Experiment -1.3

To create and explore pull request.

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Subject Name: Git and GitHub
Subject Code: 22CSH-293

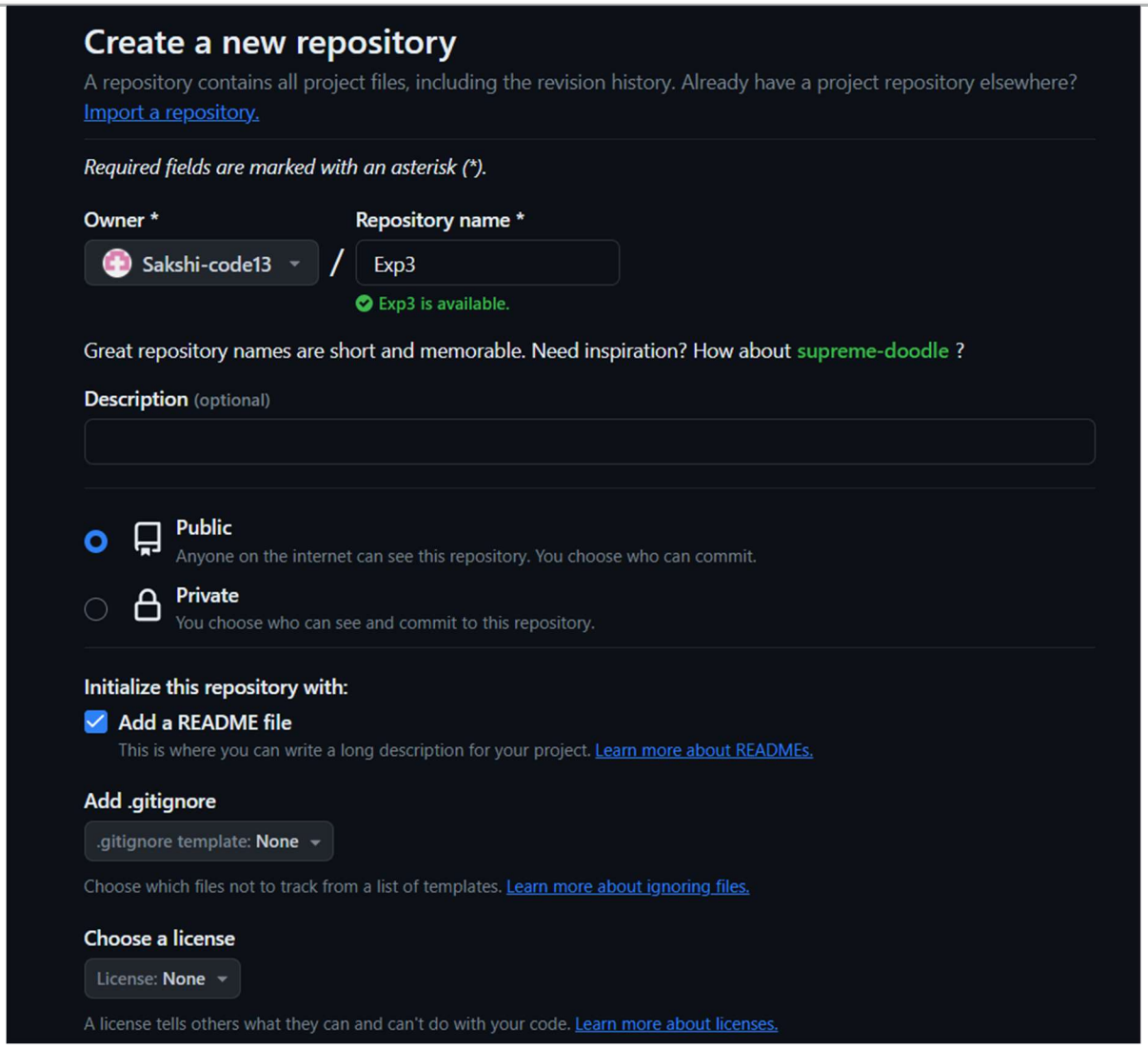
1. Aim of the practical: To create and explore pull request.

