# The coffee shop

with

# **Source Code Management**

(CS181)

# **Submitted by**

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#### 1. Version control with Git

### What is GIT and why is it used?

Git is a version control system that is widely used in the programming world. It is used for tracking changes in the source code during software development. It was developed in 2005 by Linus Torvalds, the creator of the Linux operating system kernel.

Git is a speedy and efficient distributed <u>VCS</u> tool that can handle projects of any size, from small to very large ones. Git provides cheap local branching, convenient staging areas, and multiple workflows. It is free, open-source software that lowers the cost because developers can use Git without paying money. It provides support for non-linear development. Git enables multiple developers or teams to work separately without having an impact on the work of others.

Git is an example of a distributed version control system (DVCS) (hence Distributed Version Control System).



#### What is GITHUB?

It is the world's largest open-source software developer community platform where the users upload their projects using the software Git.

GitHub is a code hosting platform for version control and collaboration. It lets you and others work together on projects from anywhere. This tutorial teaches you GitHub essentials like repositories, branches, commits, and pull requests.





#### What is the difference between GIT and GITHUB?



### What is Repository?

A repository is a directory or storage space where your projects can live. Sometimes GitHub users shorten this to "repo." It can be local to a folder on your computer, or it can be a storage space on GitHub or another online host. You can keep code files, text files, image files, you name it, inside a repository.

### What is Version Control System (VCS)?

A version control system is a tool that helps you manage "versions" of your code or changes to your code while working with a team over remote distances. Version control keeps track of every modification in a special kind of database that is accessible to the version control software. Version control software (VCS) helps you revert back to an older version just in case a bug or issue is introduced to the system or fixing a mistake without disrupting the work of other team members.

### Types of VCS

1. Local Version Control System



- 2. Centralized Version Control System
- 3. Distributed Version Control System
- I. **Local Version Control System:** Local Version Control System is located in your local machine. If the local machine crashes, it would not be possible to retrieve the files, and all the information will be lost. If anything happens to a single version, all the versions made after that will be lost.
- II. Centralized Version Control System: In the Centralized Version Control Systems, there will be a single central server that contains all the files related to the project, and many collaborators checkout files from this single server (you will only have a working copy). The problem with the Centralized Version Control Systems is if the central server crashes, almost everything related to the project will be lost.
- III. **Distributed Version Control System:** In a distributed version control system, there will be one or more servers and many collaborators similar to the centralized system. But the difference is, not only do they check out the latest version, but each collaborator will have an exact copy of the main repository on their local machines. Each user has their own repository and a working copy. This is very useful because even if the server crashes we would not lose everything as several copies are residing in several other computers.

#### 2. Problem Statement

One common management-related problem faced by coffee shop owners is slow service, especially in establishments that offer many customized coffee preparations. The best POS systems also make management hassle-free by tracking customer information, using traffic patterns to forecast staffing needs, adjusting pricing, generating reports that contain actionable information, facilitating tip reconciliation, and integrating with other solutions, such as accounting software.

### 3. Objective

PROJECT NAME: COFFEE SHOP



The objective of this project is to provide a coffee shop that will not only be known for serving great coffee but also an environment to relax, socialize, and network. This goals of this project will be:

- To lease, renovate and open an environmentally friendly coffeeshop that will attract customers. The shop will have a low economic footprint and consider the environment as the first priority of the business
- To open with-in six months at a cost not to exceed 3% of the budgeted \$400,000.
- Design a seating capacity for 30 people all with available outlets for electronic devices and shop wide Wi Fi service
- We will be offering many different types of coffee from all around the world
- Employ a volunteer program in which customers can pay for their order with lab or. This will ensure that each and every person is accommodated and has an opportunity to enjoy coffee and food in our shop regardless of the amount they have.

