Subject Name: **Source Code Management**

Subject Code: **CS181**

Cluster: **Beta**

Department: **CSE**

Team members:

Harshita Batra
2110990587
G8 - B

Anushka Malhotra - 2110990012
Areen - 2110990252

PROJECT 2

CHITKARA UNIVERSITY

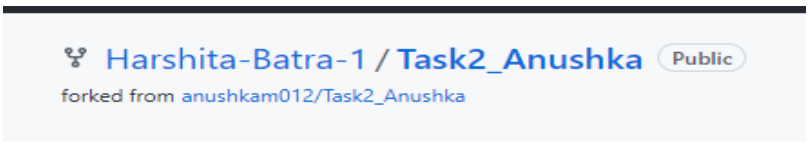
- ❖Created a distributed repository
- ❖Added team members there
- ❖Added codes there so that they can fork.

MINGW64:/c/Users/Harshita batra/Desktop/Task2

```
BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/Task2 (master)
$ git init
Initialized empty Git repository in C:/Users/Harshita batra/Desktop/Task2/.git/

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/Task2 (master)
$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        main.cpp

nothing added to commit but untracked files present (use "git add" to track)

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/Task2 (master)
$ git add .

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/Task2 (master)
$ git commit -m "Initial"
[master (root-commit) 0261e8b] Initial
 1 file changed, 19 insertions(+)
 create mode 100644 main.cpp
```

```
BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/Task2 (master)
$ git remote add origin https://github.com/Harshita-Batra-1/Task2_Harshita-Batra
.git

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/Task2 (master)
$ git branch -M main

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/Task2 (main)
$ git push -u origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 463 bytes | 463.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Harshita-Batra-1/Task2_Harshita-Batra.git
 * [new branch]      main -> main
Branch 'main' set up to track remote branch 'main' from 'origin'.
```

❖ Forked team member's repository



forked

❖ Made changes in code –

MINGW64:/c/Users/Harshita batra/Desktop/SCMtask

```
BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/SCMtask (master)
$ git init
Initialized empty Git repository in C:/Users/Harshita batra/Desktop/SCMtask/.gi
/

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/SCMtask (master)
$ git clone https://github.com/Harshita-Batra-1/Task2_Anushka.git
Cloning into 'Task2_Anushka'...
remote: Enumerating objects: 6, done.
remote: Counting objects: 100% (6/6), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 6 (delta 1), reused 6 (delta 1), pack-reused 0
Receiving objects: 100% (6/6), done.
Resolving deltas: 100% (1/1), done.

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/SCMtask (master)
$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        Task2_Anushka/

nothing added to commit but untracked files present (use "git add" to track)
```

MINGW64:/c/Users/Harshita batra/Desktop/SCMtask/Task2_Anushka

```
#include<iostream>
using namespace std;
//Hello I'm adding comments
int main() {
    int n,q;
        cin>>n>>q;
    int sum=0; //initializing

    int prod=1; //initializing
    for(int i=1;i<=n;i++){ //using for loop
        if (q==1){
            sum = sum +i;
        }
        else {
            prod =prod * i;
        }
    }
    if (q ==1){
         cout<<sum<<endl;
    }
    else if(q==2){
     cout<<prod<<endl;
sumOrProducts.cpp[+] [dos] (18:52 22/05/2022)                    3,27 Top
:wq
```

MINGW64:/c/Users/Harshita batra/Desktop/SCMtask/Task2_Anushka

```
BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/SCMtask (master)
$ ls
Task2_Anushka/  sumOrProducts.cpp

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/SCMtask (master)
$ cd ^C

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/SCMtask (master)
$ cd Task2_Anushka/

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/SCMtask/Task2_Anushka (main)
$ vi  ^C

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/SCMtask/Task2_Anushka (main)
$ vi sumOrProducts.cpp

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/SCMtask/Task2_Anushka (main)
$ ^C

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/SCMtask/Task2_Anushka (main)
$  vi sumOrProducts.cpp

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/SCMtask/Task2_Anushka (main)
$ cat sumOrproducts.cpp
#include<iostream>
using namespace std;
//Hello I'm adding comments
int main() {
    int n,q;
        cin>>n>>q;
    int sum=0; //initializing

    int prod=1; //initializing
    for(int i=1;i<=n;i++){ //using for loop
        if (q==1){
            sum = sum +i;
        }
        else {
            prod =prod * i;
        }
    }
    if (q ==1){
         cout<<sum<<endl;
    }
    else if(q==2){
     cout<<prod<<endl;
    }
    else{
        cout<<-1;
```

❖ Pushed it

```
BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/SCMtask/Task2_Anushka (main)
$ git  push
Everything up-to-date

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/SCMtask/Task2_Anushka (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   sumOrProducts.cpp

no changes added to commit (use "git add" and/or "git commit -a")

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/SCMtask/Task2_Anushka (main)
$ git add .

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/SCMtask/Task2_Anushka (main)
$ git commit -m"Added comments"
[main f4691de] Added comments
 1 file changed, 4 insertions(+), 4 deletions(-)

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/SCMtask/Task2_Anushka (main)
$ git push
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 384 bytes | 128.00 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.
To https://github.com/Harshita-Batra-1/Task2_Anushka.git
   3686126..f4691de  main -> main
```