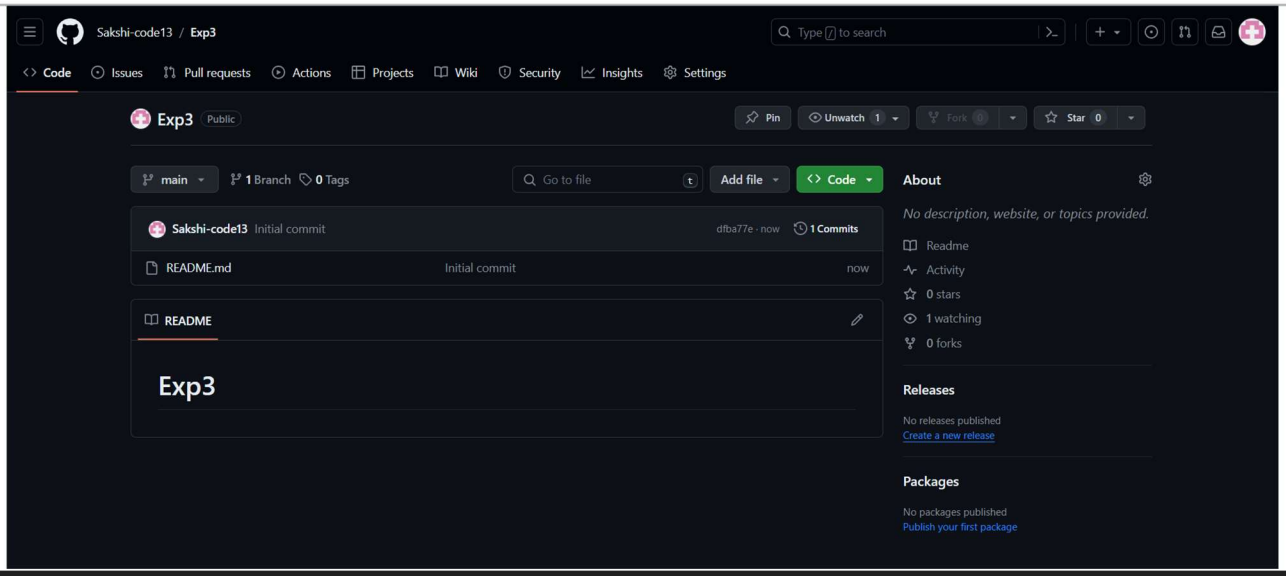
2. Task to be done: In this experiment, we have to create and explore pull request in both GUI and CLI i.e., GitHub and Git Bash.

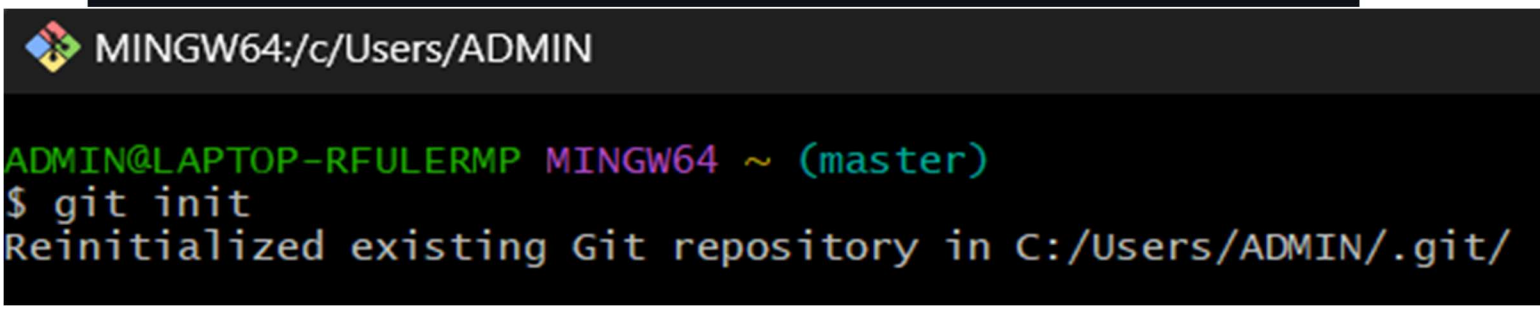
3. Steps for experiment/practical:

1. Firstly, we have to login to our GitHub account. After that we have to make one new repository on GitHub. After that, we will create the directory and then we will initialize it. By using the following command, we will initialize the git.

