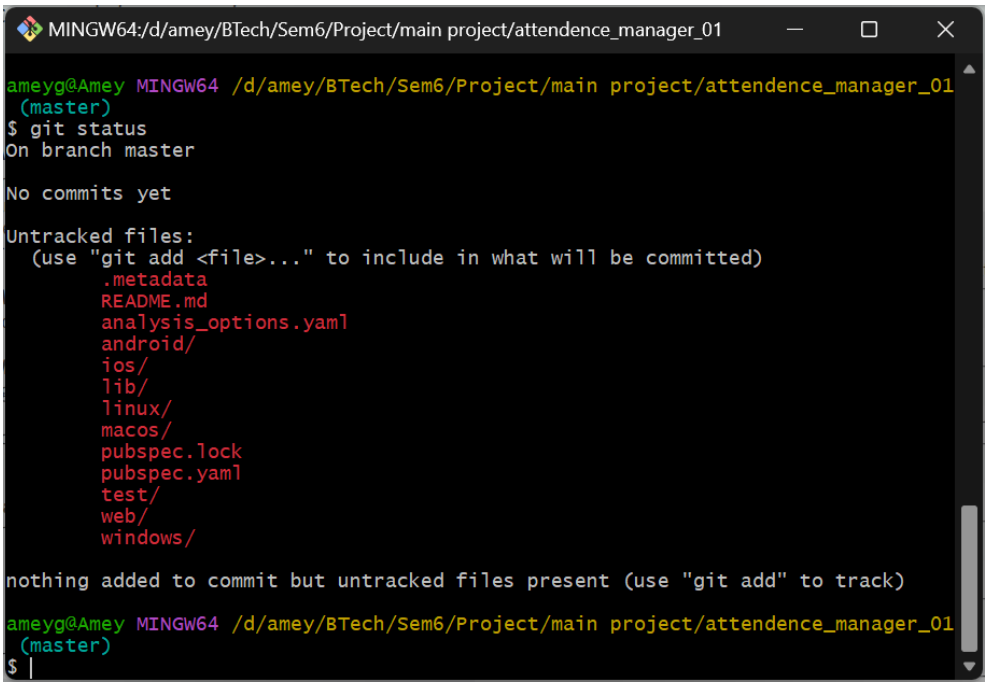
Later transferred to Asmika/attendance_manager repository

2. SETUP: Configuring user information used across all local repositories

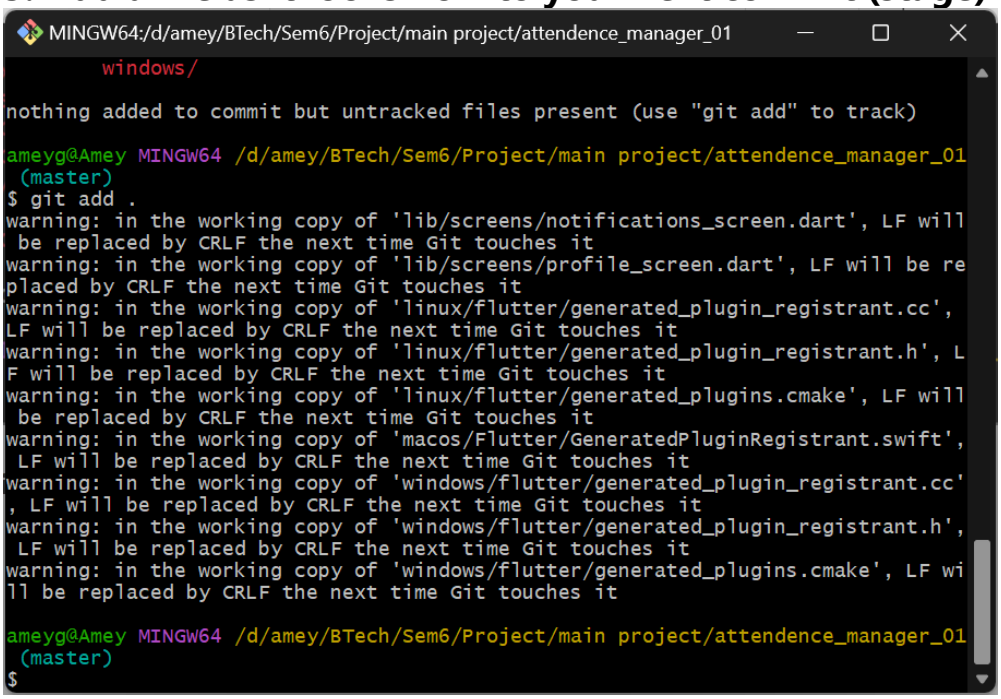
3. SETUP & INIT: Configuring user information, initializing and cloning repositories



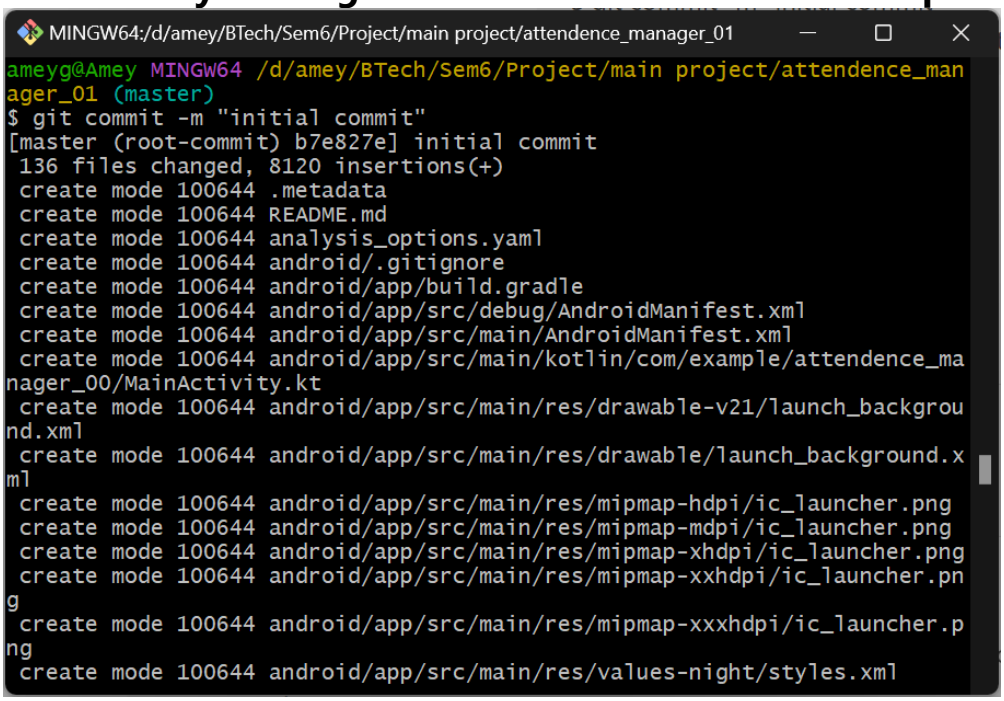
4. STAGE & SNAPSHOT: Working with snapshots and the Git staging area