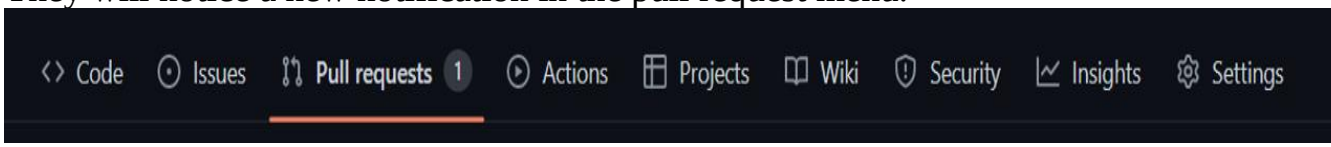
Showing 1 changed file with 4 additions and 4 deletions.

8 sumOrProducts.cpp

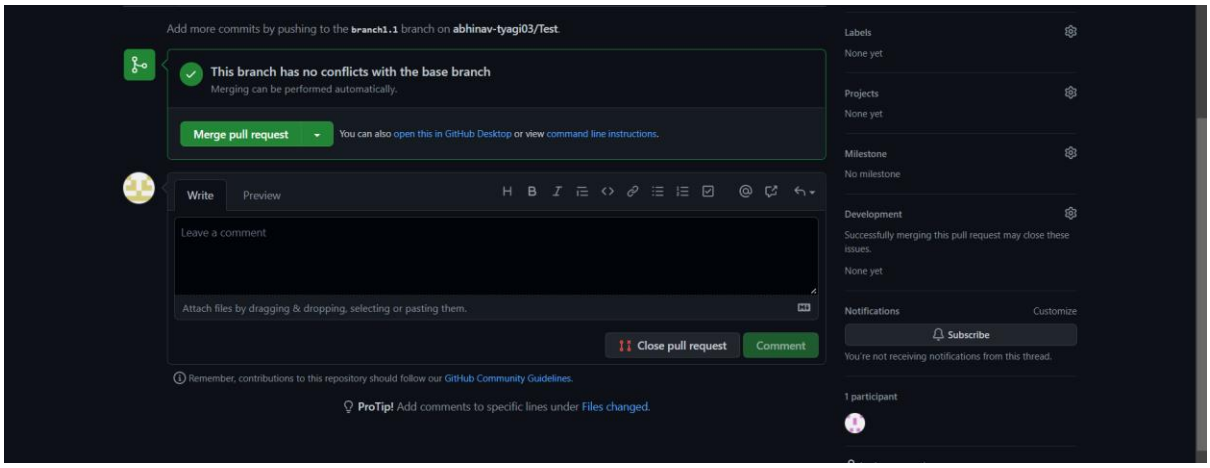
```
@@ -1,13 +1,13 @@
#include<iostream>
using namespace std;
-
+ //Hello I'm adding comments
int main() {
    int n,q;
        cin>>n>>q;
-   int sum=0;
+   int sum=0; //initializing

-   int prod=1;
-   for(int i=1;i<=n;i++){
+   int prod=1; //initializing
+   for(int i=1;i<=n;i++){ //using for loop
        if (q==1){
            sum = sum +i;
        }
```

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:-

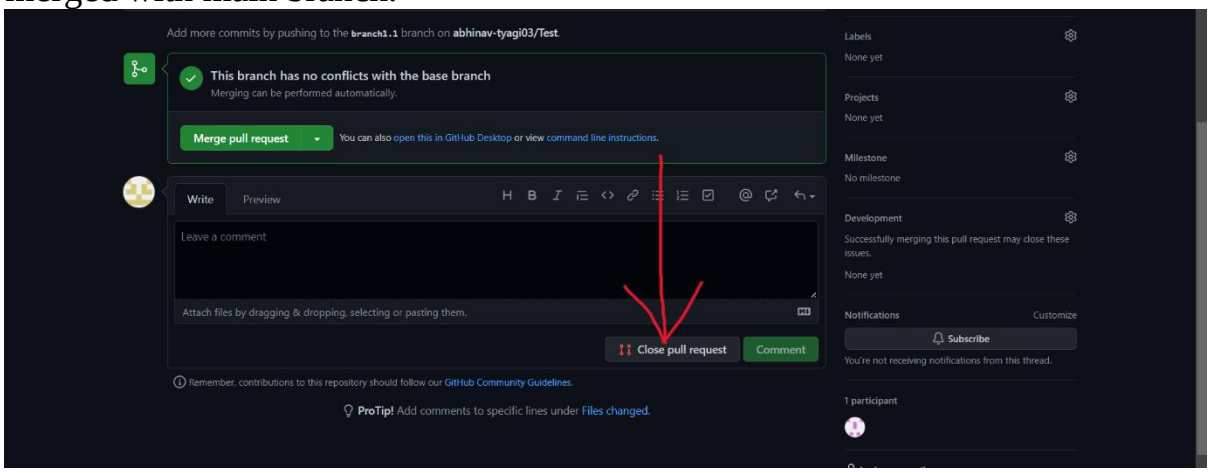
- Do the required changes in the repository, add and commit these changes in the local repository in a new branch.
- Push the modified branch using git push origin *branchname*.
- Open a pull request by following the procedure from the above experiment.
- The pull request will be created and will be visible to all the team members.
- Ask your team member to login to his/her Github 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.