$ git init

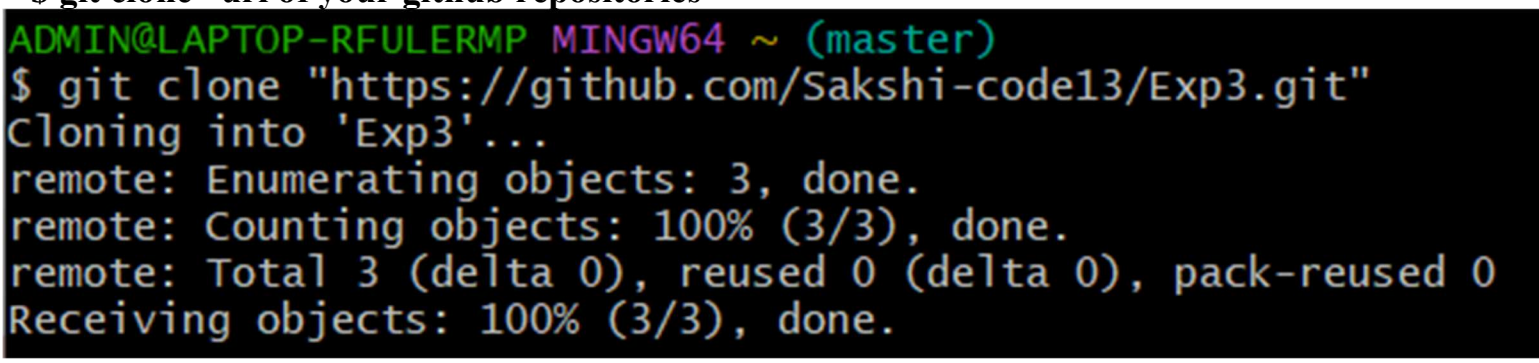

Create a new repository
A repository contains all project files, including the revision history. Already have a project repository elsewhere?
Import a repository.
Required fields are marked with an asterisk (*).
Owner *
Sakshi-code13
/
Repository name *
Exp3
Exp3 is available.
Great repository names are short and memorable. Need inspiration? How about supreme-doodle ?
Description (optional)
Public
Anyone on the internet can see this repository. You choose who can commit.
Private
You choose who can see and commit to this repository.
Initialize this repository with:
Add a README file
This is where you can write a long description for your project. Learn more about READMEs.
Add .gitignore
.gitignore template: None
Choose which files not to track from a list of templates. Learn more about ignoring files.
Choose a license
License: None
A license tells others what they can and can't do with your code. Learn more about licenses.





2. Then, we have to clone the repository by using the following command.

$ git clone "url of your github repositories"



3. Now, we will check the status by the following command: -

$ git status

```
ADMIN@LAPTOP-RFULERMP MINGW64 ~/Exp3 (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean
```

4. We will create a file and edit it, by using the cat command: -
$ vi File_name.txt as here we have used **$ vi Exp3.txt**

```
ADMIN@LAPTOP-RFULERMP MINGW64 ~/Exp3 (main)
$ vi Exp3.txt
```

5. Then, we will add the file and then commit it by using the following commands: -
$ git add .
$ git commit -m "Message"

```
ADMIN@LAPTOP-RFULERMP MINGW64 ~/Exp3 (main)
$ git add .
warning: in the working copy of 'Exp3.txt', LF will be replaced by CRLF the next
 time Git touches it
```

```
ADMIN@LAPTOP-RFULERMP MINGW64 ~/Exp3 (main)
$ git commit -m"Committed Successfully"
[main c0028ce] Committed Successfully
 1 file changed, 2 insertions(+)
 create mode 100644 Exp3.txt
```

6. Now, we will create a new branch, by using the following command:-
$ git checkout -b branch_name as here we have used **$ git checkout -b branch1**

```
ADMIN@LAPTOP-RFULERMP MINGW64 ~/Exp3 (main)
$ git checkout -b branch1
Switched to a new branch 'branch1'
```

7. In this, we have to add a file in this new branch and by using the following command we will achieve that:-

$ vi File_name.txt as here we have used **$ vi Exp3.txt**

```
ADMIN@LAPTOP-RFULERMP MINGW64 ~/Exp3 (branch1)
$ vi Exp3.txt
```

8. Now, we will add and commit the file by using the following commands:-

$ git add .

$ git commit -m "Message you want to print"

```
ADMIN@LAPTOP-RFULERMP MINGW64 ~/Exp3 (branch1)
$ git add .
warning: in the working copy of 'Exp3.txt', LF will be replaced by CRLF the next
 time Git touches it
```

```
ADMIN@LAPTOP-RFULERMP MINGW64 ~/Exp3 (branch1)
$ git commit -m"Successfully done"
[branch1 91a5c77] Successfully done
 1 file changed, 1 insertion(+)
```

9. Once again we will switch the branch to the main by using the following command:-

$ git checkout main

```
ADMIN@LAPTOP-RFULERMP MINGW64 ~/Exp3 (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)
```