5. Add a file as it looks now to your next commit (stage)

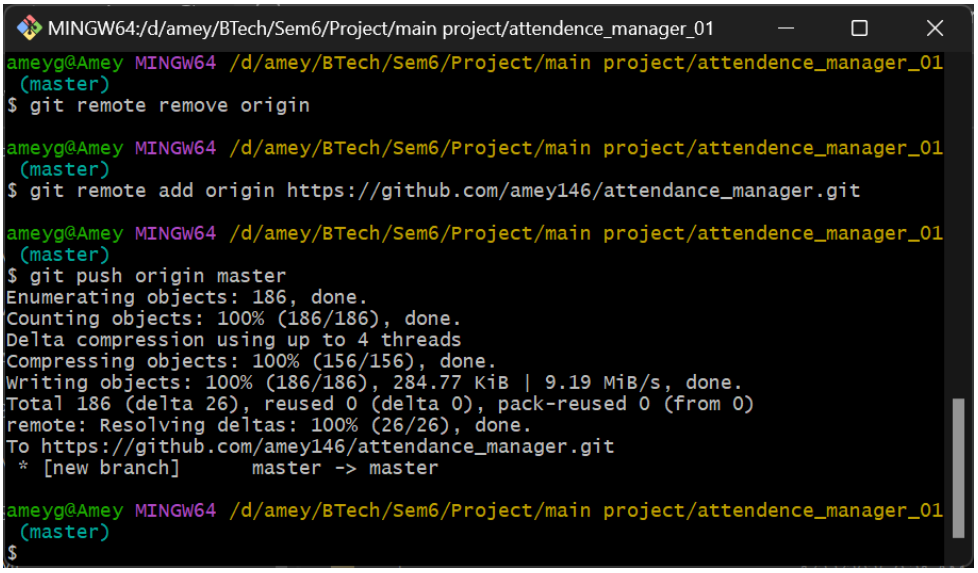


6. Commit your staged content as a new commit snapshot

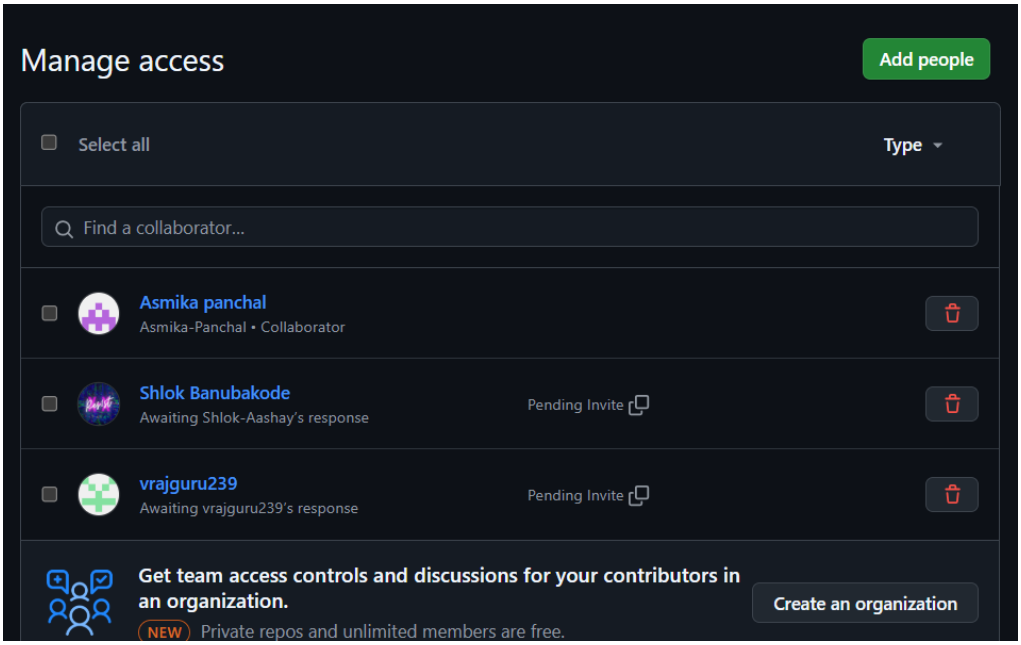


7. Transmit local branch commits to the remote repository branch

8. Push to remote repo



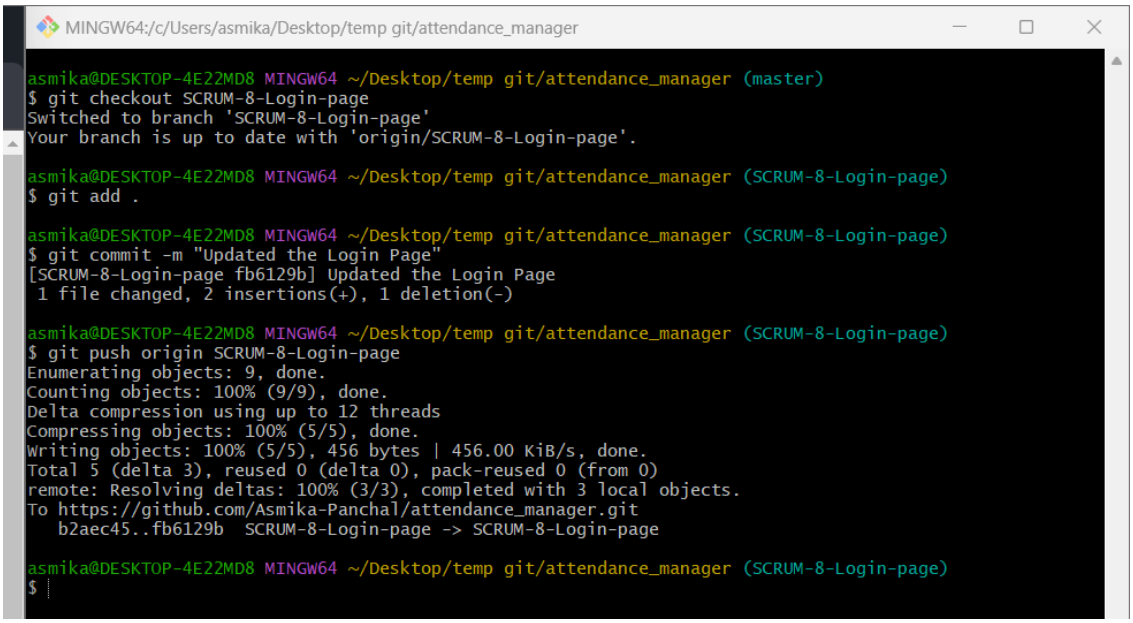
9. Add collabrators



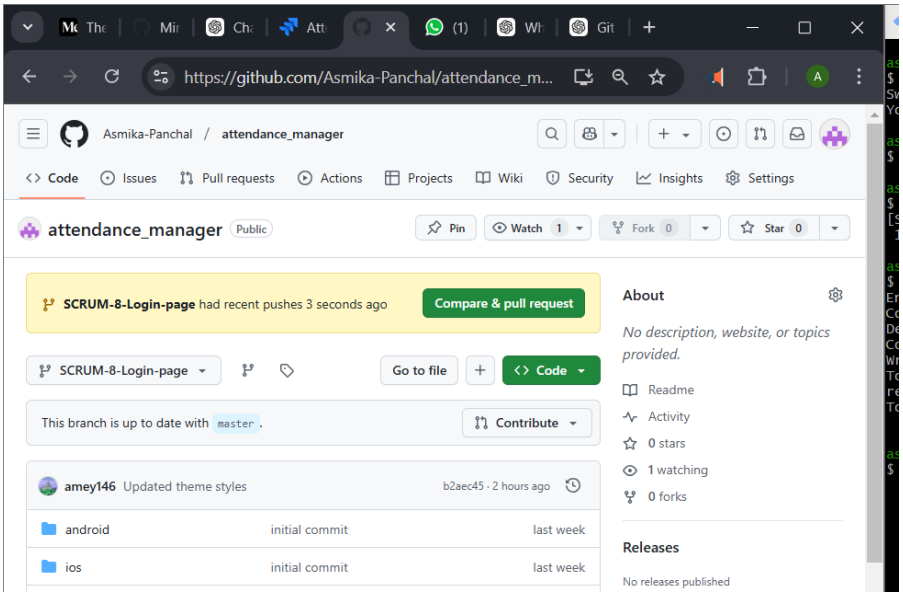
10. Make a feature branch “Login Page” and change current branch – created by Asmika Panchal -23101A2002

