DAY - 03

Exercise No – 02

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

```
D:\nandhini>git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   priya.txt
        new file:   priyaedit.txt

Changes not staged for commit:
  (use "git add/rm <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        deleted:    src/file1
        deleted:    src/file11
        deleted:    src/file111
```

2) Use the branch command to create a new branch

```
D:\nandhini>git branch
  branch1
* master

D:\nandhini>git branch branch2

D:\nandhini>git branch
  branch1
  branch2
* master
```

3) Use the checkout command to switch to it.

```
D:\nandhini>git checkout branch1
D       src/file1
D       src/file11
D       src/file111
Switched to branch 'branch1'
```

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

```
D:\nandhini>git add priyacopy.txt

D:\nandhini>git commit -m "mycommitnewcopy1"
[branch1 c2fba82] mycommitnewcopy1
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 priyacopy.txt

D:\nandhini>git commit -m "mycommitnewcopy2"
On branch branch1
Changes not staged for commit:
  (use "git add/rm <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        deleted:    src/file1
        deleted:    src/file11
        deleted:    src/file111

no changes added to commit (use "git add" and/or "git commit -a")
```

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

```
D:\nandhini>git log
commit c2fba821c452a7cce7ef31fe6e7918d395d98b48 (HEAD -> branch1)
Author: Priyadharshini Narayanan <priyanarayanan2603@gmail.com>
Date:   Fri Jul 12 18:23:20 2024 +0530

    mycommitnewcopy1

commit 0443d21d15e9479eff97125f1c6f260711603a9c
Author: Priyadharshini Narayanan <priyanarayanan2603@gmail.com>
Date:   Fri Jul 12 17:47:37 2024 +0530

    commitneweditfile

commit 34527dd851f0fc0d501484a8c9d8fefd1dde4631
Author: Priyadharshini Narayanan <priyanarayanan2603@gmail.com>
Date:   Fri Jul 12 17:44:56 2024 +0530

    commitnewfile

commit 93eb6ddb345b987e2f629396a2faf92b36059d23
Author: Priyadharshini Narayanan <priyanarayanan2603@gmail.com>
Date:   Fri Jul 12 15:59:53 2024 +0530
```

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:\nandhini>git checkout branch2
D       src/file1
D       src/file11
D       src/file111
Switched to branch 'branch2'

D:\nandhini>git branch master
fatal: a branch named 'master' already exists

D:\nandhini>git checkout master
D       src/file1
D       src/file11
D       src/file111
Switched to branch 'master'
```

```
D:\nandhini>git log
commit 636e0f69839bd5922acad6004ab349f8cc79af1b (HEAD -> master, branch2)
Author: Priyadharshini Narayanan <priyanarayanan2603@gmail.com>
Date:   Fri Jul 12 18:05:01 2024 +0530

    commitnewfile111

commit 93eb6ddb345b987e2f629396a2faf92b36059d23
Author: Priyadharshini Narayanan <priyanarayanan2603@gmail.com>
Date:   Fri Jul 12 15:59:53 2024 +0530

    mycommit5

commit 073b6e32573d0315299e1162c557250f4b864f05
Author: Priyadharshini Narayanan <priyanarayanan2603@gmail.com>
Date:   Fri Jul 12 15:55:12 2024 +0530

    mycommit3

commit 0ef046bad34300fd1942e3fbe9df41df467b2a68
Author: Priyadharshini Narayanan <priyanarayanan2603@gmail.com>
Date:   Fri Jul 12 15:46:38 2024 +0530

    mycommit2

commit 8eb85397b7bc861fd4767a9cfd58330954a7427c
Author: Priyadharshini Narayanan <priyanarayanan2603@gmail.com>
Date:   Fri Jul 12 15:44:55 2024 +0530