10. Now we will push main to the GitHub, by using the following command:-

$ git push origin main

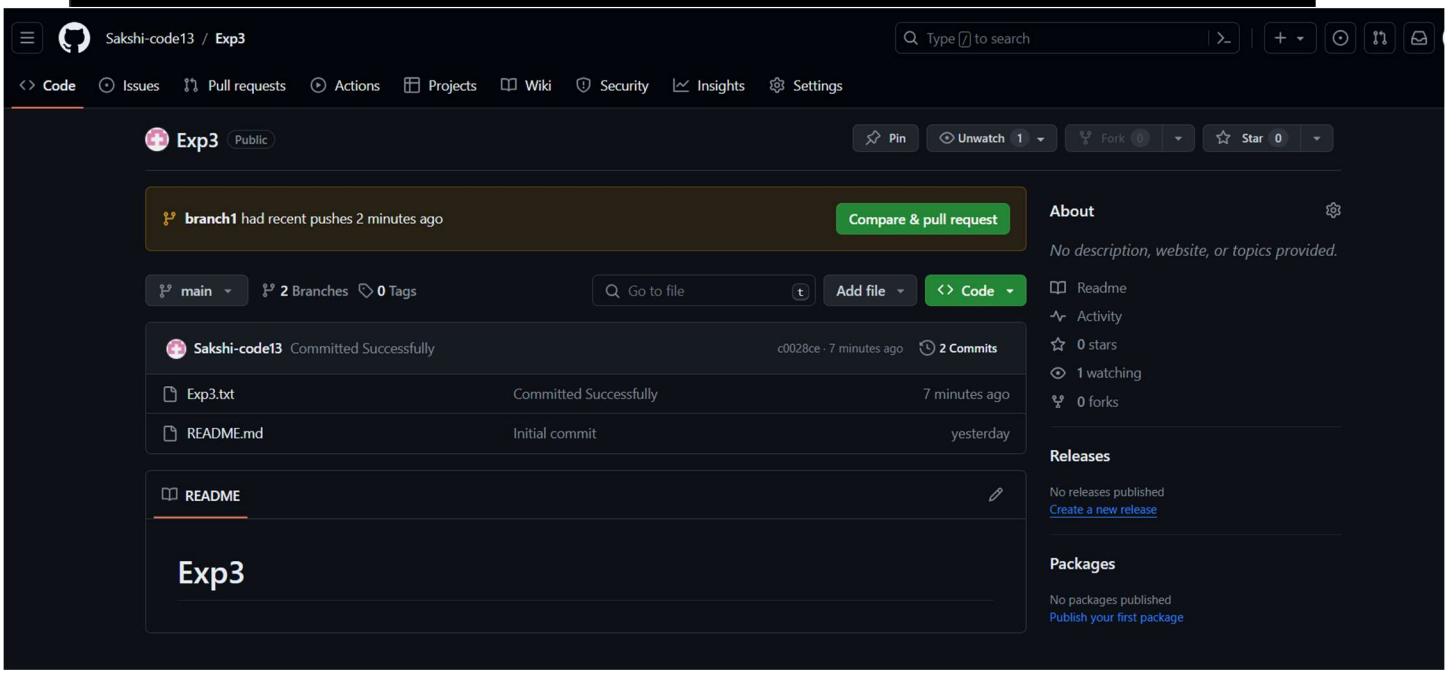
```
ADMIN@LAPTOP-RFULERMP MINGW64 ~/Exp3 (main)
$ git push origin main
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 308 bytes | 308.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Sakshi-code13/Exp3.git
   dfba77e..c0028ce  main -> main
```

