Experiment -2.4

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Branch: AIT-CSE(DevOps)
Semester: 4th
Subject Name: Git and Hub

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1. Aim/Overview of the practical: Git merge conflicts and resolving git merge conflicts

2. Software Used: Git Bash, GitHub.

3. Steps for experiment/practical:

❖ Clone a repo from the remote to the local system and move inside it.

```
yashd@Tempestation MINGW64 /f/Git Tutorials
$ git clone https://github.com/Tempestyash123456/Git-Exp.git
Cloning into 'Git-Exp'...
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), 12.67 KiB | 324.00 KiB/s, done.

yashd@Tempestation MINGW64 /f/Git Tutorials
$ cd Git-Exp
```

❖ Create a file in the local system, add it to the staging area and commit the changes.

```
yashd@Tempestation MINGW64 /f/Git Tutorials/Git-Exp (main)
$ vi file.c

yashd@Tempestation MINGW64 /f/Git Tutorials/Git-Exp (main)
$ git add file.c
warning: in the working copy of 'file.c', LF will be replaced by CRLF the next t
ime Git touches it

yashd@Tempestation MINGW64 /f/Git Tutorials/Git-Exp (main)
$ git commit -m "printed a+b when a = 5 and b = 6"
[main 1c785d8] printed a+b when a = 5 and b = 6
 1 file changed, 11 insertions(+)
 create mode 100644 file.c
```

❖ Create a new branch named **yash,** checkout to it, made some changes in the file, add it to the staging area and commit the changes.

```
yashd@Tempestation MINGW64 /f/Git Tutorials/Git-Exp (main)
$ git checkout -b yash
Switched to a new branch 'yash'

yashd@Tempestation MINGW64 /f/Git Tutorials/Git-Exp (yash)
$ vi file.c

yashd@Tempestation MINGW64 /f/Git Tutorials/Git-Exp (yash)
$ git add file.c
warning: in the working copy of 'file.c', LF will be replaced by CRLF the next t
ime Git touches it

yashd@Tempestation MINGW64 /f/Git Tutorials/Git-Exp (yash)
$ git commit -m "printed a+b when a= 50 and b=7"
[yash 2278a84] printed a+b when a= 50 and b=7
 1 file changed, 2 insertions(+), 2 deletions(-)
```

❖ Checkout to the **main** branch and merge the changes using the **git merge** command and **- - no - ff** operator.

```
yashd@Tempestation MINGW64 /f/Git Tutorials/Git-Exp (yash)
$ git checkout main
Switched to branch 'main'
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)

yashd@Tempestation MINGW64 /f/Git Tutorials/Git-Exp (main)
$ git merge --no-ff yash
hint: Waiting for your editor to close the file... |
yashd@Tempestation MINGW64 /f/Git Tutorials/Git-Exp (main)
$ git merge --no-ff yash
Merge made by the 'ort' strategy.
 file.c | 4 ++--
 1 file changed, 2 insertions(+), 2 deletions(-)

yashd@Tempestation MINGW64 /f/Git Tutorials/Git-Exp (main)
$ cat file.c
#include <stdio.h>

int main() {

        int a = 50 ;
        int b = 7 ;

        int c = a + b ;
        printf("%d",c);
        return 0 ;
}
```
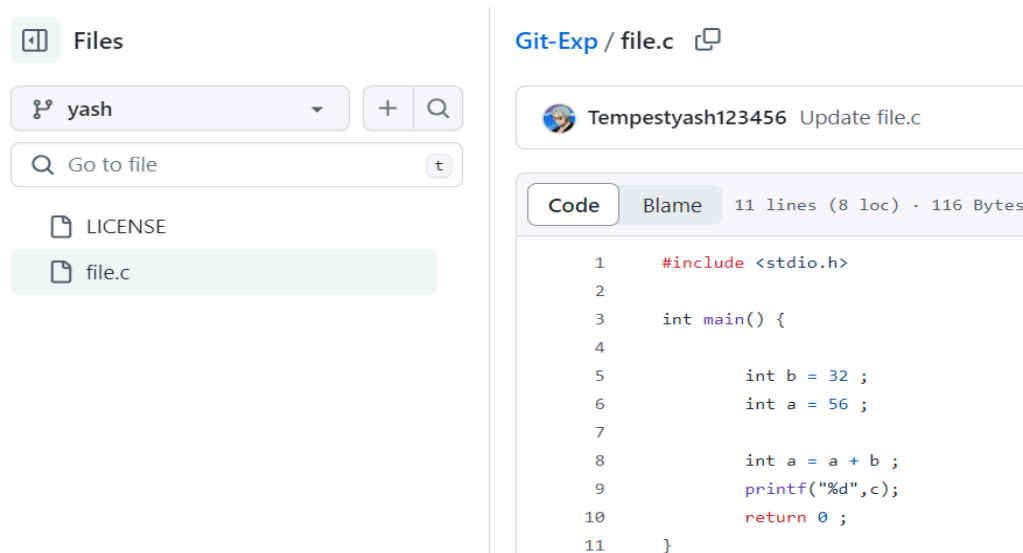
❖ Push the changes to the remote repository.

```
yashd@Tempestation MINGW64 /f/Git Tutorials/Git-Exp (main)
$ git push origin main
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 4 threads
Compressing objects: 100% (7/7), done.
Writing objects: 100% (7/7), 826 bytes | 826.00 KiB/s, done.
Total 7 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), done.
To https://github.com/Tempestyash123456/Git-Exp.git
   20293b8..c5dd503  main -> main

yashd@Tempestation MINGW64 /f/Git Tutorials/Git-Exp (yash)
$ git push origin yash
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'yash' on GitHub by visiting:
remote:      https://github.com/Tempestyash123456/Git-Exp/pull/new/yash
remote:
To https://github.com/Tempestyash123456/Git-Exp.git
 * [new branch]      yash -> yash
```

