

## **Task 2**

**Made By:** Abhay Aggarwal

**Roll No:** 2110990034

**Submitted To:** Dr. Monit Kapoor

**Team No:** 01

**Subject Name: Source Code Management**

**Subject Code: CS181**

**Cluster: Beta**

**Department: CSE**

# **INDEX**

<b>Sr. No.</b>	<b>Title</b>
1.	Creating a Distributed Repository and add members to project team
2.	Open and close Pull Request
3.	Publish and Print Network Graphs
4.	Pull Request from each member of team

**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.

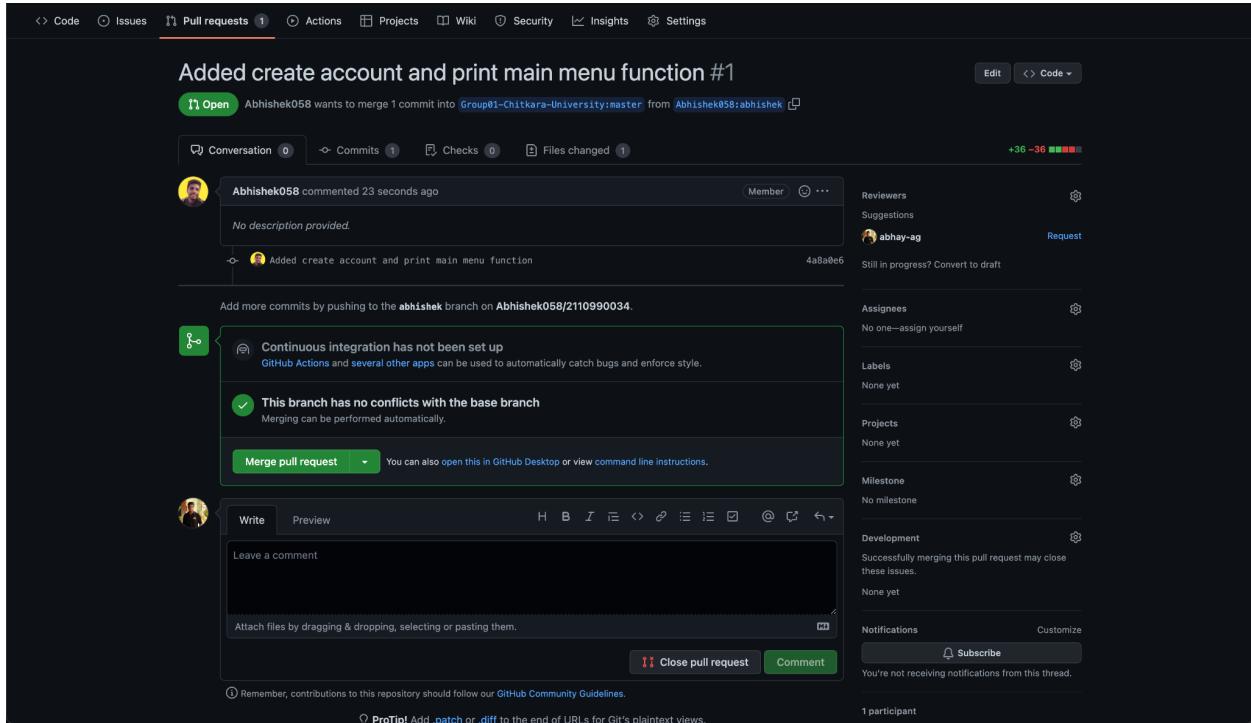
The screenshot shows the GitHub repository settings page for a public repository. The 'Who has access' tab is active. On the left, there's a sidebar with sections like General, Access (Collaborators and teams selected), Code and automation, Security, and Integrations. In the main area, there are four sections: 'PUBLIC REPOSITORY' (67 members with Read role), 'BASE ROLE' (All 67 members can access with Read role), 'DIRECT ACCESS' (4 members with Read role), and a 'Manage access' section. The 'Manage access' section lists four users: Aadithya-nc, Abhay Aggarwal, Abhiraj, and Abhishek, each with a 'Role: Read' dropdown and a 'Remove' button. There are also 'Create team', 'Add people', and 'Add teams' buttons at the top of the manage access table.

