

Experiment-2.4

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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: Git merge Conflicts and resolving git merge conflicts.

2. Task to be done: git merge , merge conflicts etc.

3. Steps for Experiment: -

1). Clone your repository, if already cloned then simply go to your repository by
(cd 22BCD-1).

```
adarsh@ASUS MINGW64 ~ (master)
$ cd 22BCD-1
```

2). Now create a new file in the repository by (vi <filename>) and write some content inside it by the same command.

```
adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ vi Exp7.c

adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ cat Exp7.c
#include <stdio.h>

int main() {
    int num1 = 5;
    int num2 = 7;
    int sum;
    sum = num1 + num2;

    printf("Sum of %d and %d is %d\n", num1, num2, sum);

    return 0;
}
```

3). After creating a file and writing some content inside it then finally add & commit your changes by (**git add filename & git commit -m "your_message"**).

```
adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ git add Exp7.c
warning: in the working copy of 'Exp7.c', LF will be replaced by CRLF the ne
xt time Git touches it

adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ git commit -m "Exp7.c committed for adding 2 nos"
[main 20f4bc5] Exp7.c committed for adding 2 nos
1 file changed, 13 insertions(+)
create mode 100644 Exp7.c
```

4). Now create a new branch by (**git checkout -b <branch_name>**).

```
adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ git checkout -b Exp7test
Switched to a new branch 'Exp7test'
```

5). Now open the same file which was created in the main branch i.e. (**Exp7.c**) and made some changes inside it by (**vi <same_filename>**).

```
adarsh@ASUS MINGW64 ~/22BCD-1 (Exp7test)
$ vi Exp7.c

adarsh@ASUS MINGW64 ~/22BCD-1 (Exp7test)
$ cat Exp7.c
#include <stdio.h>

int main() {
    int num1 = 10;
    int num2 = 5;
    int sum;
    sum = num1 + num2;

    printf("Sum of %d and %d is %d\n", num1, num2, sum);

    return 0;
}
```

6). Now add and commit your changes made in the feature_branch by (**git add <filename>** & **git commit -m "your message"**).

```
adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ git push origin main
Enumerating objects: 59, done.
Counting objects: 100% (59/59), done.
Delta compression using up to 8 threads
Compressing objects: 100% (49/49), done.
Writing objects: 100% (56/56), 5.30 KiB | 493.00 KiB/s, done.
Total 56 (delta 24), reused 1 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (24/24), completed with 2 local objects.
To https://github.com/adarshkrsingh07/22BCD-1.git
1da5848..0f6dbde main -> main
```

7). Now checkout to main branch by (**git checkout main**). and merge the feature branch by (**git merge --no-ff <branch_name>**).

```
adarsh@ASUS MINGW64 ~/22BCD-1 (Exp7test)
$ git checkout main
Switched to branch 'main'
Your branch is ahead of 'origin/main' by 19 commits.
(use "git push" to publish your local commits)

adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ git merge --no-ff Exp7test
Merge made by the 'ort' strategy.
Exp7.c | 4 ++--
1 file changed, 2 insertions(+), 2 deletions(-)
```

