



Experiment -1.2

Student Name: Aaryan Maheshwari

Branch: AIT-CSE(DEVOPS)

Semester: Fourth

Subject Name: GIT AND GITHUB

UID: 22BDO10001

Section/Group:22BCD-1/A

Date of Performance: 24/01/2024

Subject Code: 22CSH-293

1. Aim/Overview of the Practical:.To create branches with GitHub and use it.

2. Software used: Git Bash and Github.

3. Hardware Used: Computer system.

4. Steps for experiment:

To Create a branch on GitHub :

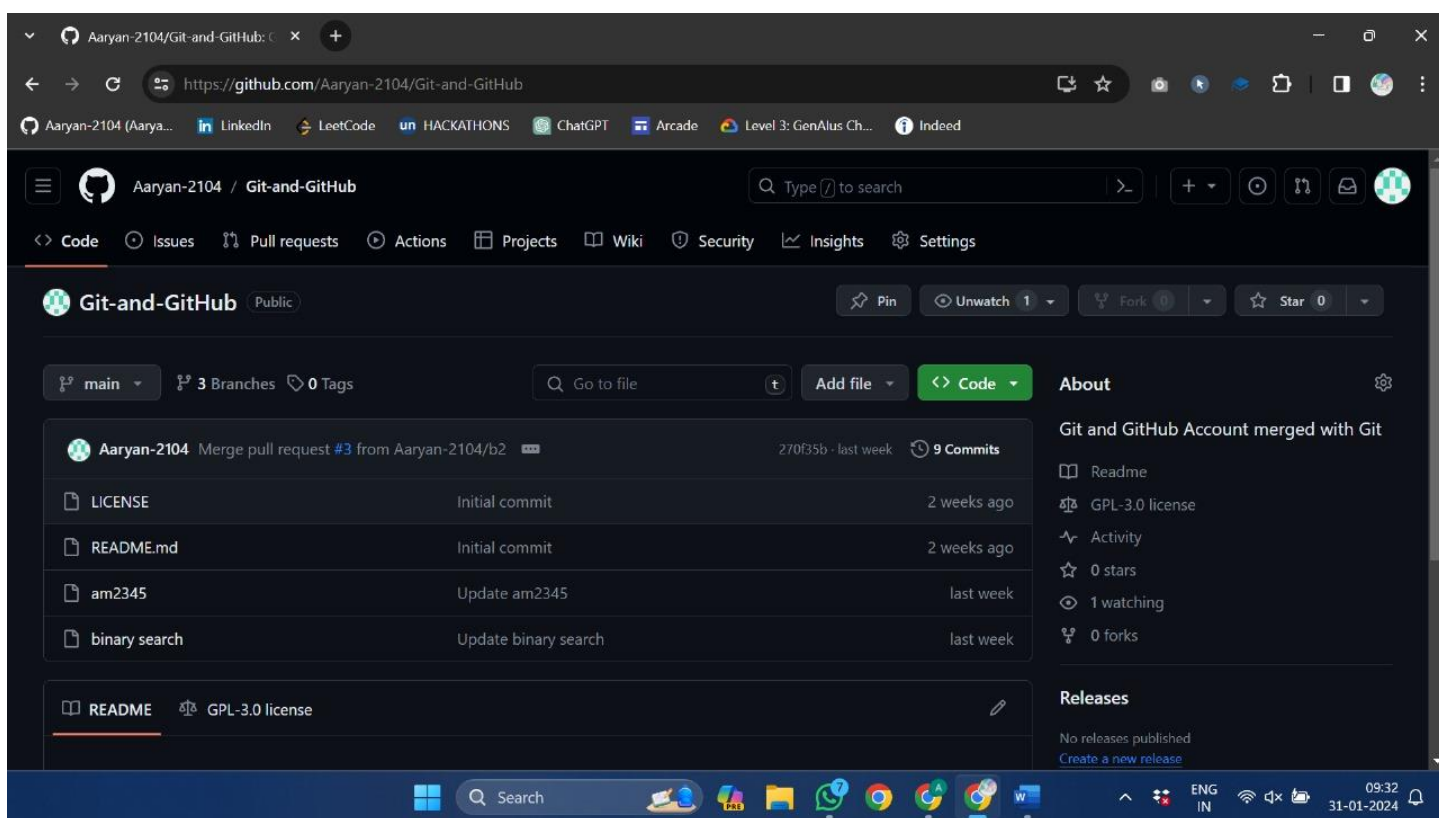
1. Login to your GitHub profile on Chrome.
2. Click on the repository where you want to do branching.
3. Click on Add the file to add a new file.
4. Give this file the name “**myfile. c**” and add any code.
5. Click on the “**commit changes**” button to commit the change.
6. Provide “**commit message**” and “**Extended description**” and then click “**commit changes**”
7. Now go on that file and click on branch “**main**”.
8. Type a new branch name “**br24.c**” and click “**Create branch br24.c from main**”
9. Click on the “**edit**” button and edit the code.