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.

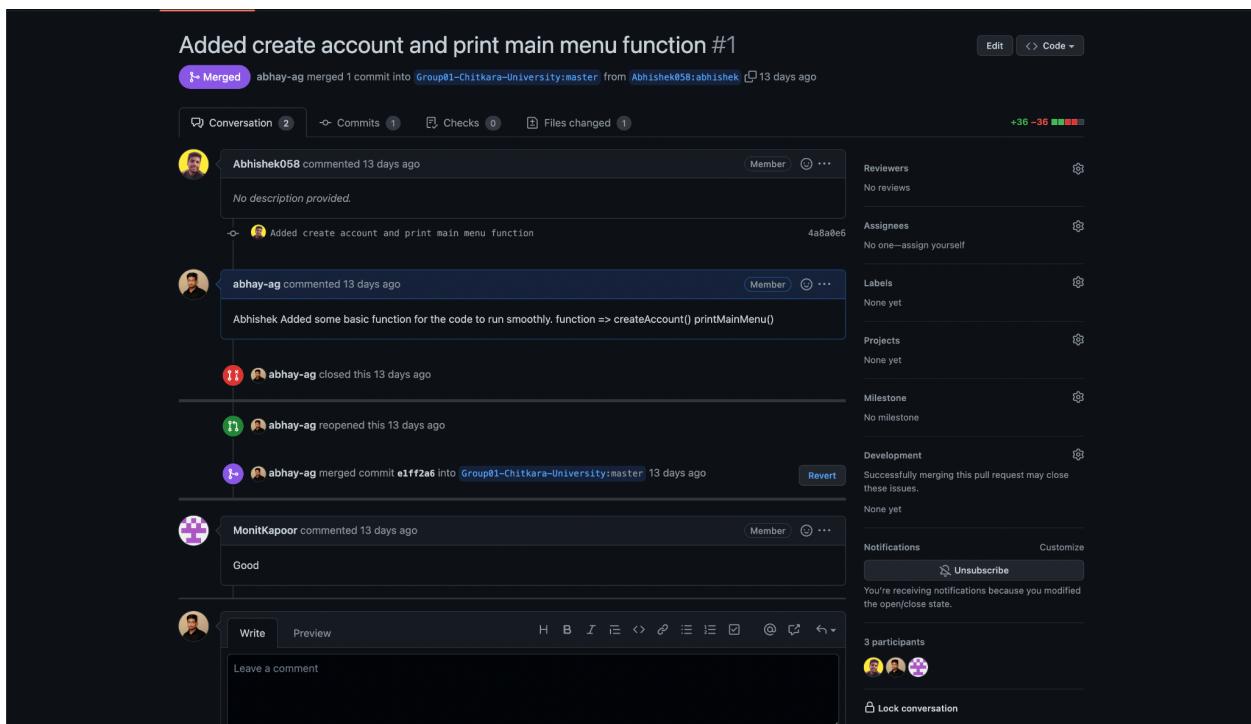
## TODO: Open and Close Pull Requests.

