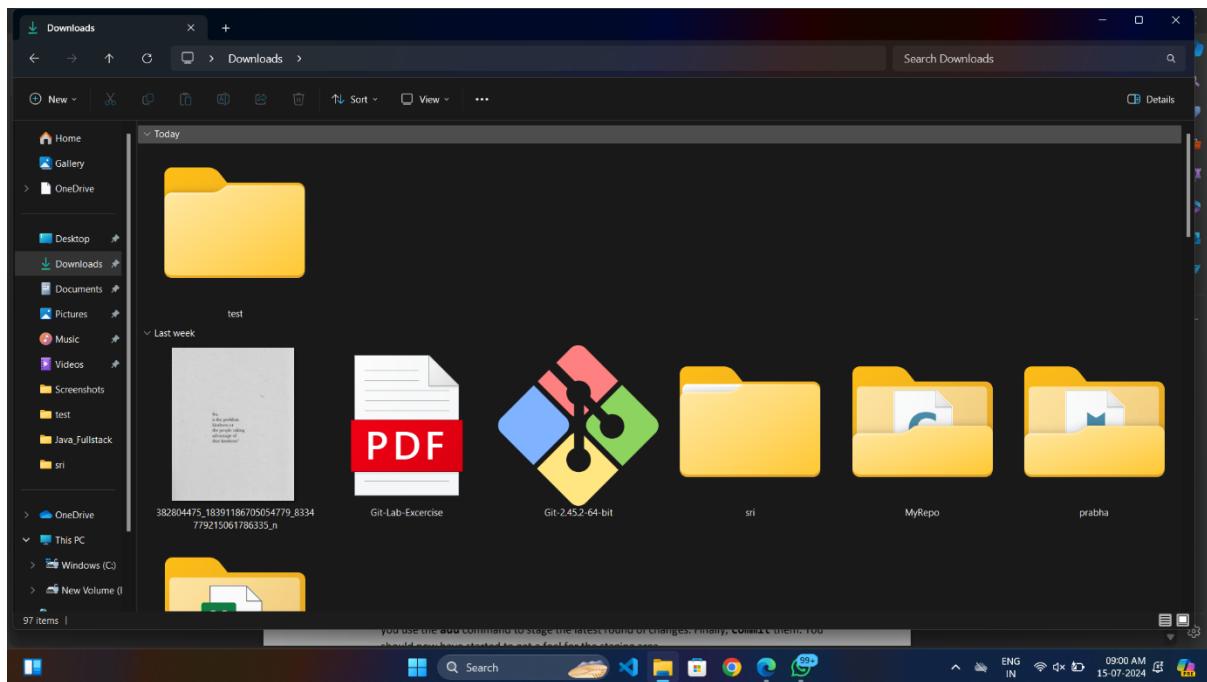


ASSIGNMENT-II

Exercise 1

Main Task

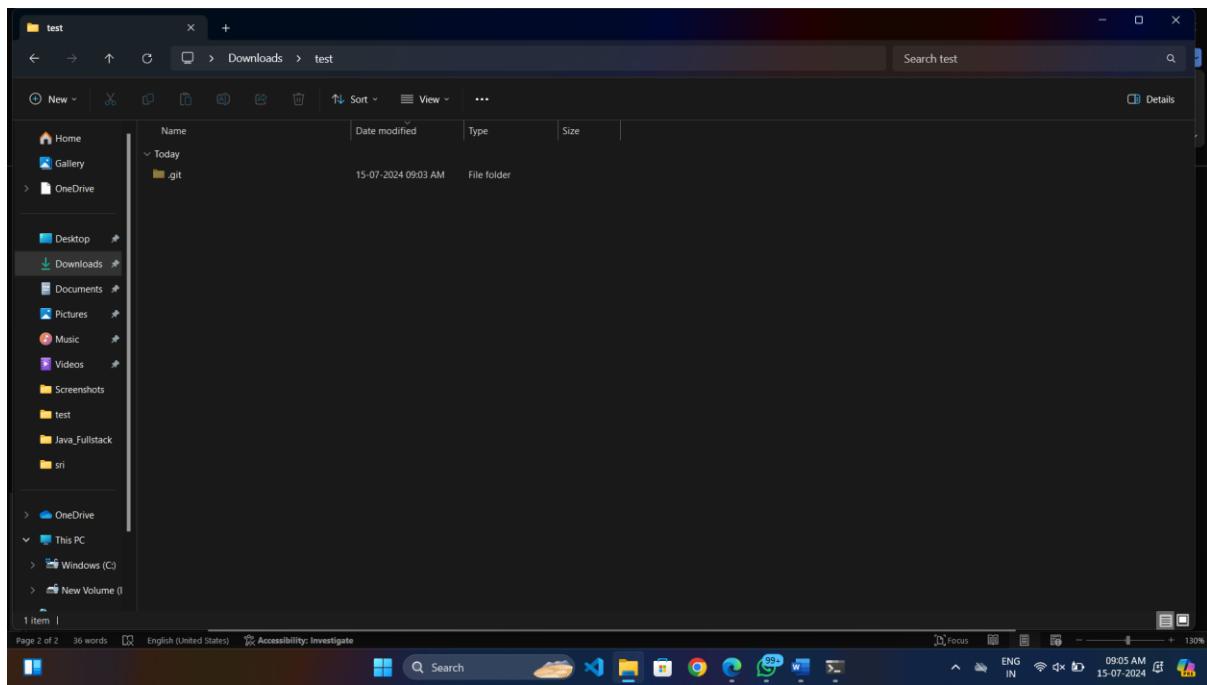
1. Create a new directory and change into it.



