Experiment-1.2

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Branch: CSE(DEVOPS) **Section/Group:** 22BCD-1/B

Semester: 4th **Date of Performance:** 19-01-24

Subject Name: Git and GitHub **Subject Code:** 22CSH-293

1. Aim/Overview of the practical: Creating Branches with GitHub.

2. Task to be done: Creation of branches, Merging of branches and Deletion of branches.

3. Steps for Experiment: -

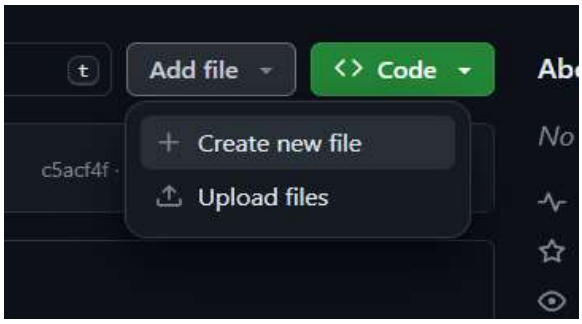
1) On GitHub.com, go to your account navigate to the main page of the repository i.e.(22BCD-1).

2) From your repository click on the file tree view on the left, select the branch dropdown menu, then click on Main.

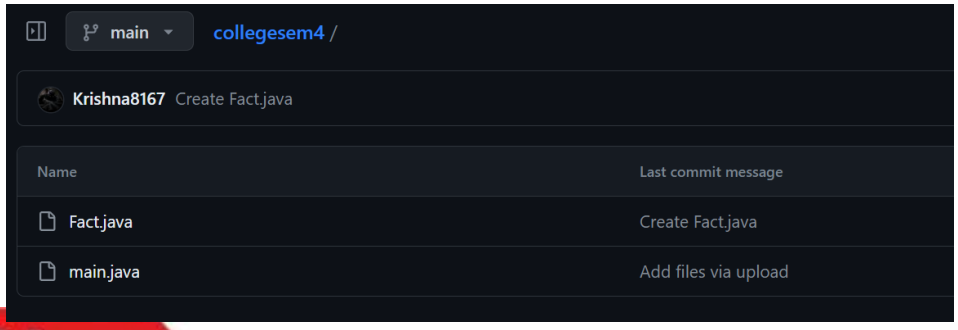
3) Apart from this, by clicking on View All Branches you can see all the branches created.

4) So, by default you will be in Main branch (default branch).

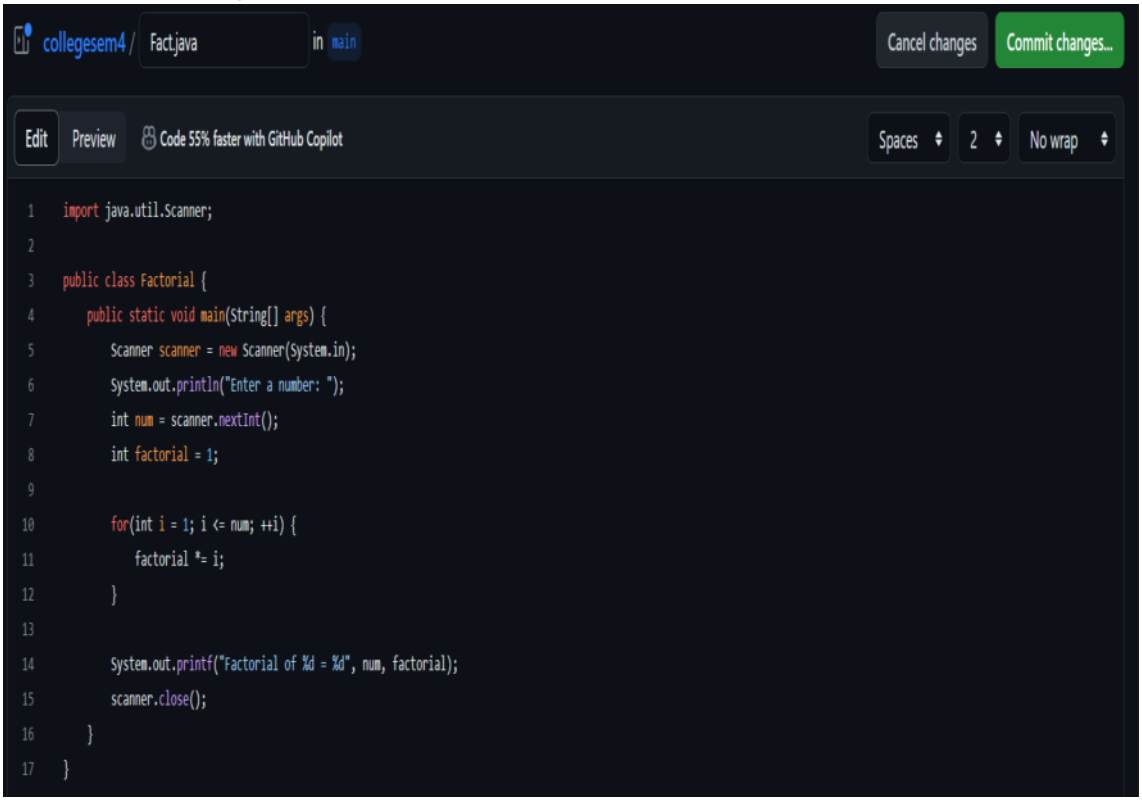
5) Now, click on Add File... Select "Create new file" option.



