

Task 2

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Submitted To: Dr. Monit Kapoor

Team No: 01

Subject Name: Source Code Management

Subject Code: CS181

Cluster: Beta

Department: CSE

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TODO: Create a distributed repository and add team members.

STEPS:

1. We created a repository in the organization by the naming convention **<Roll No>**.
2. Then from the **collaborator** section of the **settings** panel I added my other teammates as collaborators in the repository.

A screenshot of a GitHub repository's settings page. The top navigation bar shows links for Code, Issues, Pull requests, Actions, Projects, Wiki, Security, Insights, and Settings. The Settings tab is active. On the left, there's a sidebar with sections for General, Access (Collaborators and teams selected), Code and automation (Branches, Tags, Actions, Webhooks, Environments, Pages), Security (Code security and analysis, Deploy keys, Secrets), and Integrations (GitHub apps, Email notifications). The main content area is titled 'Who has access'. It shows that the repository is a 'PUBLIC REPOSITORY' with 67 members having access. Under 'BASE ROLE', 'Read' is selected. Under 'DIRECT ACCESS', 4 members have access. Below this, the 'Manage access' section lists four users: Aadithya-nc (Role: Read), Abhay Aggarwal (Role: Admin), Abhiraj (Role: Read), and Abhishek (Role: Read). Each user entry includes a 'Remove' button. At the bottom of the manage access section, there are buttons for 'Create team', 'Add people', and 'Add teams'.

3. The distributed repository is now created, but if the members were added as collaborators then we could not generate any pull request except the ones which involved branches.
4. To avoid this issue I removed them as a collaborator. We then decided to **fork and commit** to each other's repo.
5. We then forked each other's repo and started working on the given code.
6. In my repository the code is in **Python** language and is a basic **ATM Project**. My teammates started working on the code by creating their own branches and then pushing and testing the code.

TODO: Open and Close Pull Requests.

STEPS:

1. My teammates started pushing code in their own branches and then opened pull requests in my repository by **Contributing** to my code.

A screenshot of a GitHub pull request page. The title is "Added create account and print main menu function #1". The status is "Open" with a green button. It shows a comment from "Abhishek058" and a commit message "Added create account and print main menu function". The right sidebar contains sections for "Reviewers", "Suggestions", "Assignees" (set to "No one—assign yourself"), "Labels" (set to "None yet"), "Projects" (set to "None yet"), "Milestone" (set to "No milestone"), "Development" (with a note about merging closing issues), and "Notifications" (with a "Subscribe" button). A "Merge pull request" button is at the bottom left, and a "Comment" button is at the bottom right. The footer includes a "Remember, contributions to this repository should follow our GitHub Community Guidelines." link and a "ProTip" about adding .patch or .diff to URLs for plaintext views.

2. I closed them simultaneously as a maintainer of the repo.

A screenshot of a GitHub pull request page showing the history of changes. It starts with an "Open" pull request from "Abhishek058" merged by "abhay-ag". The merge commit message was "Abhishek Added some basic function for the code to run smoothly. function => createAccount() printMainMenu()". After the merge, "abhay-ag" closed the pull request. MonitKapoor commented "Good". The right sidebar shows the same sections as the first screenshot, but with updated information reflecting the merge and closure. The footer shows "3 participants" and a "Lock conversation" button.

3. As a member of the team and the requirements of the project work I also had to open and close pull requests in my teammates repositories. Below are the screenshots of the same.