### 4. Resources Required.

Frontend – HTML5, CSS3, Java script

Backend - NodeJS

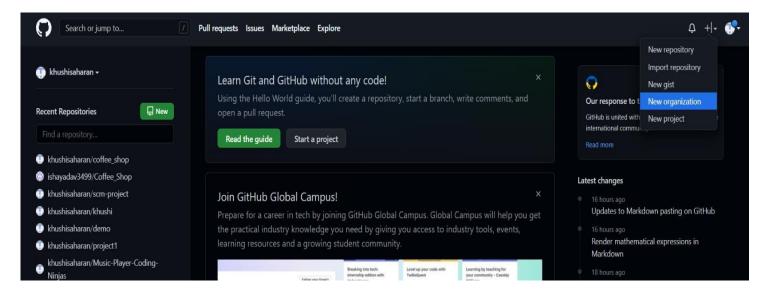




# 5. Concepts, Commands, Workflow and Discussions.

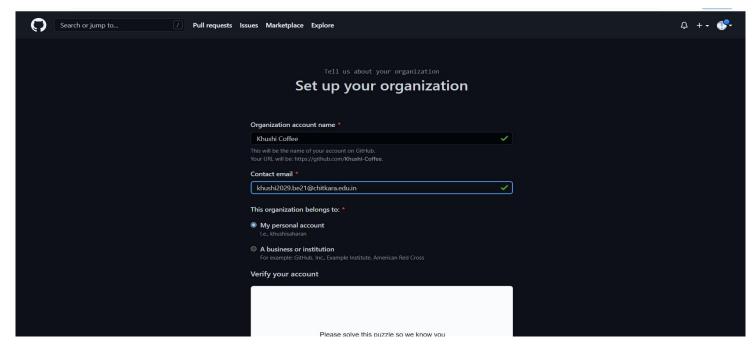
#### Aim: Create a distributed Repository and add members in project team

• Login to your GitHub account and you will land on the homepage as shown below. Click on the button shown in the menu bar and then click on New Organization.

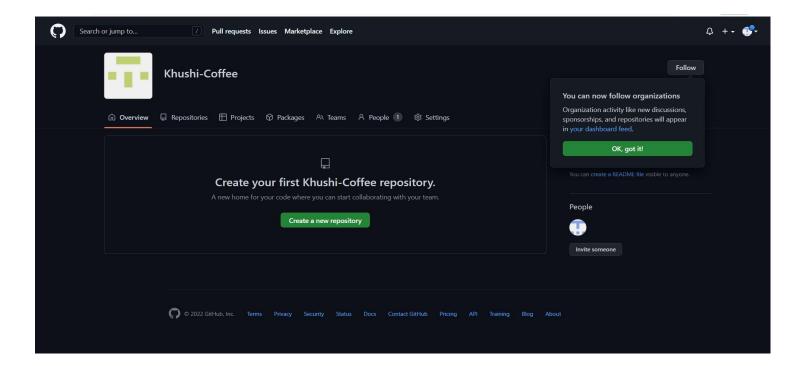


• Set Up Your Organization. Fill Your Organization's Name and Other Details.