11. Then, we will checkout to the branch1 and push it too on the GitHub, by using the commands :-

$ git checkout branch1

$ git push origin branch1

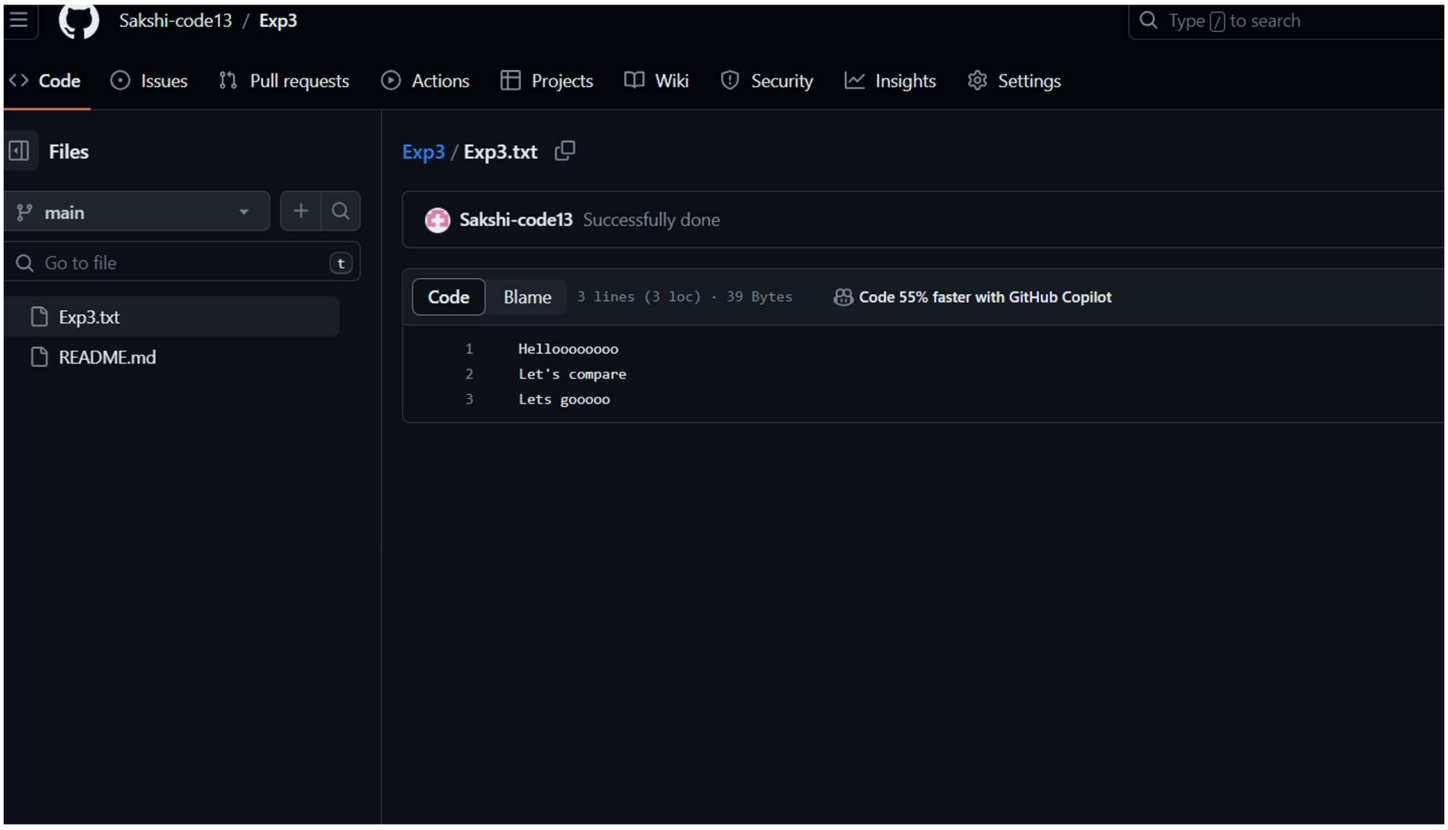
```
ADMIN@LAPTOP-RFULERMP MINGW64 ~/Exp3 (main)
$ git checkout branch1
Switched to branch 'branch1'

ADMIN@LAPTOP-RFULERMP MINGW64 ~/Exp3 (branch1)
$ git push origin branch1
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 311 bytes | 311.00 KiB/s, done.
Total 3 (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/Sakshi-code13/Exp3/pull/new/branch1
remote:
To https://github.com/Sakshi-code13/Exp3.git
 * [new branch]      branch1 -> branch1
```

