

Experiment No 3

Title: Implementation of Commit, Modification on Branch Master, Forking, and GitHub Repository Link

Objective:

To implement commit operations, modifications on the master branch, forking, and repository management using Git and GitHub.

Steps :

1.Push the file on github

```
MINGW64:/e/Devops_Practical/EXP3

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3 (main)
$ git init
Initialized empty Git repository in E:/Devops_Practical/EXP3/.git/

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3 (master)
$ git add Experiment_3.txt

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3 (master)
$ git commit -m "Add the Experiment No 3 File"
[master (root-commit) e4b877c] Add the Experiment No 3 File
1 file changed, 26 insertions(+)
create mode 100644 Experiment_3.txt

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3 (master)
$ git remote add origin https://github.com/akshatasangale16/EXP3.git
```

```
MINGW64:/e/Devops_Practical/EXP3

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3 (master)
$ git commit -m "Add the Experiment No 3 File"
[master (root-commit) e4b877c] Add the Experiment No 3 File
1 file changed, 26 insertions(+)
create mode 100644 Experiment_3.txt

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3 (master)
$ git remote add origin https://github.com/akshatasangale16/EXP3.git

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3 (master)
$ git push -u origin master
warning: git-credential-manager-core was renamed to git-credential-manager
warning: see https://aka.ms/gcm/rename for more information
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 540 bytes | 540.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/akshatasangale16/EXP3.git
 * [new branch]      master -> master
branch 'master' set up to track 'origin/master'.
```

2. Clone a Remote Repository

```
MINGW64:/e/Devops_Practical/EXP3/EXP3
HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3 (master)
$ git clone https://github.com/akshatasangale16/EXP3.git
Cloning into 'EXP3'...
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 3 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (3/3), done.

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3 (master)
$ cd EXP3
```

3. Create and Switch to a New Branch

```
MINGW64:/e/Devops_Practical/EXP3/EXP3
HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (master)
$ git branch
* master

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (master)
$ git branch -a
* master
remotes/origin/HEAD -> origin/master
remotes/origin/main
remotes/origin/master

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (master)
$ git branch new-feature

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (master)
$ git checkout new-feature
```

4. Make Changes and Commit

5. Push Changes to GitHub

```
HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (new-feature)
$ git add INFO.txt

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (new-feature)
$ git commit -m "Added new file related to information"
[new-feature c514eea] Added new file related to information
1 file changed, 3 insertions(+)
create mode 100644 INFO.txt

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (new-feature)
$
```

```

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (new-feature)
$ git add INFO.txt

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (new-feature)
$ git commit -m "Added new file related to information"
[new-feature c514eea] Added new file related to information
1 file changed, 3 insertions(+)
create mode 100644 INFO.txt

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (new-feature)
$ git push origin new-feature
warning: git-credential-manager-core was renamed to git-credential-manager
warning: see https://aka.ms/gcm/rename for more information
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 364 bytes | 364.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0

```

6. Merge the Branch into Master

```

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (new-feature)
$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (master)
$ git pull origin master
From https://github.com/akshatasangale16/EXP3
* branch          master      -> FETCH_HEAD
Already up to date.

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (master)
$ git merge new-feature
Updating e4b877c..c514eea
Fast-forward
 INFO.txt | 3 +++
1 file changed, 3 insertions(+)
create mode 100644 INFO.txt