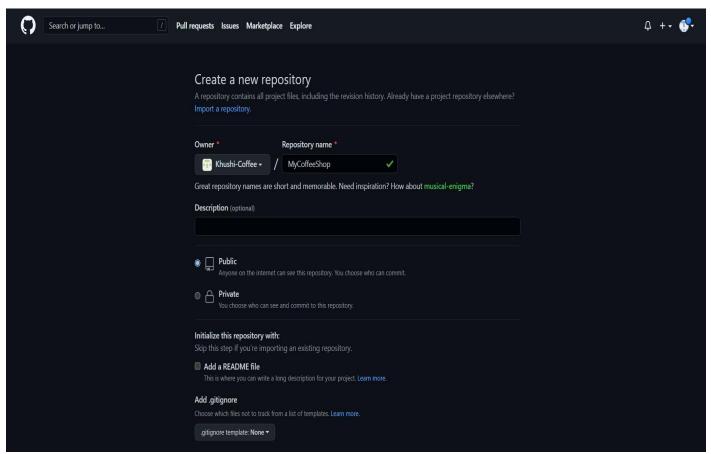




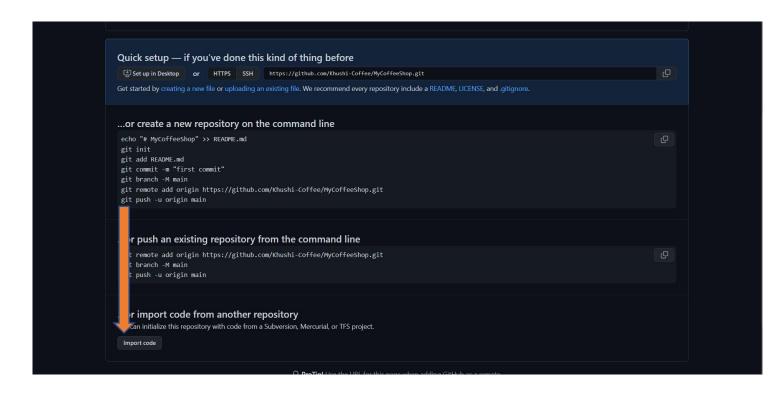
• After creating the repository, we have to create a Repository.





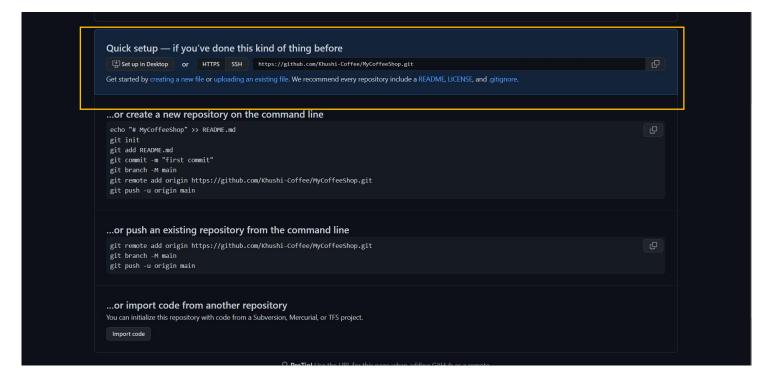


• If you want to import code from an existing repository select the import code option.

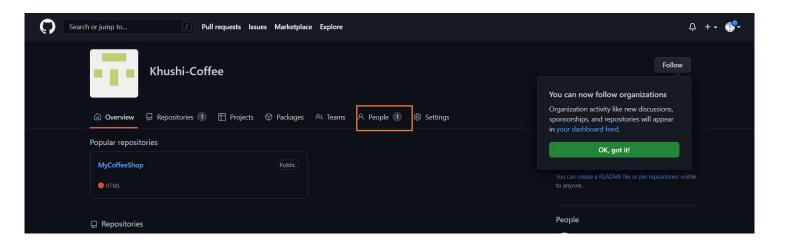




• To create a new file or upload an existing file into your repository select the option in the following box.

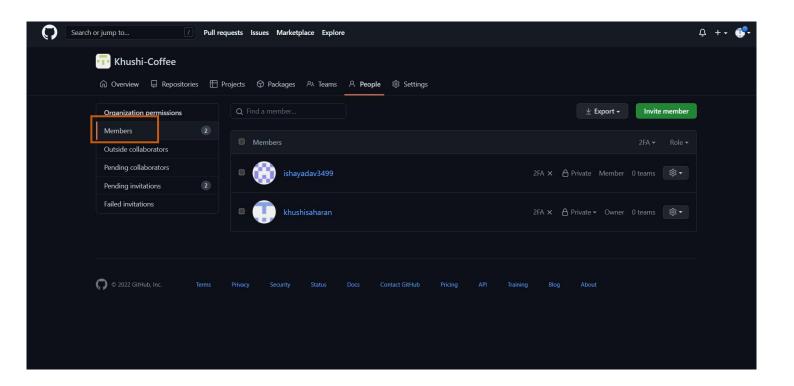


- Now, you have created your repository successfully.
- To add members to your repository, open your Organization and select People option in the navigation bar.
- Click on Collaborators option under the access tab.