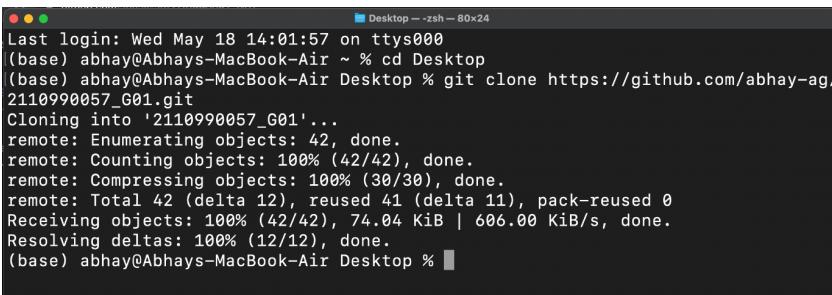
1. Contribution in Abhishek058

2. Contribution in abhi-cyber

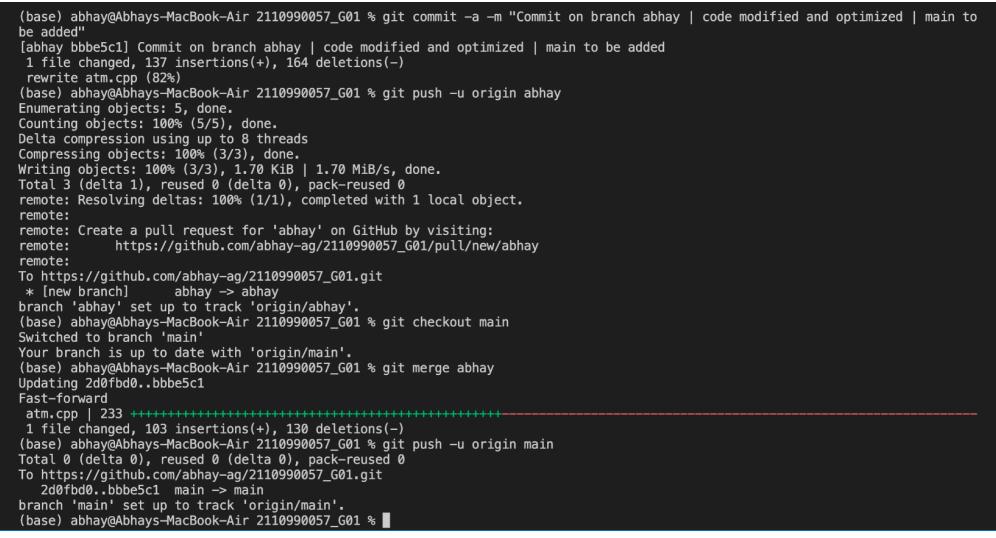
3. Contribution in Aadithya-nc

4. I worked with **abhi-cyber**, **Aadithya-nc**, **Abhishek058** on their repositories and modified their code, added new functionalities and tested their code.
5. To achieve this first I had to fork the repo into my account and then I cloned them onto my local machine.
6. After cloning I reviewed the code, made changes on my own branch and then committed to the forked repo. From where I then open a pull request and it's reflected on the repo owner's pull requests tab. [Screenshots attached for the same]. The changes made by me are also visible to the owner.

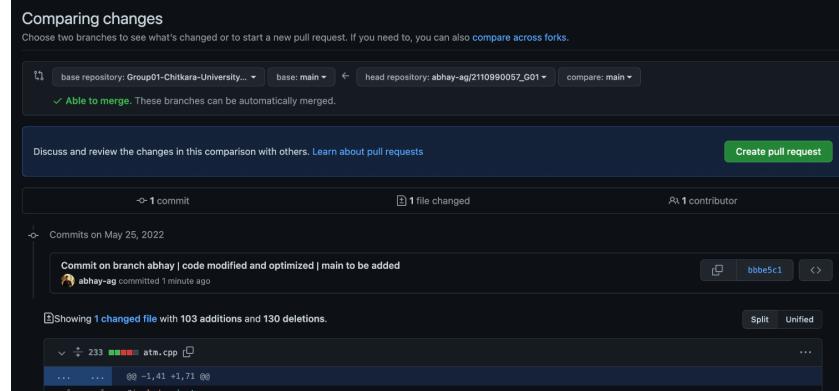
a. Screenshots for **abhi-cyber**



```
Last login: Wed May 18 14:01:57 on ttys000
(base) abhay@Abhays-MacBook-Air ~ % cd Desktop
(base) abhay@Abhays-MacBook-Air Desktop % git clone https://github.com/abhay-ag/2110990057_G01.git
Cloning into '2110990057_G01'...
remote: Enumerating objects: 42, done.
remote: Counting objects: 100% (42/42), done.
remote: Compressing objects: 100% (30/30), done.
remote: Total 42 (delta 12), reused 41 (delta 11), pack-reused 0
Receiving objects: 100% (42/42), 74.04 KiB | 606.00 KiB/s, done.
Resolving deltas: 100% (12/12), done.
(base) abhay@Abhays-MacBook-Air Desktop %
```

```
(base) abhay@Abhays-MacBook-Air 2110990057_G01 % git commit -a -m "Commit on branch abhay | code modified and optimized | main to be added"
[abhay bbbe5c1] Commit on branch abhay | code modified and optimized | main to be added
 1 file changed, 137 insertions(+), 164 deletions(-)
   rewrite atm.cpp (82%)
(base) abhay@Abhays-MacBook-Air 2110990057_G01 % git push -u origin abhay
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 1.70 KiB | 1.70 MiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
remote:
remote: Create a pull request for 'abhay' on GitHub by visiting:
remote:   https://github.com/abhay-ag/2110990057_G01/pull/new/abhay
remote:
To https://github.com/abhay-ag/2110990057_G01.git
 * [new branch]      abhay -> abhay
branch 'abhay' set up to track 'origin/abhay'.
(base) abhay@Abhays-MacBook-Air 2110990057_G01 % git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
(base) abhay@Abhays-MacBook-Air 2110990057_G01 % git merge abhay
Updating 2d0fb0d..bbbe5c1
Fast-forward
 atm.cpp | 233 ++++++++++++++++++++++++++++++++++++++-----+
 1 file changed, 103 insertions(+), 130 deletions(-)
(base) abhay@Abhays-MacBook-Air 2110990057_G01 % git push -u origin main
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/abhay-ag/2110990057_G01.git
 2d0fb0d..bbbe5c1 main -> main
branch 'main' set up to track 'origin/main'.
(base) abhay@Abhays-MacBook-Air 2110990057_G01 %
```



