

## Experiment -2.4

**Student Name:** Ayush Pandey

**Branch:** CSE-DevOps

**Semester:** 4th

**Subject Name:** Git and Hub

**UID:** 22BDO10038

**Section/Group:** 22BCD-1/A

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**Subject Code:** 22CSH-293

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 repository from the remote to the local system and move inside it.

```
Ayush Pandey@Ayush MINGW64 /c/Users
$ cd /d/Git

Ayush Pandey@Ayush MINGW64 /d/Git
$ git clone https://github.com/ayush2442/Prac_Class.git
Cloning into 'Prac_Class'...
remote: Enumerating objects: 45, done.
remote: Counting objects: 100% (45/45), done.
remote: Compressing objects: 100% (34/34), done.
remote: Total 45 (delta 14), reused 14 (delta 4), pack-reused 0
Receiving objects: 100% (45/45), 13.50 KiB | 511.00 KiB/s, done.
Resolving deltas: 100% (14/14), done.

Ayush Pandey@Ayush MINGW64 /d/Git
$ cd Prac_Class
```

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

```
Ayush Pandey@Ayush MINGW64 /d/Git/Prac_Class (main)
$ vi codefile.cpp

Ayush Pandey@Ayush MINGW64 /d/Git/Prac_Class (main)
$ git add codefile.cpp

Ayush Pandey@Ayush MINGW64 /d/Git/Prac_Class (main)
$ git commit -m "Print single number"
[main be69847] Print single number
1 file changed, 11 insertions(+)
create mode 100644 codefile.cpp
```

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

```
Ayush Pandey@Ayush MINGW64 /d/Git/Prac_Class (main)
$ git checkout -b change
Switched to a new branch 'change'

Ayush Pandey@Ayush MINGW64 /d/Git/Prac_Class (change)
$ vi codefile.cpp

Ayush Pandey@Ayush MINGW64 /d/Git/Prac_Class (change)
$ git add codefile.cpp

Ayush Pandey@Ayush MINGW64 /d/Git/Prac_Class (change)
$ git commit -m "Minor change"
[change b6d5ede] Minor change
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.

```
Ayush Pandey@Ayush MINGW64 /d/Git/Prac_Class (change)
$ 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)

Ayush Pandey@Ayush MINGW64 /d/Git/Prac_Class (main)
$ git merge --no-ff change
Merge made by the 'ort' strategy.
codefile.cpp | 4 ++--
1 file changed, 2 insertions(+), 2 deletions(-)

Ayush Pandey@Ayush MINGW64 /d/Git/Prac_Class (main)
$ cat codefile.cpp
#include <iostream>

int main() {
    int number;
    std::cout << "Please enter a single number: ";
    std::cin >> number;
    std::cout << "The single number you entered is: " << number
    << std::endl;

    return 0;
}
```

- ❖ Push the changes to the remote repository.

```
Ayush Pandey@Ayush MINGW64 /d/Git/Prac_Class (main)
$ git push origin main
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 8 threads
Compressing objects: 100% (7/7), done.
Writing objects: 100% (7/7), 761 bytes | 761.00 KiB/s, done.
Total 7 (delta 4), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (4/4), completed with 1 local obj
ect.
To https://github.com/ayush2442/Prac_Class.git
    fec6383..6e6700d  main -> main

Ayush Pandey@Ayush MINGW64 /d/Git/Prac_Class (main)
$ git push origin change
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'change' on GitHub by visiting
:
remote:     https://github.com/ayush2442/Prac_Class/pull/new/ch
ange
remote:
To https://github.com/ayush2442/Prac_Class.git
 * [new branch]      change -> change
```

- ❖ Now, move to the **change** branch on remote repository, make some changes and commit them.



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

### Open a pull request

Create a new pull request by comparing changes across two branches. If you need to, you can also compare across forks. [Learn more about diff](#)

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

**Add a title**

Update codefile.cpp

**Add a description**

Write Preview H B I

Add your description here...

☐ Markdown is supported ☐ Paste, drop, or click to add files

Create pull request

Showing 1 changed file with 1 addition and 0 deletions. Split Unified

1 codefile.cpp

```

@@ -1,3 +1,4 @@
1  #include <iostream>
2
3  int main() {
1  + //This is the extra change made on Remote
2  #include <iostream>
3
4  int main() {

```

❖ Now, merge the pull request and confirm merge.

### Update codefile.cpp #6

ayush2442 wants to merge 1 commit into main from change

Conversation 0 Commits 1 Checks 0 Files changed 1

ayush2442 commented now

No description provided.

Update codefile.cpp Verified 61afc18

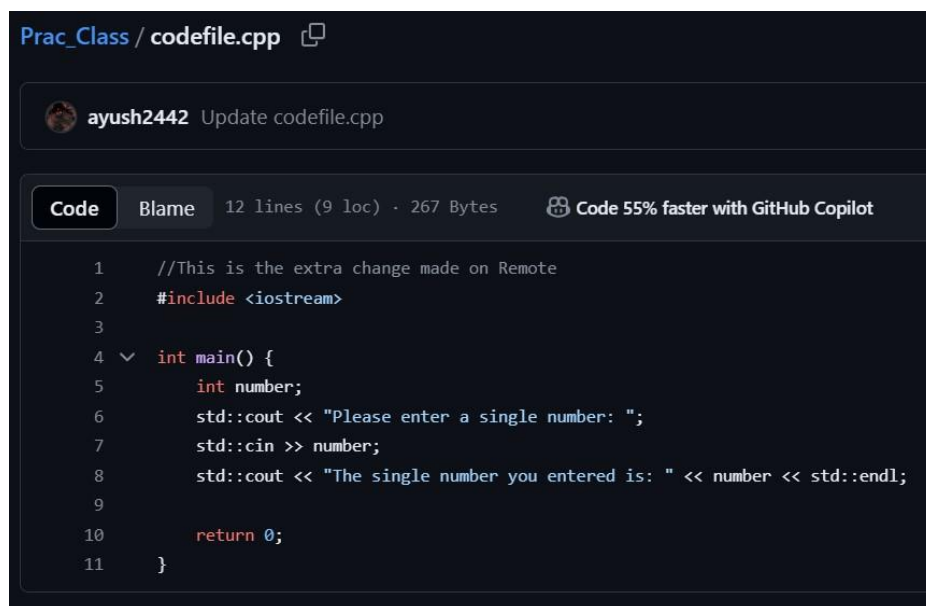
Add more commits by pushing to the change branch on ayush2442/Prac\_Class

- Require approval from specific reviewers before merging  
Rulesets ensure specific people approve pull requests before they're merged. [Add rule](#)
- 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.

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





```

Prac_Class / codefile.cpp

ayush2442 Update codefile.cpp

Code Blame 12 lines (9 loc) · 267 Bytes Code 55% faster with GitHub Copilot

1 //This is the extra change made on Remote
2 #include <iostream>
3
4 int main() {
5     int number;
6     std::cout << "Please enter a single number: ";
7     std::cin >> number;
8     std::cout << "The single number you entered is: " << number << std::endl;
9
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.			