Make changes in feature branch and add all files to stage

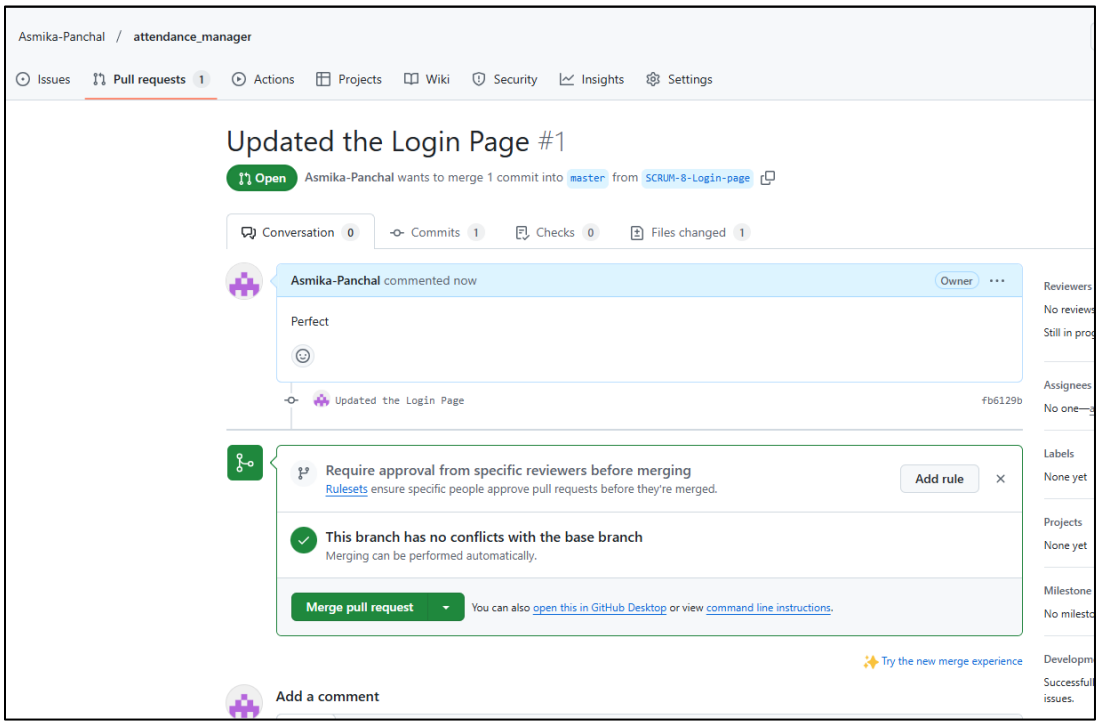
Commit changes



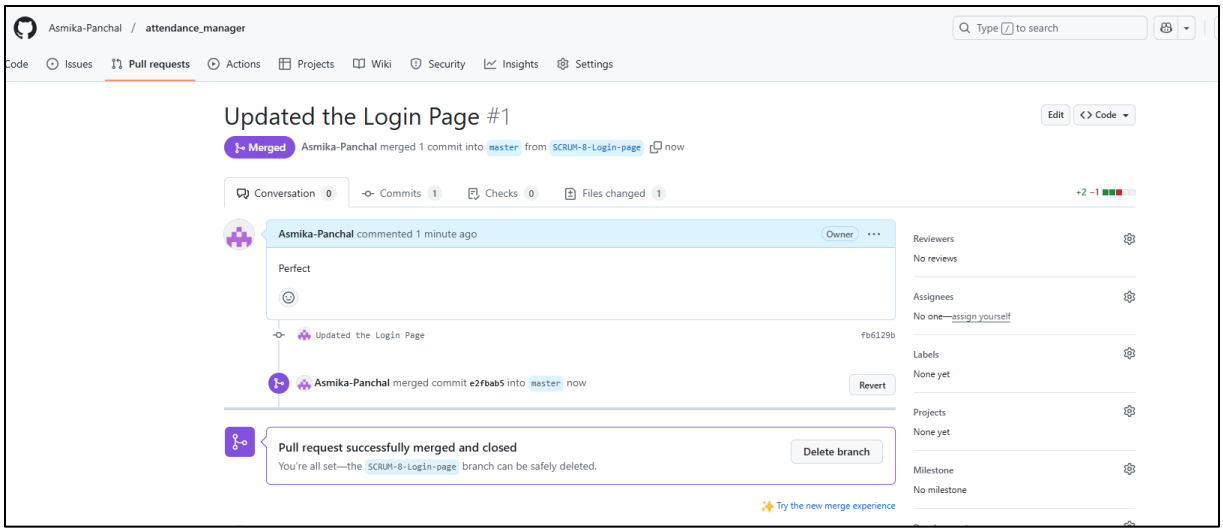
11. Compare and pull request



12. Review the changes



13. Merge into Main Branch



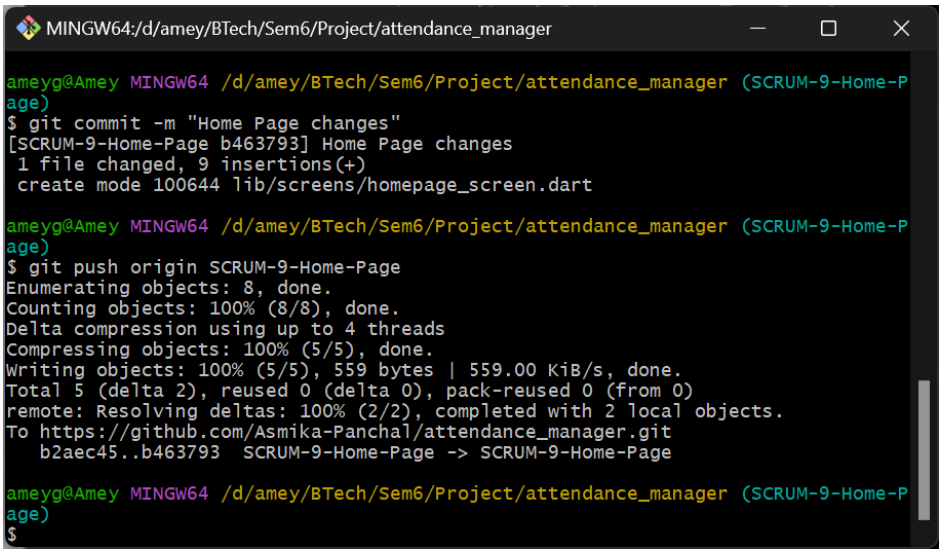
14. Same for "Home Page" branch – created by Amey Gaikwad - 23101A2005

```
ameyg@Amey MINGW64 /d/amey/BTech/Sem6/Project/attendance_manager (master)
$ git checkout SCRUM-9-Home-Page
Switched to a new branch 'SCRUM-9-Home-Page'
branch 'SCRUM-9-Home-Page' set up to track 'origin/SCRUM-9-Home-Page'.

ameyg@Amey MINGW64 /d/amey/BTech/Sem6/Project/attendance_manager (SCRUM-9-Home-P
age)
$
```

