

GIT LAB ASSIGNMENT → 02

EXERCISE -02

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BRANCH : B.E

**DEPT : COMPUTER SCIENCE AND
ENGINEERING**

YEAR : IV - YEAR

COLLEGE : KSRIET

DATE : 12.07.2024

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

```
C:\Users\home>D:
D:\>Gitrepo
'Gitrepo' is not recognized as an internal or external command,
operable program or batch file.
D:\>cd Gitrepo
D:\GitRepo>git status
On branch MyBranch-1
nothing to commit, working tree clean
D:\GitRepo>git branch
* MyBranch-1
  master
```

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

```
D:\GitRepo>git branch
* MyBranch-1
  master
D:\GitRepo>git branch MyBranch-2
D:\GitRepo>git checkout MyBranch-2
Switched to branch 'MyBranch-2'
```

3. Use the **checkout** command to switch to it.

```
D:\GitRepo>git checkout MyBranch-2
Switched to branch 'MyBranch-2'
D:\GitRepo>git add six.txt
D:\GitRepo>git status
On branch MyBranch-2
changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   six.txt
```

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

```
D:\GitRepo>git commit -m "Editing"
[MyBranch-2 a4f2f3c] Editing
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 six.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:\GitRepo>git commit -m "Editing"
MyBranch-2 a4f2f3c] Editing
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 six.txt

D:\GitRepo>git log
commit a4f2f3c49274a40938e15cc7a4bb9e531679e0ca (HEAD -> MyBranch-2)
author: ShobnaSamukthaRaj <samukthasamuktha2@gmail.com>
date: Fri Jul 12 17:49:32 2024 +0530

    Editing

commit ee94f45cf07f1af632bde52514b9fda1b3b7c611 (MyBranch-1)
author: ShobnaSamukthaRaj <samukthasamuktha2@gmail.com>
date: Thu Jul 11 15:13:57 2024 +0530

    Delete Java Commit

commit d5120a5cb87e58e37470583ff744856b69d1f01d
author: ShobnaSamukthaRaj <samukthasamuktha2@gmail.com>
date: Thu Jul 11 14:57:02 2024 +0530

    Java Commit

commit 1ea02e339f796099c6a4d2f1769e3872c64f292e
author: ShobnaSamukthaRaj <samukthasamuktha2@gmail.com>
date: Thu Jul 11 14:56:03 2024 +0530

    C Commit
```

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:\GitRepo>git log
commit b5ba5ec6f126f20610e85c8ae01030376781c790 (HEAD -> master)
Author: ShobnaSamukthaRaj <samukthasamuktha2@gmail.com>
Date: Fri Jul 12 11:38:26 2024 +0530

    MyCommit-4

commit ee94f45cf07f1af632bde52514b9fda1b3b7c611 (MyBranch-1)
Author: ShobnaSamukthaRaj <samukthasamuktha2@gmail.com>
Date: Thu Jul 11 15:13:57 2024 +0530

    Delete Java Commit

commit d5120a5cb87e58e37470583ff744856b69d1f01d
Author: ShobnaSamukthaRaj <samukthasamuktha2@gmail.com>
Date: Thu Jul 11 14:57:02 2024 +0530

    Java Commit

commit 1ea02e339f796099c6a4d2f1769e3872c64f292e
Author: ShobnaSamukthaRaj <samukthasamuktha2@gmail.com>
Date: Thu Jul 11 14:56:03 2024 +0530

    C Commit

commit 9d6f964690c2882eaf510665ee03178b21a1ec82
Author: ShobnaSamukthaRaj <samukthasamuktha2@gmail.com>
Date: Thu Jul 11 14:53:50 2024 +0530

    TXT Commit

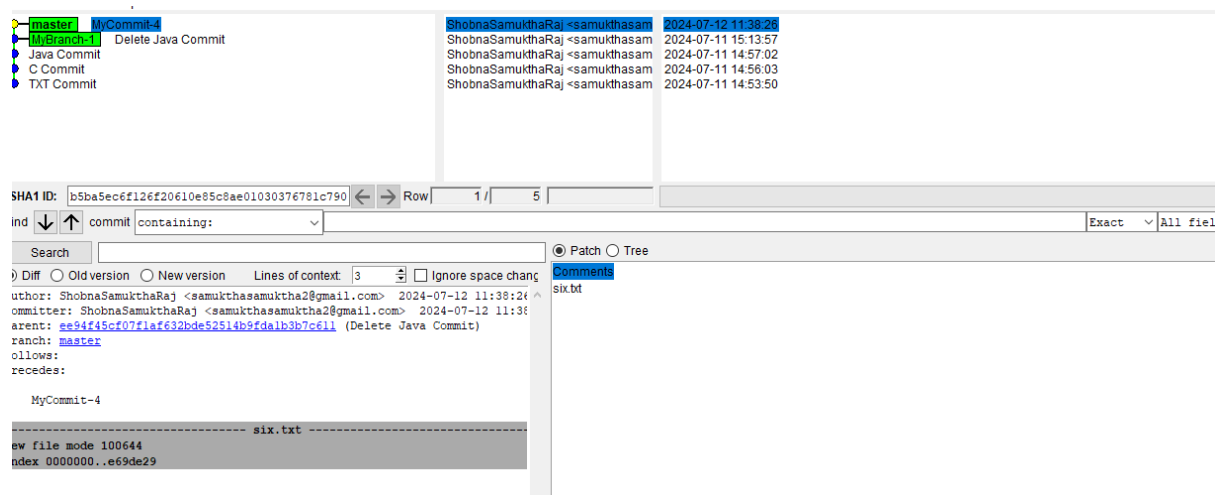
D:\GitRepo>
```

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:\GitRepo>gitk

D:\GitRepo>git checkout master
Switched to branch 'master'
```