10. After editing click on “**commit changes** “ to commit the changes.
11. Add “**Commit message**” And “**Extended description**” and then click on “**Commit changes**”
12. After committing the changes go to “**parent repository**” and click “**compare and pull request**”.
13. Compare the code in two modes.
14. Click on “**Create pull request**” And add “**title and description to code**”
15. Click on “**Merge pull request**”
16. After Merging the code Click on “**Delete branch**” if you wish to delete the branch.

From Creating Branch On GitBash:

1. Create a new folder named “**git**” on the desktop.
2. Initialize the git using the “*git init*” command.
3. Create a new file using the “*vi command*”
For example, here we have created → “**vi cm.txt**”
4. Edit the file and add content to it.
5. Put the file in the staging area using “*git add (file name)*”
For example “**git add cm.txt**”
6. Commit this file using the “*git commit -m “message”*”
7. Create a new branch using code “*git checkout -b branch_name*”
8. Open and Edit the file using “*vi file name*” and add content.
9. Put the file in the staging area using “*git add (file name)*”
For example “**git add cm.txt**”
10. Commit this file using the “*git commit -m “message”*”
11. Move to the master branch using “*git checkout master*”
12. Merge the branch using code “*git merge new*”
13. Show the status of the file using “*git status*”.

5. Outputs: For GitHub



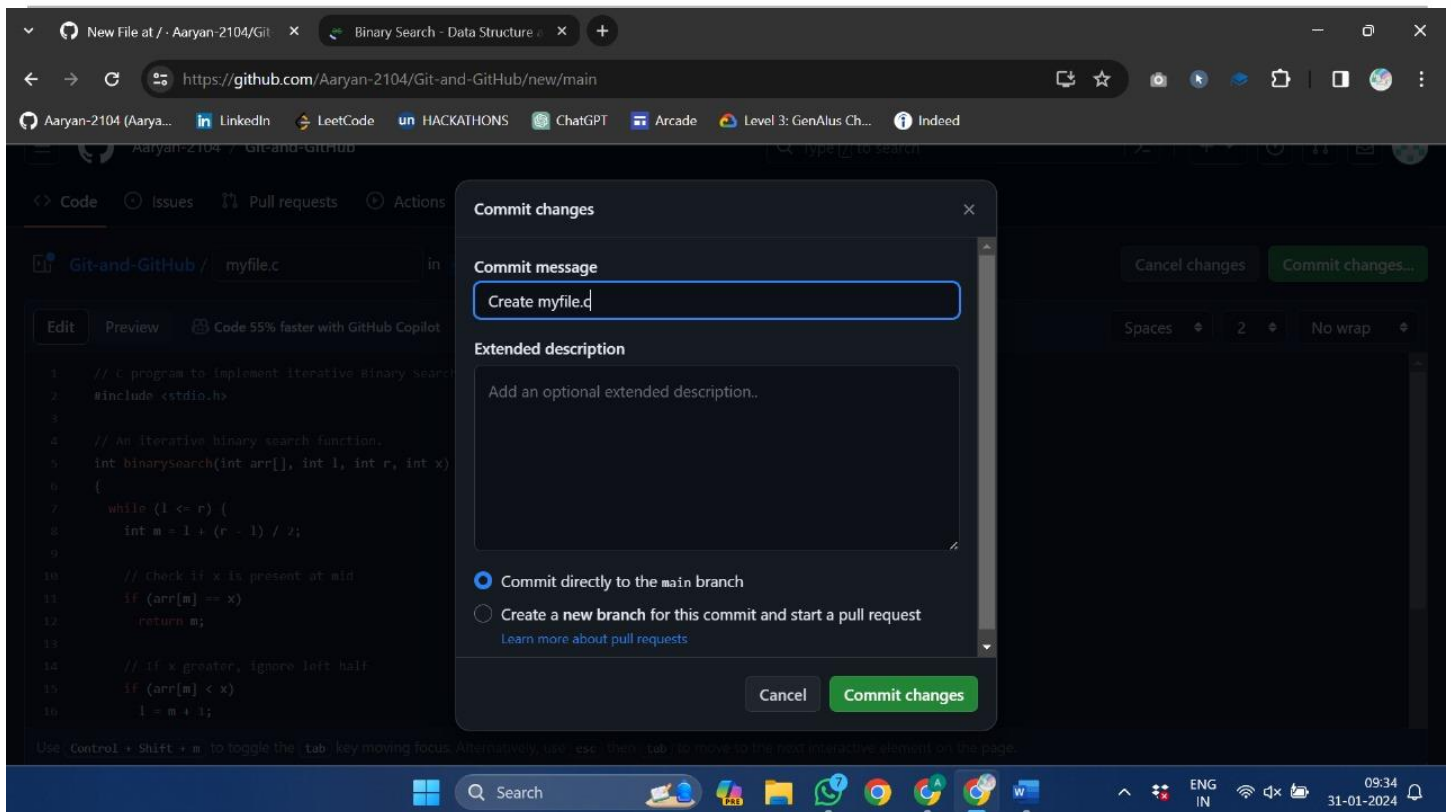
Create new file



DEPARTMENT OF ACADEMIC AFFAIRS

Discover. Learn. Empower.

**NAAC
GRADE A+**
ACCREDITED UNIVERSITY



Give this file name as myfile.c



DEPARTMENT OF ACADEMIC AFFAIRS

Discover. Learn. Empower.

NAAC
GRADE **A+**
ACCREDITED UNIVERSITY