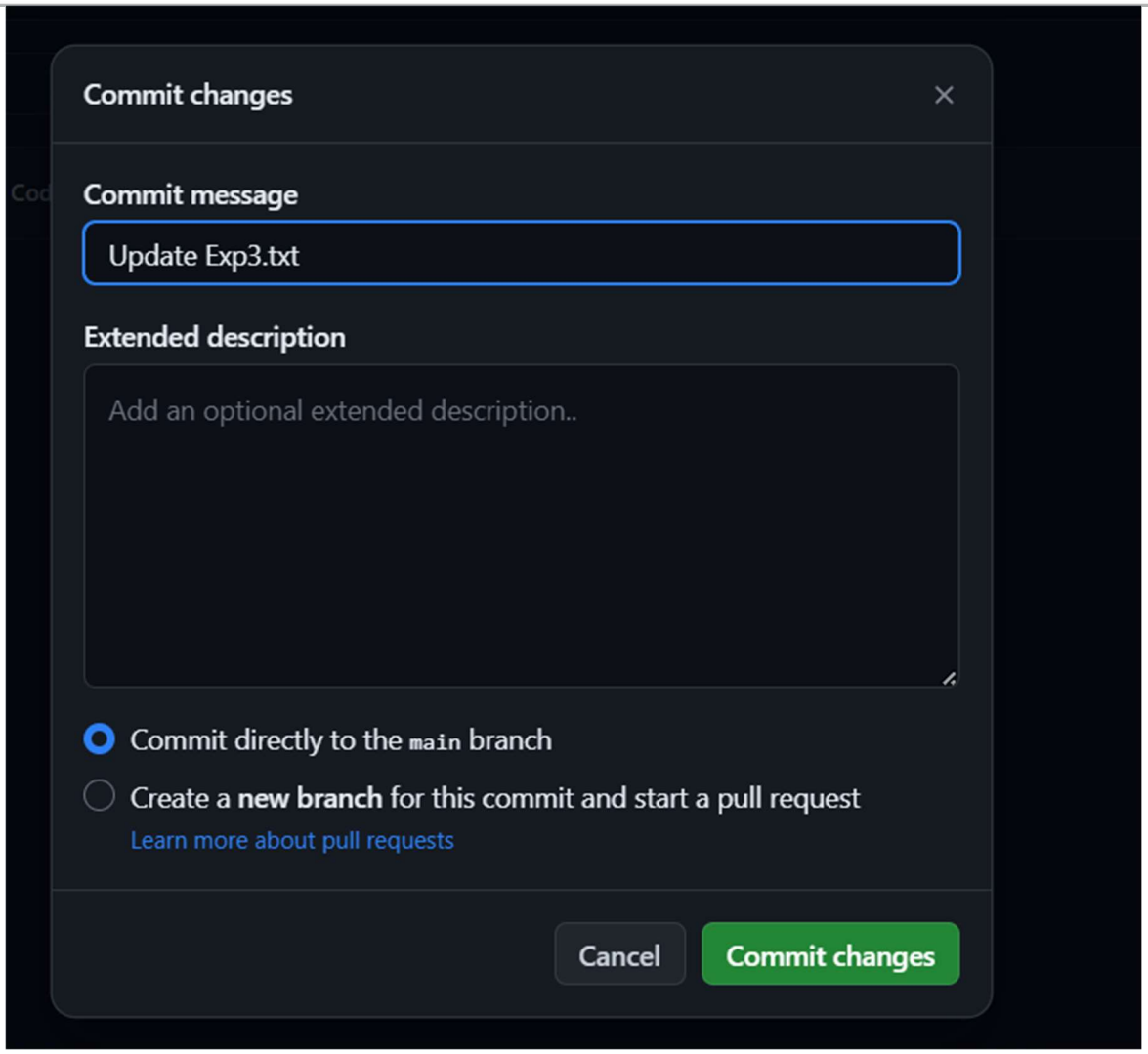


12. Now, we can see the content of the file by using the following command, and also on GitHub:-

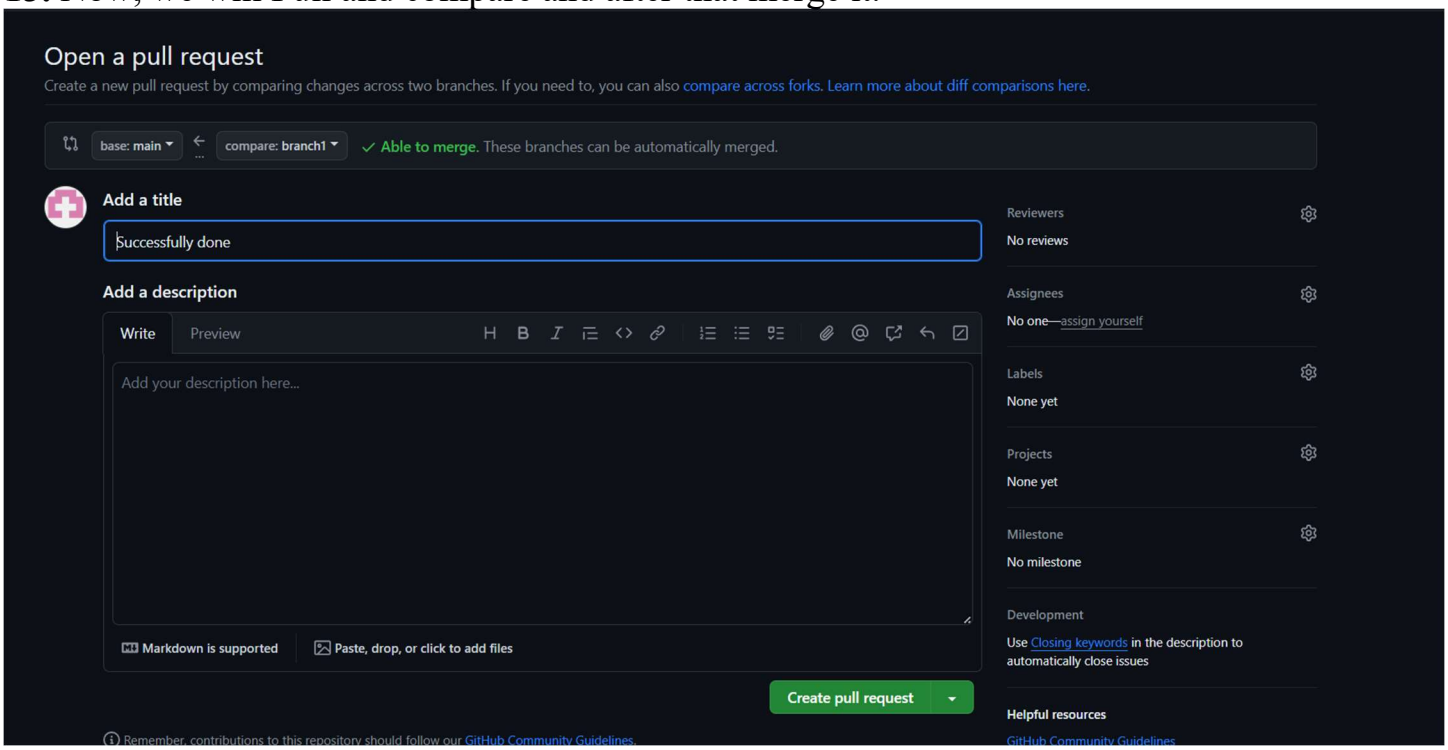
