Experiment -1.3

Student Name: Yash Kumar
UID: 22BDO10009
Branch: AIT-CSE(DevOps)
Section/Group: 22BCD-1/A
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Subject Name: Git and Hub
Subject Code: 22CSH-293

1. **Aim/Overview of the practical:** To create and explore pull requests.

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

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

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

```
yashd@Tempestation MINGW64 /f/Git Practicals/Exp3 (
master)
$ git clone https://github.com/Tempestyash123456/te
mpestYash.git
Cloning into 'tempestYash'...
remote: Enumerating objects: 11, done.
remote: Counting objects: 100% (11/11), done.
remote: Compressing objects: 100% (8/8), done.
Receiving objects:  45% (5/11), 356.00 KiB | 298.00
Receiving objects:  45% (5/11), 900.00 KiB | 403.00
Receiving objects:  45% (5/11), 1.18 MiB | 351.00 K
Receiving objects:  45% (5/11), 1.64 MiB | 373.00 K
Receiving objects:  45% (5/11), 1.89 MiB | 376.00 K
Receiving objects:  45% (5/11), 2.40 MiB | 417.00 K
Receiving objects:  45% (5/11), 2.87 MiB | 402.00 K
Receiving objects:  45% (5/11), 3.45 MiB | 470.00 K
Receiving objects:  45% (5/11), 4.11 MiB | 505.00 K
remote: Total 11 (delta 0), reused 11 (delta 0), pa
ck-reused 0
Receiving objects:  54% (6/11), 4.11 MiB | 505.00 K
Receiving objects:  63% (7/11), 4.11 MiB | 505.00 K
Receiving objects:  72% (8/11), 4.11 MiB | 505.00 K
Receiving objects:  81% (9/11), 4.11 MiB | 505.00 K
Receiving objects:  90% (10/11), 4.11 MiB | 505.00
Receiving objects: 100% (11/11), 4.11 MiB | 505.00
Receiving objects: 100% (11/11), 4.32 MiB | 459.00
KiB/s, done.

yashd@Tempestation MINGW64 /f/Git Practicals/Exp3 (
master)
$ cd tempestYash
```

- ❖ Create a file in the master or main branch , eg , **file1.c** 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.

```
yashd@Tempestation MINGW64 /f/Git Practicals/Exp3/t
empestYash (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean

yashd@Tempestation MINGW64 /f/Git Practicals/Exp3/t
empestYash (master)
$ touch file1.c

yashd@Tempestation MINGW64 /f/Git Practicals/Exp3/t
empestYash (master)
$ vi file1.c

yashd@Tempestation MINGW64 /f/Git Practicals/Exp3/t
empestYash (master)
$ git add file1.c
warning: in the working copy of 'file1.c', LF will
be replaced by CRLF the next time Git touches it

yashd@Tempestation MINGW64 /f/Git Practicals/Exp3/t
empestYash (master)
$ git commit -m "Wrote hello world"
[master 13760a6] Wrote hello world
 1 file changed, 6 insertions(+)
 create mode 100644 file1.c
```

- Create a new branch and checkout to it using the **git checkout -b** command , eg , **test**.
- Open the **file1.c** on the **vi** editor and make some changes in it.

```c
#include <stdio.h>

int main() {
        printf("Hello world");
}
```

(master) (test)

- Repeat step 4 again.

```
yashd@Tempestation MINGW64 /f/Git Practicals/Exp3/t
empestYash (master)
$ git status
On branch master
Your branch is ahead of 'origin/master' by 1 commit
.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean

yashd@Tempestation MINGW64 /f/Git Practicals/Exp3/t
empestYash (master)
$ git checkout -b test
Switched to a new branch 'test'

yashd@Tempestation MINGW64 /f/Git Practicals/Exp3/t
empestYash (test)
$ vi file1.c

yashd@Tempestation MINGW64 /f/Git Practicals/Exp3/t
empestYash (test)
$ git add file1.c
warning: in the working copy of 'file1.c', LF will
be replaced by CRLF the next time Git touches it
```

- Merge the **test** branch in the **master** branch using the **git merge <branch_name>** command and resolve the merge conflict if necessary.