6) After clicking on “Create new file” Enter your file name i.e. (Fact.j ava).

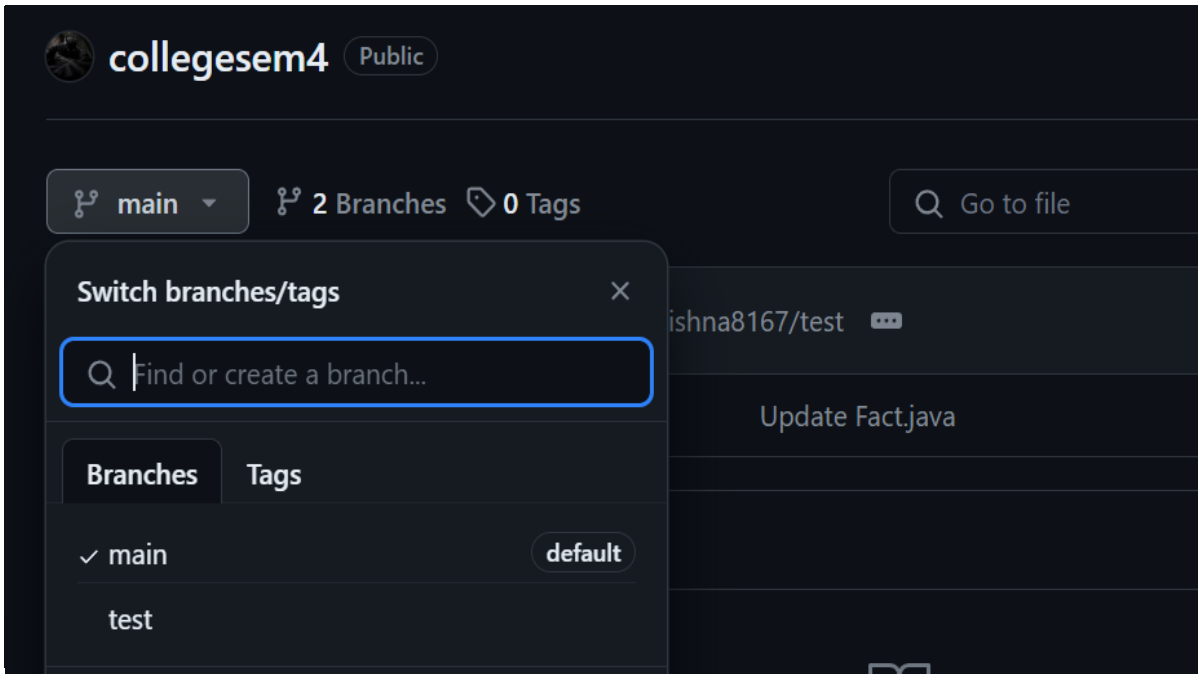


7) The (Fact.j ava) is created in the “Main branch”, now write a simple code for factorial of the numbers in your file.