$ cat Exp3.txt

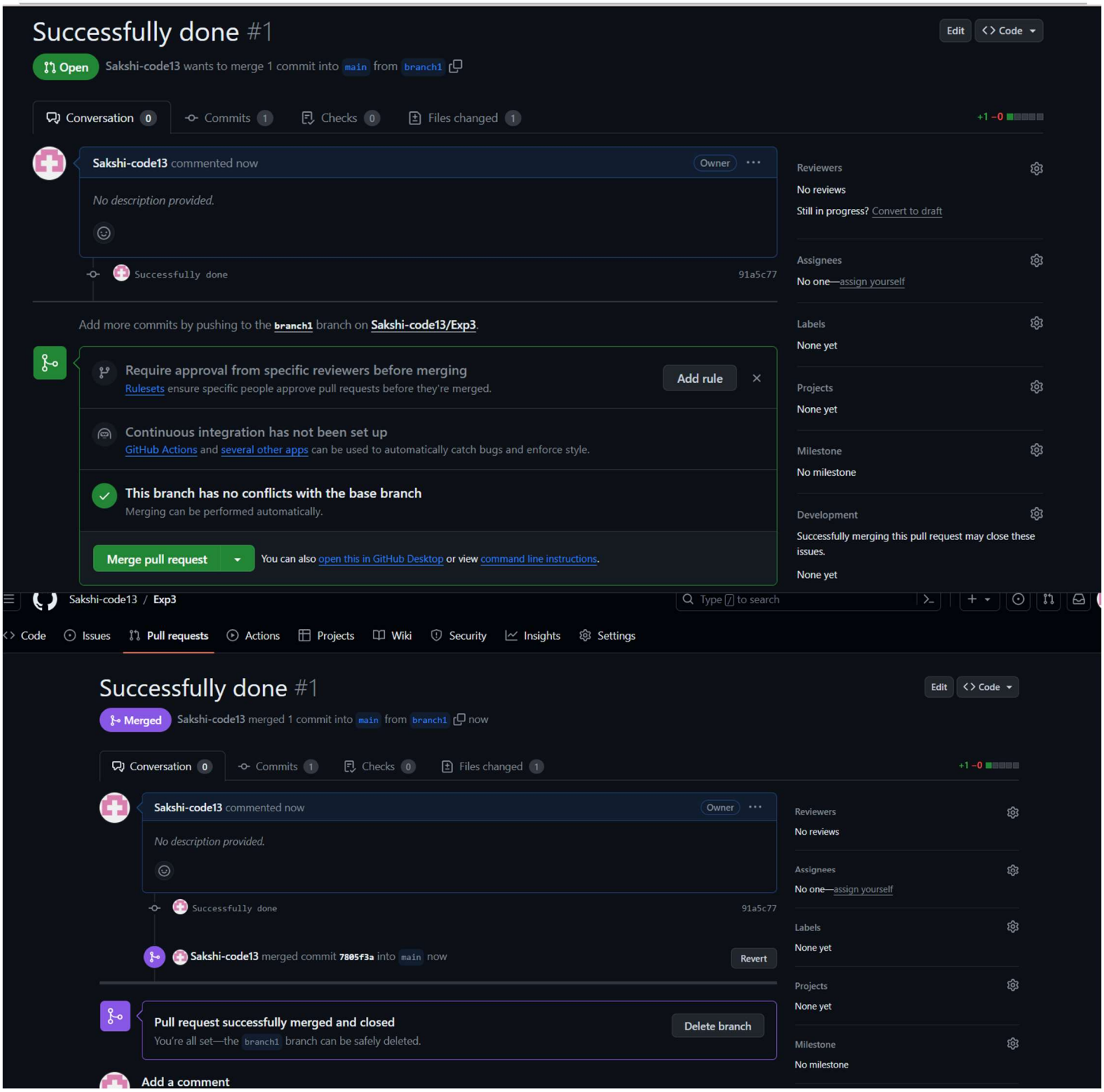
```
ADMIN@LAPTOP-RFULERMP MINGW64 ~/Exp3 (branch1)
$ cat Exp3.txt
Hellooooooooo
Let's compare
Lets gooooo
```