b. Screenshots for Abhishek058

```
(base) abhay@Abhays-MacBook-Air 2110990058_ % git branch
* abhay
  master
(base) abhay@Abhays-MacBook-Air 2110990058_ % git commit -a -m "Added the Test Class and Sports Class || Main is to be added"
[abhay bf43d0c] Added the Test Class and Sports Class || Main is to be added
 1 file changed, 20 insertions(+)
(base) abhay@Abhays-MacBook-Air 2110990058_ % git push -u origin abhay
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 512 bytes | 512.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
remote:
remote: Create a pull request for 'abhay' on GitHub by visiting:
remote:   https://github.com/abhay-ag/2110990058_/pull/new/abhay
remote:
To https://github.com/abhay-ag/2110990058_.git
 * [new branch]      abhay -> abhay
branch 'abhay' set up to track 'origin/abhay'.
(base) abhay@Abhays-MacBook-Air 2110990058_ % git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
(base) abhay@Abhays-MacBook-Air 2110990058_ % git merge abhay
Updating f7f520a..bf43d0c
Fast-forward
 res_class.cpp | 20 ++++++-----+
 1 file changed, 20 insertions(+)
(base) abhay@Abhays-MacBook-Air 2110990058_ %
```

Comparing changes

Choose two branches to see what's changed or to start a new pull request. If you need to, you can also [compare across forks](#).

base repository: Group01-Chitkara-University... base: master head repository: abhay-ag/2110990058_ compare: master

✓ Able to merge These branches can be automatically merged.

Discuss and review the changes in this comparison with others. Learn about pull requests [Create pull request](#)

1 commit 1 file changed 1 contributor

Commits on May 25, 2022

Added the Test Class and Sports Class || Main is to be added
abhay-ag committed 1 minute ago

Showing 1 changed file with 20 additions and 0 deletions. [Split](#) [Unified](#)

res_class.cpp

```
@@ -11,4 +11,24 @@ class Student{
 11 11     rNo = i;
 12 12     name = n;
 13 13 }
 14 +
 15 + class Sports{
 16 +     protected:
 17 +         int score;
 18 +
 19 +     public:
 20 +         Sports(int sc = 0){
 21 +             score = sc;
 22 +         }
 23 +     }
 24 +
 25 + class Test:public Student{
 26 +     protected:
```

c. Screenshots for Aadithya-nc

```
(base) abhay@Abhays-MacBook-Air 2110990002 % git log --oneline
b104c3e (HEAD -> master, origin/master, origin/HEAD) Code Explanation added | Code corrections
8f06446 Inheritance basic code added
e0531ed Practical File
(base) abhay@Abhays-MacBook-Air 2110990002 %
```

The screenshot shows a GitHub pull request comparison between two repositories. The base repository is 'Group01-Chitkara-University' and the head repository is 'abhay-ag/2110990002'. The comparison shows 1 commit, 2 files changed, and 1 contributor. The commit 'Code Explanation added | Code corrections' by 'abhay-ag' is shown with a diff view of inheritance.cpp. The diff highlights changes from line 4 to line 14.

