

## Experiment -3.1

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**Branch:** CSE(DevOps)

**Semester:** 4th

**Subject Name-** Git and GitHub

**UID:**22BDO10055

**Section/Group-**22BCD-1(B)

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**1. Aim/Overview of the practical:** Compare the changes in the Git Repository.

**2. Software used:** Git bash and GitHub

**3. Steps for experiment/practical:**

- Create a directory named e8 and then change the directory to e8.
- Use git init, then open a file named EXP8.txt. Write some content in that file, then add that file and then commit it in the staging area.

```
MINGW64/c:/Users/Ayush/e8

ayush@LAPTOP-14JQ3IMU MINGW64 ~ (main)
$ mkdir e8

ayush@LAPTOP-14JQ3IMU MINGW64 ~ (main)
$ cd

ayush@LAPTOP-14JQ3IMU MINGW64 ~ (main)
$ cd e8

ayush@LAPTOP-14JQ3IMU MINGW64 ~/e8 (main)
$ git init
Initialized empty Git repository in C:/Users/ayush/e8/.git/

ayush@LAPTOP-14JQ3IMU MINGW64 ~/e8 (main)
$ vi exp8.txt

ayush@LAPTOP-14JQ3IMU MINGW64 ~/e8 (main)
$ cat exp8.txt
#include <stdio.h>
int main() {

    int number1, number2, sum;

    printf("Enter two integers: ");
    scanf("%d %d", &number1, &number2);

    // calculate the sum
    sum = number1 + number2;

    printf("%d + %d = %d", number1, number2, sum);
    return 0;
}
```

- Now create a new branch named compare and open the same file. Do some changes, and then add the file and then commit it.

```
MINGW64:/c/Users/Ayush/e8

ayush@LAPTOP-14JQ3IMU MINGW64 ~ (main)
$ mkdir e8

ayush@LAPTOP-14JQ3IMU MINGW64 ~ (main)
$ cd

ayush@LAPTOP-14JQ3IMU MINGW64 ~ (main)
$ cd e8

ayush@LAPTOP-14JQ3IMU MINGW64 ~/e8 (main)
$ git init
Initialized empty Git repository in C:/Users/ayush/e8/.git/

ayush@LAPTOP-14JQ3IMU MINGW64 ~/e8 (main)
$ vi exp8.txt

ayush@LAPTOP-14JQ3IMU MINGW64 ~/e8 (main)
$ cat exp8.txt
#include <stdio.h>
int main() {

    int number1, number2, sum;

    printf("Enter two integers: ");
    scanf("%d %d", &number1, &number2);

    // calculate the sum
    sum = number1 + number2;

    printf("%d + %d = %d", number1, number2, sum);
    return 0;
}
```

- Checkout the main branch using git diff compare and compare both the branches, we can easily spot the changes that we have made in the branch compare.

```
ayush@LAPTOP-14JQ3IMU MINGW64 ~/e8 (main)
$ git diff compare
diff --git a/exp8.txt b/exp8.txt
index d723009..3464b9e 100644
--- a/exp8.txt
+++ b/exp8.txt
@@ -1,15 +1,15 @@
#include <stdio.h>
int main() {

-     int n1, n2, c;
+     int number1, number2, sum;

    printf("Enter two integers: ");
-     scanf("%d %d", &n1, &n2);
+     scanf("%d %d", &number1, &number2);

    // calculate the sum
-     c = n1 + n2;
+     sum = number1 + number2;

-     printf("%d + %d = %d", n1, n2, c);
+     printf("%d + %d = %d", number1, number2, sum);
    return 0;
}
```

#### 4. Result/Output/Writing Summary:

In this experiment, we will edit a file, commit changes on GitHub, observe the differences in the local machine, and push and pull from the local to the remote repository.

**Learning outcomes (What I have learnt):**

1. Learn about changes that we have made.
2. Learn about editing a file locally.
3. Learn about creating a new branch and opening the same file in it.
4. Learn how to check the differences in the local machine.
5. Learn how to match the branch with the main branch.

**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.			