Experiment -2.2

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Section/Group: 22BCD-1/A
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1. **Aim/Overview of the practical:** To merge pull requests and update local repositories.

2. **Software Used:** Git Bash, GitHub.

3. **Steps for experiment/practical:**

- Create or clone a repository on your local machine after opening GIT BASH.
- Move to the directory using the **cd** command.

```
chaya@Chayan MINGW64 ~ (master)
$ git clone https://github.com/Chayan-12/new-github.git
fatal: destination path 'new-github' already exists and is not an empty director
y.

chaya@Chayan MINGW64 ~ (master)
$ cd new-github
```

- Create or open a file in the master or main branch , eg , **exp5.txt** and add some text to the file.
- Add the file to the staging area using **git add** and then commit the changes using the **git commit** command **OR** you can use the command **git commit -a -m "<commit_msg>"** or **git commit -am "<commit_msg>"**.

```
chaya@Chayan MINGW64 ~/new-github (main)
$ vi exp5.txt

chaya@Chayan MINGW64 ~/new-github (main)
$ cat exp5.txt
This is my 5th experiment

chaya@Chayan MINGW64 ~/new-github (main)
$ git commit -a -m "Added text to exp5.txt"
[main 604ed4e] Added text to exp5.txt
 1 file changed, 1 insertion(+), 1 deletion(-)
```

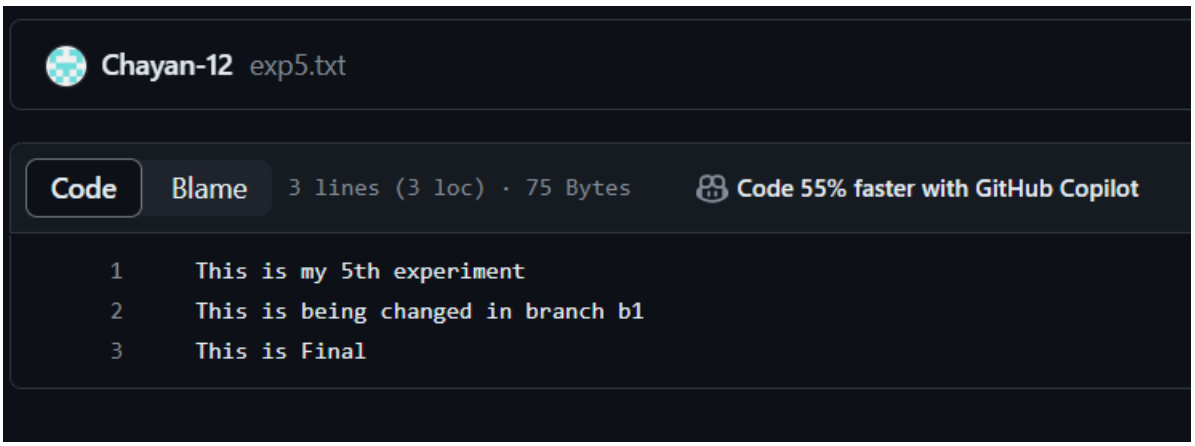
- Create a new branch and checkout to it using the **git checkout -b** command , eg , **b1**.
- Open the **exp5.txt** on the **vi** editor and make some changes in it.

```
chaya@Chayan MINGW64 ~/new-github (main)
$ git checkout -b b1
Switched to a new branch 'b1'

chaya@Chayan MINGW64 ~/new-github (b1)
$ vi exp5.txt

chaya@Chayan MINGW64 ~/new-github (b1)
$ cat exp5.txt
This is my 5th experiment
This is being changed in branch b1

chaya@Chayan MINGW64 ~/new-github (b1)
$ git commit -am "Tested in b1"
[b1 1153120] Tested in b1
 1 file changed, 1 insertion(+)
```

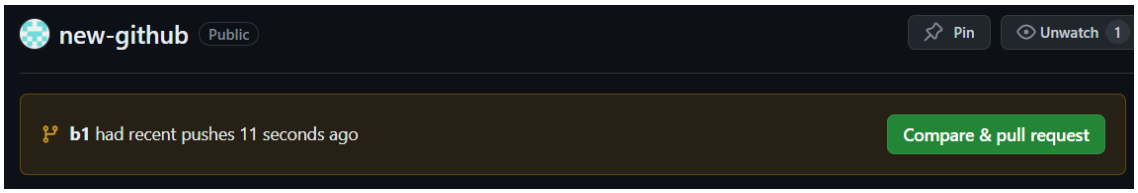
- Merge the changes made in the **b1** branch with the **main** branch and resolve the conflicts manually if necessary using the **git merge** command.

```
chaya@Chayan MINGW64 ~/new-github (main)
$ git diff main b1
diff --git a/exp5.txt b/exp5.txt
index 8e45c39..acef15d 100644
--- a/exp5.txt
+++ b/exp5.txt
@@ -1 +1,2 @@
 This is my 5th experiment
+This is being changed in branch b1

chaya@Chayan MINGW64 ~/new-github (main)
$ git diff

chaya@Chayan MINGW64 ~/new-github (main)
$ git merge b1
Updating 604ed4e..1153120
Fast-forward
 exp5.txt | 1 +
 1 file changed, 1 insertion(+)

chaya@Chayan MINGW64 ~/new-github (main)
$ cat exp5.txt
This is my 5th experiment
This is being changed in branch b1
```

