

Experiment -2.1

Student Name: Atinshay Awasthi

Branch: CSE-DevOps

Semester: 4th

Subject Name: Git and GitHub

UID: 22BDO10007

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. Apparatus/Software Used: Git Bash, GitHub.

3. Steps for experiment/practical:

- First open GitHub, create a repository 'editing-file', and clone a repository on git bash.
- Then move to the directory using the **cd** command.

```
ATINSHAY@LAPTOP-89PK0ATO MINGW64 ~ (master)
$ git clone https://github.com/AtinshayAwasthi/editing-file.git
Cloning into 'editing-file'...
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), done.

ATINSHAY@LAPTOP-89PK0ATO MINGW64 ~ (master)
$ cd

ATINSHAY@LAPTOP-89PK0ATO MINGW64 ~ (master)
$ cd editing-file

ATINSHAY@LAPTOP-89PK0ATO MINGW64 ~/editing-file (main)
$
```

- Now create a file named 'abc', and add some text to the files using vi filename.

- Add it to the staging area by git add command and commit it using git commit -m “message”.

```
ATINSHAY@LAPTOP-89PK0ATO MINGW64 ~/editing-file (main)
$ ls
abc

ATINSHAY@LAPTOP-89PK0ATO MINGW64 ~/editing-file (main)
$ vi abc

ATINSHAY@LAPTOP-89PK0ATO MINGW64 ~/editing-file (main)
$ git add abc

ATINSHAY@LAPTOP-89PK0ATO MINGW64 ~/editing-file (main)
$ git commit -m "edited"
[main e9af8ab] edited
1 file changed, 3 insertions(+), 3 deletions(-)

ATINSHAY@LAPTOP-89PK0ATO MINGW64 ~/editing-file (main)
$
```

- Now push the changes to remote repository using command git push origin main.

```
ATINSHAY@LAPTOP-89PK0ATO MINGW64 ~/editing-file (main)
$ git push origin main
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 6 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 264 bytes | 264.00 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/AtinshayAwasthi/editing-file.git
   b8d8de7..e9af8ab  main -> main

ATINSHAY@LAPTOP-89PK0ATO MINGW64 ~/editing-file (main)
```

- You can see the changes in the remote repository.

Local Repository	Remote Repository
@@ -2,15 +2,15 @@	
2 using namespace std;	2 using namespace std;
3 int main()	3 int main()
4 {	4 {
5 - int arr[5], sum=0 ;	5 + int a[5], sum=0 ;
6 cout<<"enter the elements : ";	6 cout<<"enter the elements : ";
7 for(int i=0;i<5;i++)	7 for(int i=0;i<5;i++)
8 {	8 {
9 - cin>>arr[i];	9 + cin>>a[i];
10 }	10 }
11 for(int i=0;i<5;i++)	11 for(int i=0;i<5;i++)
12 {	12 {
13 - sum=sum+arr[i];	13 + sum=sum+a[i];
14 }	14 }
15 cout<<"the sum is : "<<sum;	15 cout<<"the sum is : "<<sum;
16 }	16 }

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

```

1  #include<iostream>
2  using namespace std;
3  int main()
4  { int a[5], add=0 ;
5      cout<<"enter the elements : ";
6      for(int i=0;i<5;i++)
7      {cin>>a[i];}
8      for(int i=0;i<5;i++){add=add+a[i];}
9      cout<<"the result is : "<<add;}
10

```

(remote)

```

MINGW64:/c/Users/ATINSHAY/editing-file
#include<iostream>
using namespace std;
int main()
{
    int a[5], sum=0 ;
    cout<<"enter the elements : ";
    for(int i=0;i<5;i++)
    {
        cin>>a[i];
    }
    for(int i=0;i<5;i++)
    {
        sum=sum+a[i];
    }
    cout<<"the sum is : "<<sum;
}

```

(local)

- Now, pull your changes using git pull origin main.

```

ATINSHAY@LAPTOP-89PK0AT0 MINGW64 ~/editing-file (main)
$ git pull origin main
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 1.02 KiB | 86.00 KiB/s, done.
From https://github.com/AtinshayAwasthi/editing-file
* branch          main          -> FETCH_HEAD
   e9af8ab..b2b1aef  main          -> origin/main
Updating e9af8ab..b2b1aef
Fast-forward
 abc | 15 ++++-----
 1 file changed, 4 insertions(+), 11 deletions(-)

ATINSHAY@LAPTOP-89PK0AT0 MINGW64 ~/editing-file (main)
$ |