The screenshot shows a web browser displaying a GitHub repository page for 'Binary Search - Data Structure'. The repository is owned by 'Aaryan-2104'. The file 'myfile.c' is selected, and the code is displayed in a dark-themed editor. The code is a C program for iterative binary search. The browser's address bar shows the URL 'https://github.com/Aaryan-2104/Git-and-GitHub/new/main'. The repository's navigation bar includes links for Code, Issues, Pull requests, Actions, Projects, Wiki, Security, Insights, and Settings. The code editor has tabs for 'Edit', 'Preview', and 'Code 55% faster with GitHub Copilot'. The code is as follows:

```
1 // C program to implement iterative Binary Search
2 #include <stdio.h>
3
4 // An iterative binary search function.
5 int binarysearch(int arr[], int l, int r, int x)
6 {
7     while (l <= r) {
8         int m = l + (r - l) / 2;
9
10        // check if x is present at mid
11        if (arr[m] == x)
12            return m;
13
14        // If x greater, ignore left half
15        if (arr[m] < x)
16            l = m + 1;
```

The Windows taskbar at the bottom shows the time as 09:34 on 31-01-2024, with the language set to ENG IN.

Add Binary Search Code into this file



DEPARTMENT OF ACADEMIC AFFAIRS

Discover. Learn. Empower.



The screenshot shows a GitHub repository page for user 'Aaryan-2104' and repository 'Git-and-GitHub'. The left sidebar shows a file explorer with 'br24.c' selected. The main area displays the code for 'myfile.c', which is a C program implementing an iterative binary search. The code is 40 lines long (34 loc) and 794 bytes. It includes a header for `<stdio.h>` and defines a `binarySearch` function. The function takes an array `arr`, width `w`, range `r`, and target `x`. It uses a `while` loop to find the target, calculating the middle index `m` as `w + (r - w) / 2`. If the target is found at `arr[m]`, it returns `m`.

```
1 // C program to implement iterative Binary Search
2 #include <stdio.h>
3
4 // An iterative binary search function.
5 int binarySearch(int arr[], int w, int r, int x)
6 {
7     while (w <= r) {
8         int m = w + (r - w) / 2;
9
10        // Check if x is present at mid
11        if (arr[m] == x)
12            return m;
13    }
```