```

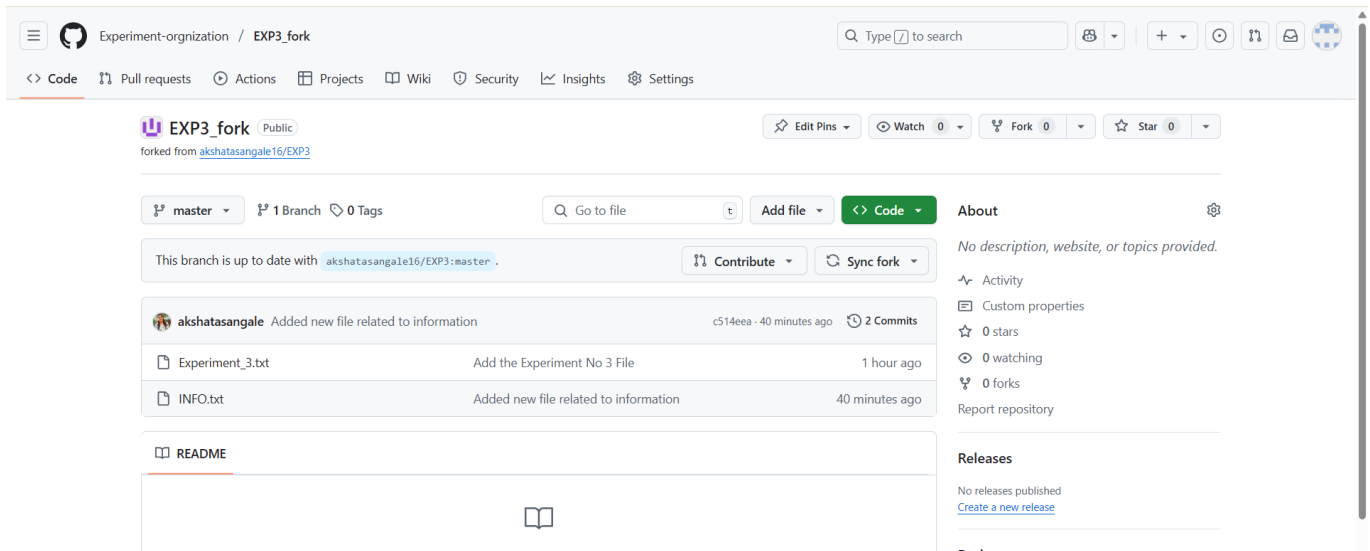
```

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (master)
$ git push origin master
warning: git-credential-manager-core was renamed to git-credential-manager
warning: see https://aka.ms/gcm/rename for more information
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/akshatasangale16/EXP3.git
 e4b877c..c514eea  master -> master

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (master)
$ |

```

7. Fork a Repository



```
HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (master)
$ git clone https://github.com/Experiment-organization/EXP3_fork.git
Cloning into 'EXP3_fork'...
remote: Enumerating objects: 6, done.
remote: Counting objects: 100% (6/6), done.
remote: Compressing objects: 100% (5/5), done.
remote: Total 6 (delta 0), reused 6 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (6/6), done.

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (master)
$ |
```

8.Delete a Branch (After Merging)

```
HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (master)
$ git branch -d new-feature
Deleted branch new-feature (was c514eea).

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (master)
$ git push origin --delete new-feature
warning: git-credential-manager-core was renamed to git-credential-manager
warning: see https://aka.ms/gcm/rename for more information
To https://github.com/akshatasangale16/EXP3.git
- [deleted]          new-feature

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (master)
$ |
```

9.Undo Change

git reset --hard <commit-hash> : Removes commits permanently
git revert <commit-hash>:Creates a new commit that undoes changes

```

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (master)
$ git log --oneline
1ca11a2 (HEAD -> master) Revert "Add the Experiment No 3 File"
c514eea (origin/master, origin/HEAD) Added new file related to information
e4b877c (origin/main) Add the Experiment No 3 File

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (master)
$ git reset --hard c514eea
HEAD is now at c514eea Added new file related to information

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (master)
$ git log --oneline
c514eea (HEAD -> master, origin/master, origin/HEAD) Added new file related to i
nformation
e4b877c (origin/main) Add the Experiment No 3 File

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (master)
$

```

```

MINGW64:/e/Devops_Practical/EXP3/EXP3
Revert "Add the Experiment No 3 File"

This reverts commit e4b877c76fcfcc45771859ebfcd771b7cf1b4783.

# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
#
# On branch master
# Your branch is up to date with 'origin/master'.
#
# Changes to be committed:
#   deleted:    Experiment_3.txt
#
# Untracked files:
#   EXP3_fork/
#
~
~
~
~
~
~
.git/COMMIT_EDITMSG [unix] (19:20 20/03/2025) 1,1 All
"/e/Devops_Practical/EXP3/EXP3/.git/COMMIT_EDITMSG" [unix] 16L, 404B

```

```

[master 1ca11a2] Revert "Add the Experiment No 3 File"
1 file changed, 26 deletions(-)
delete mode 100644 Experiment_3.txt

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (master)
$

```

10. Stashing Changes

```
HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (master)
$ git stash save "work in progress"
No local changes to save

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (master)
$ git stash pop
No stash entries found.

HPW@LAPTOP-TB5614NC MINGW64 /e/Devops_Practical/EXP3/EXP3 (master)
$
```

Conclusion:

This experiment demonstrated how to manage version control effectively using Git. It covered committing changes, branching, merging, forking, and undoing changes, essential for team collaboration and code management.