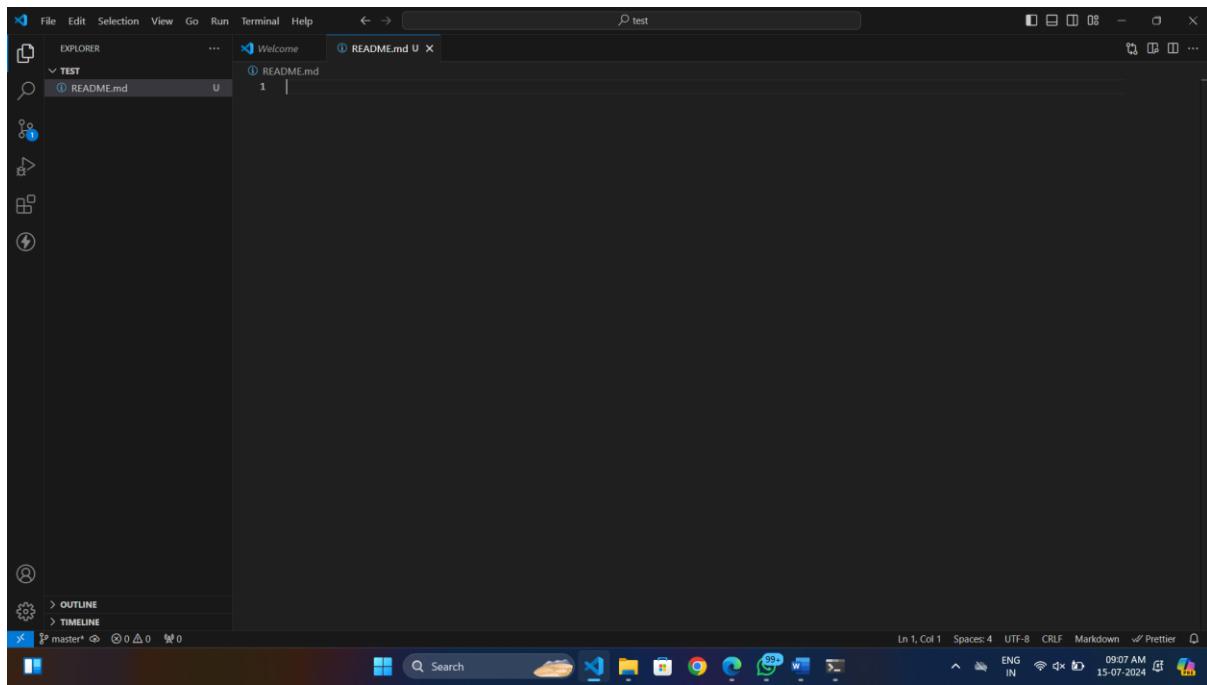
2. Use the init command to create a Git repository in that directory.

```
C:\Users\Ramya>cd downloads
C:\Users\Ramya\Downloads>cd test
C:\Users\Ramya\Downloads\test>git init
Initialized empty Git repository in C:/Users/Ramya/Downloads/test/.git/
C:\Users\Ramya\Downloads\test>
```

