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## Exercise 2

### Main Task

1. Run the status command. Notice how it tells you what branch you are in.

```
D:\FULLSTACK70DAYS\GIT\day2ex2>git status
On branch master
nothing to commit, working tree clean
```

2. Use the branch command to create a new branch.

3. Use the checkout command to switch to it.

```
D:\FULLSTACK70DAYS\GIT\day2ex2>git branch stu
D:\FULLSTACK70DAYS\GIT\day2ex2>git checkout stu
Switched to branch 'stu'
```

4. Make a couple of commits in the branch – perhaps adding a new file and/or editing existing ones.

```
D:\FULLSTACK70DAYS\GIT\day2ex2>echo hwy there!>f2.txt
D:\FULLSTACK70DAYS\GIT\day2ex2>git add .
D:\FULLSTACK70DAYS\GIT\day2ex2>git commit -m "added to stu"
[stu af5e8bc] added to stu
1 file changed, 1 insertion(+)
create mode 100644 f2.txt
```

5. Use the log command to see the latest commits. The two you just made should be at the top of the list.

```
D:\FULLSTACK70DAYS\GIT\day2ex2>git log
commit af5e8bcfa022cf31ffb9b4f5bc07b8880ac7acbe (HEAD -> stu)
Author: dilipkumarmcse <dilipkumarmcse2022@ksrce.ac.in>
Date: Sat Jul 13 14:25:20 2024 +0530

    added to stu

commit 4fae6cf188548d8024681fec8fee42651ac3020a (master)
Author: dilipkumarmcse <dilipkumarmcse2022@ksrce.ac.in>
Date: Sat Jul 13 14:16:16 2024 +0530

    initial
```

6. Use the checkout command to switch back to the master branch. Run log again. Notice your commits don't show up now. Check the files also – they should have their original contents.

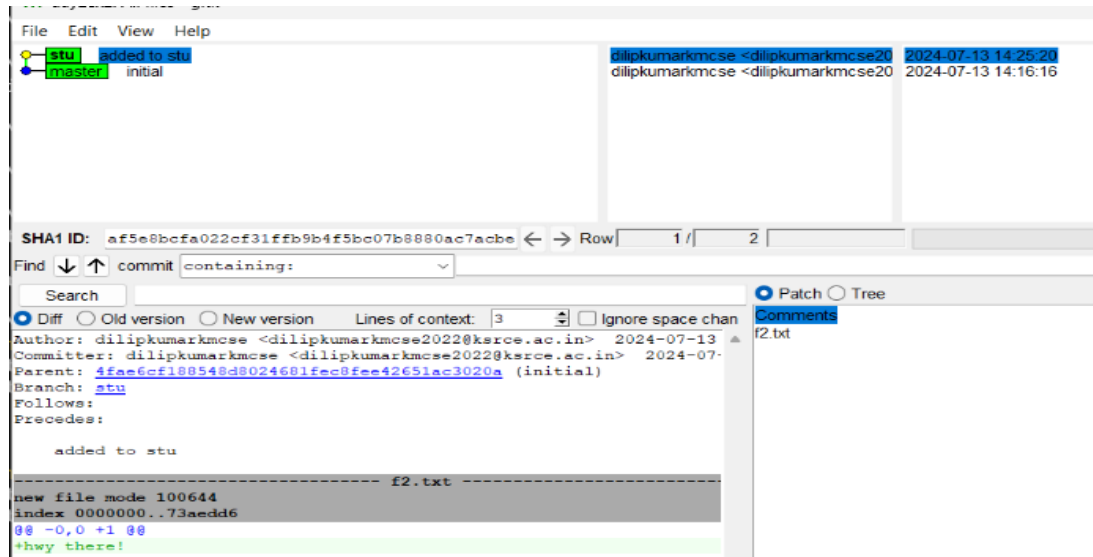
```
D:\FULLSTACK70DAYS\GIT\day2ex2>git checkout master
Switched to branch 'master'
D:\FULLSTACK70DAYS\GIT\day2ex2>git log
commit 4fae6cf188548d8024681fec8fee42651ac3020a (HEAD -> master)
Author: dilipkumarmcse <dilipkumarmcse2022@ksrce.ac.in>
Date: Sat Jul 13 14:16:16 2024 +0530

    initial
```

7. Use the checkout command to switch back to your branch. Use gitk to take a look at the commit graph; notice it's linear.

```
D:\FULLSTACK70DAYS\GIT\day2ex2>git checkout stu
Switched to branch 'stu'

D:\FULLSTACK70DAYS\GIT\day2ex2>gitk
```