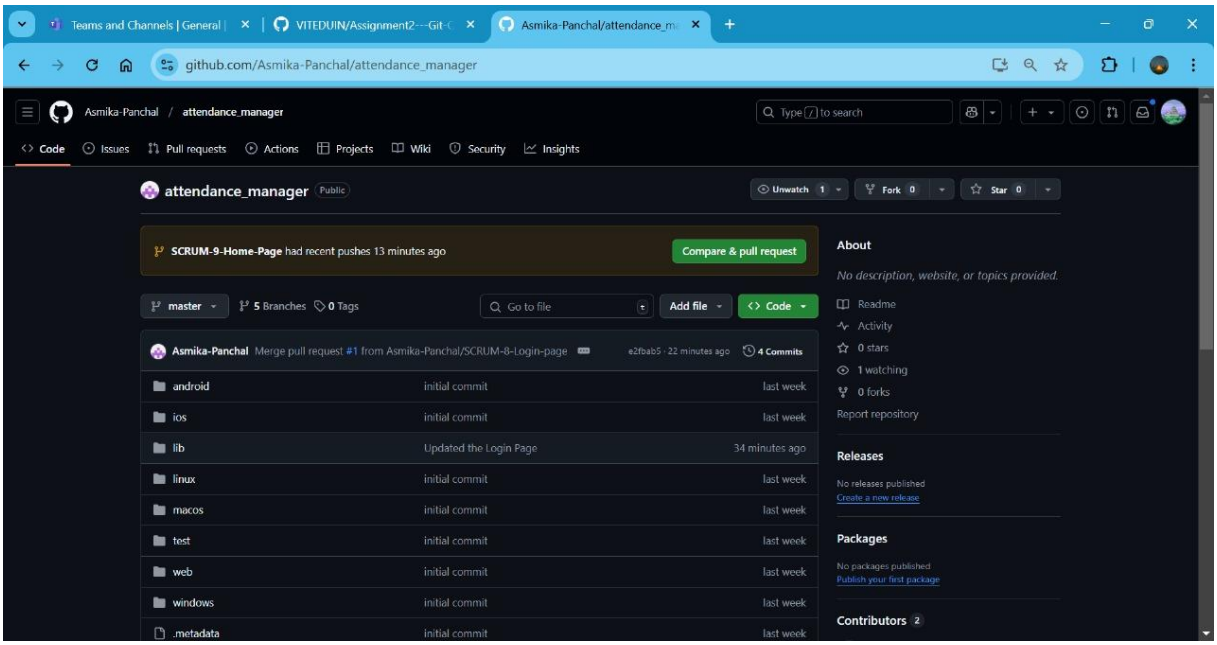
15. Add files to stage

```
ameyg@Amey MINGW64 /d/amey/BTech/Sem6/Project/attendance_manager (SCRUM-9-Home-P
age)
$ git add .
warning: in the working copy of 'lib/screens/homepage_screen.dart', LF will be r
eplaced by CRLF the next time Git touches it

ameyg@Amey MINGW64 /d/amey/BTech/Sem6/Project/attendance_manager (SCRUM-9-Home-P
age)
$ git status
On branch SCRUM-9-Home-Page
Your branch is up to date with 'origin/SCRUM-9-Home-Page'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   lib/screens/homepage_screen.dart
```