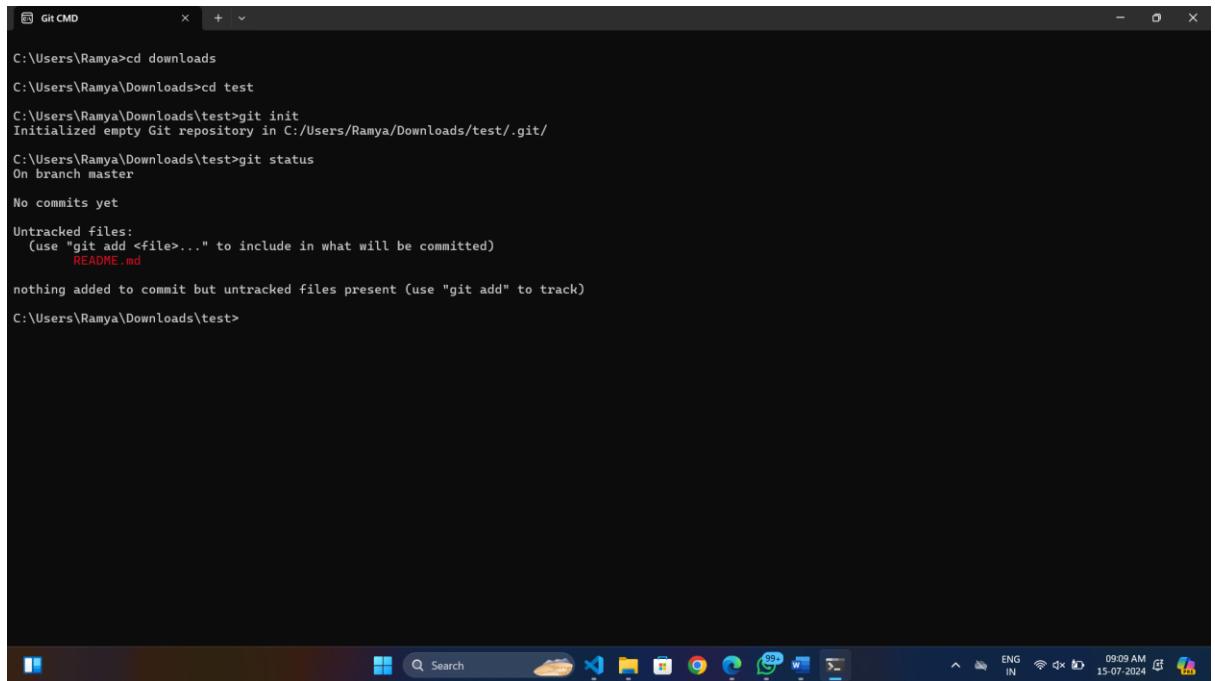
3. Observe that there is now a .git directory.