8. Now checkout the master branch again. Use the merge command to merge your branch in to it. Look for information about it having been a fast-forward merge. Look at git log, and see that there is no merge commit. Take a look in gitk and see how the DAG is linear.

```
D:\FULLSTACK70DAYS\GIT\day2ex2>git checkout master
Switched to branch 'master'

D:\FULLSTACK70DAYS\GIT\day2ex2>git merge stu
Updating 4fae6cf..af5e8bc
Fast-forward
 f2.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 f2.txt

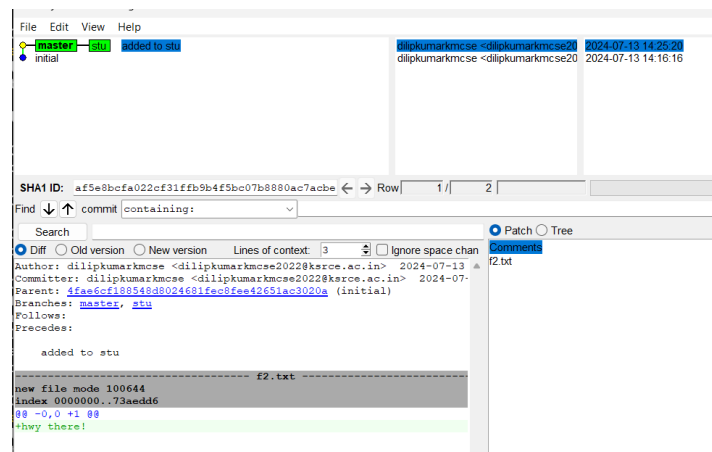
D:\FULLSTACK70DAYS\GIT\day2ex2>git log
commit af5e8bcfa022cf31ffb9b4f5bc07b8880ac7acbe (HEAD -> master, stu)
Author: dilipkumarkmcse <dilipkumarkmcse2022@ksrce.ac.in>
Date: Sat Jul 13 14:25:20 2024 +0530

    added to stu

commit 4fae6cf188548d8024681fec8fee42651ac3020a
Author: dilipkumarkmcse <dilipkumarkmcse2022@ksrce.ac.in>
Date: Sat Jul 13 14:16:16 2024 +0530

    initial

D:\FULLSTACK70DAYS\GIT\day2ex2>gitk
```



9. Switch back to your branch. Make a couple more commits.

```
D:\FULLSTACK70DAYS\GIT\day2ex2>git checkout stu
Switched to branch 'stu'

D:\FULLSTACK70DAYS\GIT\day2ex2>echo >f3.txt

D:\FULLSTACK70DAYS\GIT\day2ex2>git add .

D:\FULLSTACK70DAYS\GIT\day2ex2>git commit -m "more"
[stu db49c5f] more
1 file changed, 1 insertion(+)
create mode 100644 f3.txt
```

10. Switch back to master. Make a commit there, which should edit a different file from the ones you touched in your branch – to be sure there is no conflict.

```
D:\FULLSTACK70DAYS\GIT\day2ex2>git checkout master
Switched to branch 'master'
```

```
D:\FULLSTACK70DAYS\GIT\day2ex2>git merge stu
Updating af5e8bc..db49c5f
Fast-forward
 f3.txt | 1 +
1 file changed, 1 insertion(+)
create mode 100644 f3.txt
```

11. Now merge your branch again. (Aside: you don't need to do anything to inform Git that you only want to merge things added since your previous merge. Due to the way Git works, that kind of issue simply does not come up, unlike in early versions of Subversion.)

```
D:\FULLSTACK70DAYS\GIT\day2ex2>git add ff1.txt

D:\FULLSTACK70DAYS\GIT\day2ex2>git commit -m "diff"
[master 2ec6677] diff
1 file changed, 1 insertion(+)
create mode 100644 ff1.txt
```

12. Look at git log. Notice that there is a merge commit. Also look in gitk. Notice the DAG now shows how things forked, and then were joined up again by a merge commit.

```
D:\FULLSTACK70DAYS\GIT\day2ex2>git log
commit db49c5fcea0d8556009722afa8a98cfda270347 (HEAD -> master, stu)
Author: dilipkumarkmse <dilipkumarkmse2022@ksrce.ac.in>
Date: Sat Jul 13 14:32:14 2024 +0530

    more

commit af5e8bcfa022cf31ffb9b4f5bc07b8880ac7acbe
Author: dilipkumarkmse <dilipkumarkmse2022@ksrce.ac.in>
Date: Sat Jul 13 14:25:20 2024 +0530

    added to stu

commit 4fae6cf188548d8024681fec8fee42651ac3020a
Author: dilipkumarkmse <dilipkumarkmse2022@ksrce.ac.in>
Date: Sat Jul 13 14:16:16 2024 +0530

    initial

D:\FULLSTACK70DAYS\GIT\day2ex2>gitk
```