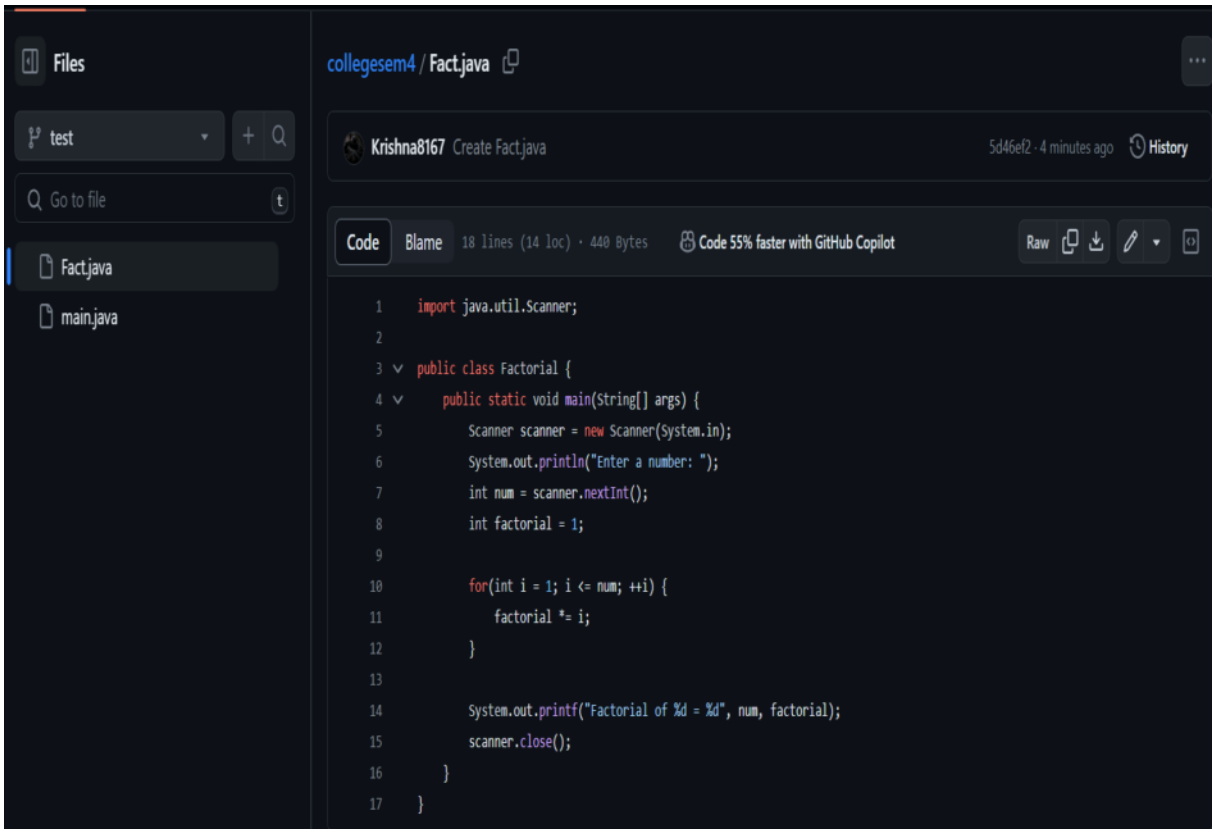


8) So, now we have to create another branch from “Main branch” i.e. (Feature_Branch).

9) In the "Find or create a branch..." text field, type a unique name for your new branch, then click Create branch i.e.(test).

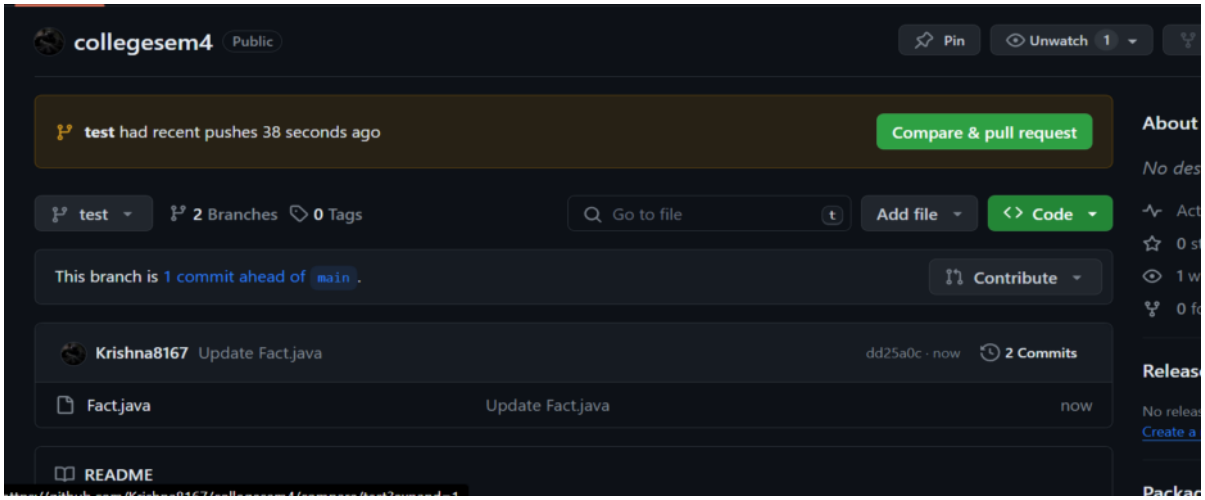


10) After Creating a Feature branch from the "Main branch", now in the Feature branch we have to do some changes in the (Fact.java) file which was created in the main branch.



