

Experiment -2.4

Student Name: Chayan Gope

UID: 22BDO10036

Branch: AIT-CSE(DevOps)

Section/Group: 22BCD-1/A

Semester: 4th

Date of Performance: 28/01/2024

Subject Name: Git and Hub

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

```
chaya@Chayan MINGW64 /  
$ git clone https://github.com/Chayan-12/new-github.git  
Cloning into 'new-github'...  
remote: Enumerating objects: 70, done.  
remote: Counting objects: 100% (70/70), done.  
remote: Compressing objects: 100% (48/48), done.  
remote: Total 70 (delta 28), reused 38 (delta 13), pack-reused 0  
Receiving objects: 100% (70/70), 26.94 KiB | 26.94 MiB/s, done.  
Resolving deltas: 100% (28/28), done.  
  
chaya@Chayan MINGW64 /  
$ cd new-github
```

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

```
chaya@Chayan MINGW64 /new-github (main)  
$ vi file.c  
  
chaya@Chayan MINGW64 /new-github (main)  
$ git add file.c  
  
chaya@Chayan MINGW64 /new-github (main)  
$ git commit -m "Committed"  
[main b9d9174] Committed  
1 file changed, 24 insertions(+)  
create mode 100644 file.c
```

- ❖ Create a new branch named **branch1**, checkout to it, made some changes in the file, add it to the staging area and commit the changes.

```
chaya@Chayan MINGW64 /new-github (main)
$ git checkout -b branch1
Switched to a new branch 'branch1'

chaya@Chayan MINGW64 /new-github (branch1)
$ vi file.c

chaya@Chayan MINGW64 /new-github (branch1)
$ git add file.c

chaya@Chayan MINGW64 /new-github (branch1)
$ git commit -m "Edited and Committed"
[branch1 613d709] Edited and Committed
1 file changed, 1 insertion(+)
```

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

```
chaya@Chayan MINGW64 /new-github (branch1)
$ 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)

chaya@Chayan MINGW64 /new-github (main)
$ git merge --no-ff branch1
Merge made by the 'ort' strategy.
file.c | 1 +
1 file changed, 1 insertion(+)

chaya@Chayan MINGW64 /new-github (main)
$ cat file.c
#include <stdio.h>

// Function to calculate the factorial of a number
unsigned long long factorial(int n) {
    if (n == 0)
        return 1;
```

- ❖ Push the changes to the remote repository.


```
chaya@Chayan MINGW64 /new-github (main)
$ git push origin main
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 12 threads
Compressing objects: 100% (7/7), done.
Writing objects: 100% (7/7), 885 bytes | 885.00 KiB/s, done.
Total 7 (delta 4), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (4/4), completed with 1 local object.
To https://github.com/Chayan-12/new-github.git
    e1ba5a3..3867b30  main -> main

chaya@Chayan MINGW64 /new-github (main)
$ git push origin branch1
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/Chayan-12/new-github.git
    45483cb..613d709  branch1 -> branch1
```

- ❖ Now, move to the **branch1** branch on remote repo, make some changes and commit them.

  main  new-github / file.c 

 Chayan-12 Edited and Committed

Code Blame 25 lines (20 loc) · 565 Bytes  Code 55% faster with GitHub Copilot

```
1  #include <stdio.h>
2
3  // Function to calculate the factorial of a number
4  unsigned long long factorial(int n) {
5      if (n == 0)
6          return 1;
```

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

base: main

compare: branch1

✓ Able to merge. These branches can be automatically merged.

Add a title

Update file.c

Write

Preview

H

B

I

≡

<>

🔗

⋮

⋮

☰

📎

@

↗

↶

📐

Add your description here...

📄 Markdown is supported

📋 Paste, drop, or click to add files

Create pull request

Reviewers

No reviews

Assignees

No one—[assign yourself](#)

Labels

None yet

Projects

None yet

Milestone

No milestone

Development

Use [Closing keywords](#) in the description to automatically close issues

Helpful resources

[GitHub Community Guidelines](#)

```
2 file.c
22     return 0;
23 }
24
25 - [this is demonstration purpose only
25 + // Demonstration only
```

- ❖ Now, merge the pull request and confirm merge.

Update file.c #6


Merged Chayan-12 merged 1 commit into main from branch1 now

Conversation 0

Commits 1

Checks 0


Files changed 1




Chayan-12 commented now


Owner ...

No description provided.




 Update file.c

Verified11d957b

 Chayan-12 merged commit a499fba into main now

Revert



Pull request successfully merged and closed

You're all set—the branch1 branch can be safely deleted.

Delete branch

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

Commit

Update file.c

main (#6)

Chayan-12 committed 3 minutes ago (Verified)

Showing 1 changed file with 1 addition and 1 deletion.

```

@@ -22,4 +22,4 @@ int main() {
22     return 0;
23 }
24
25 - // This is demonstration purpose only
25 + // Demonstration only

```

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.			