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:\GitRepo>git log
commit deb95aee40c6320498b13b183ac4595df6f7f67c (HEAD -> MyBranch-2)
Merge: a4f2f3c 082831e
Author: ShobnaSamukthaRaj <samukthasamuktha2@gmail.com>
Date: Fri Jul 12 18:35:56 2024 +0530

Commit-1

commit 082831e75f5704e9879dcab58906d97a0ce8c7e4 (master)
Author: ShobnaSamukthaRaj <samukthasamuktha2@gmail.com>
Date: Fri Jul 12 18:30:08 2024 +0530

Commit-2

commit 6eaa354c7fe346a611d07ae89ac00ed577180d9a
Author: ShobnaSamukthaRaj <samukthasamuktha2@gmail.com>
Date: Fri Jul 12 18:29:51 2024 +0530

Commit-1

commit a4f2f3c49274a40938e15cc7a4bb9e531679e0ca
Author: ShobnaSamukthaRaj <samukthasamuktha2@gmail.com>
Date: Fri Jul 12 17:49:32 2024 +0530

Editing

commit b5ba5ec6f126f20610e85c8ae01030376781c790
Author: ShobnaSamukthaRaj <samukthasamuktha2@gmail.com>
Date: Fri Jul 12 11:38:26 2024 +0530

D:\GitRepo>
D:\GitRepo>
```

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

D:\GitRepo>git ls-tree master
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391    eleven.txt
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391    file1.txt
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391    file2.txt
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391    five.c
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391    four.c
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391    one.c
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391    six.txt
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391    three.c
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391    two.c

D:\GitRepo>git ls-tree MyBranch-2
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391    eleven.txt
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391    file1.txt
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391    file2.txt
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391    five.c
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391    four.c
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391    one.c
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391    six.txt
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391    three.c
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391    two.c

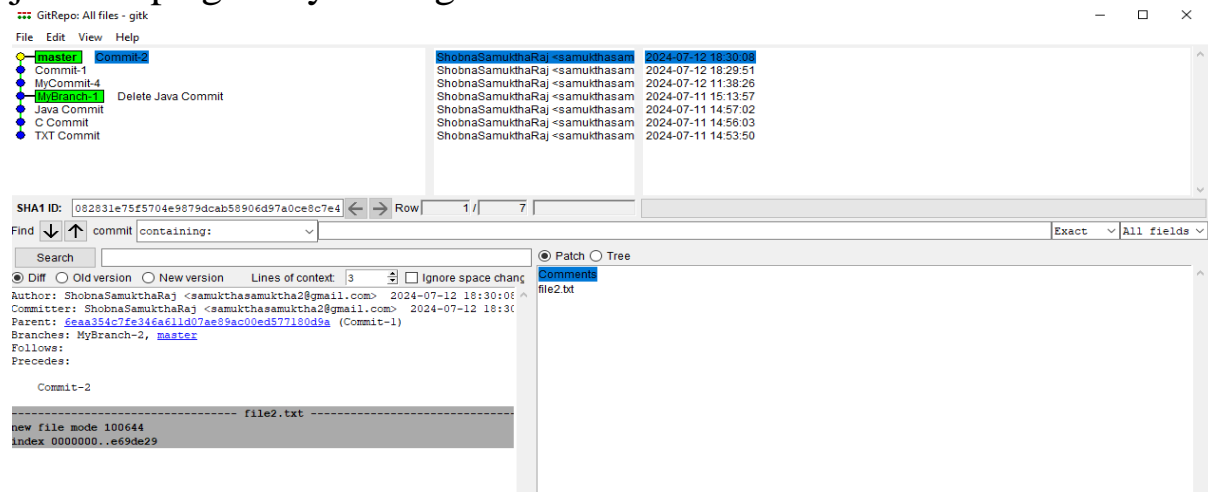
D:\GitRepo>
```

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:\GitRepo>git merge MyBranch-1
Already up to date.

D:\GitRepo>
```

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:\GitRepo>git merge MyBranch-1
Already up to date.

D:\GitRepo>git log
commit 082831e75f5704e9879dcab58906d97a0ce8c7e4 (HEAD -> master)
Author: ShobnaSamukthaRaj <samukthasamuktha2@gmail.com>
Date: Fri Jul 12 18:30:08 2024 +0530

    Commit-2

commit 6eaa354c7fe346a611d07ae89ac00ed577180d9a
Author: ShobnaSamukthaRaj <samukthasamuktha2@gmail.com>
Date: Fri Jul 12 18:29:51 2024 +0530

    Commit-1

commit b5ba5ec6f126f20610e85c8ae01030376781c790
Author: ShobnaSamukthaRaj <samukthasamuktha2@gmail.com>
Date: Fri Jul 12 11:38:26 2024 +0530

    MyCommit-4

commit ee94f45cf07f1af632bde52514b9fda1b3b7c611 (MyBranch-1)
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commit 1ea02e339f796099c6a4d2f1769e3872c64f292e
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Date: Thu Jul 11 14:56:03 2024 +0530

    C Commit

commit 9d6f964690c2882eaf510665ee03178b21a1ec82
Author: ShobnaSamukthaRaj <samukthasamuktha2@gmail.com>
Date: Thu Jul 11 14:53:50 2024 +0530

    TXT Commit

D:\GitRepo>gitk
D:\GitRepo>
```