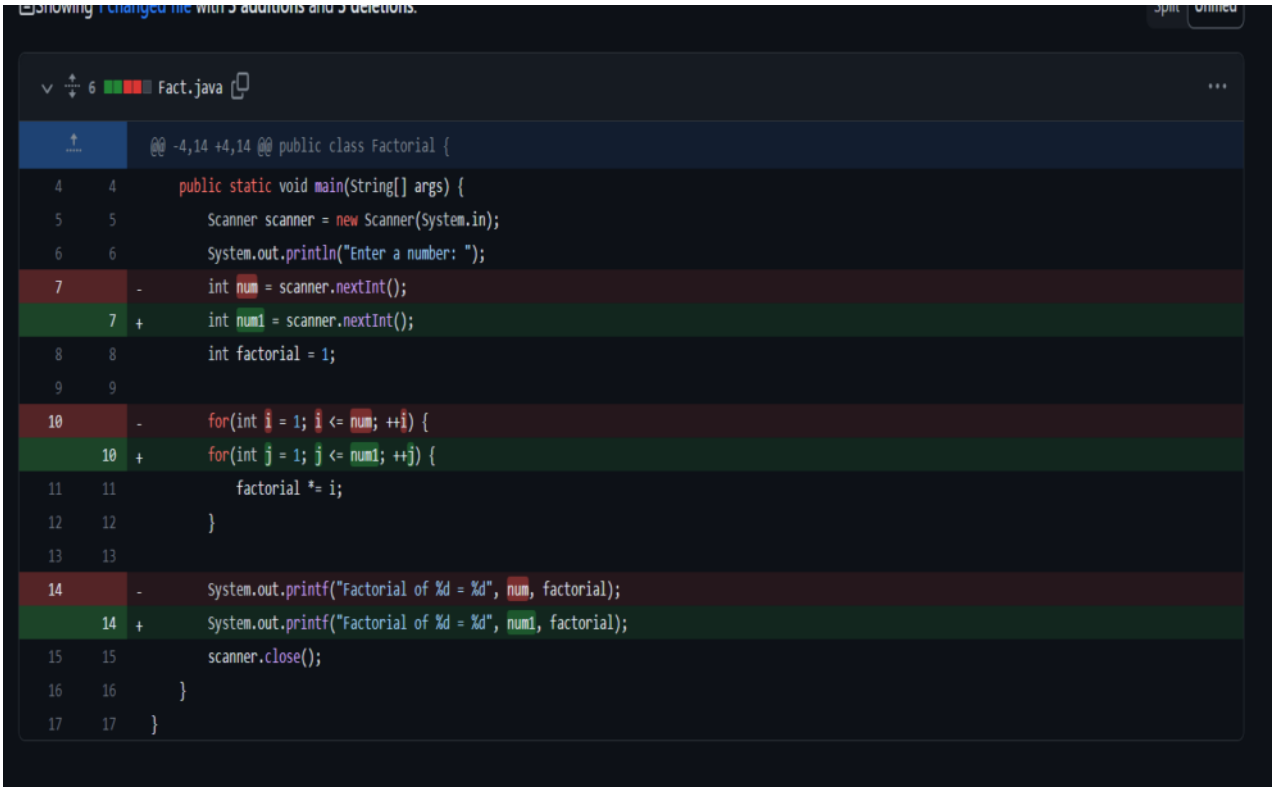
11) In the Main Branch file the variables are (num, i) and now in feature branch after some changes the variables are (num1,j).

12) Now go to "Main branch" a compare and pull request notification is reflected.