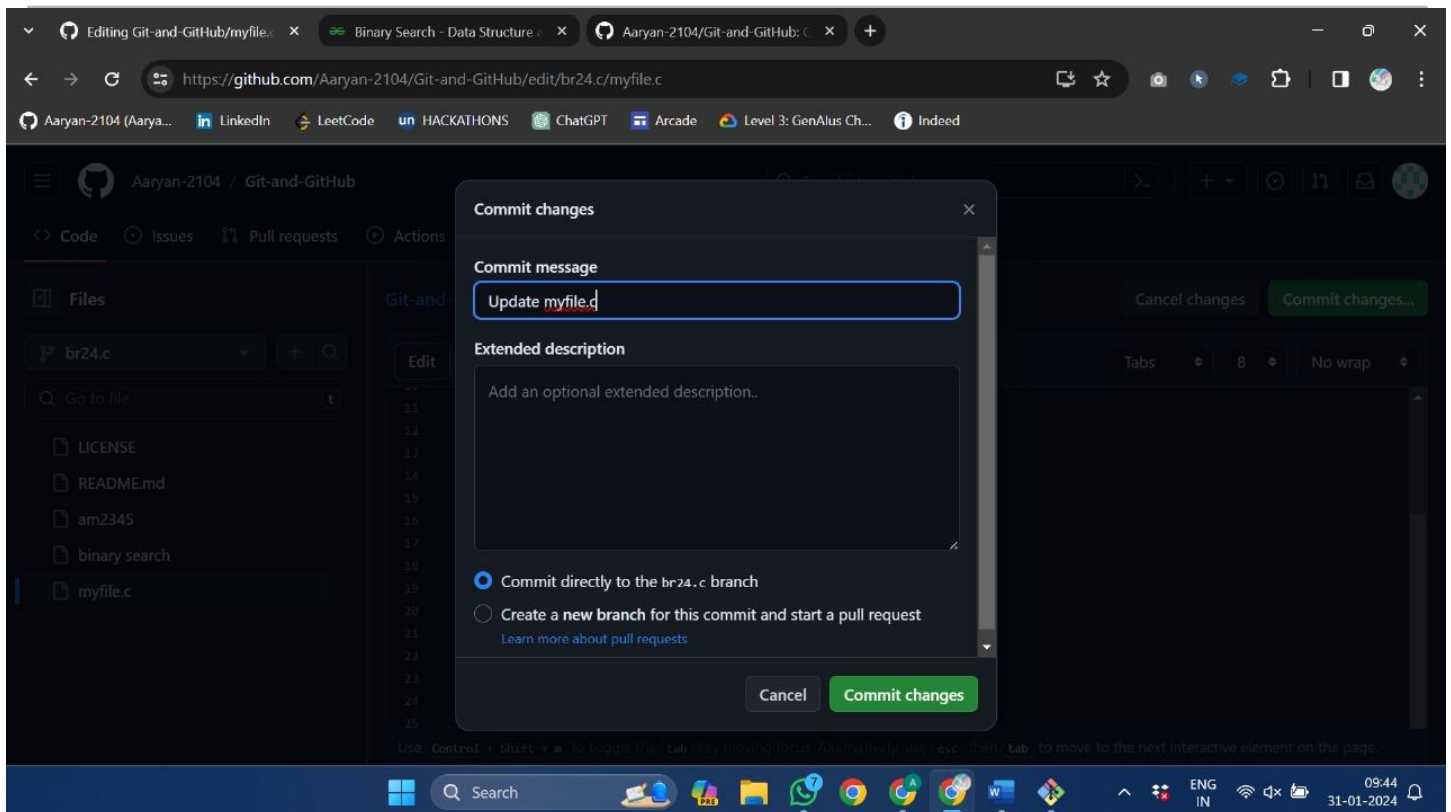
Now create a branch named br24.c



DEPARTMENT OF ACADEMIC AFFAIRS

Discover. Learn. Empower.

**NAAC
GRADE A+**
ACCREDITED UNIVERSITY



Edit this branch and click on commit changes



DEPARTMENT OF ACADEMIC AFFAIRS

Discover. Learn. Empower.