    mycommit1
```
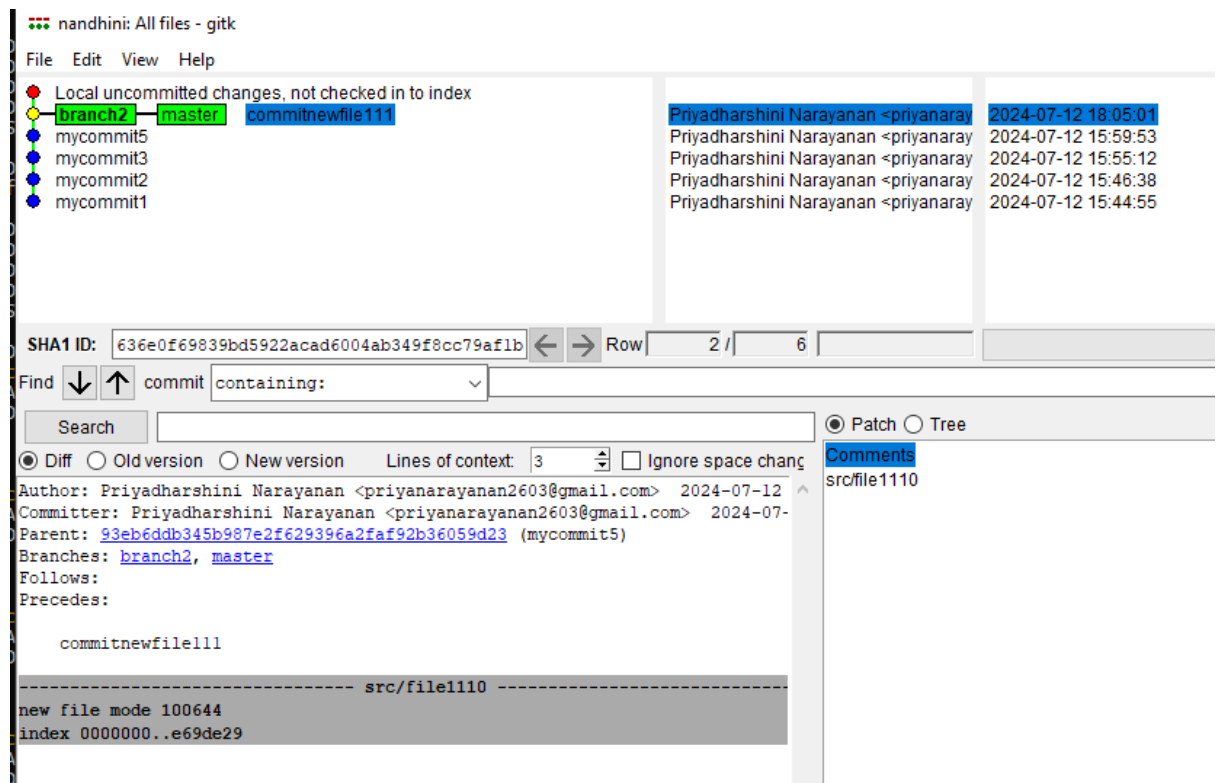
7) Use the checkout command to switch back to your branch.
Use gitk to take a look at the commit graph; notice it's linear.

```
D:\nandhini>git checkout branch2
D       src/file1
D       src/file11
D       src/file111
Switched to branch 'branch2'
```

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

```
D:\nandhini>git checkout master
D        src/file1
D        src/file11
D        src/file111
Switched to branch 'master'
```

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

```
D:\Day2>git checkout Mybranch
Switched to branch 'Mybranch'

D:\Day2>git add .

D:\Day2>git commit -m "ChangeInFile2"
[Mybranch f28c20f] ChangeInFile2
 1 file changed, 1 insertion(+)

D:\Day2>git add .

D:\Day2>git commit -m "ChangeInFile3"
[Mybranch 2f0e612] ChangeInFile3
 1 file changed, 1 insertion(+)
```

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:\Day2>git ls-tree master
100644 blob ce37df6e60fb4a1d736dd2face528d33bad979e6    file1.txt
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391    file2.txt
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391    file3.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:\Day2>git merge Mybranch
Updating 1f39381..2f0e612
Fast-forward
 file2.txt | 1 +
 file3.txt | 1 +
 2 files changed, 2 insertions(+)
```

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:\Day2>git log
commit 2f0e6129ce9630ce41f8dce0882c5a618a19c53b (HEAD -> master, Mybranch)
Author: Dhivya Saravanan <dhivyavbm@gmail.com>
Date:   Fri Jul 12 18:40:38 2024 +0530

    ChangeInFile3

commit f28c20f3fe4f0c10a89633487e53556d01443ae6
Author: Dhivya Saravanan <dhivyavbm@gmail.com>
Date:   Fri Jul 12 18:39:48 2024 +0530

    ChangeInFile2

commit 1f39381f83dfedb67a85e21a45f9ddd891ef0d80
Author: Dhivya Saravanan <dhivyavbm@gmail.com>
Date:   Fri Jul 12 18:31:16 2024 +0530

    Changefile

commit d0b29f102ee00aafd1da87f367d8f3bc7e9ef42b
Author: Dhivya Saravanan <dhivyavbm@gmail.com>
Date:   Fri Jul 12 18:30:14 2024 +0530

    addfile1

commit c0a93e1077f3da88b07779f6422dd4c0d53970fe
Author: Dhivya Saravanan <dhivyavbm@gmail.com>
Date:   Fri Jul 12 18:26:16 2024 +0530

    Msg

D:\Day2>gitk
```