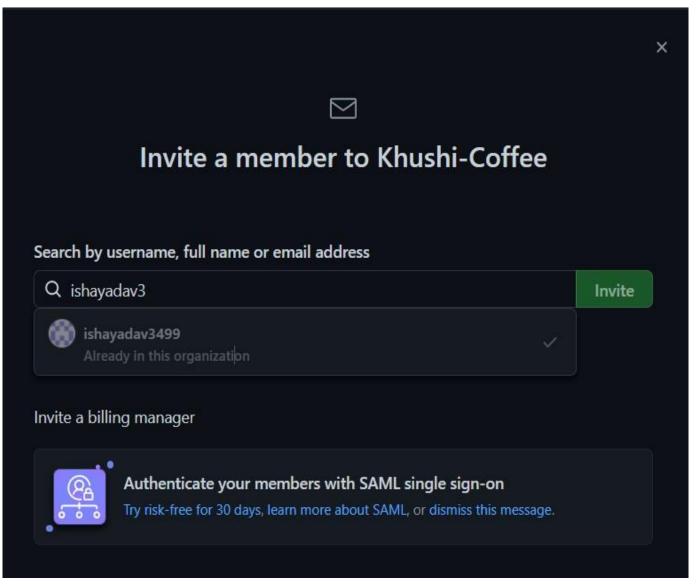


• To add members click on the add people option and search the id of your respective team member.







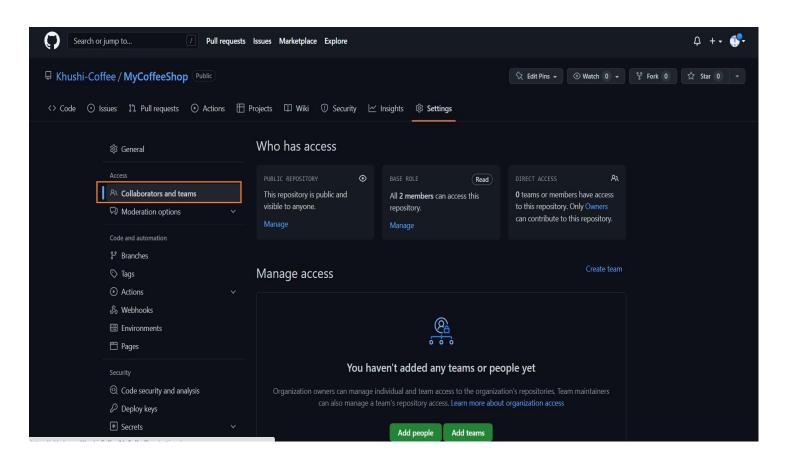


- To accept the invitation from your team member, open your email registered with GitHub.
- You will receive an invitation mail from the repository owner. Open the email and click on accept invitation.
- You will be redirected to GitHub where you can either select to accept or decline the invitation.





• Next, Open the desired Repository in the Organisation. Look and click on Settings -> Collaborators and Teams. Here you can Manage the role of each collaborator.





### **Experiment No. 02**

#### Aim: Open and Close a Pull Request

• To Open a Pull Request, First of All, it will be required to fork the repository and commit changes into your own.

```
MINGW64/c/CoffeeShop

HP@LAPTOP-R9TNMH35 MINGW64 ~

$ cd c:

HP@LAPTOP-R9TNMH35 MINGW64 /c

$ mkdir CoffeeShop

HP@LAPTOP-R9TNMH35 MINGW64 /c

$ cd CoffeeShop

HP@LAPTOP-R9TNMH35 MINGW64 /c/CoffeeShop

$ git init

Initialized empty Git repository in C:/CoffeeShop/.git/

HP@LAPTOP-R9TNMH35 MINGW64 /c/CoffeeShop (master)

$ git clone https://github.com/khushi-Coffee/MyCoffeeShop.git

Cloning into 'MyCoffeeShop'...

remote: Enumerating objects: 100% (33/33), done.

remote: Counting objects: 100% (33/33), done.

remote: Total 33 (delta 0), reused 0 (delta 0), pack-reused 0

Receiving objects: 100% (33/33), 1.49 MiB | 2.29 MiB/s, done.

HP@LAPTOP-R9TNMH35 MINGW64 /c/CoffeeShop (master)

$
```