https://github.com/Aaryan-2104/Git-and-GitHub/compare/br24.c?expand=1

Aaryan-2104 / Git-and-GitHub

br24.c had recent pushes 26 seconds ago [Compare & pull request](#)

main 4 Branches 0 Tags

Go to file Add file Code

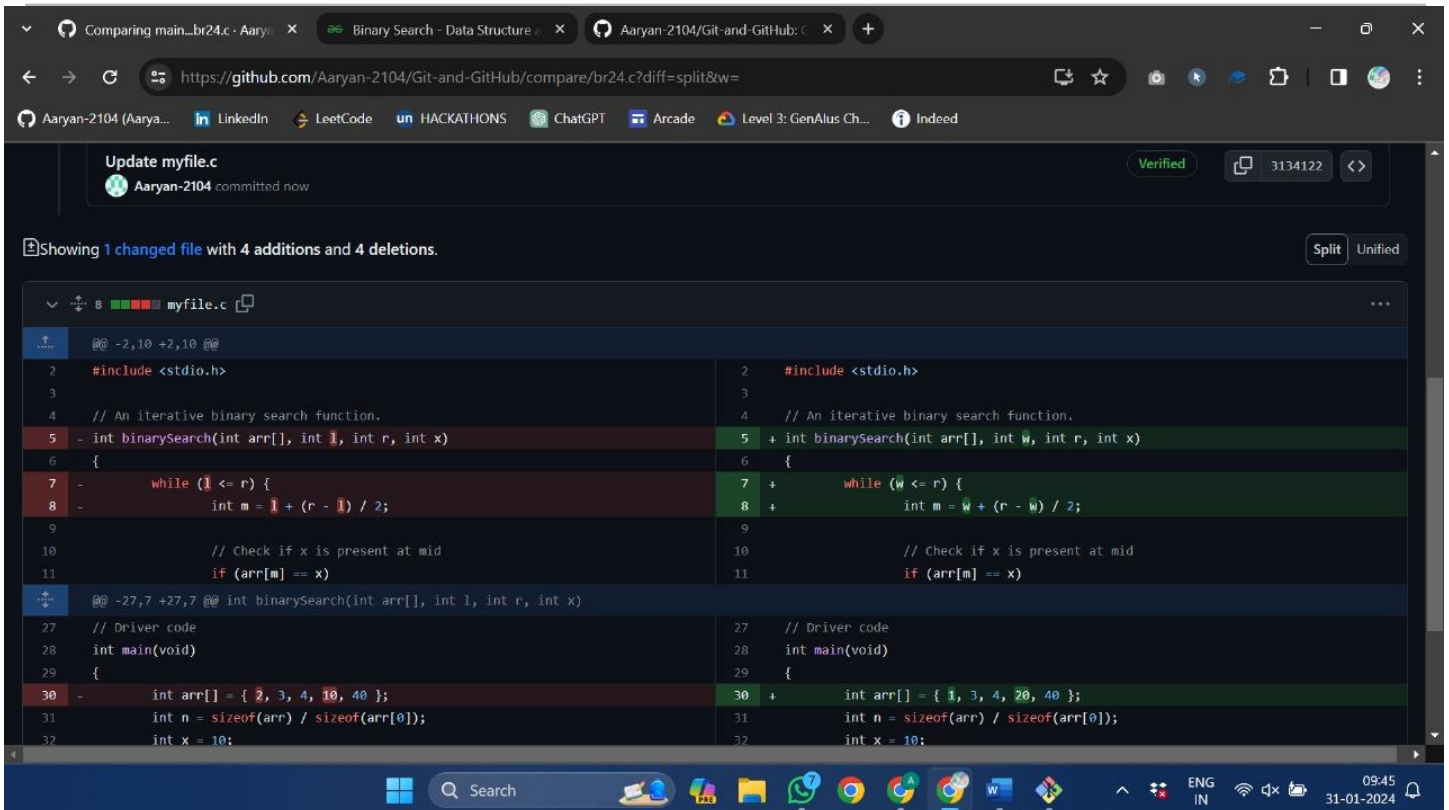
File	Commit	Time
Aaryan-2104 Create myfile.c	f12817a	10 minutes ago 10 Commits
LICENSE	Initial commit	2 weeks ago
README.md	Initial commit	2 weeks ago
am2345	Update am2345	last week
binary search	Update binary search	last week

https://github.com/Aaryan-2104/Git-and-GitHub/compare/br24.c?expand=1

Search

ENG IN 09:45 31-01-2024

Click on Compare and Pull Request



Update myfile.c
Aaryan-2104 committed now

Showing 1 changed file with 4 additions and 4 deletions.

