Experiment-2.3

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

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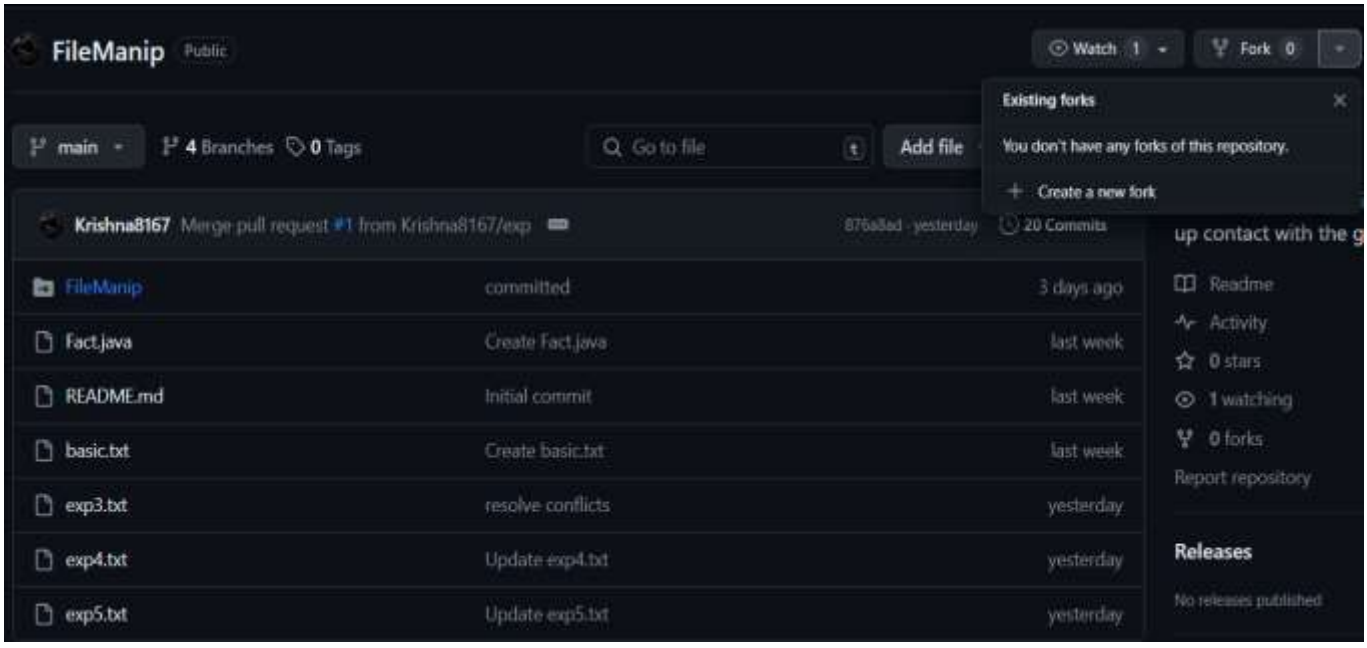
Subject Name: Git and GitHub **Subject Code:** 22CSH-293