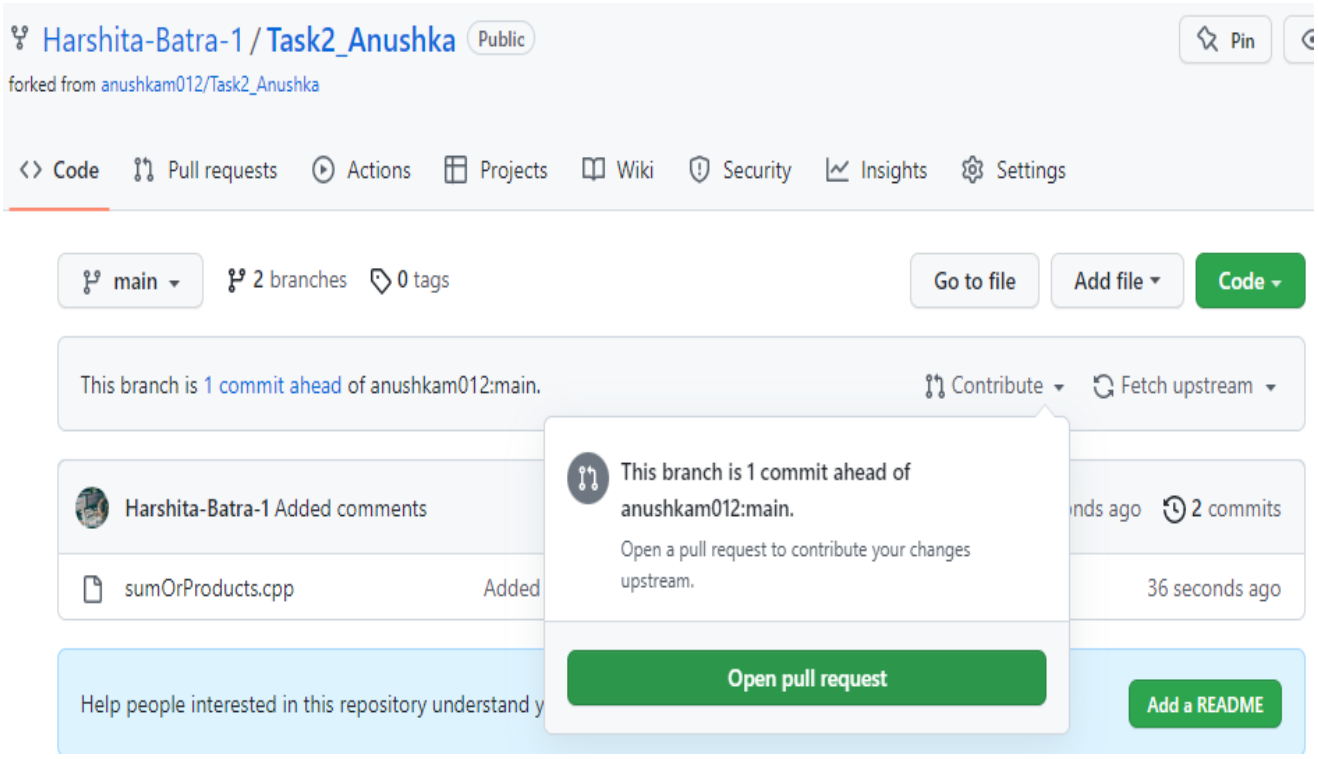


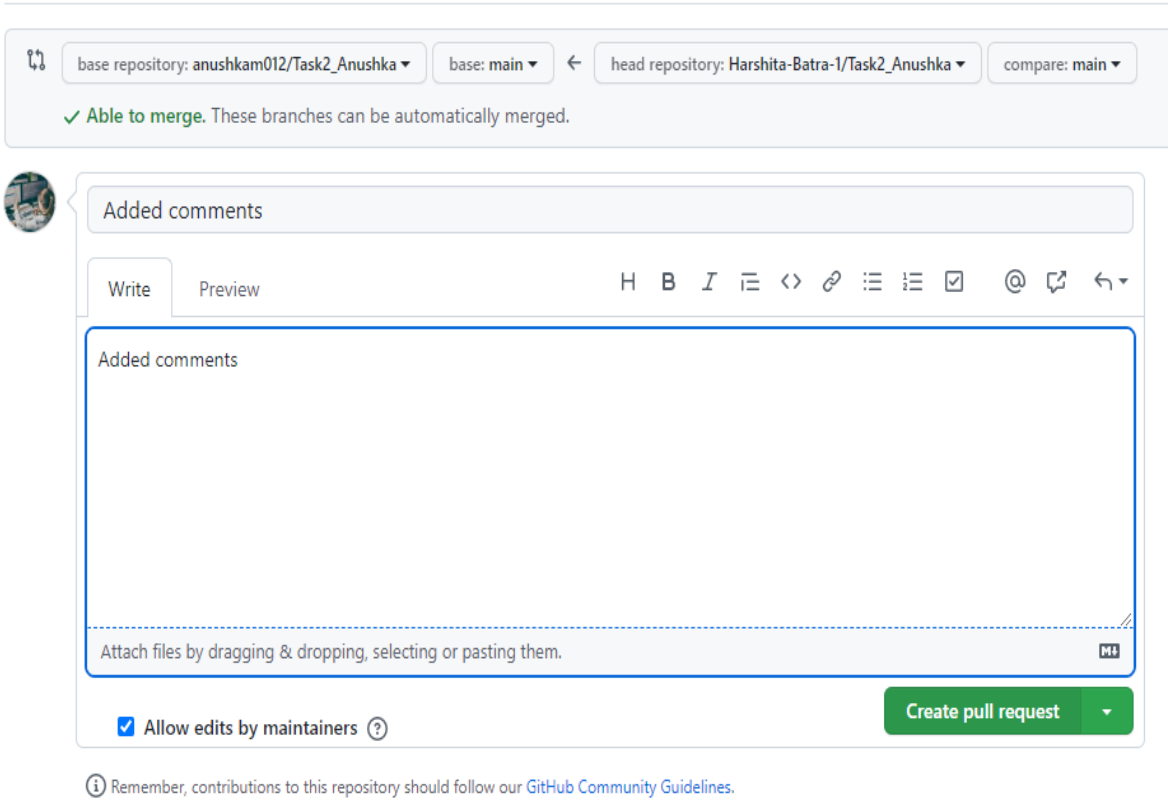
- By selecting close the pull request the pull request is not accepted and not merged with main branch.

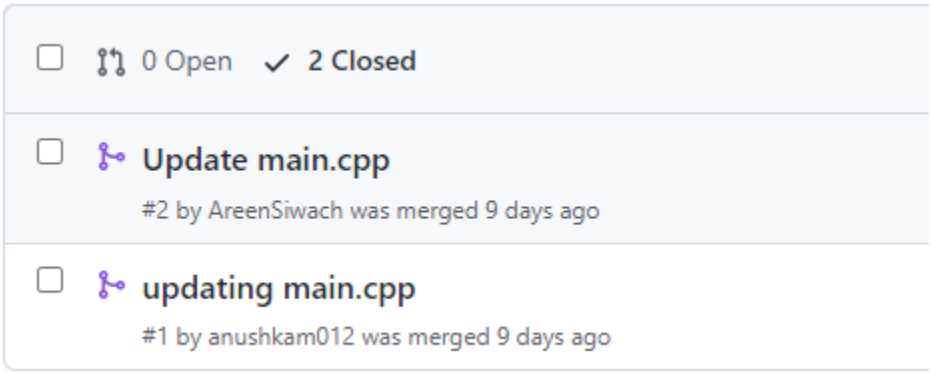


- The process is similar to closing and merging the pull request by you. It simply includes an external party to execute.
- The result of merging the pull request is shown below.
- Thus, we conclude opening and closing of pull request. We also conclude merging of the pull request to the main branch.

❖ Pull request sent to my team member


Harshita-Batra-1 / Task2_Anushka