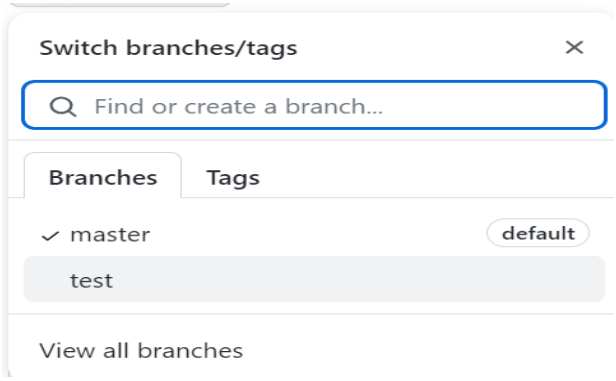
```
yashd@Tempestation MINGW64 /f/Git Practicals/Exp3/t
empestYash (master)
$ git merge test
Updating 13760a6..cc871dd
Fast-forward
 file1.c | 2 +-
 1 file changed, 1 insertion(+), 1 deletion(-)
```

- Now, push your changes in the **master** and **test** branch to the remote repository.

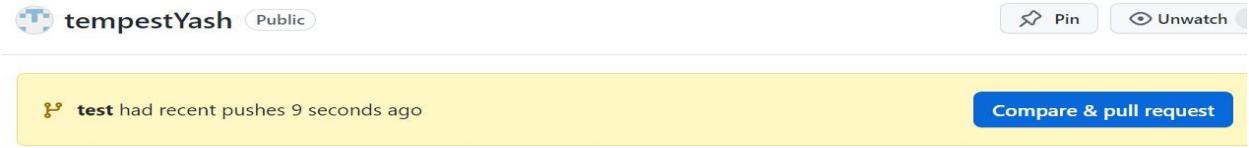
```
yashd@Tempestation MINGW64 /f/Git Practicals/Exp3/t
empestYash (master)
$ git push origin master
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 4 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (6/6), 632 bytes | 632.00 KiB
/s, done.
Total 6 (delta 2), reused 0 (delta 0), pack-reused
0
remote: Resolving deltas: 100% (2/2), completed wit
h 1 local object.
To https://github.com/Tempestyash123456/tempestYash
.git
   e00597c..cc871dd  master -> master

yashd@Tempestation MINGW64 /f/Git Practicals/Exp3/t
empestYash (master)
$ git checkout test
Switched to branch 'test'
```

```
yashd@Tempestation MINGW64 /f/Git Practicals/Exp3/t
empestYash (test)
$ git push origin test
Total 0 (delta 0), reused 0 (delta 0), pack-reused
0
remote:
remote: Create a pull request for 'test' on GitHub
by visiting:
remote:      https://github.com/Tempestyash123456/t
empestYash/pull/new/test
remote:
To https://github.com/Tempestyash123456/tempestYash
.git
 * [new branch]      test -> test
```

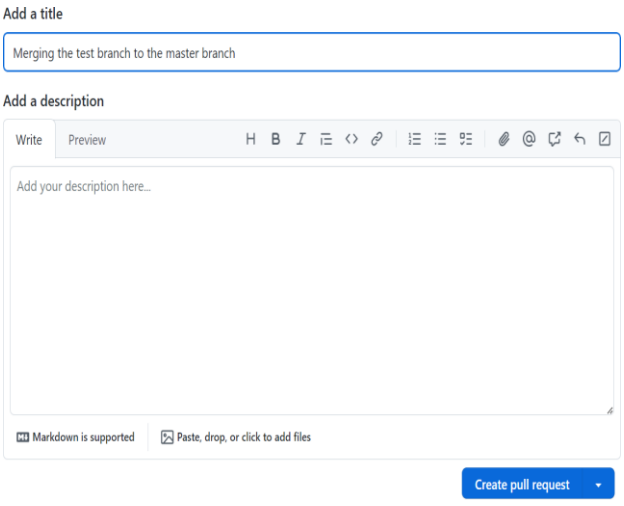
- Now, Go to github, open the repository and move to the **test** branch and make some changes in a file.

