

Experiment -2.1

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Branch: AIT-CSE(DevOps)

Semester: 4th

Subject Name: Git and Hub

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Section/Group: 22BCD-1/B

Date of Performance: 07/01/2024

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.

```
Last login: Thu Feb 22 14:24:09 on ttys001
tarushchauhan@Tarushs-MacBook-Air ~ % git clone https://github.com/Tarushchauhan73/TARush.git
fatal: destination path 'TARush' already exists and is not an empty directory.
tarushchauhan@Tarushs-MacBook-Air ~ % git clone https://github.com/Tarushchauhan73/experiment4.git
fatal: destination path 'experiment4' already exists and is not an empty directory.
tarushchauhan@Tarushs-MacBook-Air ~ % cd experiment4
tarushchauhan@Tarushs-MacBook-Air experiment4 %
```

- ❖ Create or open a file in the master or main branch , eg , **file.c** and add some text to thefile.
- ❖ Add the file to the staging area using **git add** and then commit the changes using the **gitcommit** command.

```
nothing added to commit but untracked files present (use "git add" to track)
tarushchauhan@Tarushs-MacBook-Air experiment4 % git add .
tarushchauhan@Tarushs-MacBook-Air experiment4 % git commit -m "Added file.c"
[main 037fd60] Added file.c
 1 file changed, 2 insertions(+)
 create mode 100644 file2
tarushchauhan@Tarushs-MacBook-Air experiment4 %
```

- ❖ Pull the changes to the remote repo using the command **git push <remote_name> <branch_name>**.(In Mac the push don't occur because of ssh permission).

```
1 file changed, 2 insertions(+)
 create mode 100644 file2
tarushchauhan@Tarushs-MacBook-Air experiment4 % git push origin main
Username for 'https://github.com': Tarushchauhan73
Password for 'https://Tarushchauhan73@github.com':
remote: Permission to Tarushchauhan73/experiment4.git denied to Tarushchauhan73.
fatal: unable to access 'https://github.com/Tarushchauhan73/experiment4.git/': The requested UR
L returned error: 403
tarushchauhan@Tarushs-MacBook-Air experiment4 %
```

- ❖ 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.

```
tarushchauhan@Tarushs-MacBook-Air experiment4 % git checkout -b 'test'
Switched to a new branch 'test'
tarushchauhan@Tarushs-MacBook-Air experiment4 % vi file.c
tarushchauhan@Tarushs-MacBook-Air experiment4 % cat file.c
hello my name is tarush

tarushchauhan@Tarushs-MacBook-Air experiment4 % git add file.c
tarushchauhan@Tarushs-MacBook-Air experiment4 % git commit -m "changed file.c in test branch"
[test 05bd711] changed file.c in test branch
 1 file changed, 2 insertions(+)
tarushchauhan@Tarushs-MacBook-Air experiment4 %
```

- ❖ 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

```
#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 ;
}
```

```
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 ;
}
```

```
tarushchauhan@Tarushs-MacBook-Air experiment4 % git push
Username for 'https://github.com': Tarushchauhan73
Password for 'https://Tarushchauhan73@github.com':
remote: Permission to Tarushchauhan73/experiment4.git denied to Tarushchauhan73.
fatal: unable to access 'https://github.com/Tarushchauhan73/experiment4.git/': The requested UR
L returned error: 403
tarushchauhan@Tarushs-MacBook-Air experiment4 % git push
Username for 'https://github.com': Tarushchauhan73
Password for 'https://Tarushchauhan73@github.com':
remote: Permission to Tarushchauhan73/experiment4.git denied to Tarushchauhan73.
fatal: unable to access 'https://github.com/Tarushchauhan73/experiment4.git/': The requested UR
L returned error: 403
tarushchauhan@Tarushs-MacBook-Air experiment4 % git push
Username for 'https://github.com': experiment4
Password for 'https://experiment4@github.com':
remote: Permission to Tarushchauhan73/experiment4.git denied to Tarushchauhan73.
fatal: unable to access 'https://github.com/Tarushchauhan73/experiment4.git/': The requested UR
L returned error: 403
tarushchauhan@Tarushs-MacBook-Air experiment4 % git merge test
Updating 037fd60..05bd711
Fast-forward
 file.c | 2 ++
 1 file changed, 2 insertions(+)
tarushchauhan@Tarushs-MacBook-Air experiment4 % git push origin main
Username for 'https://github.com': Tarushchauhan73
Password for 'https://Tarushchauhan73@github.com':
remote: Permission to Tarushchauhan73/experiment4.git denied to Tarushchauhan73.
fatal: unable to access 'https://github.com/Tarushchauhan73/experiment4.git/': The requested UR
L returned error: 403
tarushchauhan@Tarushs-MacBook-Air experiment4 % git push origin main
```