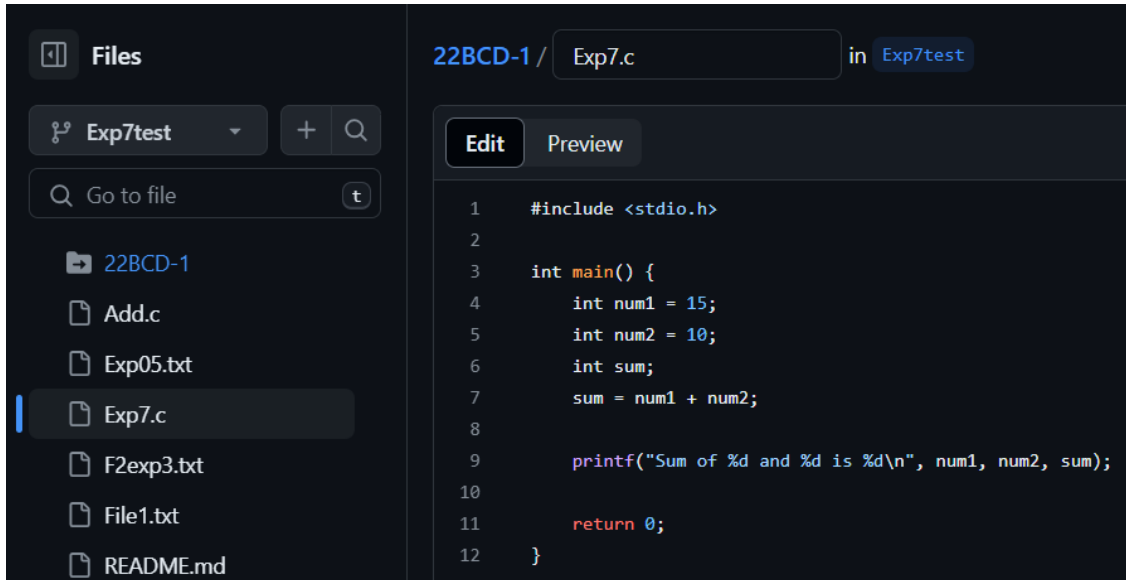
8). After merging push all the changes to your remote repository by (**git push origin main**) and also push the changes from the feature branches. By (**git push origin Exp7test**).

```
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

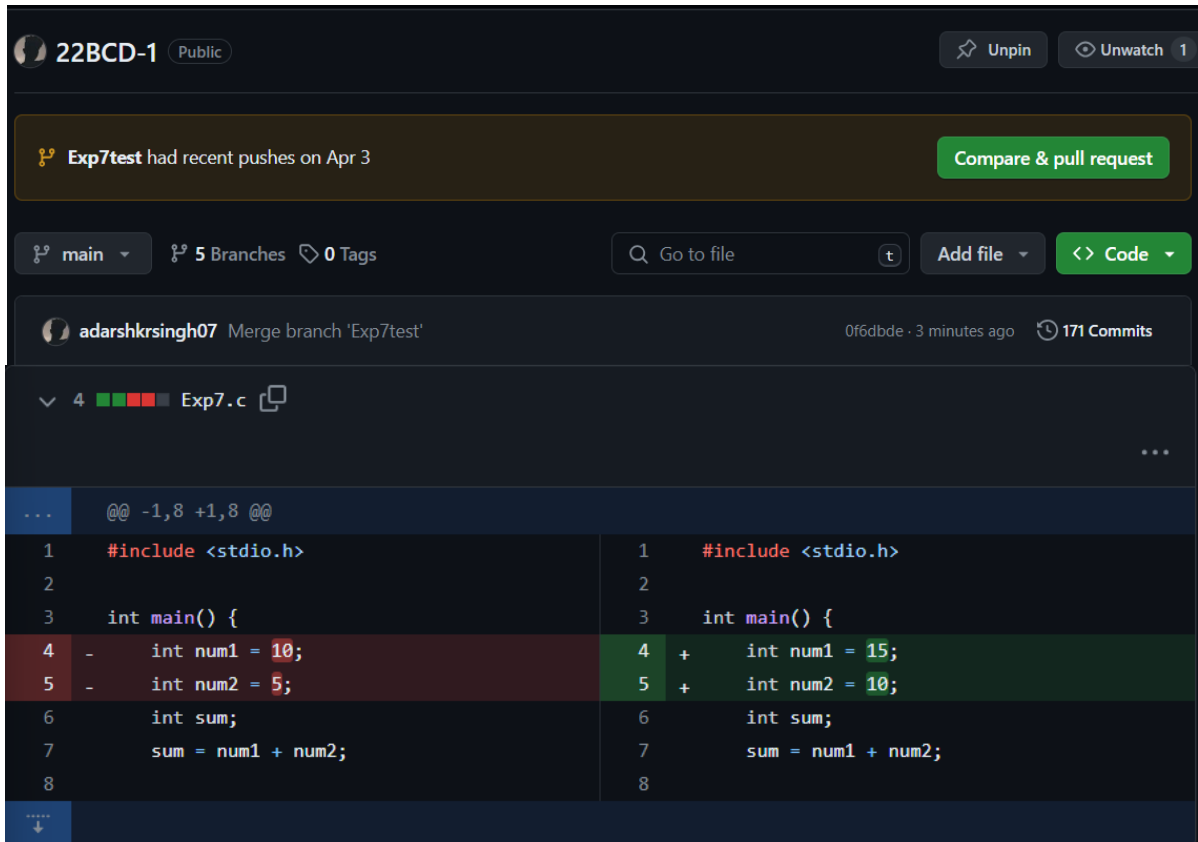
adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ git checkout Exp7test
Switched to branch 'Exp7test'

adarsh@ASUS MINGW64 ~/22BCD-1 (Exp7test)
$ git push origin Exp7test
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'Exp7test' on GitHub by visiting:
remote: https://github.com/adarshkrsingh07/22BCD-1/pull/new/Exp7test
remote:
To https://github.com/adarshkrsingh07/22BCD-1.git
```

9). Now on github made some changes in the same file and add and commit your changes.




10). Now after committing the changes go back to main branch and click on open pull request and see the changes that are made on the github after pushing the file from git to github.




11). Now merge your feature branch to the main branch after checking the chances of conflicts in your file.

Add more commits by pushing to the **Exp7test** branch on [adarshkrsingh07/22BCD-1](#).




Continuous integration has not been set up
[GitHub Actions](#) and [several other apps](#) can be used to automatically catch bugs and enforce style.



This branch has no conflicts with the base branch
Merging can be performed automatically.

Merge pull request ▼ You can also [open this in GitHub Desktop](#) or view [command line instructions](#).



Pull request successfully merged and closed
You're all set—the **Exp7test** branch can be safely deleted.

[Delete branch](#)

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 git merge and how you can resolve the 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.			