### STEPS:

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

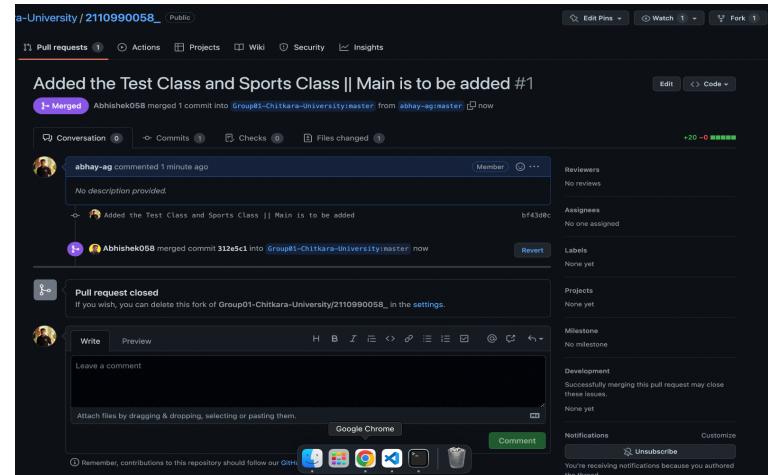
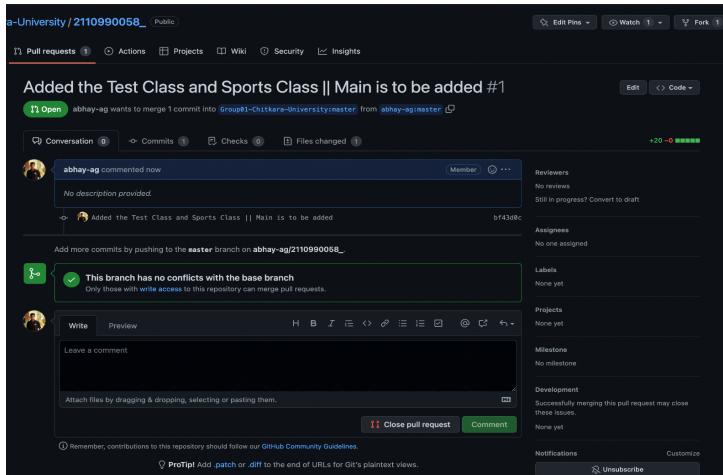


2. I closed them simultaneously as a maintainer of the repo.

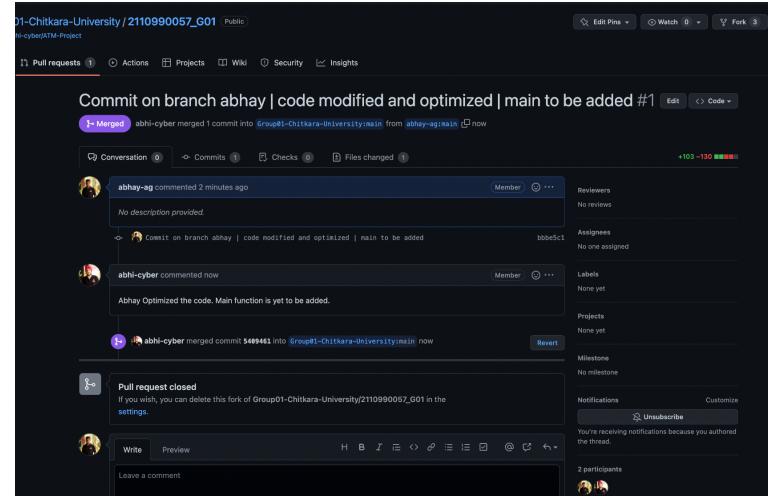
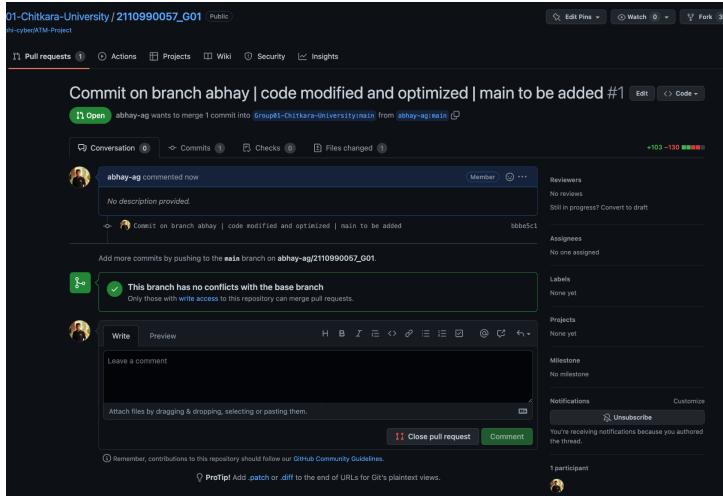


- As a member of the team and the requirements of the project work I also had to open and close pull requests in my teammates repositories. Below are the screenshots of the same.