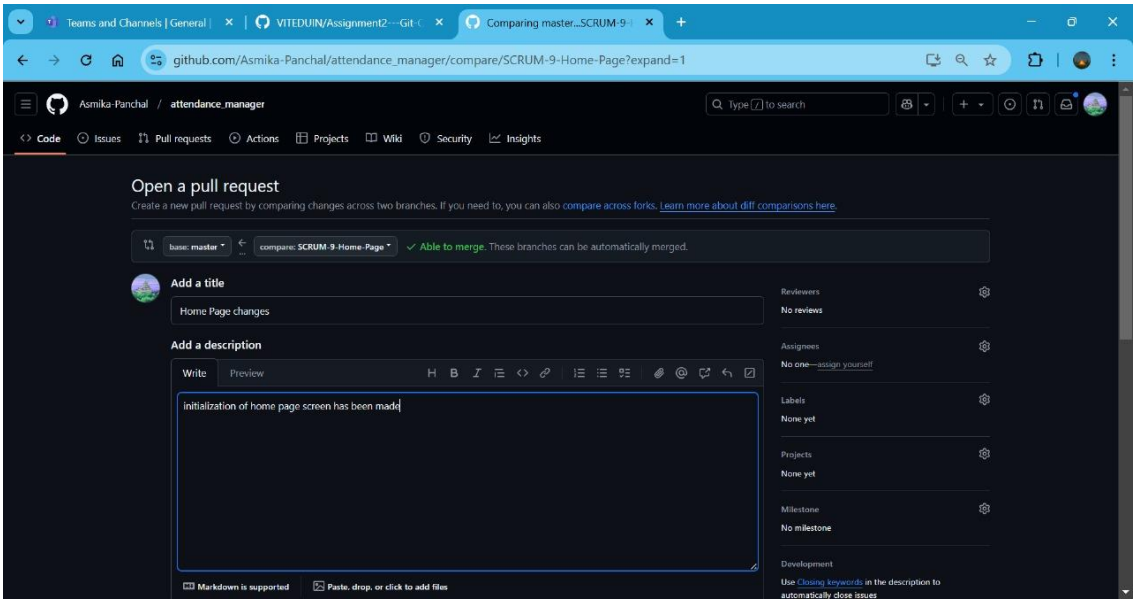
16. Commit and push

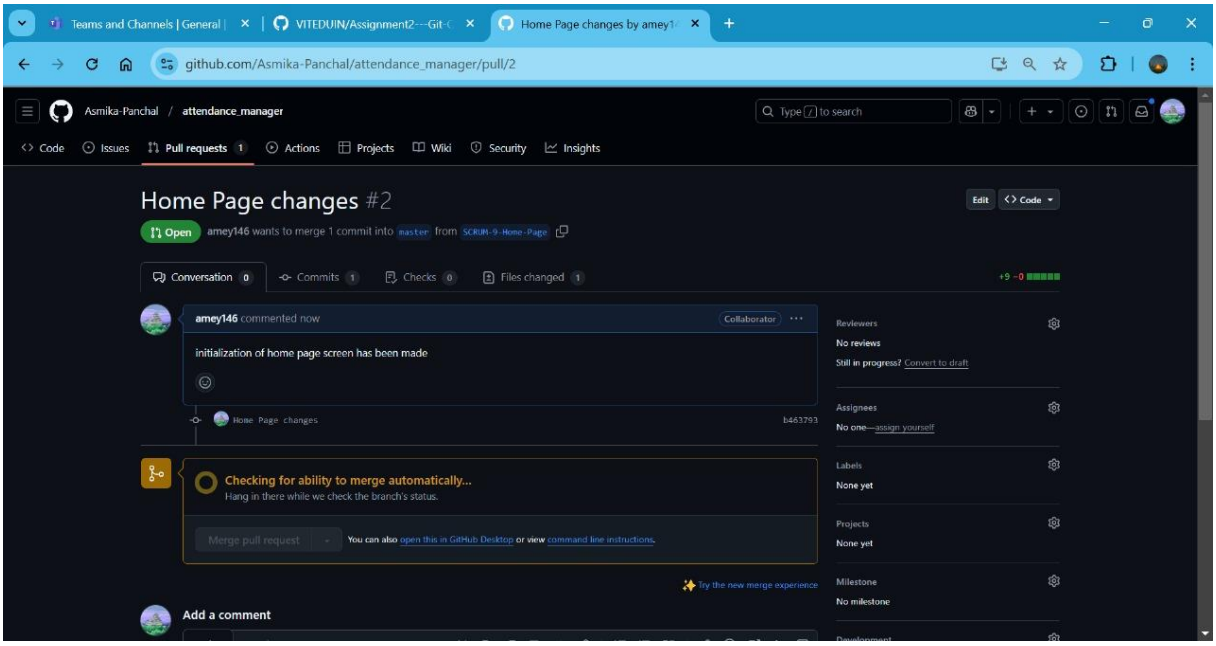


17. Compare and Pull request

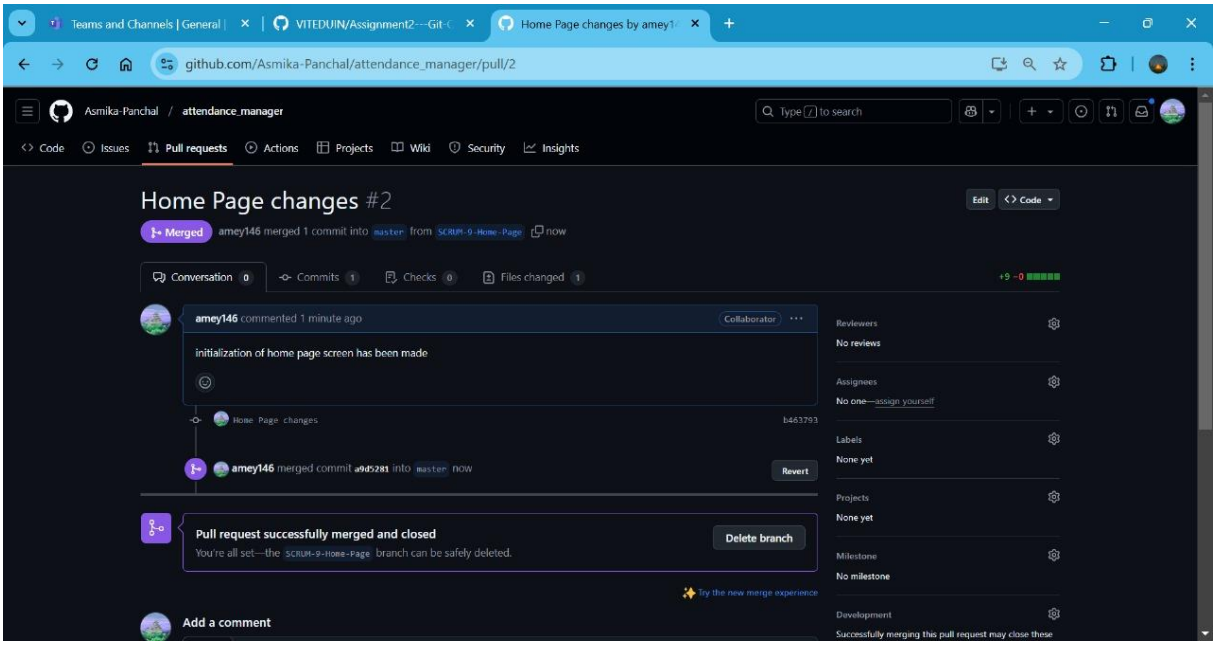


18. Review the changes



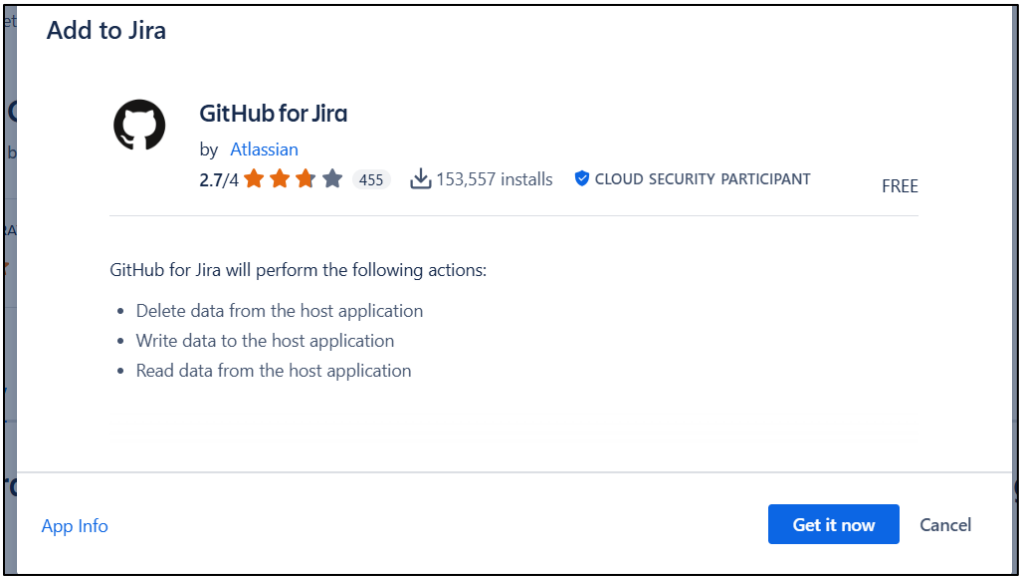


19. Merge into Main Branch

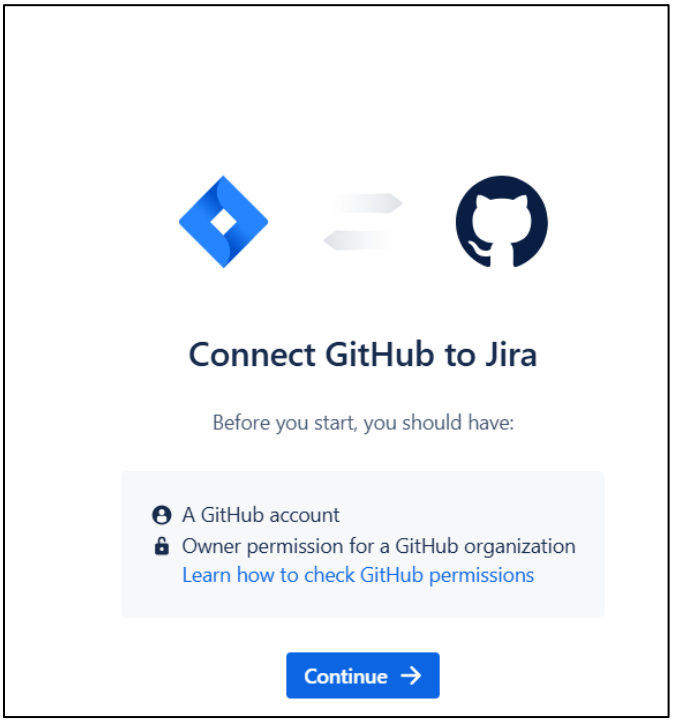