Public
Pin
forked from anushkam012/Task2_Anushka
Code
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
main
2 branches
0 tags
Go to file
Add file
Code
This branch is 1 commit ahead of anushkam012:main.
Contribute
Fetch upstream
This branch is 1 commit ahead of anushkam012:main.
Open a pull request to contribute your changes upstream.
Harshita-Batra-1 Added comments
2 commits
sumOrProducts.cpp
Added
36 seconds ago
Open pull request
Help people interested in this repository understand y
Add a README





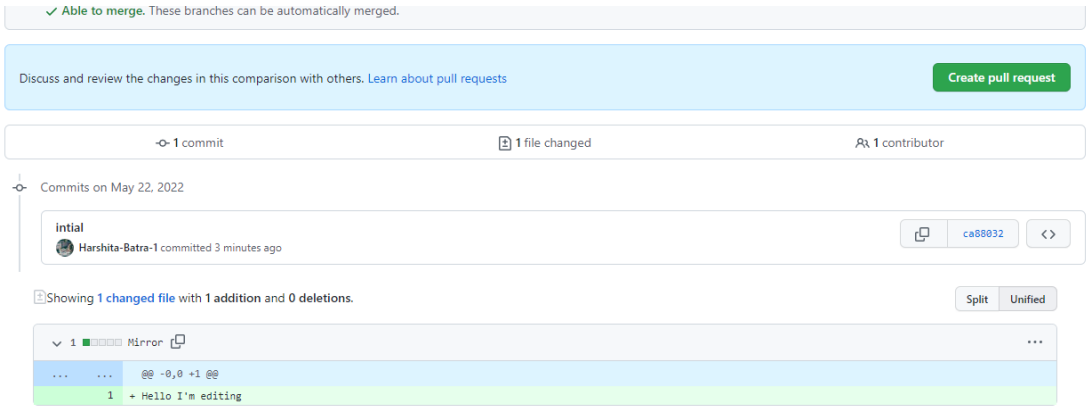
❖ **Forked another team member's repository**

