

## Experiment -2.1

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**Branch:** AIT-CSE(DevOps)

**Semester:** 4th

**Subject Name:** Git and Hub

**UID:** 22BDO10022

**Section/Group:** 22BCD-1/A

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**Subject Code:** 22CSH-293

1. **Aim/Overview of the practical:** Editing a file and committing changes on GitHub.

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.

```
ASUS@LAPTOP-1RQUJV7T MINGW64 ~/Desktop/git hub practical (master)
$ git clone https://github.com/beanand47/simplework.git
Cloning into 'simplework'...
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), 12.68 KiB | 227.00 KiB/s, done.

ASUS@LAPTOP-1RQUJV7T MINGW64 ~/Desktop/git hub practical (master)
$ cd anand
bash: cd: anand: No such file or directory

ASUS@LAPTOP-1RQUJV7T MINGW64 ~/Desktop/git hub practical (master)
$ cd simplework
```

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

```
ASUS@LAPTOP-1RQUJV7T MINGW64 ~/Desktop/git hub practical/simplework (main)
$ git add file1.c
warning: in the working copy of 'file1.c', LF will be replaced by CRLF the next
time Git touches it

ASUS@LAPTOP-1RQUJV7T MINGW64 ~/Desktop/git hub practical/simplework (main)
$ git commit -m "wrote work"
[main d2a0b1d] wrote work
1 file changed, 1 insertion(+)
create mode 100644 file1.c
```

- ❖ Pull the changes to the remote repo using the command **git push <remote\_name> <branch\_name>**.

```
$ git push origin master
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 351 bytes | 351.00 KiB
/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused
0
remote: Resolving deltas: 100% (1/1), completed wit
h 1 local object.
To https://github.com/Tempestyash123456/tempestYash
.git
a6f5129..bd74693 master -> master
```

- ❖ You will be able to see the changes in the remote repository.

```
#include <stdio.h>

int main() {
    printf("Hello world \ Local \ Part 1");
    return 0 ;
}
```

( local )

```
1  #include <stdio.h>
2
3  int main() {
4      printf("Hello world \ Local \ Part 1");
5      return 0 ;
6  }
```

( remote )

- ❖ Now, make some changes in the file in the remote repository and pull those changes in the local repository.

```
$ git pull origin master
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 3 (delta 2), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 939 bytes | 2.00 KiB/s, done.
From https://github.com/Tempestyash123456/tempestYash
 * branch            master       -> FETCH_HEAD
   bd74693..fd98ab7  master       -> origin/master
Updating bd74693..fd98ab7
Fast-forward
 file.c | 1 +
 1 file changed, 1 insertion(+)
```

Code Blame 8 lines (6 loc) · 131 Bytes

```
1  #include <stdio.h>
2
3  int main() {
4      printf("Hello world \ Local \ Part 1");
5      printf("Hello world \ remote \ Part 1");
6      return 0 ;
7  }
```

( remote )

```
#include <stdio.h>

int main() {
    printf("Hello world \ Local \ Part 1");
    printf("Hello world \ remote \ Part 1");
    return 0 ;
}
```

( local )

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

```
ASUS@LAPTOP-1RQUJV7T MINGW64 ~/Desktop/git hub practical/simplework (main)
$ git checkout -b test
Switched to a new branch 'test'

ASUS@LAPTOP-1RQUJV7T MINGW64 ~/Desktop/git hub practical/simplework (test)
$ vi file1.c

ASUS@LAPTOP-1RQUJV7T MINGW64 ~/Desktop/git hub practical/simplework (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 changes made in the **test** branch with the **master** branch and resolve the conflicts manually if necessary.
- ❖ Push the **master** and **test** branch onto the remote repository.

```
ASUS@LAPTOP-1RQUJV7T MINGW64 ~/Desktop/git hub practical/simplework (test)
$ git push origin test
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 8 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (6/6), 574 bytes | 574.00 KiB/s, done.
Total 6 (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/beanand47/simplework/pull/new/test
remote:
To https://github.com/beanand47/simplework.git
 * [new branch]      test -> test
```

- ❖ You will be able to see the new changes in the remote repository.

```
#include <stdio.h>

int main() {
    printf("Hello world \ Local \ Part 1");
    printf("Hello world \ remote \ Part 1");
    printf("Hello world / Local / test / Part 2");
    return 0 ;
}
```

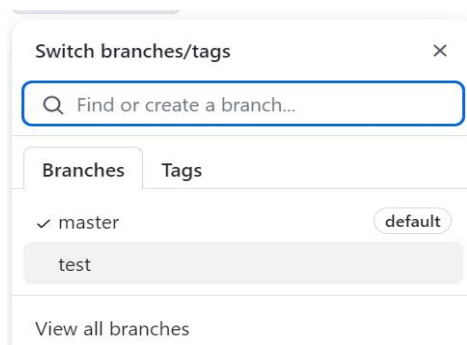
( local )