1. Aim/Overview of the practical: Creation of forks on GitHub.

2. Task to be done: Fork a repository on GitHub, create files, push and pull operations and git clone.

3. Steps for Experiment: -

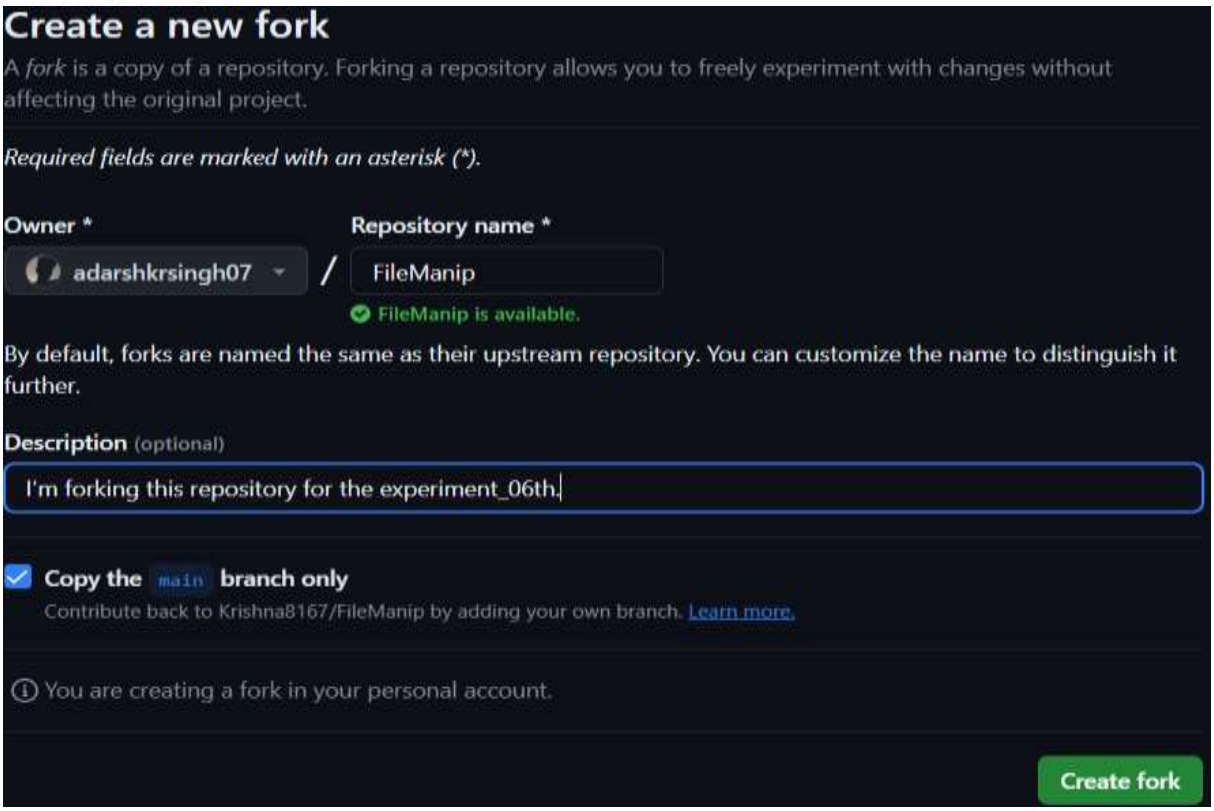
1). Go to your GitHub account and on search bar of your profile, search for the repository that you want to fork i.e. (**Krishna8167/FileManip**).



2). Now click on the fork button which is on the right side of the repository.

3). Change the name accordingly or leave it as default and also configure if you want to copy contents of main branch only or not.

4). Description is optional, now click on the **create fork** option. Now the repository is successfully forked in your account.



5). Now clone the forked repository on your local machine **i.e. Git.** Copy the https link of the forked repository from the GitHub. i.e. (**git clone** https://adarshkrsingh07/FileManip.git).

```
adarsh@ASUS MINGW64 ~ (master)
$ git clone https://github.com/adarshkrsingh07/FileManip.git
Cloning into 'FileManip'...
remote: Enumerating objects: 57, done.
remote: Counting objects: 100% (57/57), done.
remote: Compressing objects: 100% (38/38), done.
remote: Total 57 (delta 21), reused 30 (delta 10), pack-reused 0
Receiving objects: 100% (57/57), 10.48 KiB | 894.00 KiB/s, done.
Resolving deltas: 100% (21/21), done.
```

6). Now go to your forked repository by **cd <repo_name>** and run the **ls** command to check for files which is already present in the repository.

```
adarsh@ASUS MINGW64 ~ (master)
$ cd FileManip

adarsh@ASUS MINGW64 ~/FileManip (main)
$ ls
basic.txt  exp3.txt  exp4.txt  exp5.txt  Fact.java  FileManip/  README.md
```