MINGW64:/c/Users/Harshita batra/Desktop/task2/Task2_Areen

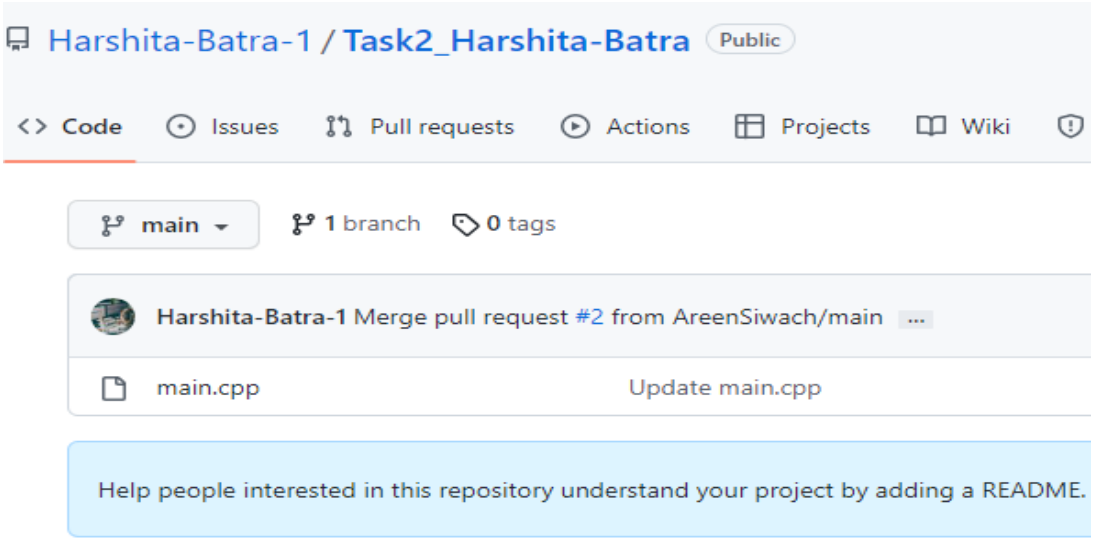
```
BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/task2 (master)
$ git init
Initialized empty Git repository in C:/Users/Harshita batra/Desktop/task2/.git/

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/task2 (master)
$ git clone https://github.com/Harshita-Batra-1/Task2_Areen.git
Cloning into 'Task2_Areen'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), done.

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/task2 (master)
$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        Task2_Areen/

nothing added to commit but untracked files present (use "git add" to track)

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/task2 (master)
$ ls
Task2_Areen/

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/task2 (master)
$ cd ^C

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/task2 (master)
$ cd Task2_Areen/

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/task2/Task2_Areen (main)
$ ls
'Mirror Number Pattern.cpp'

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/task2/Task2_Areen (main)
$ ^C

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/task2/Task2_Areen (main)
$ vi Mirror Number Pattern.cpp
3 files to edit

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/task2/Task2_Areen (main)
$ cat Mirror Number Pattern.cpp
Hello I'm editing
```

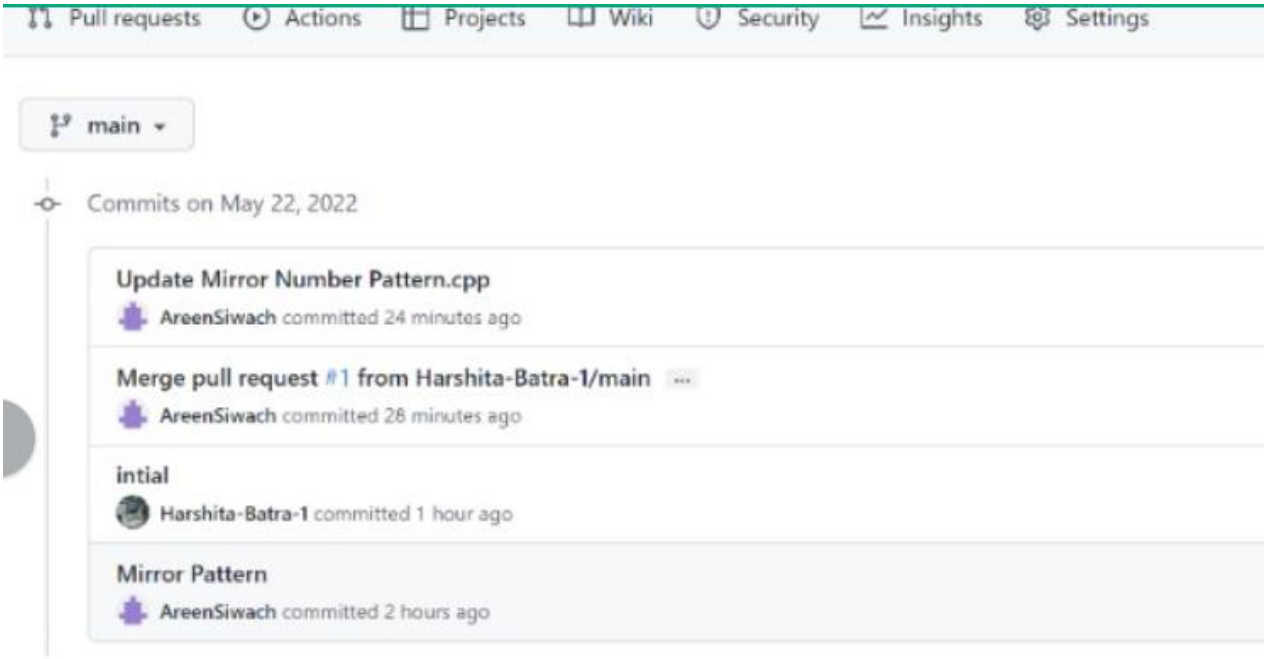
```
BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/task2/Task2_Areen (main)
$ git push
Everything up-to-date

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/task2/Task2_Areen (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        Mirror

nothing added to commit but untracked files present (use "git add" to track)

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/task2/Task2_Areen (main)
$ git add .
warning: LF will be replaced by CRLF in Mirror.
The file will have its original line endings in your working directory

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/task2/Task2_Areen (main)
$ git commit -m"intial"
[main ca88032] intial
 1 file changed, 1 insertion(+)
 create mode 100644 Mirror

BATRA's@DESKTOP-I2LH7RN MINGW64 ~/Desktop/task2/Task2_Areen (main)
$ git push
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), 310 bytes | 310.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Harshita-Batra-1/Task2_Areen.git
   a25cdbb..ca88032  main -> main
```