```
1  #include <stdio.h>
2
3  int main() {
4      printf("Hello world \ Local \ Part 1");
5      printf("Hello world \ remote \ Part 1");
6      printf("Hello world / Local / test / Part 2");
7      return 0 ;
8  }
```

( remote )

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

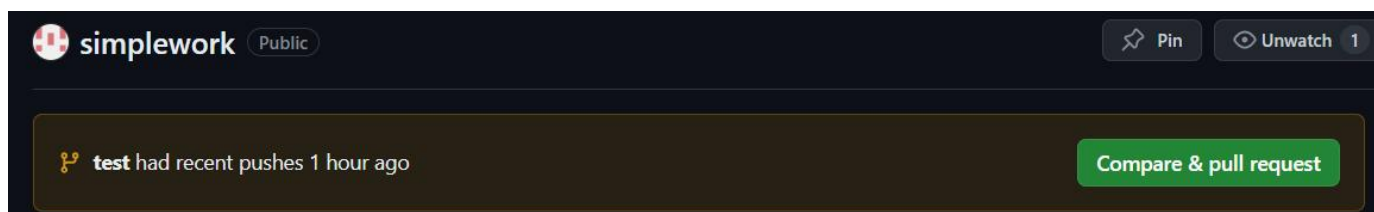




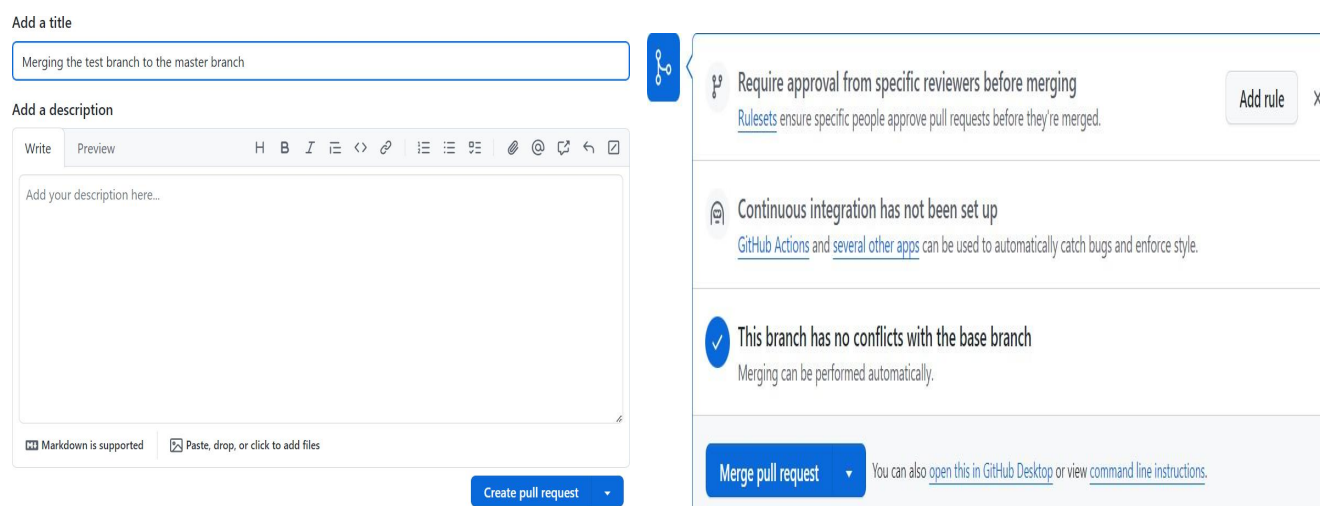
```
#include <stdio.h>

int main() {
    printf("Hello world \ Local \ Part 1");
    printf("Hello world \ remote \ Part 1");
    printf("Hello world / Local / test / Part 2");
    printf("Hello world / Remote / test / Part 2");
    return 0 ;
}
```

- ❖ 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**



❖ Now, pull the changes to the local repository using **git pull**.

```
$ 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 2), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (4/4), 1.79 KiB | 12.00 KiB/s, done.
From https://github.com/Tempestyash123456/tempestYash
* branch                master      -> FETCH_HEAD
   2791321..bb5a4ca      master      -> origin/master
Updating 2791321..bb5a4ca
Fast-forward
 file.c | 1 +
 1 file changed, 1 insertion(+)
```

❖ You will be able to see the changes in your local repository.

```
#include <stdio.h>

int main() {
    printf("Hello world \ Local \ Part 1");
    printf("Hello world \ remote \ Part 1");
    printf("Hello world / Local / test / Part 2");
    printf("Hello world / Remote / test / Part 2");
    return 0 ;
}
```

( remote )

```
#include <stdio.h>

int main() {
    printf("Hello world \ Local \ Part 1");
    printf("Hello world \ remote \ Part 1");
    printf("Hello world / Local / test / Part 2");
    printf("Hello world / Remote / test / Part 2");
    return 0 ;
}
```

( local )

#### **4. Result/Output/Writing Summary:**

In this experiment, we have edited a file in the local repository and shown the changes on the remote repository and vice versa. For this purpose, we have made use of both Git and GitHub.

#### **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.			



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