• Add and commit the changes to the local repository.

```
Spit add unposed with the state of the state
```

• Use git push origin branch name option to push the new branch to the main repository.



```
UPULAPTUP-RETINNESS WINGOOK /c/CoffeeShop/MyCoffeeShop (main)

S git add index.html

APRILAPTUP-RETINNESS WINGOOK /c/CoffeeShop/MyCoffeeShop (main)

S git thranch Cafena

APRILAPTUP-RETINNESS WINGOOK /c/CoffeeShop/MyCoffeeShop (main)

S git checkout Cafena

APRILAPTUP-RETINNESS WINGOOK /c/CoffeeShop/MyCoffeeShop (Cafena)

S touch coffeeDate.txt

APRILAPTUP-RETINNESS WINGOOK /c/CoffeeShop/MyCoffeeShop (Cafena)

S git add *

APRILAPTUP-RETINNESS WINGOOK /c/CoffeeShop/MyCoffeeShop (Cafena)

S git commit -n/New File*

[Cafena ceached] New File

I file changed, 0 insertions(-), 0 deletions(-)

create mode 100644 coffeeDate.txt

APRILAPTUP-RETINNESS WINGOOK /c/CoffeeShop/MyCoffeeShop (Cafena)

S git push origin Cafena
```

```
S git branch Cafena

mull_APTOP_STRANGS Winness /c/CoffeeShop/myCoffeeShop (main)

5 git branch Cafena

mull_APTOP_STRANGS Winness /c/CoffeeShop/myCoffeeShop (main)

5 git checkout Cafena

mull_APTOP_STRANGS Winness /c/CoffeeShop/myCoffeeShop (Cafena)

5 touch CoffeeDate.txt

mull_APTOP_STRANGS Winness /c/CoffeeShop/myCoffeeShop (Cafena)

5 git add *

mull_APTOP_STRANGS Winness /c/CoffeeShop/myCoffeeShop (Cafena)

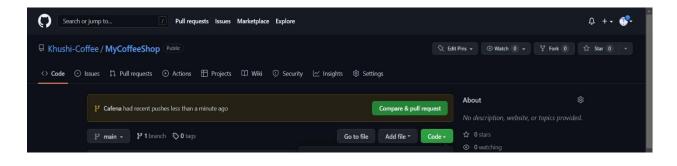
5 git comit -mill_most File*

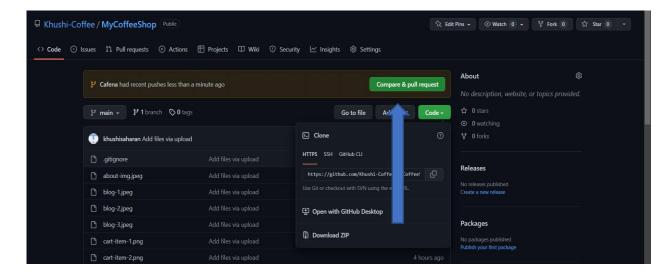
(Cafena Casabed) New File*

(C
```

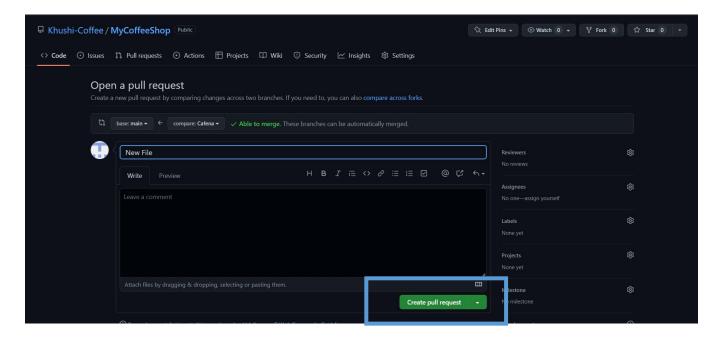


• After pushing new branch GitHub will either automatically ask you to create a pull request or you can create your own pull request.