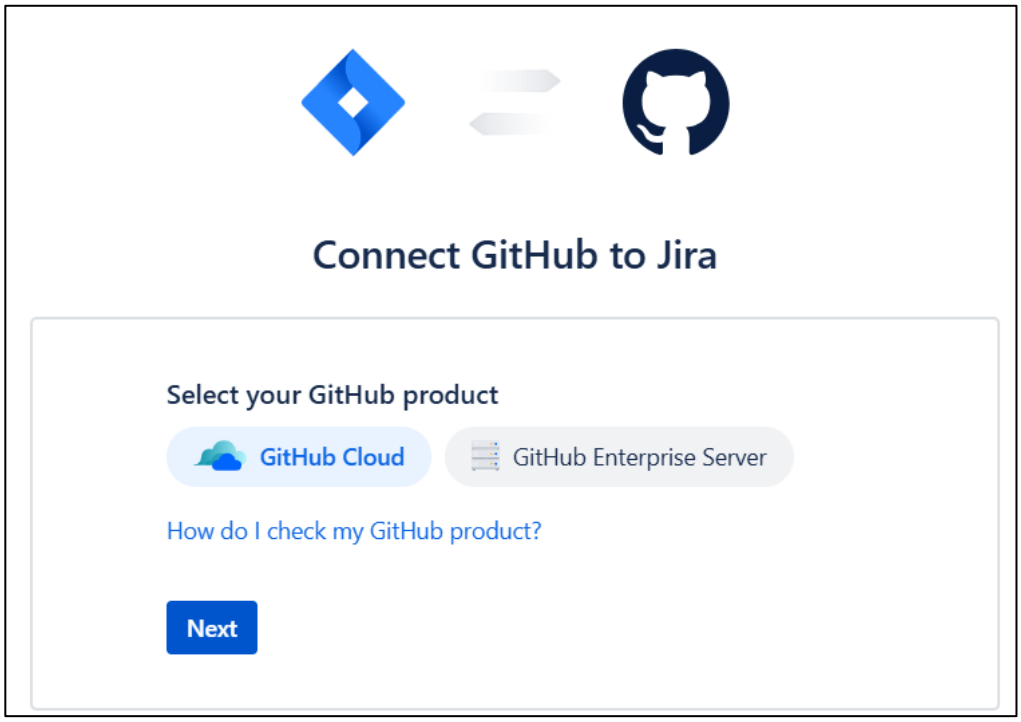
Step 5: Connect GitHub Cloud to Jira

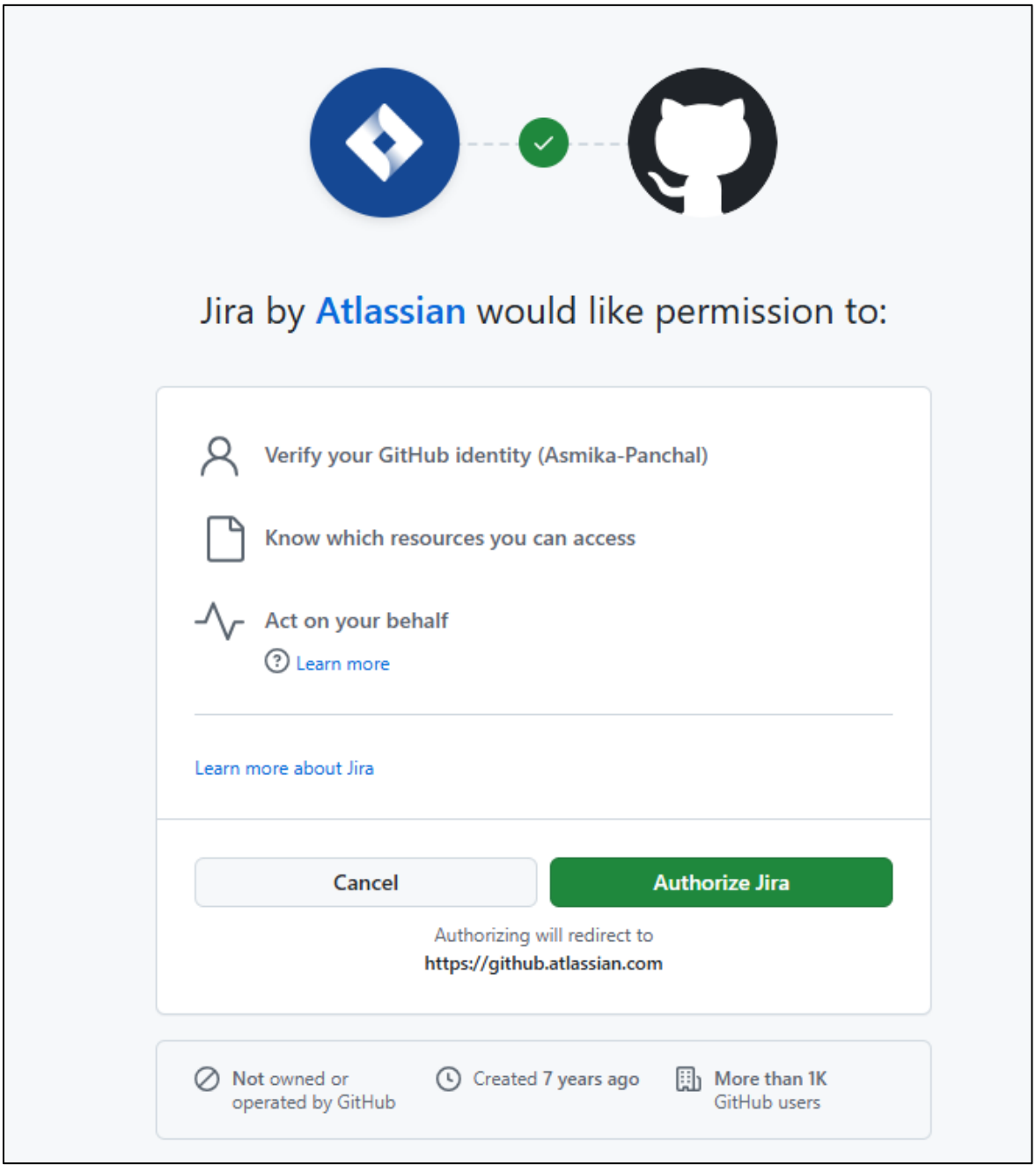
5.1 Install the GitHub for Jira app



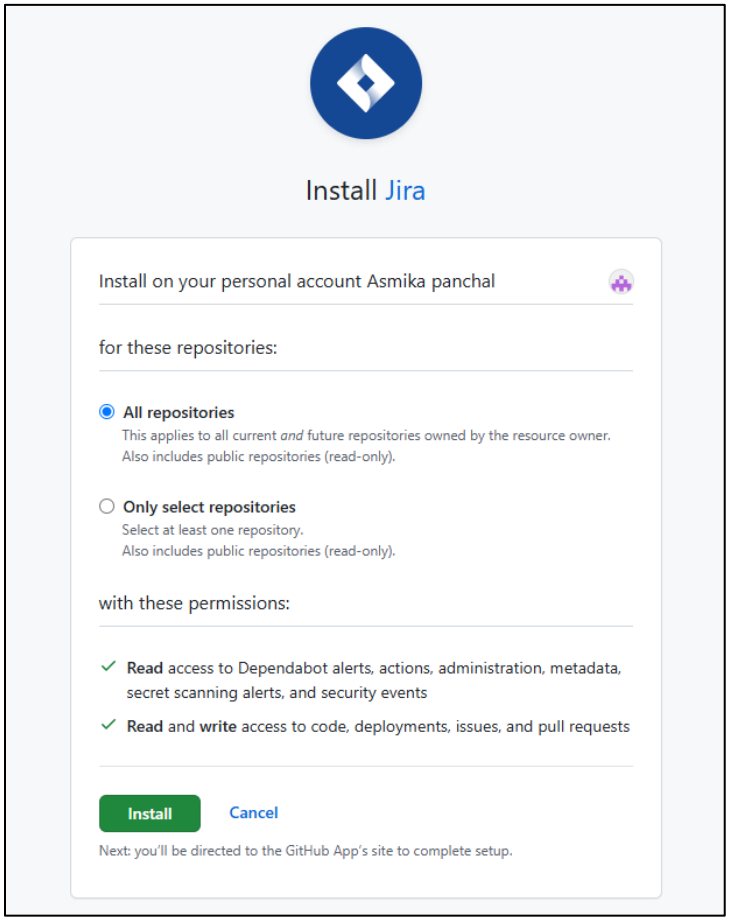
5.2 Connect a GitHub organization

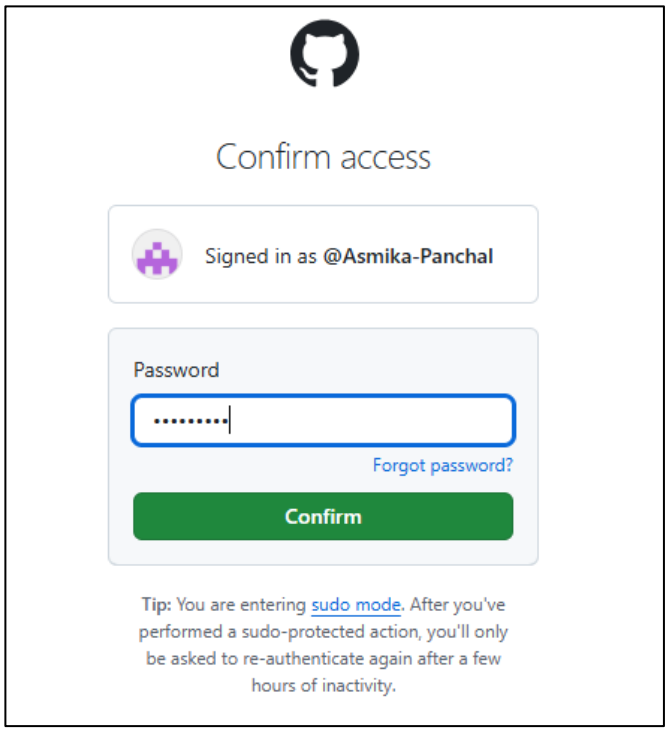




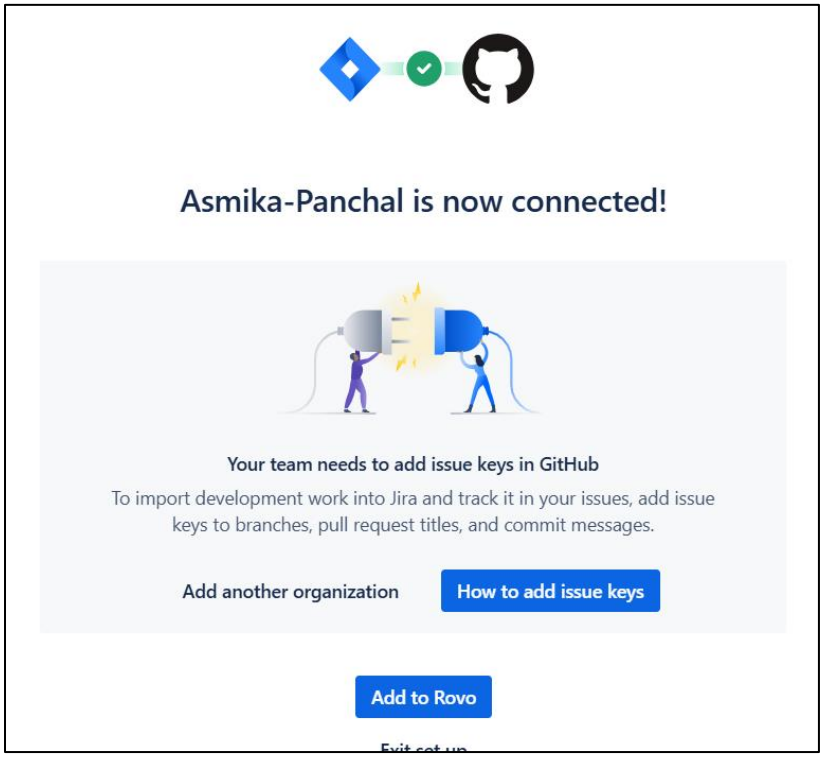

Jira by Atlassian would like permission to:
Verify your GitHub identity (Asmika-Panchal)
Know which resources you can access
Act on your behalf
Learn more
Learn more about Jira
Cancel
Authorize Jira
Authorizing will redirect to
https://github.atlassian.com
Not owned or operated by GitHub
Created 7 years ago
More than 1K GitHub users