```

- Now you can see the changes by doing vi abc.
- Then create a new branch using the command 'git checkout -b branch name'.
- Open the abc file on the vi editor and make some changes.

```
ATINSHAY@LAPTOP-89PK0AT0 MINGW64 ~/editing-file (main)
$ git checkout -b branch1
Switched to a new branch 'branch1'

ATINSHAY@LAPTOP-89PK0AT0 MINGW64 ~/editing-file (branch1)
$ vi abc

ATINSHAY@LAPTOP-89PK0AT0 MINGW64 ~/editing-file (branch1)
$ git add abc

ATINSHAY@LAPTOP-89PK0AT0 MINGW64 ~/editing-file (branch1)
$ git commit -m "abc file is changed"
[branch1 11a94cb] abc file is changed
1 file changed, 1 deletion(-)

ATINSHAY@LAPTOP-89PK0AT0 MINGW64 ~/editing-file (branch1)
$
```

- Now merge the changes made in branch1 with the main branch.
- Then push the main and branch1 to the remote repository.

```
ATINSHAY@LAPTOP-89PK0AT0 MINGW64 ~/editing-file (branch1)
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.

ATINSHAY@LAPTOP-89PK0AT0 MINGW64 ~/editing-file (main)
$ git merge branch1
Updating b2b1aef..11a94cb
Fast-forward
 abc | 1 -
 1 file changed, 1 deletion(-)

ATINSHAY@LAPTOP-89PK0AT0 MINGW64 ~/editing-file (main)
$ git push origin main
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 6 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 267 bytes | 267.00 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/AtinshayAwasthi/editing-file.git
 b2b1aef..11a94cb main -> main

ATINSHAY@LAPTOP-89PK0AT0 MINGW64 ~/editing-file (main)
$ git push origin branch1
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'branch1' on GitHub by visiting:
remote: https://github.com/AtinshayAwasthi/editing-file/pull/new/branch1
remote:
To https://github.com/AtinshayAwasthi/editing-file.git
 * [new branch] branch1 -> branch1

ATINSHAY@LAPTOP-89PK0AT0 MINGW64 ~/editing-file (main)
$
```

- Now you can see the changes in the remote repository.

```
Code Blame 8 lines (8 loc) · 192 Bytes

1  #include<iostream>
2  using namespace std;
3  int main()
4  { int a[5], add=0 ;
5      for(int i=0;i<5;i++)
6      {cin>>a[i];}
7      for(int i=0;i<5;i++){add=add+a[i];}
8      cout<<"the result is : "<<add;}
```

- Now go to GitHub and in the repo make to the branch1 and make some changes in the file.

branch1 2 Branches 0 Tags

Switch branches/tags

Find or create a branch...