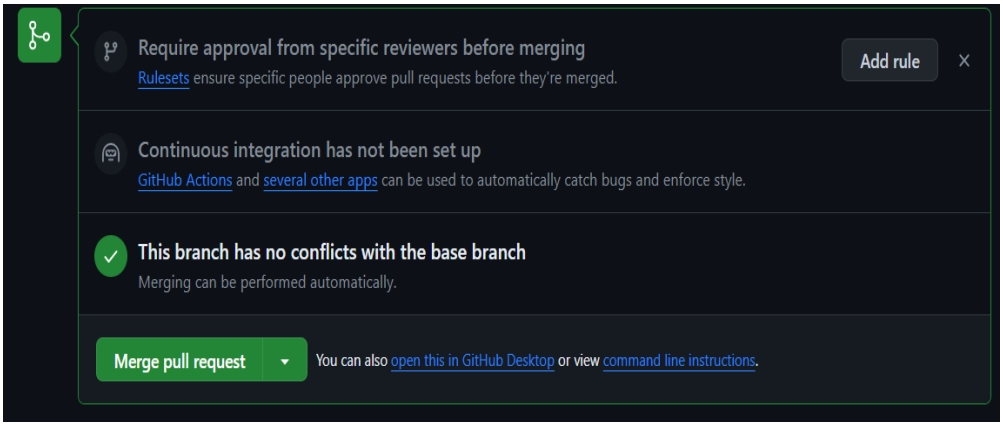
❖ Now, Go to github, open the repository and move to the **b1** branch and make some changes in a file.



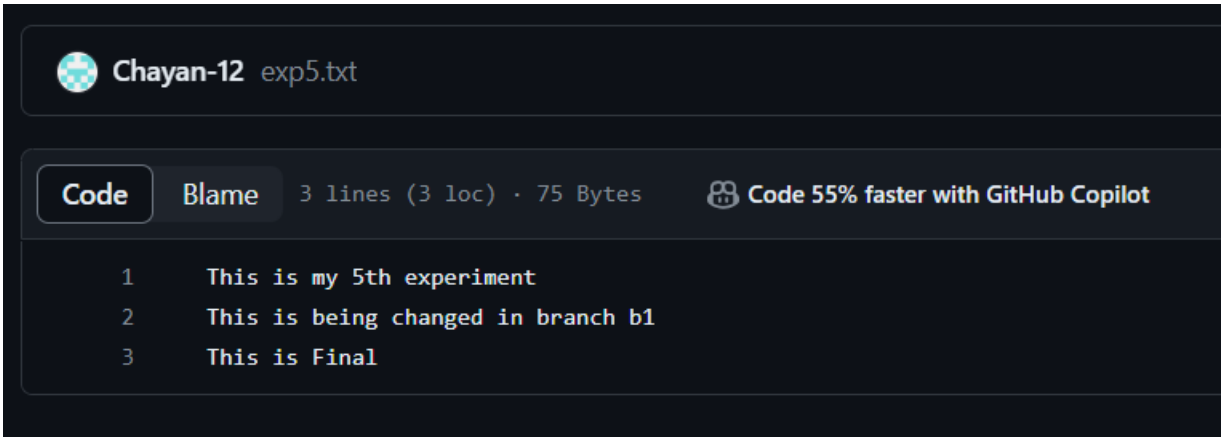
❖ Commit the changes and move to the **main** branch. Click on the **Compare & Pull request**.



❖ **Create the pull request,** resolve the merge conflicts (if any) and then **merge pull request**.



❖ After the merging, you may choose to delete your branch , i.e , **b1**



4. Result/Output/Writing Summary:

In this experiment, we have merged a file in a branch to the master or main branch on both the local and remote repositories/environment.

Learning outcomes (What I have learnt):

1. Learnt how to create a branch.

2. Learnt how to clone a remote repo to our local system.

3. Learnt how to create a pull request and handle their merging.

4. Learnt to merge two branches.

5. Learnt how to resolve merge conflicts.

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.			