7). Now create a file new file i.e. (**vi Exp06.txt**) and write something in it. We can also see the content of the file by (**cat <file_name>**).

```
adarsh@ASUS MINGW64 ~/FileManip (main)
$ vi Exp06.txt

adarsh@ASUS MINGW64 ~/FileManip (main)
$ cat Exp06.txt
hello form git.
I forked this repository for the experiment 06.
and now i'm creating a file from git in this forked repo.
```

8). After writing in the file in the end add and commit your file i.e. (**git add .** & **git commit -m** "your_message").

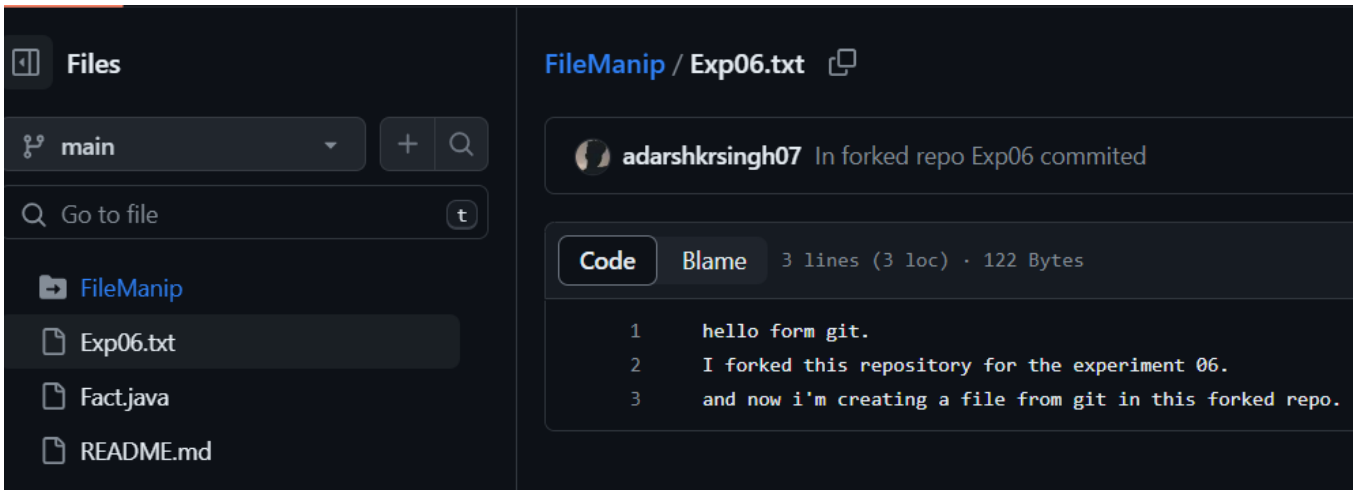
```
adarsh@ASUS MINGW64 ~/FileManip (main)
$ git add Exp06.txt
warning: in the working copy of 'Exp06.txt', LF will be replaced by CR
LF the next time Git touches it

adarsh@ASUS MINGW64 ~/FileManip (main)
$ git commit -m "In forked repo Exp06 commited"
[main ebd9009] In forked repo Exp06 commited
 1 file changed, 3 insertions(+)
 create mode 100644 Exp06.txt
```