Split Unified

```

@@ -2,10 +2,10 @@
2  #include <stdio.h>
3
4  // An iterative binary search function.
5 - int binarySearch(int arr[], int l, int r, int x)
6  {
7 -     while (l <= r) {
8 -         int m = l + (r - l) / 2;
9
10         // Check if x is present at mid
11         if (arr[m] == x)
@@ -27,7 +27,7 @@ int binarySearch(int arr[], int l, int r, int x)
27 // Driver code
28 int main(void)
29 {
30 -     int arr[] = { 2, 3, 4, 10, 40 };
31     int n = sizeof(arr) / sizeof(arr[0]);
32     int x = 10;
  
```

```

2  #include <stdio.h>
3
4  // An iterative binary search function.
5 + int binarySearch(int arr[], int l, int r, int x)
6  {
7 +     while (l <= r) {
8 +         int m = l + (r - l) / 2;
9
10         // Check if x is present at mid
11         if (arr[m] == x)
27 // Driver code
28 int main(void)
29 {
30 +     int arr[] = { 1, 3, 4, 20, 40 };
31     int n = sizeof(arr) / sizeof(arr[0]);
32     int x = 10;
  
```

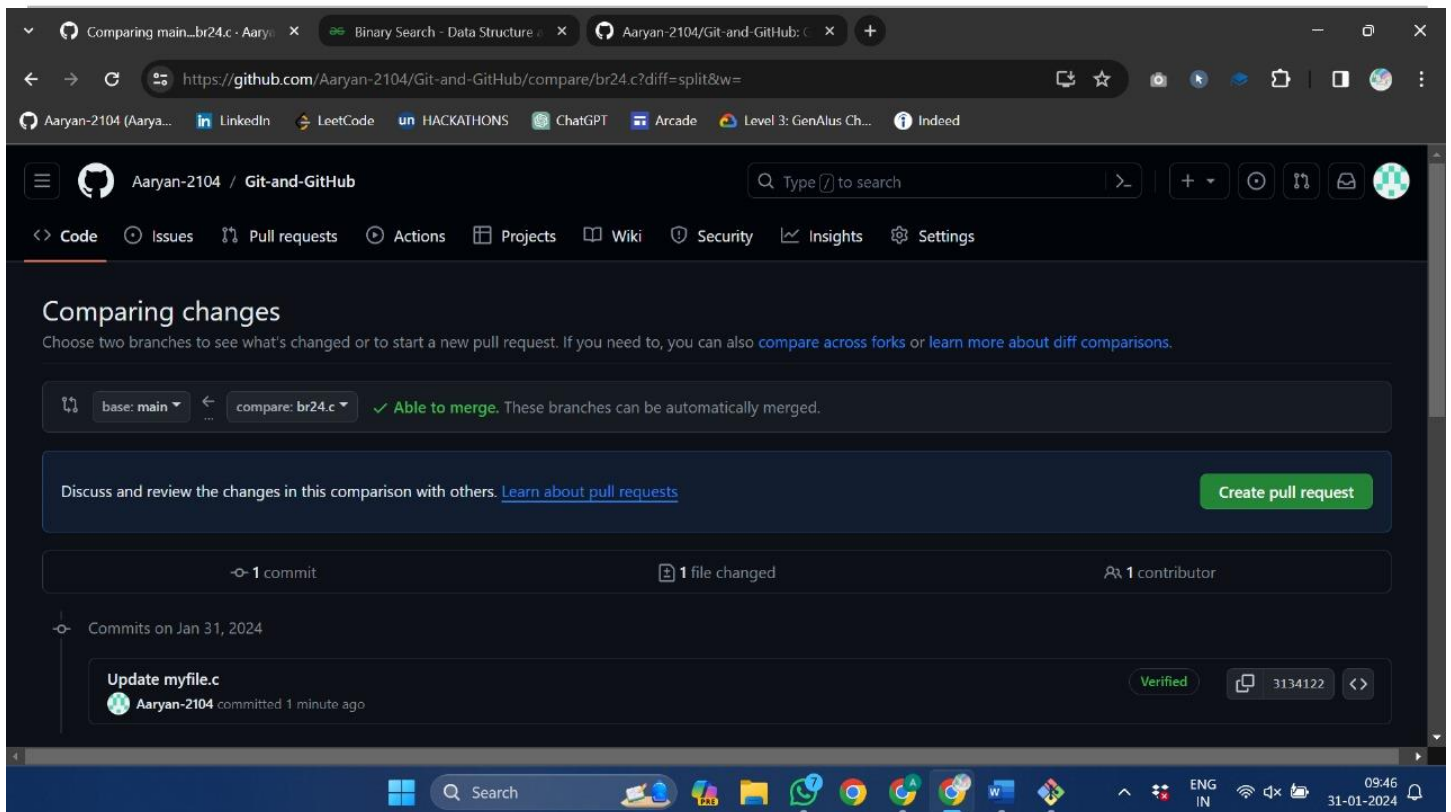
09:45
31-01-2024

Compare the 2 codes in the Split Mode



DEPARTMENT OF ACADEMIC AFFAIRS

Discover. Learn. Empower.