### First two screenshots: Contribution in **Abhishek058**



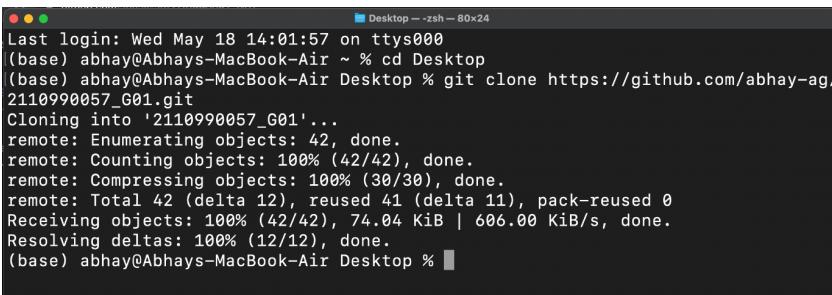
### Second two screenshots: Contribution in **abhi-cyber**



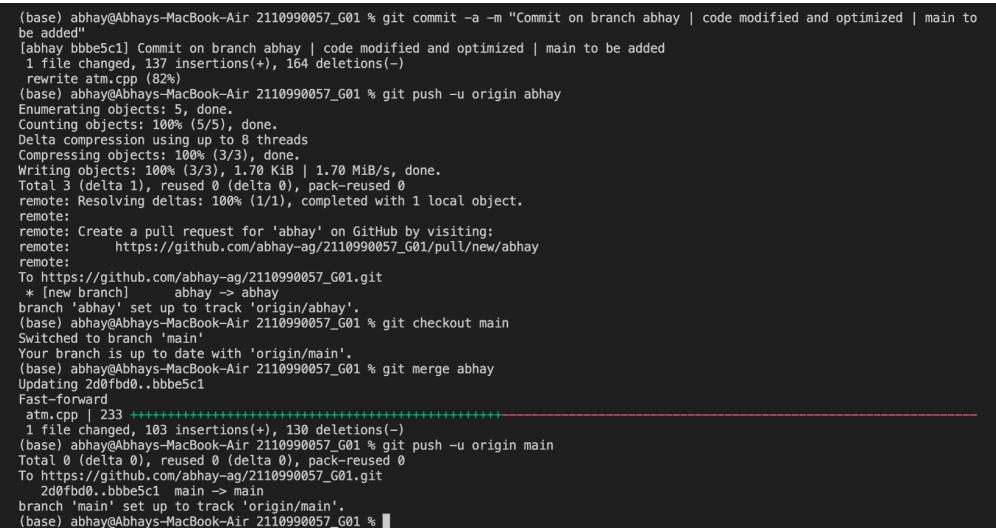
- I worked with **abhi-cyber**, **Aadithya-nc**, **Abhishek058** on their repositories and modified their code, added new functionalities and tested their code.
- To achieve this first I had to fork the repo into my account and then I cloned them onto my local machine.

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.