❖ Now, move to the **yash** branch on remote repo, make some changes and commit them.

Files			Git-Exp / file.c
yash	▼	+ 🔍	Tempestyash123456 Update file.c
🔍 Go to file		t	Code Blame 11 lines (8 loc) · 116 Bytes
📄 LICENSE			1 #include <stdio.h>
📄 file.c			2
			3 int main() {
			4
			5 int b = 32 ;
			6 int a = 56 ;
			7
			8 int a = a + b ;
			9 printf("%d",c);
			10 return 0 ;
			11 }

❖ Move to the **main** branch, click on **compare & pull request**, and create a pull request.

base: main ← compare: yash ✓ **Able to merge.** These branches can be automatically merged.

Add a title

Update file.c

Add a description

| Write | Preview |

Add your description here...

📖 Markdown is supported   🖼 Paste, drop, or click to add files

Create pull request ▾

```
@@ -2,10 +2,10 @@
                                           2
    int main() {                           3      int main() {
                                           4
-       int a = 50 ;                        5   +      int b = 32 ;
-       int b = 7 ;                         6   +      int a = 56 ;
                                           7
-       int c = a + b ;                     8   +      int a = a + b ;
        printf("%d",c);                     9          printf("%d",c);
        return 0 ;                         10          return 0 ;
    }                                      11      }
```

❖ Now, merge the pull request and confirm merge.

Update file.c #1

🔀 Merged Tempestyash1234... merged 1 commit into `main` from `yash` ⧉ now

| 💬 Conversation 0 | ⎔ Commits 1 | ☑ Checks 0 | 📄 Files changed 1 |

Tempestyash123456 commented 1 minute ago   Owner ⋯

No description provided.

😊

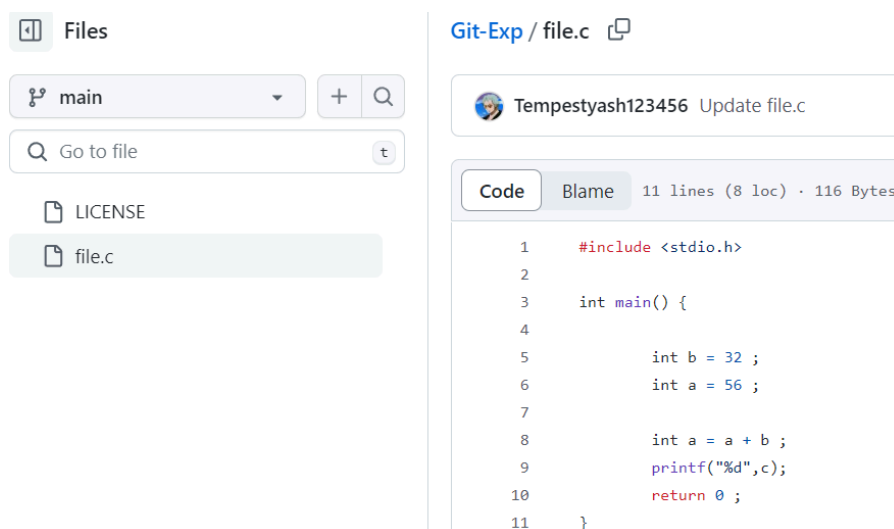⧉ Update file.c   Verified   2d709d1

🔀 **Tempestyash123456** merged commit **6c94e48** into `main` now   Revert

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

❖ You can see the changes in the **main** branch.

Files

main

Go to file

LICENSE

file.c

Git-Exp / file.c

Tempestyash123456 Update file.c

| Code | Blame | 11 lines (8 loc) · 116 Bytes |

```c
1    #include <stdio.h>
2
3    int main() {
4
5        int b = 32 ;
6        int a = 56 ;
7
8        int a = a + b ;
9        printf("%d",c);
10       return 0 ;
11   }
```

4. Result/Output/Writing Summary:

In this experiment, we have merge the contents of a branch to the main branch using pull request on both git bash and github.

Learning outcomes (What I have learnt):

1. Learnt how to create a branch.

2. Learnt how to clone a remote repo to our local system.

3. Learnt how to create a pull request and handle their merging.

4. Learnt to merge two branches.

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.			