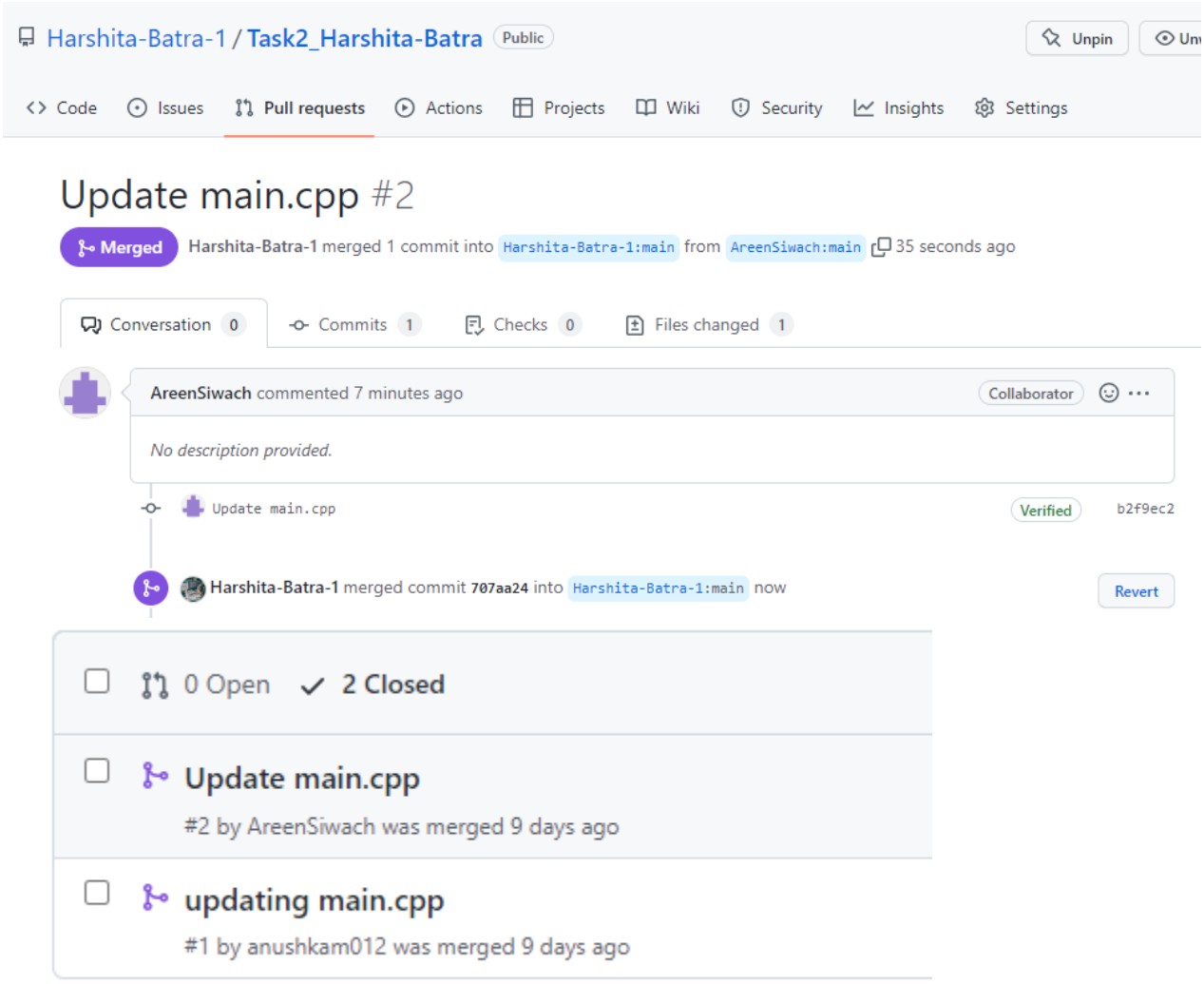
❖ Sent the pull request



❖ Merging of pull request







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.