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

```
#include <stdio.h>

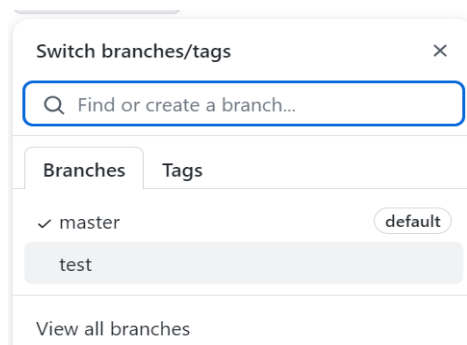
int main() {
    printf("Hello world \ Local \ Part 1");
    printf("Hello world \ remote \ Part 1");
    printf("Hello world / Local / test / Part 2");
    return 0 ;
}
```

```
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 ;
}
```

(local)

(remote)

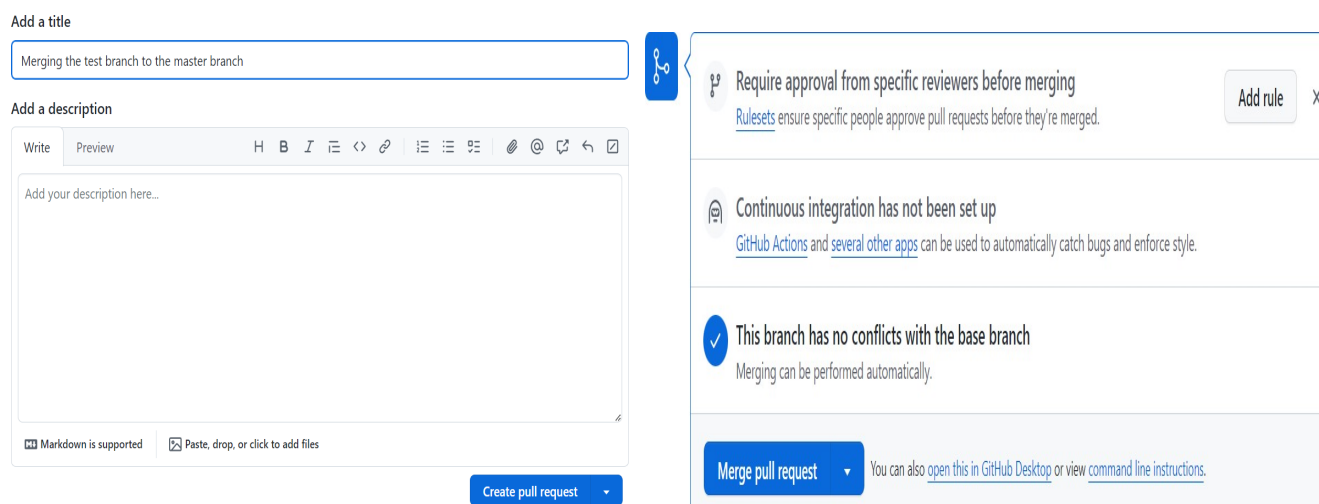
- ❖ Now, Go to github, open the repository and move to the **test** branch and make some changes in a file.



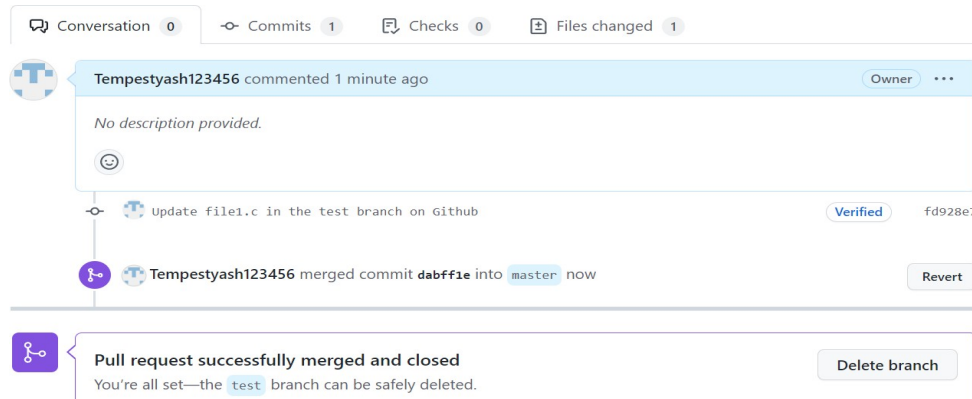
```
#include <stdio.h>

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 & Pullrequest**.
- ❖ **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)

❖ 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.			