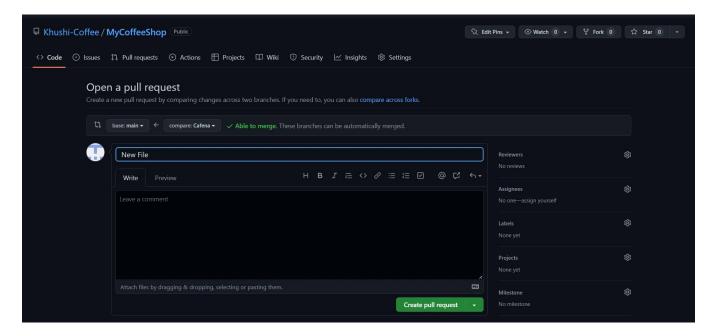


• To create your own pull request click on pull request option.

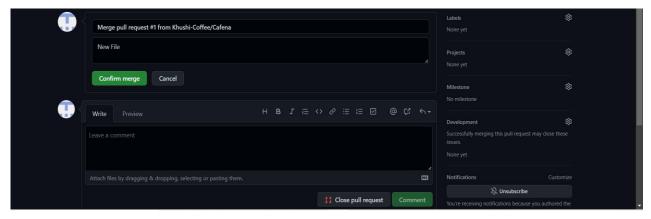




• GitHub will detect any conflicts and ask you to enter a description of your pull request.

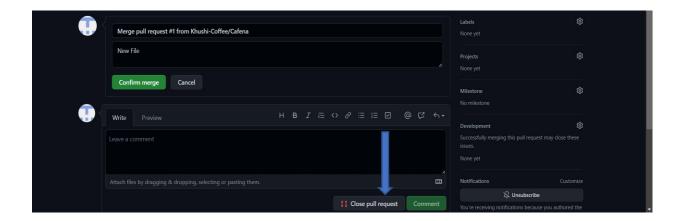


• After opening a pull request all the team members will be sent the request if they want to merge or close the request.

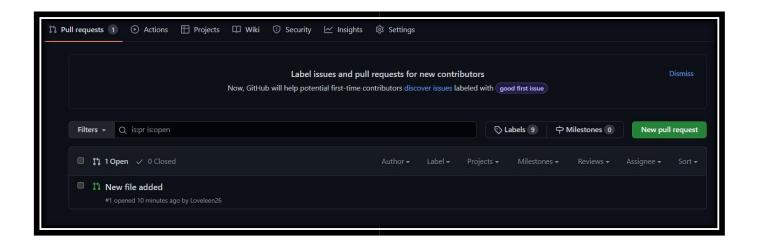


- If the team member chooses not to merge your pull request they will close you're the pull request.
- To close the pull request simply click on close pull request and add comment/ reason why you closed the pull request.





• You can see all the pull request generated and how they were dealt with by clicking on pull request option.





# Experiment No. 03

Aim: Create a pull request on a team member's repo and close pull requests generated by team members on own Repo as a maintainer

To create a pull request on a team member's repository and close requests by any other team members as a maintainer follow the procedure given below:-

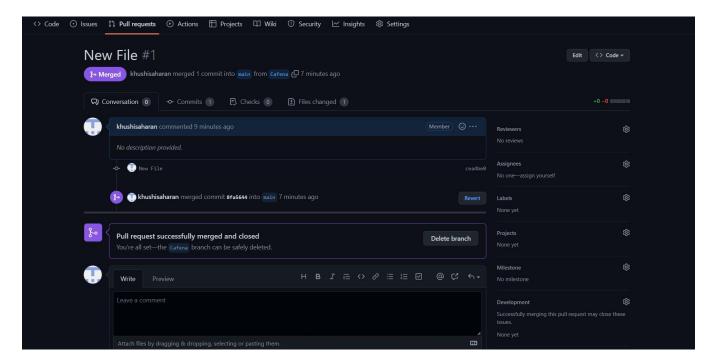
- Do the required changes in the repository, add and commit these changes in the local repository in a new branch.
- Push the modified branch using git push origin branch name.
- Open a pull request by following the procedure from the above experiment.
- The pull request will be created and will be visible to all the team members.
- Ask your team member to login to his/her Git hub account.
- They will notice a new notification in the pull request menu.
- Click on it. The pull request generated by you will be visible to them.