The screenshot shows a GitHub repository page for 'abhay-ag/2110990002'. It shows 1 commit ahead of 'Group01-Chitkara-University:master'. A tooltip indicates the branch is 1 commit ahead of 'Group01-Chitkara-University:master'. The repository contains files like 'SCM Practcal file.docx', 'SCM Practcal file.pdf', 'inheritance', and 'inheritance.cpp'. A green 'Open pull request' button is visible.

TODO: Publish and Print Network Graphs

STEPS:

1. Goto the **Insights** tab of the Repository.

The screenshot shows the GitHub Insights tab for a repository. At the top, there are tabs for Pull requests, Actions, Projects, Wiki, Security, Insights (which is highlighted with a yellow border), and Settings. Below the tabs, it displays the master branch (1 branch, 0 tags), Go to file, Add file, and Code dropdown. A list of commits is shown, starting with a merge pull request from abhay-ag. The commits are: .gitignore (File name changed || Task 1.2 added), Task 1.1.pdf (Added index to the files), Task 1.2.pdf (Added index to the files), and atm_project.py (Commit made on branch aadithya | added code explanation). The date for the merge pull request is 1 hour ago, while the other commits are from 1 hour ago to 7 days ago. At the bottom, there's a message: "Help people interested in this repository understand your project by adding a README." with a green "Add a README" button.

2. Click on the **Network** panel in the navigation panel.

The screenshot shows the GitHub navigation sidebar with various metrics listed: Pulse, Contributors, Community, Community Standards, Traffic, Commits, Code frequency, Dependency graph, Network (which is highlighted with a yellow border), and Forks.

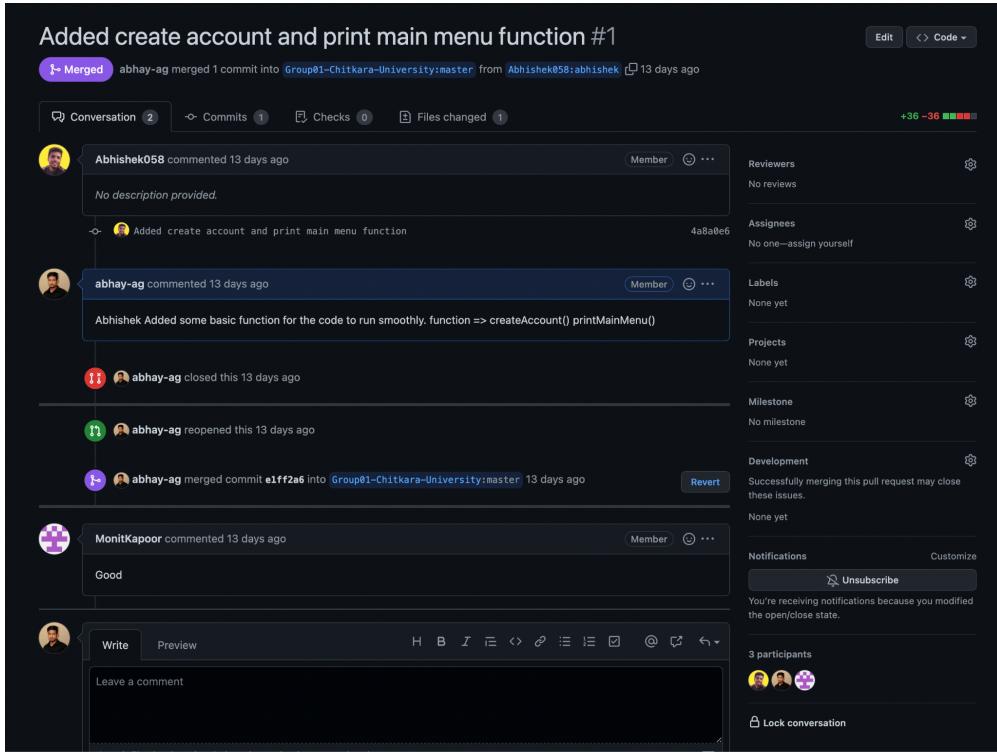
3. We can now visualize the network graph of our repository. Mine is attached below.



4. Through the network graph we can visualize the creating and merging of all the branches from the master branch and into the master branch. This network graph is very simple, they can be quite complex in bigger repositories.

