

## Experiment -3.1

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**Branch:** CSE (Devops)  
**Semester:** 4th  
**Subject Name:** Git and Git Hub

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**Section/Group:** 22BCD-1\A  
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### 1. Aim/Overview of the practical:

Git Merge Conflicts and resolving Git merge conflicts

### 2. Software Used:

Git Bash, Git-Hub.

### 3. Steps for experiment/practical:

1. Create a new directory on your local device, then open the repo and initialize.

```
ASUS TUF@sushant MINGW64 ~ (main)
$ mkdir Git-Exp.8

ASUS TUF@sushant MINGW64 ~ (main)
$ cd Git-Exp.8/

ASUS TUF@sushant MINGW64 ~/Git-Exp.8 (main)
$ git init
Initialized empty Git repository in C:/Users/ASUS TUF/Git-Exp.8/.git/
```

2. Use Git Bash to open the file using the command “vi Check\_diff.txt”. Edit the content of the file as needed.

```
ASUS TUF@sushant MINGW64 ~/Git-Exp.8 (main)
$ vi Check_diff.txt
```

3. Add the changes to the staging area using the command “git add .”
4. Commit them with a descriptive message using "git commit -m 'message'".

```
ASUS TUF@sushant MINGW64 ~/Git-Exp.8 (main)
$ git add Check_diff.txt
warning: in the working copy of 'Check_diff.txt', LF w

ASUS TUF@sushant MINGW64 ~/Git-Exp.8 (main)
$ git commit -m "first commit"
[main (root-commit) 0fc2f49] first commit
1 file changed, 1 insertion(+)
create mode 100644 Check_diff.txt
```

5. Create a new branch named "branch1" using either "git branch branch1" or "git checkout -b branch1".

```
ASUS TUF@sushant MINGW64 ~/Git-Exp.8 (main)
$ git checkout -b branch1
Switched to a new branch 'branch1'

ASUS TUF@sushant MINGW64 ~/Git-Exp.8 (branch1)
$ ls
Check_diff.txt
```

6. Edit the file "vi Check\_diff.txt" add it to the staging area, and commit the changes using the same commands as in step 3&4.

```
ASUS TUF@sushant MINGW64 ~/Git-Exp.8 (branch1)
$ vi Check_diff.txt

ASUS TUF@sushant MINGW64 ~/Git-Exp.8 (branch1)
$ git add Check_diff.txt
warning: in the working copy of 'Check_diff.txt',

ASUS TUF@sushant MINGW64 ~/Git-Exp.8 (branch1)
$ git commit -m "changes made on branch"
[branch1 6376c03] changes made on branch
1 file changed, 1 insertion(+)
```

7. Switch back to the main branch using "git checkout main" and run the "git diff" command to compare changes between branches.

```
ASUS TUF@sushant MINGW64 ~/Git-Exp.8 (branch1)
$ git diff main branch1
diff --git a/Check_diff.txt b/Check_diff.txt
index aa7e41f..6e3d371 100644
--- a/Check_diff.txt
+++ b/Check_diff.txt
@@ -1,2 @@
+This is Experiment-8 of Git and Git-Hub.
+Name - Sushant jha \ UID-22bdo10052
```

8. Then we use "git log" to view all the commits made.

```
ASUS TUF@sushant MINGW64 ~/Git-Exp.8 (branch1)
$ git log
commit 6376c0357a8b2678f199f2f4488dbcd5a45411c9 (HEAD -> branch1)
Author: sushant1236 <sushantjha1236@gmail.com>
Date: Wed Mar 6 10:37:42 2024 +0530

    changes made on branch

commit 0fc2f49fa789caefadfcdf5f7c4ec8338b3a1ebd (main)
Author: sushant1236 <sushantjha1236@gmail.com>
Date: Wed Mar 6 09:58:56 2024 +0530

    first commit
```

9. We can view the log history in different forms using different log commands like “--graph”, “-p”, “-n”, “--oneline”.

```
ASUS TUF@sushant MINGW64 ~/Git-Exp.8 (branch1)
$ git log --oneline
6376c03 (HEAD -> branch1) changes made on branch
0fc2f49 (main) first commit

ASUS TUF@sushant MINGW64 ~/Git-Exp.8 (branch1)
$ git log --graph
* commit 6376c0357a8b2678f199f2f4488dbcd5a45411c9 (HEAD -> branch1)
| Author: sushant1236 <sushantjha1236@gmail.com>
| Date: Wed Mar 6 10:37:42 2024 +0530
|
| changes made on branch
|
* commit 0fc2f49fa789caefadfcdf5f7c4ec8338b3a1ebd (main)
| Author: sushant1236 <sushantjha1236@gmail.com>
| Date: Wed Mar 6 09:58:56 2024 +0530
|
| first commit

ASUS TUF@sushant MINGW64 ~/Git-Exp.8 (branch1)
$ git log -p
commit 6376c0357a8b2678f199f2f4488dbcd5a45411c9 (HEAD -> branch1)
Author: sushant1236 <sushantjha1236@gmail.com>
Date: Wed Mar 6 10:37:42 2024 +0530

changes made on branch

diff --git a/Check_diff.txt b/Check_diff.txt
index aa7e41f..6e3d371 100644
--- a/Check_diff.txt
+++ b/Check_diff.txt
@@ -1,2 @@
This is Experiment-8 of Git and Git-Hub.
+Name - Sushant jha \\\ UID-22bdo10052

commit 0fc2f49fa789caefadfcdf5f7c4ec8338b3a1ebd (main)
Author: sushant1236 <sushantjha1236@gmail.com>
Date: Wed Mar 6 09:58:56 2024 +0530

first commit

diff --git a/Check_diff.txt b/Check_diff.txt
new file mode 100644
index 0000000..aa7e41f
--- /dev/null
+++ b/Check_diff.txt
@@ -0,0 +1 @@
+This is Experiment-8 of Git and Git-Hub.
```

## Learning outcomes (What I have learnt):

1. Understanding Git Workflow
2. Learnt about Git Merge Conflicts.
3. Version Control Proficiency.

- 
4. Committing changes.
  5. Learnt about how to Git merge conflicts.

**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.			