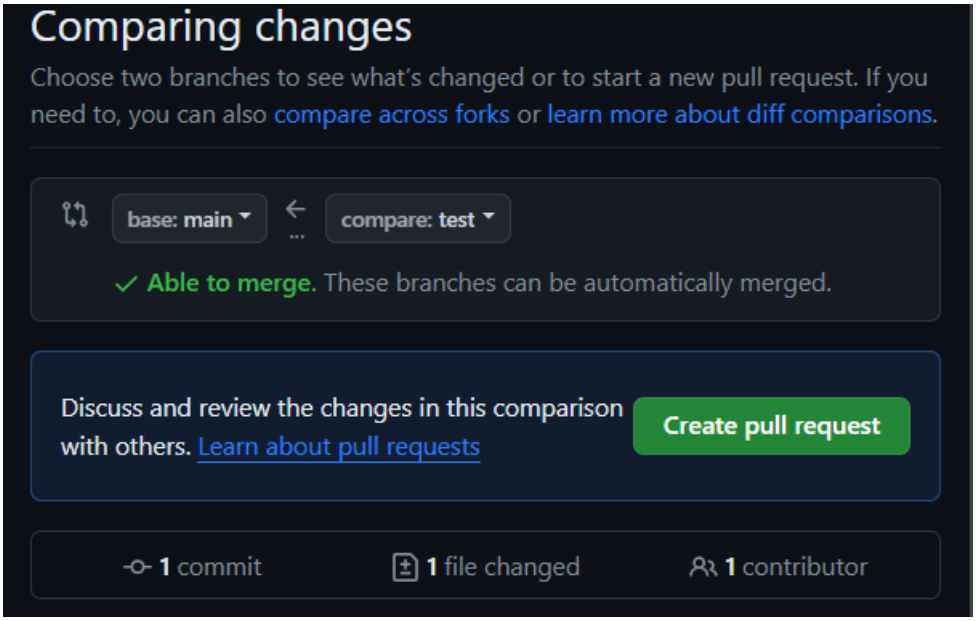


13) Now click on the Compare & Pull request.

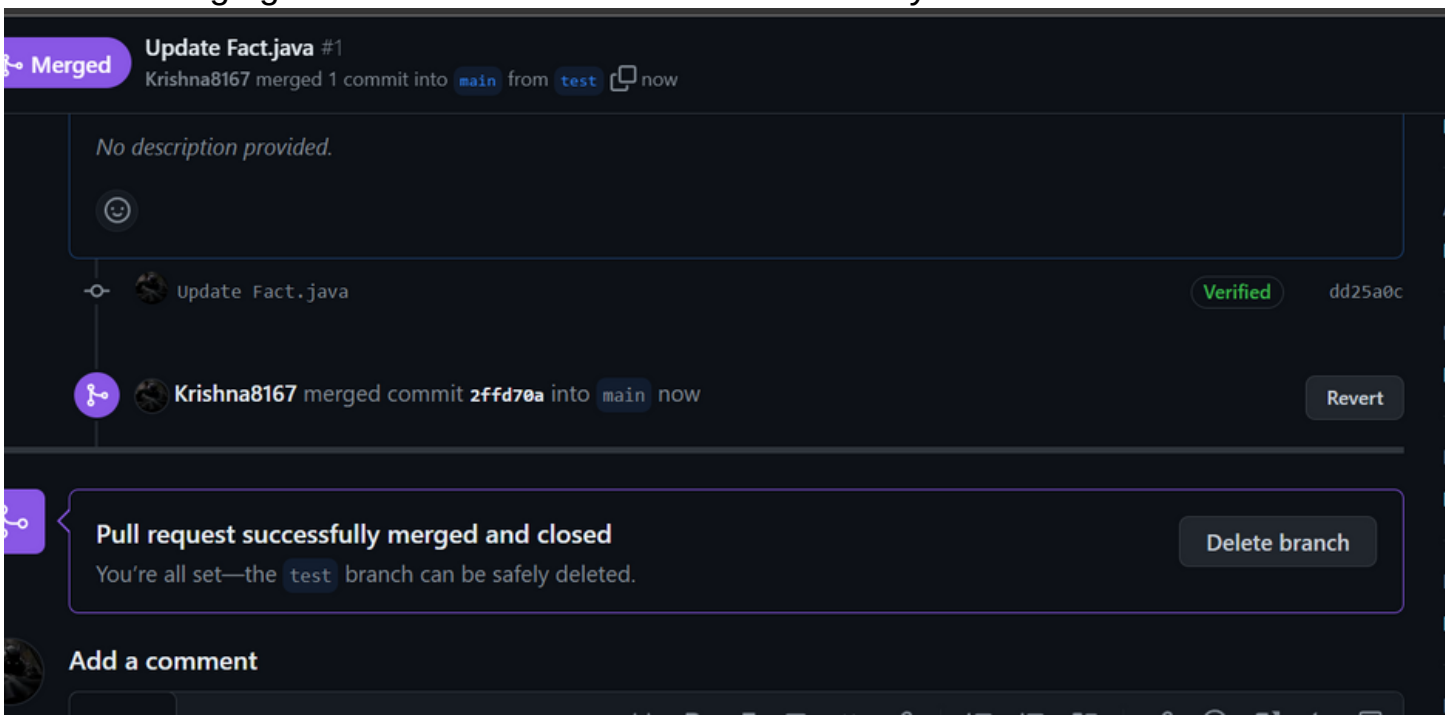
14) After clicking on Compare and Pull Request, it will be visible what changes have been made in the feature branch.