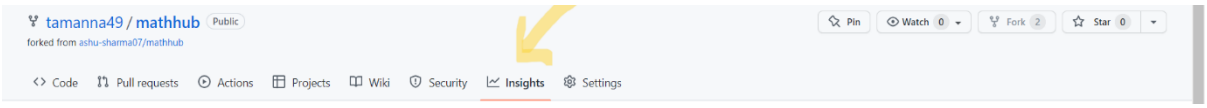
Some repository graphs are available only in public repositories with GitHub Free:

- 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**.

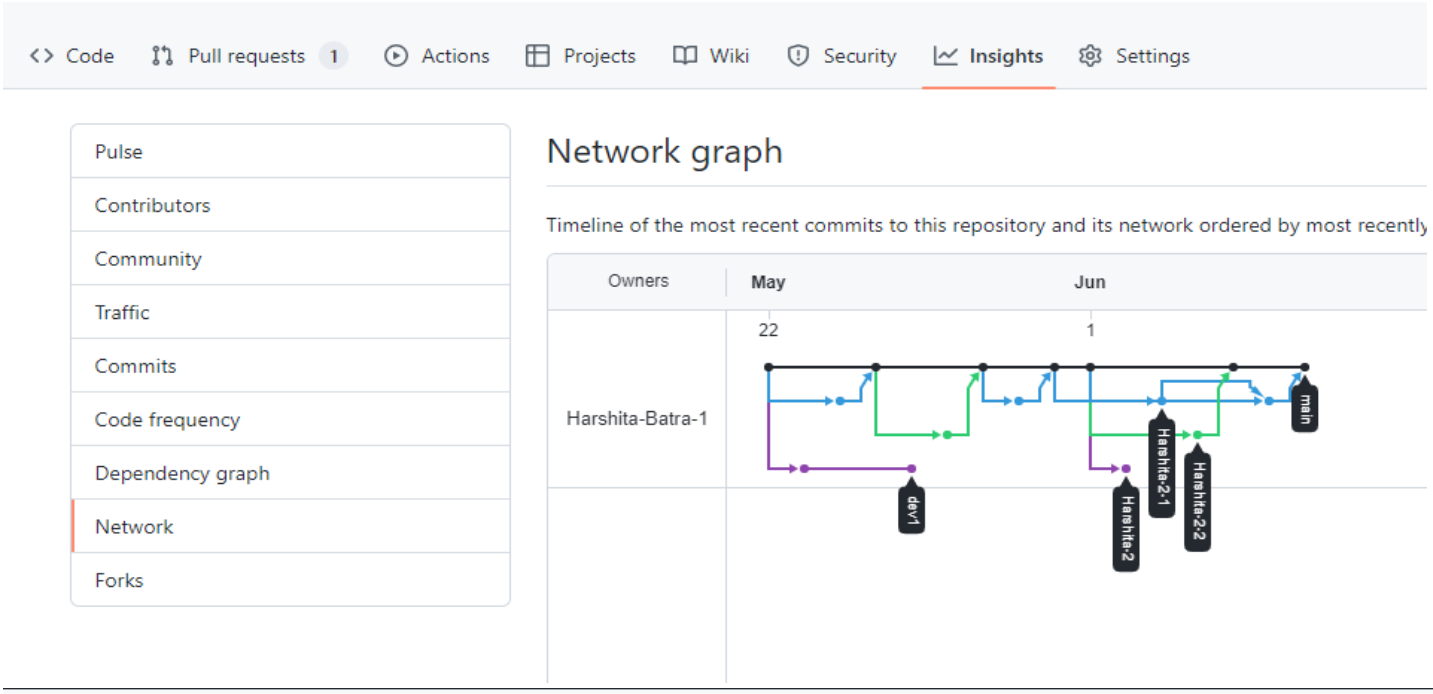
Listing the forks of a repository

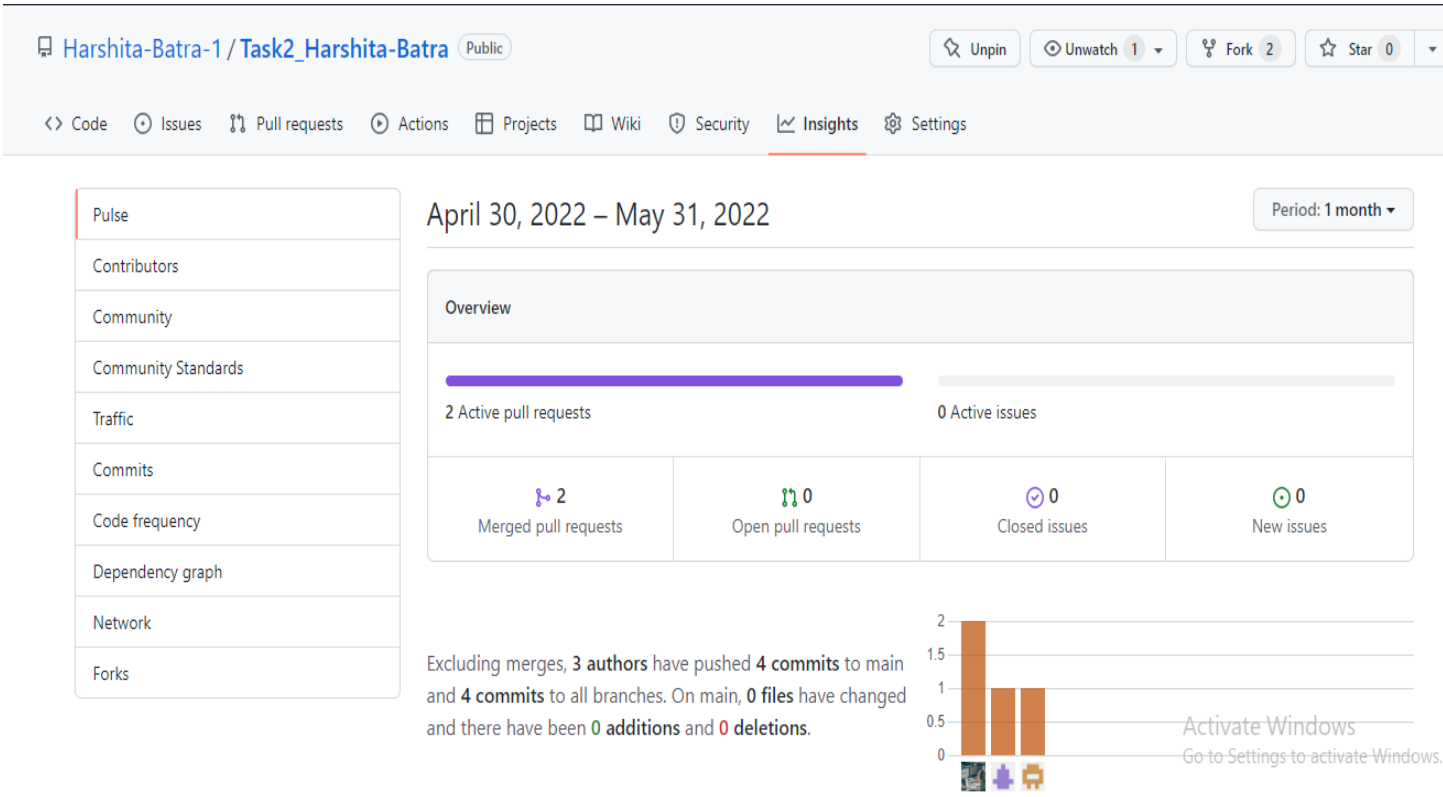
Forks are listed alphabetically by the username of the person who forked the repository

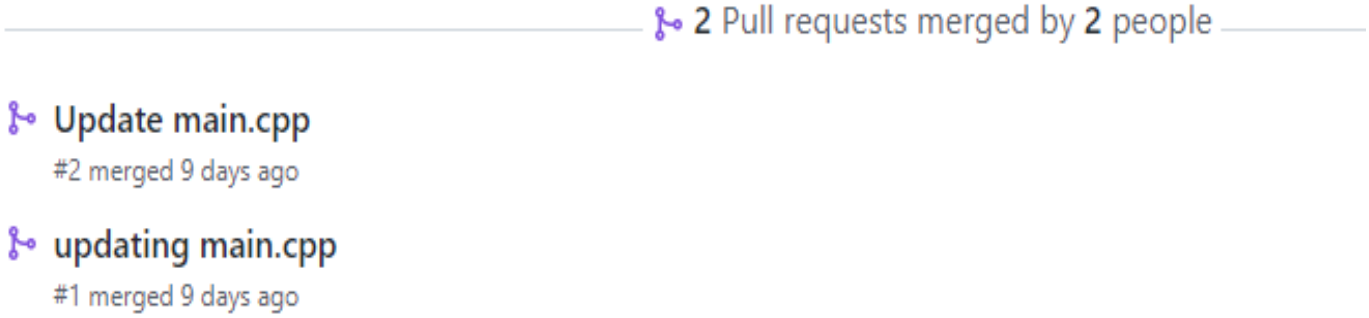
Clicking the number of forks shows you the full network. From there you can click "members" to see who forked the repo

1. On GitHub.com, navigate to the main page of the repository.

2. Under your repository name, click **Insights**.







Viewing the dependencies of a repository

You can use the dependency graph to explore the code your repository depends on.

Almost all software relies on code developed and maintained by other developers, often known as a supply chain. For example, utilities, libraries, and frameworks. These dependencies are an integral part of your code and any bugs or vulnerabilities in them may affect your code. It's important to review and maintain these dependencies.