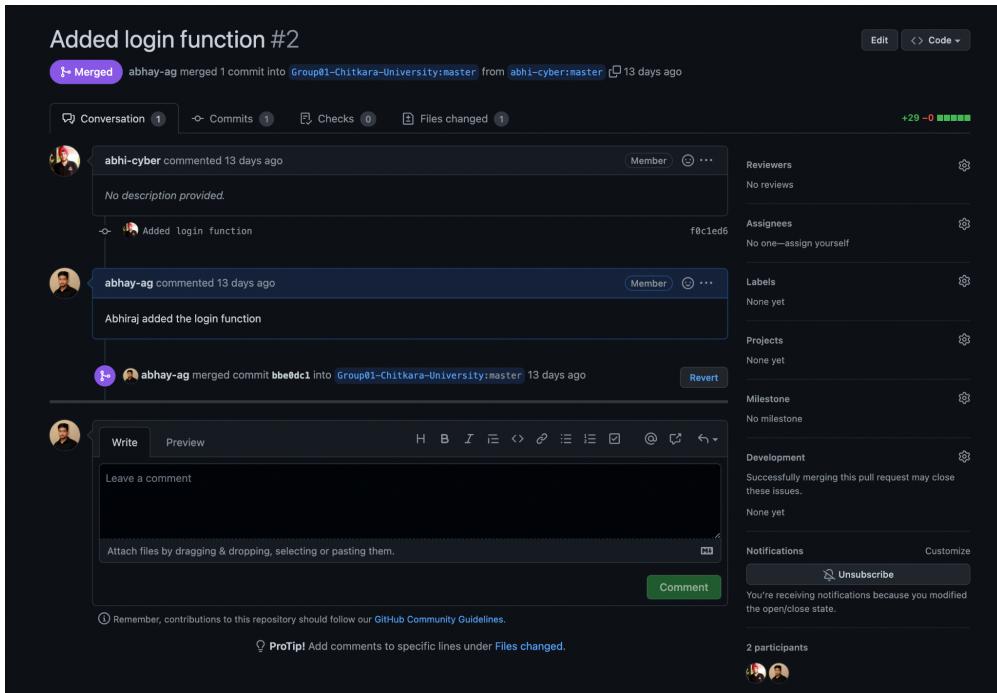
TODO: Pull request from each member of the team.

- Member #1



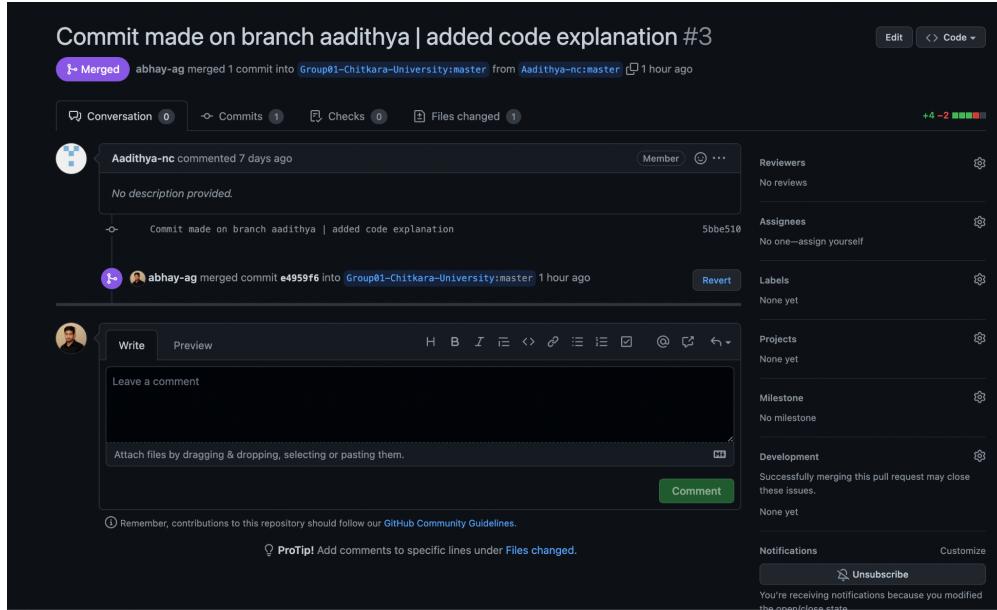
The screenshot shows a GitHub pull request titled "Added create account and print main menu function #1". The status is "Merged" by "abhay-ag" 13 days ago. The conversation tab has 2 messages. The first message is from "Abhishek058" commenting 13 days ago with "No description provided." The second message is from "abhay-ag" commenting 13 days ago with "Abhishek Added some basic function for the code to run smoothly. function => createAccount() printMainMenu()". "abhay-ag" closed the issue 13 days ago and reopened it 13 days ago. "abhay-ag" merged commit `e1ff2a6` into `Group01-Chitkara-University:master` 13 days ago. The pull request has +36 -36 changes. The right sidebar shows no reviews, assignees, or labels. Projects, Milestone, and Development sections are also empty. Notifications are customized with an "Unsubscribe" button. The participant list includes "abhishek058" and "MonitKapoor". A "Lock conversation" button is present at the bottom.