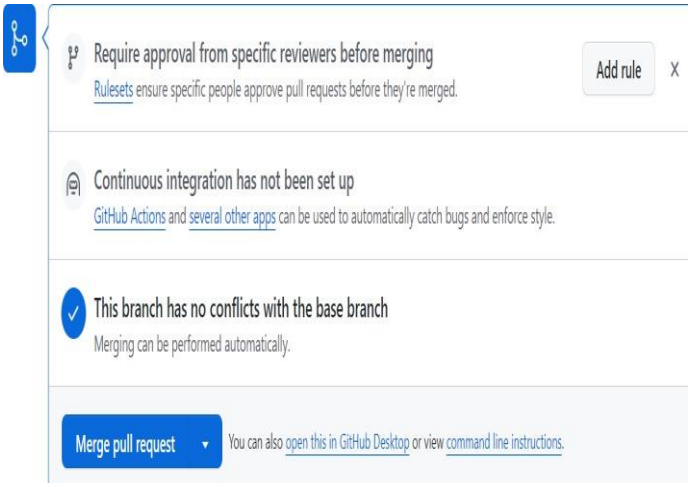


❖ Commit the changes and move to the **master** branch. Click on the **Compare & Pull request**.

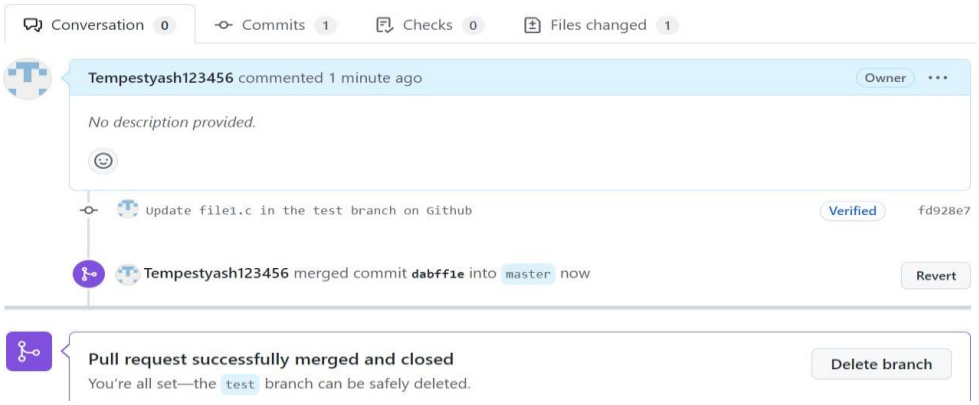


❖ **Create the pull request,** resolve the merge conflicts (if any) and then **merge pull request**.





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



❖ The master branch will now be reflecting the changes.

❖ In the Git Bash, you may get the changes in your local repository using the **git pull** command and if you want the references of the commits, use **git fetch**.

```
yashd@Tempestation MINGW64 /f/Git Practicals/Exp3/tempestYash (master)
$ git pull origin master
remote: Enumerating objects: 6, done.
remote: Counting objects: 100% (6/6), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 4 (delta 1), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (4/4), 1.86 KiB | 12.00 KiB/s, done.
From https://github.com/Tempestyash123456/tempestYash
 * branch            master     -> FETCH_HEAD
   cc871dd..dabff1e  master     -> origin/master
Updating cc871dd..dabff1e
Fast-forward
 file1.c | 3 ++-
 1 file changed, 2 insertions(+), 1 deletion(-)

yashd@Tempestation MINGW64 /f/Git Practicals/Exp3/tempestYash (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean
```

```
yashd@Tempestation MINGW64 /f/Git Practicals/Exp3/tempestYash (master)
$ git fetch
```

❖ Now, after **git pull**, we will be seeing the changes in **file1.c**

4. Result/Output/Writing Summary:

In this experiment, we have created and explored the pull requests. We have created a new branch, made some changes in the files in that new branch and then merged the changes with the main branch by resolving merge conflicts by using both GitHub and Git Bash.

Learning outcomes (What I have learnt):

1. Learnt how to create a branch.

2. Learnt how to push the changes to the remote repository.

3. Learnt how to pull the changes from the remote repository.

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.			