4. Create a README file.



5. Look at the output of the status command; the README you created should appear as an untracked file.



A screenshot of a Windows desktop environment. At the top is the taskbar with various pinned icons. Below it is the Start button. The main area shows a terminal window titled "Git CMD". The terminal output is as follows:

```
C:\Users\Ramya>cd downloads
C:\Users\Ramya\Downloads>cd test
C:\Users\Ramya\Downloads\test>git init
Initialized empty Git repository in C:/Users/Ramya/Downloads/test/.git/
C:\Users\Ramya\Downloads\test>git status
On branch master

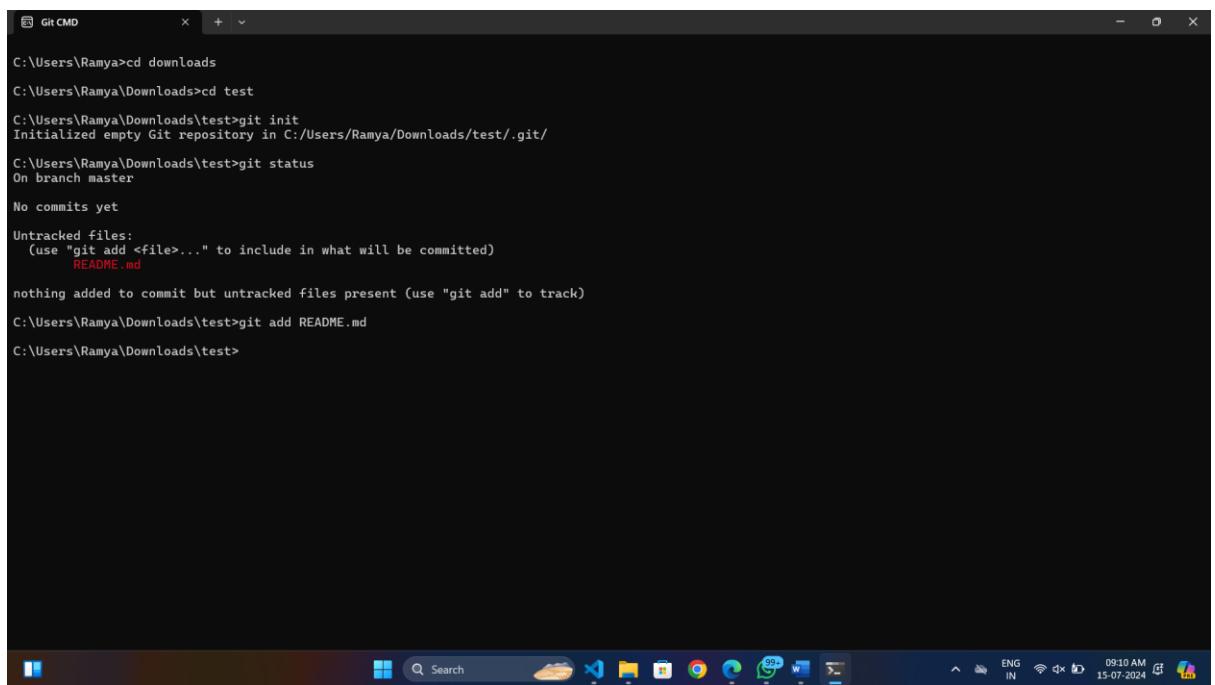
No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    README.md

nothing added to commit but untracked files present (use "git add" to track)
C:\Users\Ramya\Downloads\test>
```

The system tray at the bottom right shows the date as 15-07-2024 and the time as 09:09 AM.

6. Use the add command to add the new file to the staging area. Again, look at the output of the status command.



A screenshot of a Windows desktop environment, identical to the one above. The taskbar, Start button, and system tray are visible. The terminal window titled "Git CMD" shows the following output:

```
C:\Users\Ramya>cd downloads
C:\Users\Ramya\Downloads>cd test
C:\Users\Ramya\Downloads\test>git init
Initialized empty Git repository in C:/Users/Ramya/Downloads/test/.git/
C:\Users\Ramya\Downloads\test>git status
On branch master

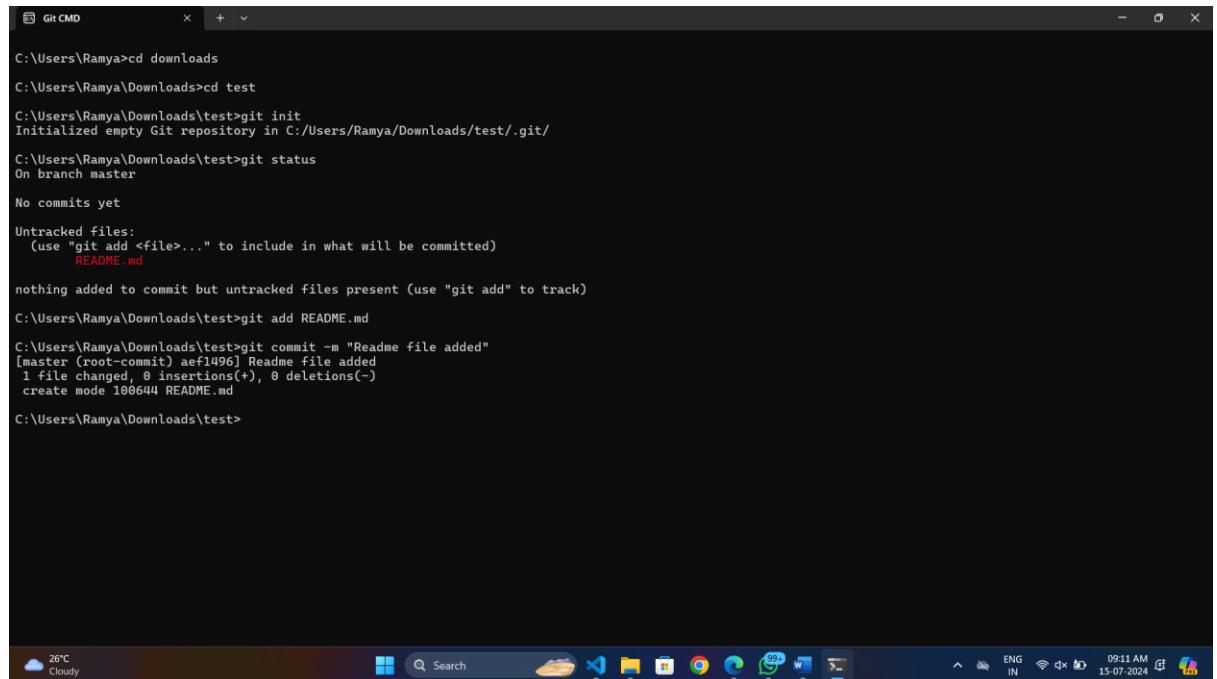
No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    README.md

nothing added to commit but untracked files present (use "git add" to track)
C:\Users\Ramya\Downloads\test>git add README.md
C:\Users\Ramya\Downloads\test>
```