5.3 Add the Jira app to a new GitHub organization

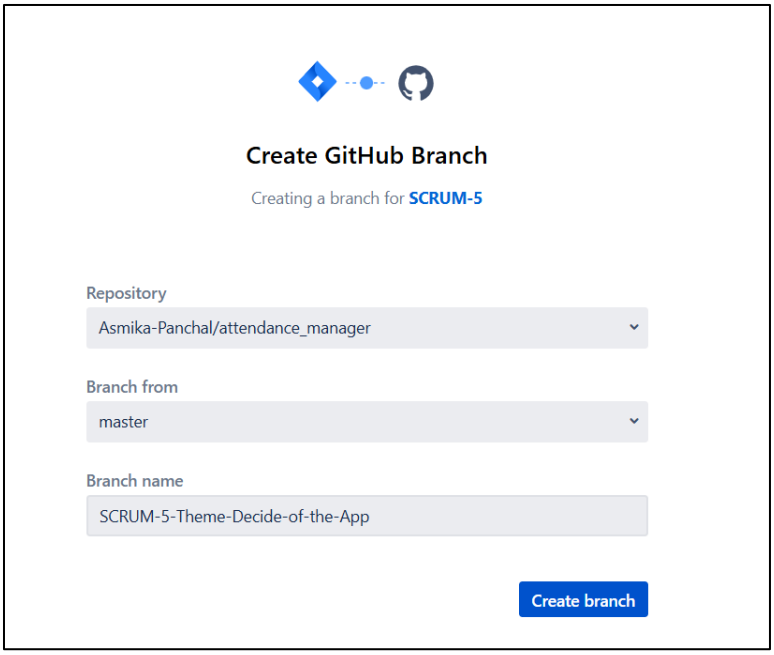


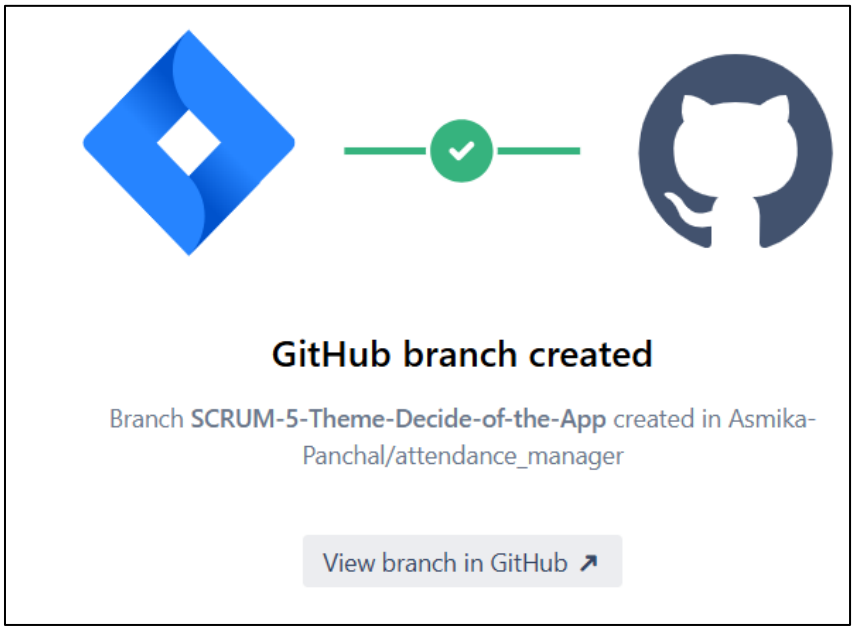


5.4 Connect a new GitHub repository



Create a Branch:

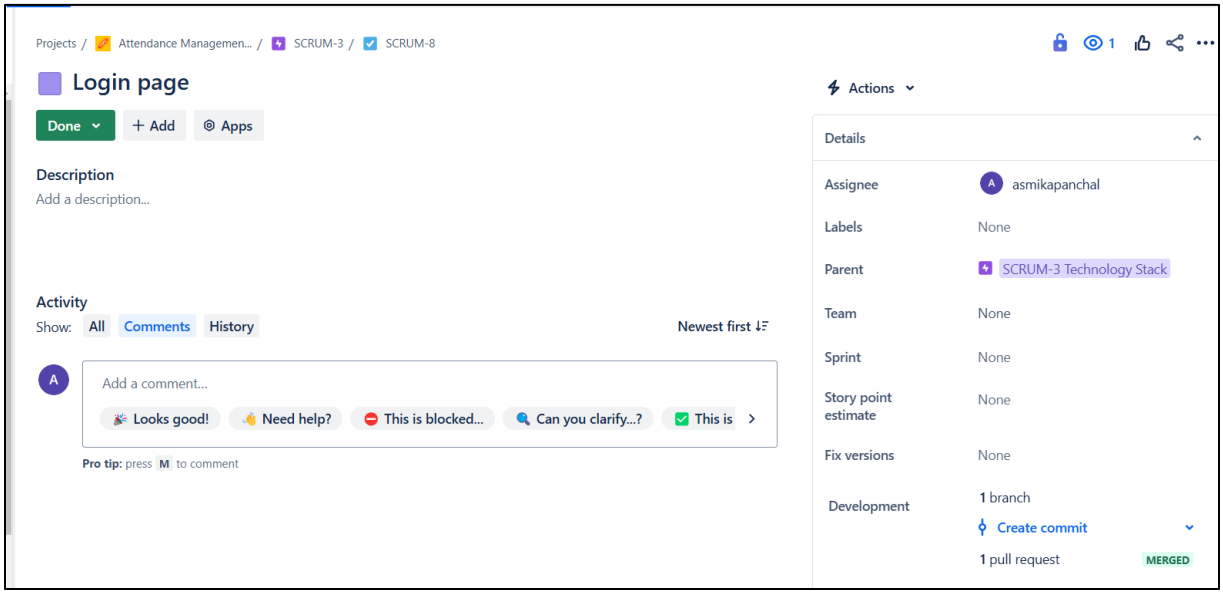


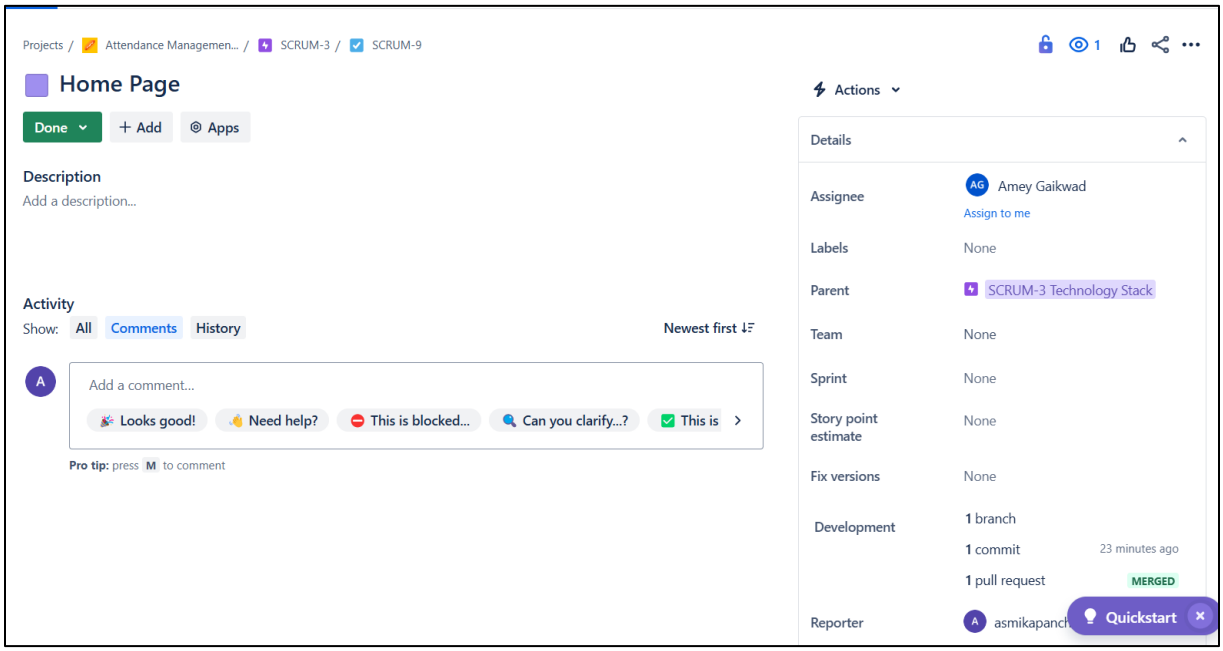


Also other issues created like: Login Page, Home Page

5.5 Link your development information to Jira issues

Commit merged reflected in Jira




Projects / Attendance Managemen... / SCRUM-3 / SCRUM-9
1
Home Page
Done
+ Add
Apps
Description
Add a description...
Activity
Show: All Comments History
Newest first
Add a comment...
Looks good!
Need help?
This is blocked...
Can you clarify...?
This is
Pro tip: press M to comment
Actions
Details
Assignee
Amey Gaikwad
Assign to me
Labels
None
Parent
SCRUM-3 Technology Stack
Team
None
Sprint
None
Story point estimate
None
Fix versions
None
Development
1 branch
1 commit
23 minutes ago
1 pull request
MERGED
Reporter
asmikapanch
Quickstart