15) 1Now compare the changes in the file, after comparison it will show whether the file is able to be merged or there are some conflicts.



17. After Merging the code Click on **"Delete branch"** if you wish to delete the branch.



For Creating Branch on GitBash:

1. Create a new directory **"folder2"** on desktop. **2.** Initialize the git using **"git init"** command.

3. Create a new file **"touch text.txt"**

4. Edit file and add content to it.

5. Put the file in staging area **"git add text.txt"**

```
krish@MSI MINGW64 ~/experiment2 (master)
$ touch text.txt

krish@MSI MINGW64 ~/experiment2 (master)
$ vi text.txt

krish@MSI MINGW64 ~/experiment2 (master)
$ git add text.txt
warning: in the working copy of 'text.txt', LF will be replaced by CRLF the next time Git touches it

krish@MSI MINGW64 ~/experiment2 (master)
$ vim text.txt

krish@MSI MINGW64 ~/experiment2 (master)
$ git add text.txt
```

6. Commit this file using **"git commit -m "enter any commit message here""**.

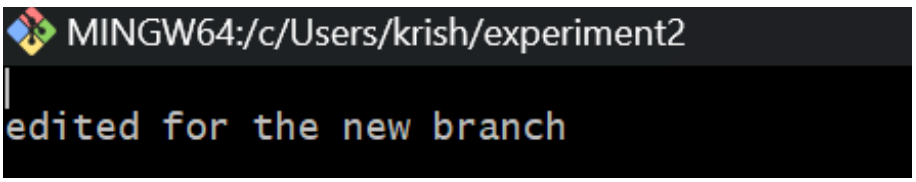
7. Create a new branch using code **"git checkout -b branch1"**.

```
krish@MSI MINGW64 ~/experiment2 (master)
$ git add text.txt

krish@MSI MINGW64 ~/experiment2 (master)
$ git commit -m "New file with text content"
[master (root-commit) 6fd5489] New file with text content
 1 file changed, 2 insertions(+)
 create mode 100644 text.txt

krish@MSI MINGW64 ~/experiment2 (master)
$ git checkout -b branch1
Switched to a new branch 'branch1'
```

8. Open and edit file using **"vim text.txt"** and add content to it.



9. Put the file in staging area **“git add text.txt”.**

10. Commit this file using **“git commit -m “enter any commit message here””.**

11. Move to master branch using **“git checkout master”.**

12. Merge the branch **“git merge branch1”.**

```
krish@MSI MINGW64 ~/experiment2 (branch1)
$ git commit -m "Edited branch in the new branch"
[branch1 73619a3] Edited branch in the new branch
 1 file changed, 7 insertions(+), 1 deletion(-)

krish@MSI MINGW64 ~/experiment2 (branch1)
$ git checkout master
Switched to branch 'master'

krish@MSI MINGW64 ~/experiment2 (master)
$ git merge branch1
Updating 6fd5489..73619a3
Fast-forward
 text.txt | 8 +++++++-
 1 file changed, 7 insertions(+), 1 deletion(-)

krish@MSI MINGW64 ~/experiment2 (master)
$ git status
On branch master
nothing to commit, working tree clean
```

13. Show the status of file **“git status”**.

```
krish@MSI MINGW64 ~/experiment2 (master)
$ git status
On branch master
nothing to commit, working tree clean
```

5. Result/Output/Writing Summary:

In this experiment we worked with branches on the GitHub and also on our local repository. We created and deleted a branch and also to created and merged a pull request.

Learning outcomes (What I have learnt):

1. Learnt how to install git.

2. Learnt how to configure git with GitHub account.

3. Learnt about some basic commands such as cd and cat.

4. Learnt using git clone command.

5. Also learnt how to add and commit updates to the GitHub account.

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.			