- Click on the pull request. Two option will be available, either to close the pull request or Merge the request with the main branch.
- By selecting the merge branch option the main branch will get updated for all the team members.

•

- By selecting close the pull request the pull request is not accepted and not merged with main branch.
- The process is similar to closing and merging the pull request by you. It simply includes an external party to execute.
- The result of merging the pull request.
- The result of closing the request is shown below.





# Experiment No. 04

#### Aim: Publish and print network graphs

The network graph is one of the useful features for developers on GitHub. It is used to display the branch history of the entire repository network, including branches of the root repository and branches of forks that contain commits unique to the network.

A repository's graphs give you information on traffic, projects that depend on the repository, contributors and commits to the repository, and a repository's forks and network. If you maintain a repository, you can use this data to get a better understanding of who's using your repository and why they're using it.

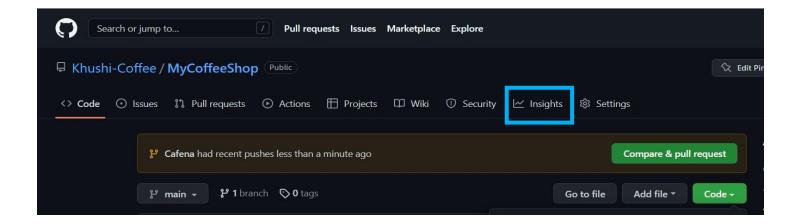
Some repository graphs are available only in public repositories with GitHub Free:

- Pulse
- Contributors
- Traffic
- Commits
- Code frequency
- Network

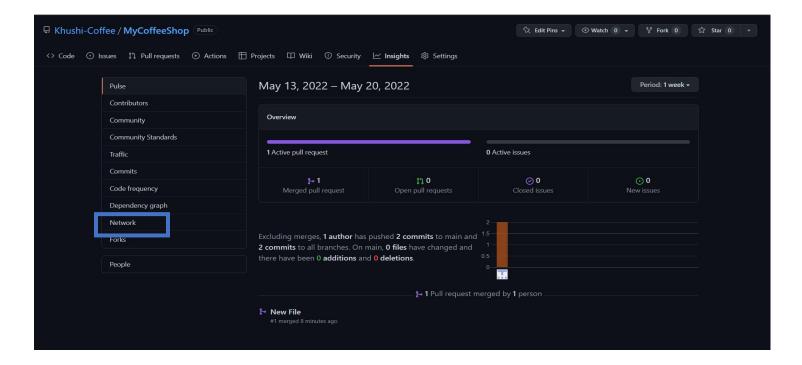
#### Steps to access network graphs of respective repository



- 1. On GitHub.com, navigate to the main page of the repository.
- 2. Under your repository name, click Insights.

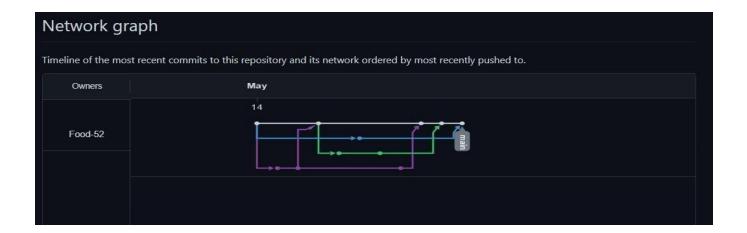


3.At the left sidebar, click on Network.





You will get the network graph of your repository which displays the branch history of the entire repository network, including branches of the root repository and branches of forks that contain commits unique to the network.



### 5. Workflow and Discussion

During the development of the application we kept in mind the digital framework and financial network online. And we took an approach on how to create a infrastructure that enables cashless economy. The development of this project started with a collaboration of the team while implementing the basic framework and overview and later the project development started which was at last uploaded on Git-Hub via collaboration.