Commit changes
Commit message
Update Exp3.txt
Extended description
Add an optional extended description..
Commit directly to the main branch
Create a new branch for this commit and start a pull request
Learn more about pull requests
Cancel
Commit changes

13. Now, we will Pull and compare and after that merge it.




Successfully done #1
Edit
Code
Open
Sakshi-code13 wants to merge 1 commit into main from branch1
Conversation 0
Commits 1
Checks 0
Files changed 1
+1 −0
Sakshi-code13 commented now
Owner
No description provided.
Successfully done
91a5c77
Add more commits by pushing to the branch1 branch on Sakshi-code13/Exp3.
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.
Reviewers
No reviews
Still in progress? Convert to draft
Assignees
No one—assign yourself
Labels
None yet
Projects
None yet
Milestone
No milestone
Development
Successfully merging this pull request may close these issues.
None yet
Sakshi-code13 / Exp3
Type / to search
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
Successfully done #1
Edit
Code
Merged
Sakshi-code13 merged 1 commit into main from branch1 now
Conversation 0
Commits 1
Checks 0
Files changed 1
+1 −0
Sakshi-code13 commented now
Owner
No description provided.
Successfully done
91a5c77
Sakshi-code13 merged commit 7805f3a into main now
Revert
Pull request successfully merged and closed
You're all set—the branch1 branch can be safely deleted.
Delete branch
Add a comment
Reviewers
No reviews
Assignees
No one—assign yourself
Labels
None yet
Projects
None yet
Milestone
No milestone

14. Although after making changes to the file on the GitHub, we will use fetch command to fetch the updated details on the screen but it will show the older result.

```
ADMIN@LAPTOP-RFULERMP MINGW64 ~/Exp3 (branch1)
$ git fetch
remote: Enumerating objects: 8, done.
remote: Counting objects: 100% (8/8), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (4/4), 1.80 KiB | 167.00 KiB/s, done.
From https://github.com/Sakshi-code13/Exp3
   c0028ce..5f675fe  main       -> origin/main

ADMIN@LAPTOP-RFULERMP MINGW64 ~/Exp3 (branch1)
$ cat Exp3.txt
Hellooooooooo
Let's compare
Lets gooooo
```

15. But, by using the command $ git pull origin main we can see the updated result by using the command $ cat Exp3.txt

```
ADMIN@LAPTOP-RFULERMP MINGW64 ~/Exp3 (branch1)
$ git pull origin main
From https://github.com/Sakshi-code13/Exp3
 * branch            main       -> FETCH_HEAD
Updating 91a5c77..5f675fe
Fast-forward
 Exp3.txt | 4 ++--
 1 file changed, 2 insertions(+), 2 deletions(-)
```

```
ADMIN@LAPTOP-RFULERMP MINGW64 ~/Exp3 (branch1)
$ cat Exp3.txt
Hello
Let's compare
Lets go...
```

16. To get the details about the differences we will use the command **$ git diff main**

```
ADMIN@LAPTOP-RFULERMP MINGW64 ~/Exp3 (branch1)
$ git diff main
diff --git a/Exp3.txt b/Exp3.txt
index 4ed5d28..3475e09 100644
--- a/Exp3.txt
+++ b/Exp3.txt
@@ -1,2 +1,3 @@
-Hellooooooooo
+Hello
 Let's compare
+Lets go...
```

17. At last we will checkout to the main branch and after that we will merge the files branch1 to the main branch and then we will get the no difference

```
ADMIN@LAPTOP-RFULERMP MINGW64 ~/Exp3 (branch1)
$ git checkout main
Switched to branch 'main'
Your branch is behind 'origin/main' by 3 commits, and can be fast-forwarded.
  (use "git pull" to update your local branch)
```

```
ADMIN@LAPTOP-RFULERMP MINGW64 ~/Exp3 (main)
$ git merge branch1
Updating c0028ce..5f675fe
Fast-forward
 Exp3.txt | 3 ++-
 1 file changed, 2 insertions(+), 1 deletion(-)
```

```
ADMIN@LAPTOP-RFULERMP MINGW64 ~/Exp3 (main)
$ git diff branch1
```

4. Result: In this experiment, we have created pull requests and explored with the help of Git Bash and GitHub. We initiated the creation of directory, branches, added specific files to it, added and committed it also pushed it to the GitHub, there we have compared it and subsequentially merged it with the main branch.

Learning outcomes (What I have learnt):

1. Understanding Git Workflow
2. Understanding Collaborative Workflow
3. Version Control Proficiency
4. Committing changes
5. Working with staging area.

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.			