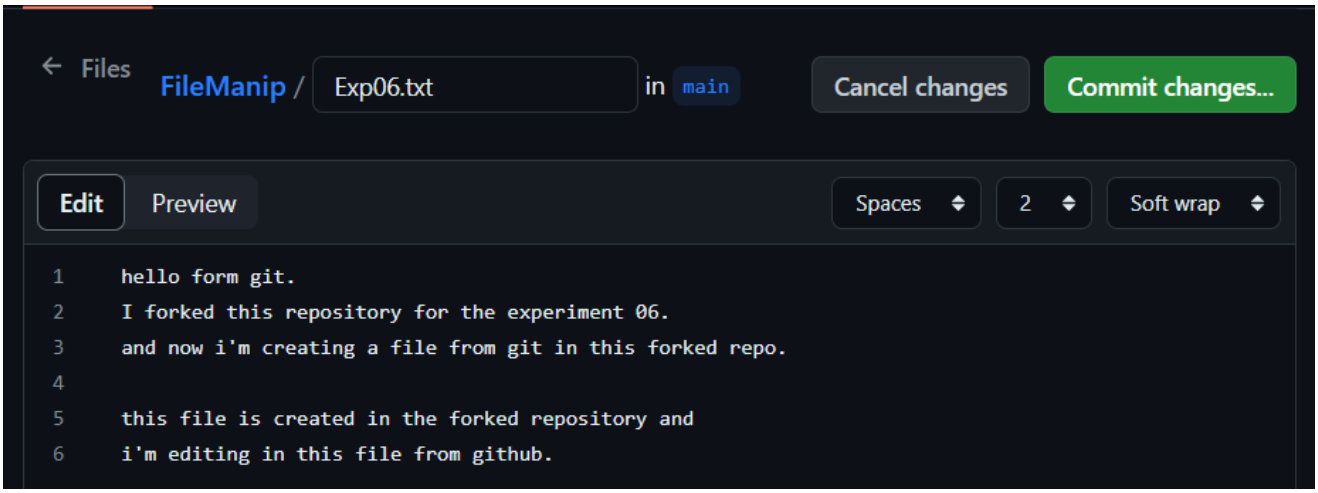
9). Now push all the changes which is done on your local machine, by (**git push** origin main).

```
adarsh@ASUS MINGW64 ~/FileManip (main)
$ git push origin main
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 381 bytes | 381.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/adarshkrsingh07/FileManip.git
   876a8ad..ebd9009  main -> main
```

10). Now go to your GitHub account and see the changes that are made from the local machine.



11). Now you can also make some changes in the same file on GitHub.



12). You can now pull the repository to your local repository so you can see the changes made on GitHub. By (**git pull origin main**).

```
adarsh@ASUS MINGW64 ~/FileManip (main)
$ git pull origin main
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 1.03 KiB | 58.00 KiB/s, done.
From https://github.com/adarshkrsingh07/FileManip
 * branch            main       -> FETCH_HEAD
   ebd9009..45cd94a  main       -> origin/main
Updating ebd9009..45cd94a
Fast-forward
 Exp06.txt | 3 +++
 1 file changed, 3 insertions(+)
```

13). To see the changes made on GitHub you can run (**cat <filename>**).

```
adarsh@ASUS MINGW64 ~/FileManip (main)
$ cat Exp06.txt
hello form git.
I forked this repository for the experiment 06.
and now i'm creating a file from git in this forked repo.

this file is created in the forked repository and
i'm editing in this file from github.
```

14). You can see the log to see the commit history. i.e. (git log -n) to see the no of commit.

```
adarsh@ASUS MINGW64 ~/FileManip (main)
$ git log -2
commit 45cd94a3433016b6299e1c4b9492da2128c701fa (HEAD -> main, origin/main, origin/HEAD)
Author: Adarsh Kumar Singh <123314058+adarshkrsingh07@users.noreply.github.com>
Date:   Wed Mar 6 21:42:36 2024 +0530

    Update Exp06.txt

commit ebd9009f8ce7d1b0c5e4122aeb42bfea821e4f24
Author: adarshkrsingh07 <adarshkrdixit@gmail.com>
Date:   Wed Mar 6 21:38:50 2024 +0530

    In forked repo Exp06 commited
```

We have successfully forked a repository and made the changes.

Learning outcomes (What I have learnt):

1. Learnt about Git.
2. Learnt about GitHub.
3. Learnt about various git commands that can be applied on Git Bash.
4. Learnt about fork and how you can clone your forked repository on git.

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.			