Experiment-3.2

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Branch: CSE(DEVOPS)   **Section/Group:** 22BCD-1/B

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

1. Aim/Overview of the practical: Understanding the various reset modes..

2. Task to be done: git reset, different reset modes etc.

3. Steps for Experiment: -

1). Create a new repository in your local machine i.e. (**mkdir** <repo_name>), or go to the already created repository by (**cd** <repo_name>).

```
adarsh@ASUS MINGW64 ~ (master)
$ cd 22BCD-1
```

2). Now create a new file by (**vi** <file_name>) and some content inside it.

```
adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ vi exp9.txt

adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ cat exp9.txt
this file is for exp 9.
adding some content inside it.
```

3). After that now add and commit your changes by (**git add .** & **git commit -m** "your message).

```
adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ git add .
warning: in the working copy of 'exp9.txt', LF will be replaced by CRLF

adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ git commit -m "exp9 first commit"
[main d510394] exp9 first commit
 1 file changed, 2 insertions(+)
 create mode 100644 exp9.txt
```

4). Now again made some changes in the file by (**vi** <file_name>).

```
adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ vi exp9.txt
```

5). Now check the status of the file it will show modified by (**git status**).

```
adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ git status
On branch main
Your branch is ahead of 'origin/main' by 4 commits.
  (use "git push" to publish your local commits)

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   exp9.txt
```

6). Now add and commit your second changes which was done in the file by (**git add . & git commit -m "**your message**"**).

```
adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ git add .
warning: in the working copy of 'exp9.txt', LF will be replaced by CRLF

adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ git commit -m "2nd commit after modification"
[main f06f00c] 2nd commit after modification
 1 file changed, 1 insertion(+)
```

7). Now check the histories by (**git log**).

```
adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ git log
commit f06f00cfcaba7a0d0531aef12bae0f70f5039f56 (HEAD -> main)
Author: adarshkrsingh07 <adarshkrdixit@gmail.com>
Date:   Thu Apr 11 21:32:39 2024 +0530

    2nd commit after modification

commit d510394d3737728b0c0d0dcaa8e855e0e922cfbc
Author: adarshkrsingh07 <adarshkrdixit@gmail.com>
Date:   Thu Apr 11 21:31:16 2024 +0530

    exp9 first commit
```

8). Now do some reset commands firstly execute soft reset by (**git reset --soft** hashcode) it will move the file to the index/staging area and check the **git status**.

```
adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ git reset --soft d51039

adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ git status
On branch main
Your branch is ahead of 'origin/main' by 4 commits.
  (use "git push" to publish your local commits)

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   exp9.txt
```

9). Now execute mixed reset by (**git reset –mixed hashcode**) it will move the file form repository to the working directory.

```
adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ git reset --mixed d51039
Unstaged changes after reset:
M       exp9.txt

adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ git status
On branch main
Your branch is ahead of 'origin/main' by 4 commits.
  (use "git push" to publish your local commits)

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   exp9.txt
```

9). Now execute hard reset by (**git reset –hard hashcode**) it will remove the file form all the stages i.e. repository,staging and working directory.

```
adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ git reset --hard d51039
HEAD is now at d510394 exp9 first commit

adarsh@ASUS MINGW64 ~/22BCD-1 (main)
$ git status
On branch main
Your branch is ahead of 'origin/main' by 4 commits.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean
```

Learning outcomes (What I have learnt):

1. Learnt about Git.
2. Learnt about GitHub.
3. Learnt about various git reset commands that can be applied on Git Bash.
4. Learnt about git reset modes.

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.			