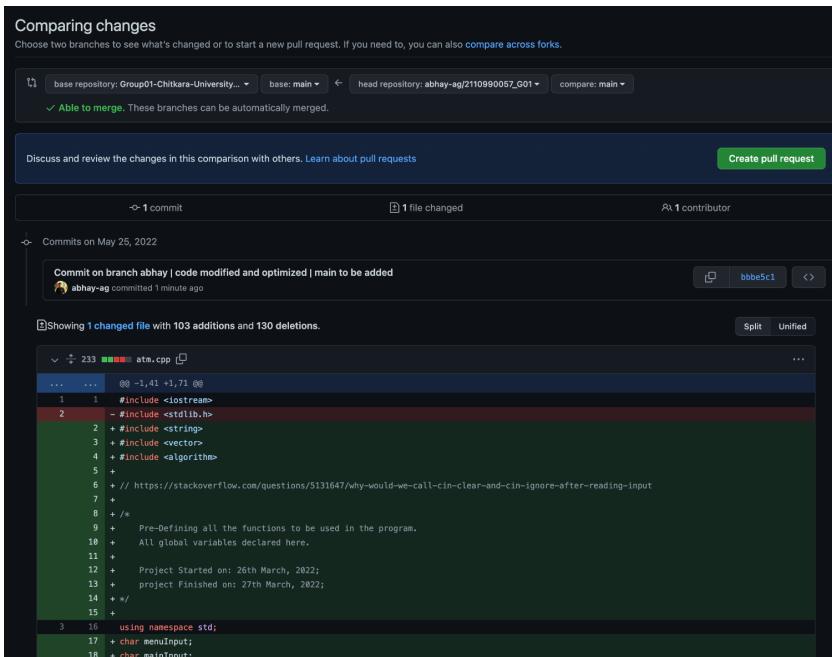
#### a. Screenshots for **abhi-cyber**



```
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 bbb5c1] 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 2d0fdb0..bbb5c1
Fast-forward
 atm.cpp | 233 ++++++-----+
 1 files 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
 2d0fdb0..bbb5c1  main -> main
branch 'main' set up to track 'origin/main'.
(base) abhay@Abhays-MacBook-Air 2110990057_G01 %
```

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: main head repository: abhay-ag/2110990057\_G01 compare: main

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 B 1 file changed A 1 contributor

Commits on May 25, 2022

Commit on branch abhay | code modified and optimized | main to be added

abhay-ag committed 1 minute ago

Showing 1 changed file with 103 additions and 130 deletions.

```

diff --git a/atm.cpp b/atm.cpp
@@ -1,41 +1,71 @@
 1 #include <iostream>
 2 -#include <strlib.h>
 3 +#include <string>
 4 +#include <vector>
 5 +#include <algorithm>
 6 +// https://stackoverflow.com/questions/5131647/why-would-we-call-cin-clear-and-cin-ignore-after-reading-input
 7 +
 8 +/*
 9 + Pre-Defining all the functions to be used in the program.
10 + All global variables declared here.
11 +
12 + Project Started on: 26th March, 2022;
13 + project Finished on: 27th March, 2022;
14 +*/
15 +
16 using namespace std;
17 +char menuInput;
18 +char mainInput;
```

## 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_ %
```

The screenshot shows a GitHub pull request comparison interface. At the top, it says "Comparing changes" and "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." Below this, there are dropdown menus for "base repository: Group01-Chitkara-University...", "base: master", "head repository: abhay-ag/2110990058\_", and "compare: master". A green checkmark indicates "Able to merge". The main area shows a summary: "1 commit", "1 file changed", and "1 contributor". It also notes "Commits on May 25, 2022". The commit message is "Added the Test Class and Sports Class || Main is to be added" by "abhay-ag committed 1 minute ago". The commit hash is "bf43d0c". Below this, a diff viewer shows the changes in "res\_class.cpp". The diff highlights 20 additions and 0 deletions. The code changes are as follows:

```
diff --git a/res_class.cpp b/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:
```

## 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 note to add a README and 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: Pulse, Contributors, Community, Community Standards, Traffic, Commits, Code frequency, Dependency graph, Network (which is highlighted with a yellow border), and Forks.

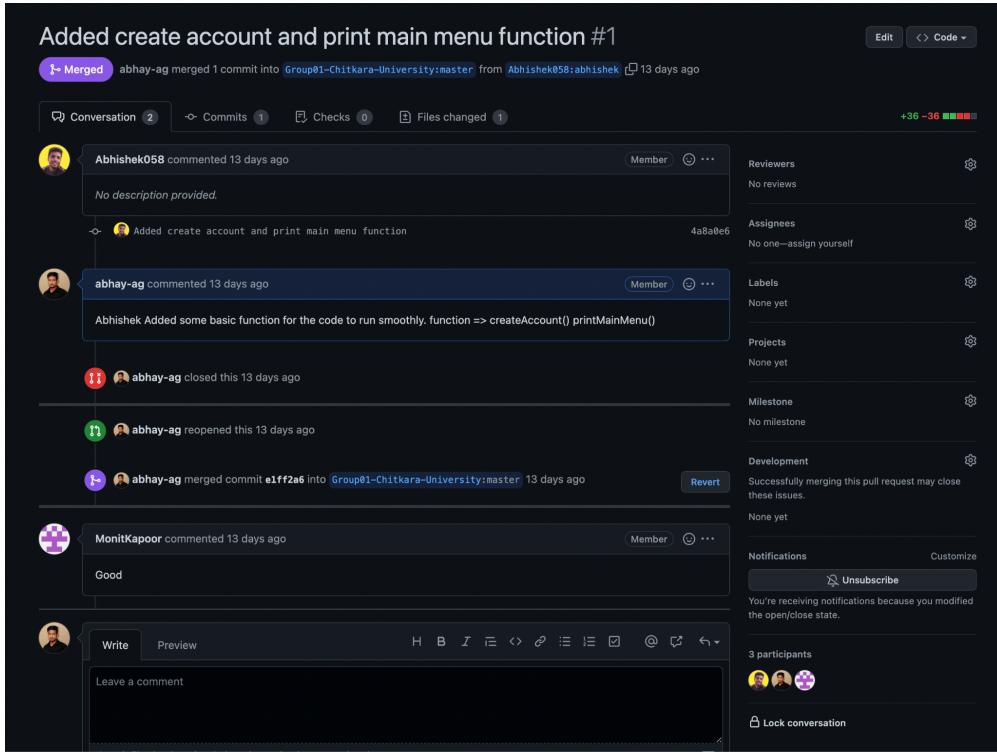
3. We can now visualize the network graph of our repository. Mine is attached below.



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.

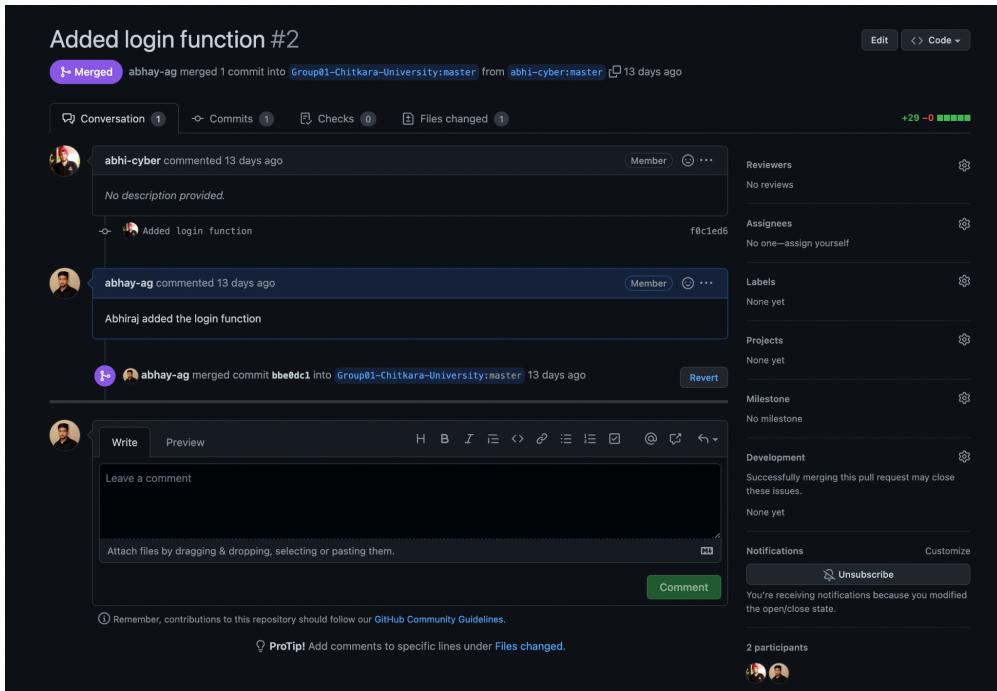
**TODO:** Pull request from each member of the team.

- Member #1



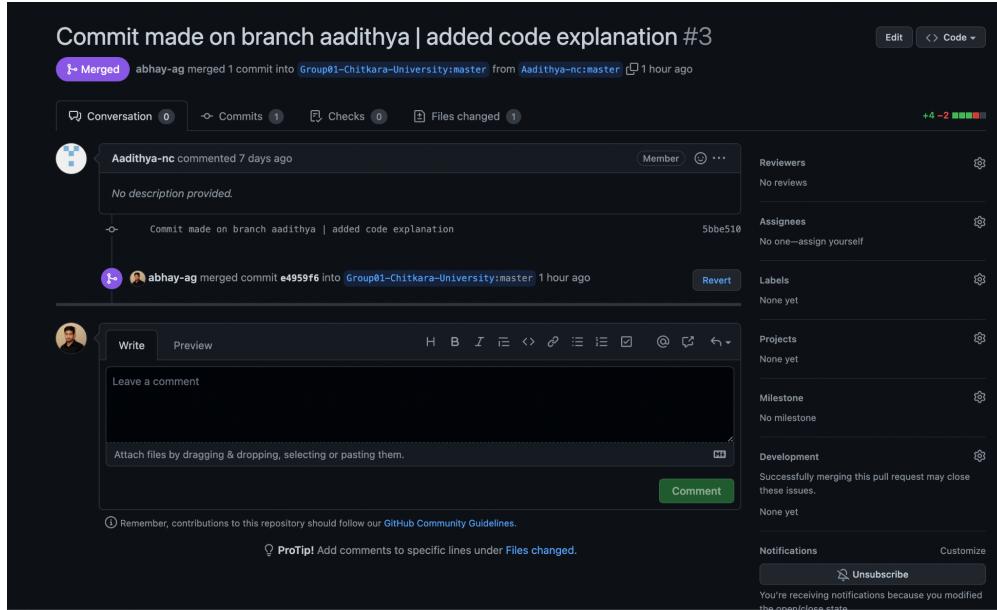
The screenshot shows a GitHub pull request titled "Added create account and print main menu function #1". The status is "Merged" by "abhay-ag" 13 days ago. The conversation tab has 2 messages. The first message is from "Abhishek058" (Member) 13 days ago: "No description provided." The second message is from "abhay-ag" (Member) 13 days ago: "Abhishek Added some basic function for the code to run smoothly. function => createAccount() printMainMenu()". Below the messages, "abhay-ag" closed and reopened the issue 13 days ago. "abhay-ag" merged commit `e1ff2a6` into `Group01-Chitkara-University:master` 13 days ago. On the right side, there are sections for Reviewers, Assignees, Labels, Projects, Milestone, Development, and Notifications. The Notifications section shows "Unsubscribe" and a note about receiving notifications because the issue was modified. The participant list includes "abhishek058" and "MonitKapoor". A "Lock conversation" button is also present.

- 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" (Member) 13 days ago: "No description provided.". Below it, "abhai-cyber" added the login function. "abhai-cyber" merged commit `bbe0dc1` into `Group01-Chitkara-University:master` 13 days ago. The right side of the screen displays standard GitHub pull request sidebar information including sections for Reviewers, Assignees, Labels, Projects, Milestone, Development, and Notifications. The Notifications section shows "Unsubscribe" and a note about receiving notifications because the issue was modified. The participant list includes "abhai-cyber" and "abhai-ag". A "Comment" button is visible at the bottom of the comment input field.

- Member #3



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