Branches Tags

main default

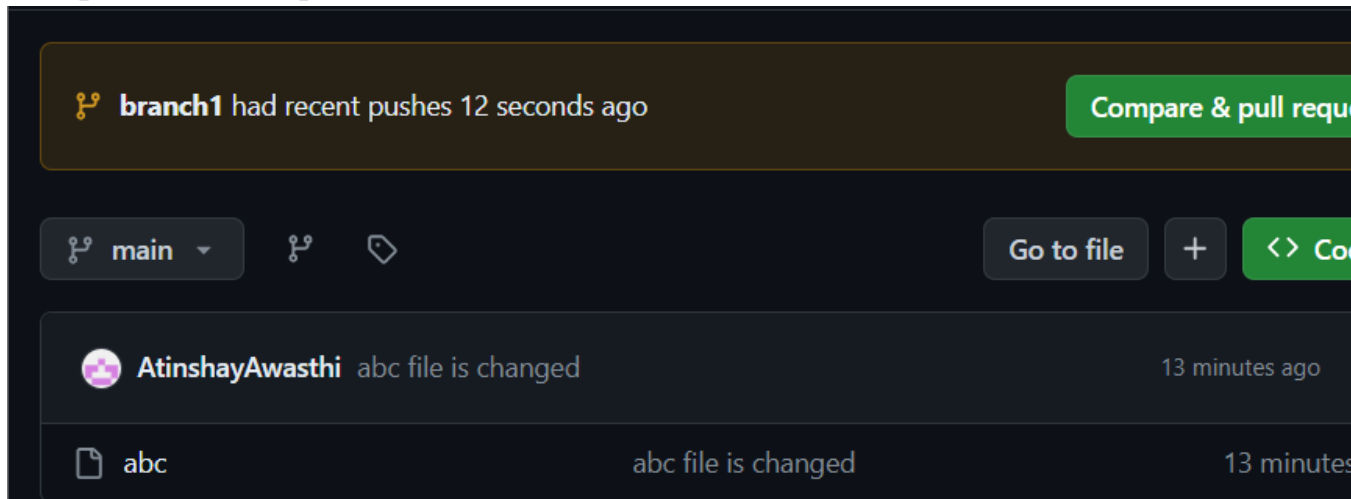
✓ branch1

View all branches

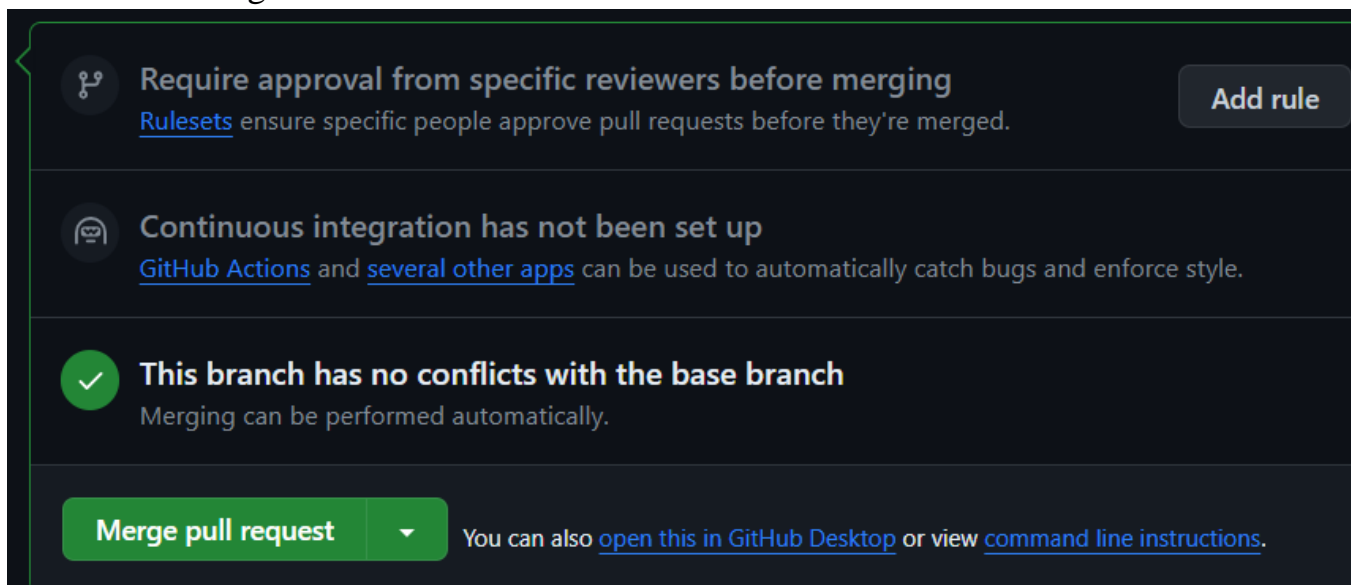
Edit Preview

```
1  #include<iostream>
2  using namespace std;
3  int main()
4  { int a[5], sum=0 ;
5      for(int i=0;i<5;i++)
6      {
7          cin>>a[i];
8      }
9      for(int i=0;i<5;i++){
10         sum=sum+a[i];
11     }
12     cout<<"the result is : "<<sum;
13 }
```

- Now commit the changes and go to main branch.
Compare & Pull request.



- Now create the pull request and after that click merge pull request.
Do confirm merge.





4. Result/Output/Writing Summary:

In this experiment, we have Editing a file and committing changes on GitHub.

Learning outcomes (What I have learnt):

1. I have learnt about branches and how to create them.
2. I have learnt about how to push and pull the changes.
3. I have learnt about how to merge the branches.
4. I have learnt about some new commands.
5. I have 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.			