Click on Create Pull Request



DEPARTMENT OF ACADEMIC AFFAIRS

Discover. Learn. Empower.

NAAC
GRADE **A+**
ACCREDITED UNIVERSITY

Update myfile.c #4
Aaryan-2104 wants to merge 1 commit into `main` from `br24.c`

Update myfile.c Verified 3134122

Add more commits by pushing to the `br24.c` branch on [Aaryan-2104/Git-and-GitHub](#)

Require approval from specific reviewers before merging
[Rulesets](#) ensure specific people approve pull requests before they're merged. Add rule

Continuous integration has not been set up
[GitHub Actions](#) and [several other apps](#) can be used to automatically catch bugs and enforce style.

This branch has no conflicts with the base branch
Merging can be performed automatically.

Merge pull request You can also [open this in GitHub Desktop](#) or view [command line instructions](#).

Add a comment
Write Preview

Assignees
No one—[assign yourself](#)

Labels
None yet

Projects
None yet

Milestone
No milestone

Development
Successfully merging this pull request may close these issues.

Notifications Customize
Unsubscribe

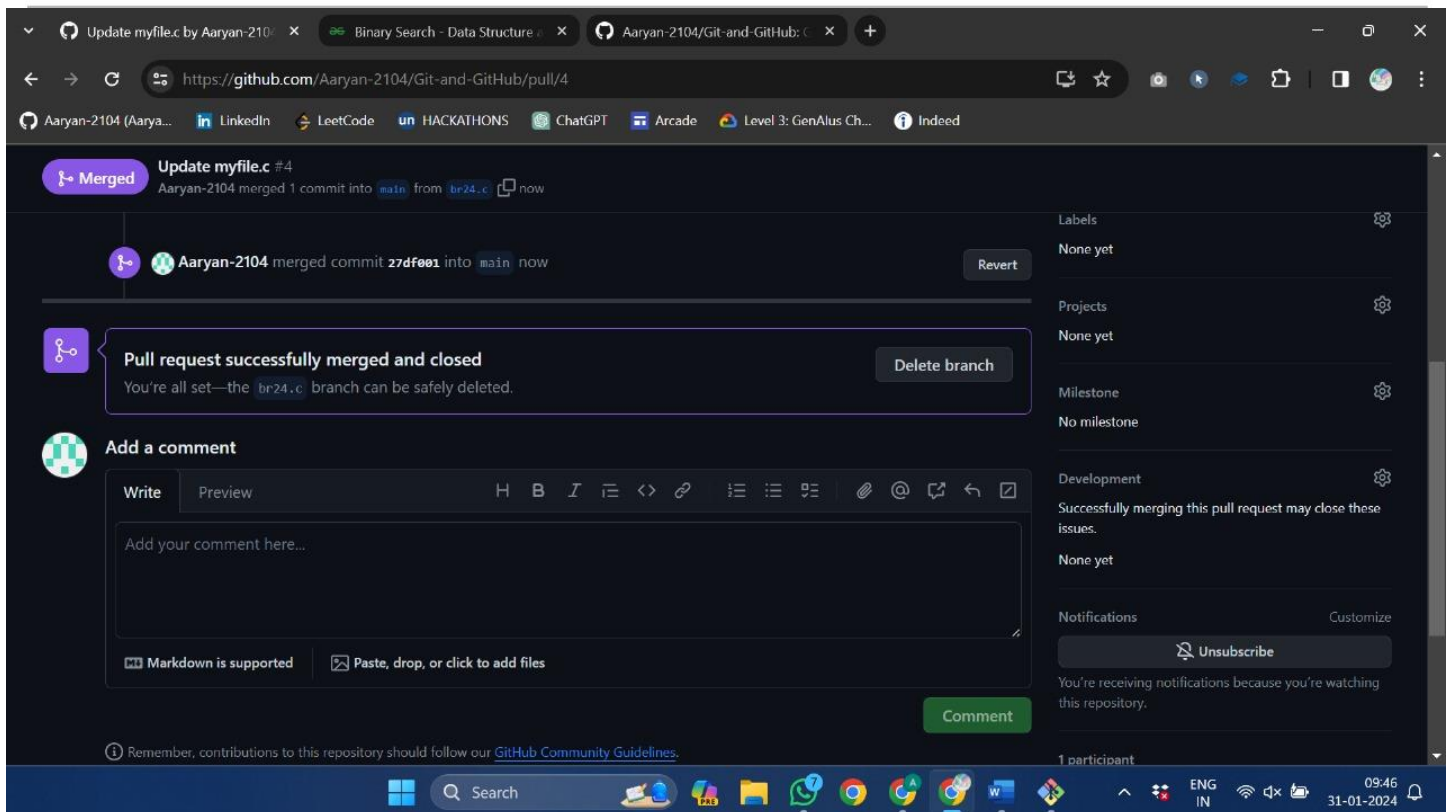
Click on Merge Pull Request



DEPARTMENT OF ACADEMIC AFFAIRS

Discover. Learn. Empower.

NAAC
GRADE **A+**
ACCREDITED UNIVERSITY



Pull Request successfully Merged and now you have an option to Delete as well. You can delete it as well

**For GitBash -->
(Creating Branch on GitBash)**



DEPARTMENT OF ACADEMIC AFFAIRS

Discover. Learn. Empower.

**NAAC
GRADE A+**
ACCREDITED UNIVERSITY

```
MINGW64/c/Users/AARYAN/Git-and-GitHub
AARYAN@Aaryan-PC MINGW64 ~ (u)
$ cd Git-and-GitHub

AARYAN@Aaryan-PC MINGW64 ~/Git-and-GitHub (main)
$ git init
Reinitialized existing Git repository in C:/Users/AARYAN/Git-and-GitHub/.git/

AARYAN@Aaryan-PC MINGW64 ~/Git-and-GitHub (main)