- Member #2

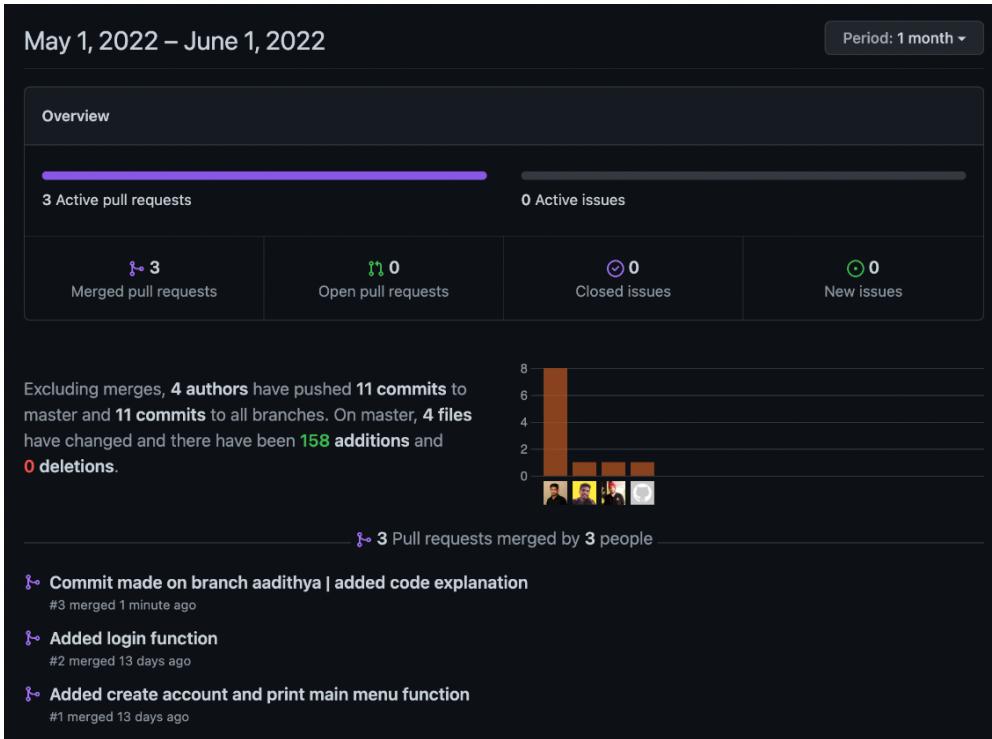


The screenshot shows a GitHub pull request titled "Added login function #2". The status is "Merged" by "abhai-cyber" 13 days ago. The conversation tab has 1 message from "abhi-cyber" commenting 13 days ago with "No description provided.". "abhai-cyber" added the login function. "abhai-cyber" merged commit `bbe0dc1` into `Group01-Chitkara-University:master` 13 days ago. The pull request has +29 -0 changes. The right sidebar shows no reviews, assignees, or labels. Projects, Milestone, and Development sections are also empty. Notifications are customized with an "Unsubscribe" button. The participant list includes "abhai-cyber" and "abhay-ag". A "Comment" button is present at the bottom. A note at the bottom left says "Remember, contributions to this repository should follow our GitHub Community Guidelines." and a "ProTip!" note says "Add comments to specific lines under Files changed."

- Member #3



- Screenshots of the total pull requests and contributors in my repository.



Users who have contributed to this file

- abhay-ag
- Abhishek058
- abhi-cyber