$ vi cm.txt

AARYAN@Aaryan-PC MINGW64 ~/Git-and-GitHub (main)
$ git add cm.txt

AARYAN@Aaryan-PC MINGW64 ~/Git-and-GitHub (main)
$ git commit -m "commting now"
[main e582155] Commting now
1 file changed, 1 insertion(+)
create mode 100644 cm.txt

AARYAN@Aaryan-PC MINGW64 ~/Git-and-GitHub (main)
$ git checkout -b j
Switched to a new branch 'j'

AARYAN@Aaryan-PC MINGW64 ~/Git-and-GitHub (j)
$ vi cm.txt

AARYAN@Aaryan-PC MINGW64 ~/Git-and-GitHub (j)
$ git add cm.txt

AARYAN@Aaryan-PC MINGW64 ~/Git-and-GitHub (j)
$ git commit -m "second committ"
[j d045d76] Second committ
1 file changed, 1 insertion(+), 1 deletion(-)

AARYAN@Aaryan-PC MINGW64 ~/Git-and-GitHub (j)
$ git checkout main
Switched to branch 'main'
Your branch is ahead of 'origin/main' by 1 commit.
(use "git push" to publish your local commits)
```



```
MINGW64/c/Users/AARYAN/Git-and-GitHub
AARYAN@Aaryan-PC MINGW64 ~/Git-and-GitHub (main)
$ git merge j
Updating e582155..d045d76
Fast-forward
 cm.txt | 2 +-
 1 file changed, 1 insertion(+), 1 deletion(-)

AARYAN@Aaryan-PC MINGW64 ~/Git-and-GitHub (main)
$ git status
On branch main
Your branch is ahead of 'origin/main' by 2 commits.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean

AARYAN@Aaryan-PC MINGW64 ~/Git-and-GitHub (main)
$
```

6. Result/Output/Writing Summary:

In this experiment, we have created a branch on a file in the repository using GitHub and Gitbash. We have merged this branch with the parent main branch.

7. Learning outcomes (What I have learnt):

1. Learnt About branching.
2. Learnt how to create a branch using Git Hub.



-
3. Learnt how to create a branch using gitbash.
 4. Learnt how to merge the two branches.
 5. Also learnt how to differentiate these two files.

Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			