The system tray at the bottom right shows the date as 15-07-2024 and the time as 09:10 AM.

7. Now use the commit command to commit the contents of the staging area.



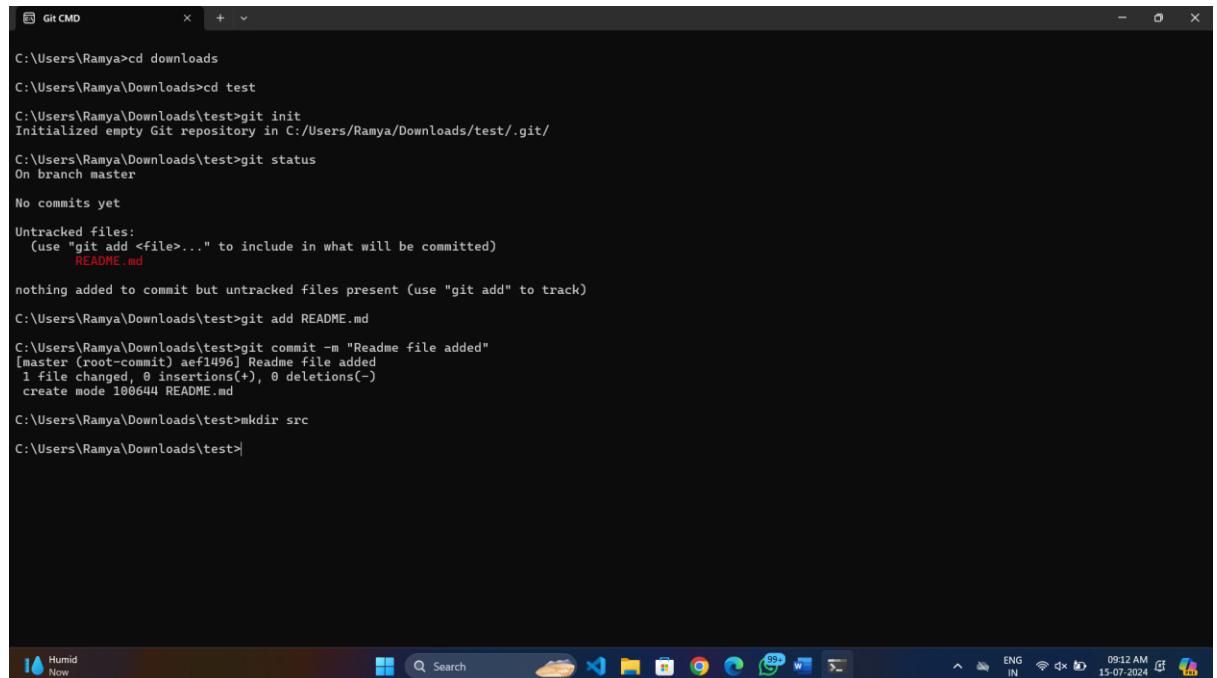
```
C:\Users\Ramya>cd downloads
C:\Users\Ramya\Downloads>cd test
C:\Users\Ramya\Downloads\test>git init
Initialized empty Git repository in C:/Users/Ramya/Downloads/test/.git/
C:\Users\Ramya\Downloads\test>git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    README.md

nothing added to commit but untracked files present (use "git add" to track)
C:\Users\Ramya\Downloads\test>git add README.md
C:\Users\Ramya\Downloads\test>git commit -m "Readme file added"
[master (root-commit) aeef1496] Readme file added
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 README.md
C:\Users\Ramya\Downloads\test>
```

8. Create a src directory and add a couple of files to it.

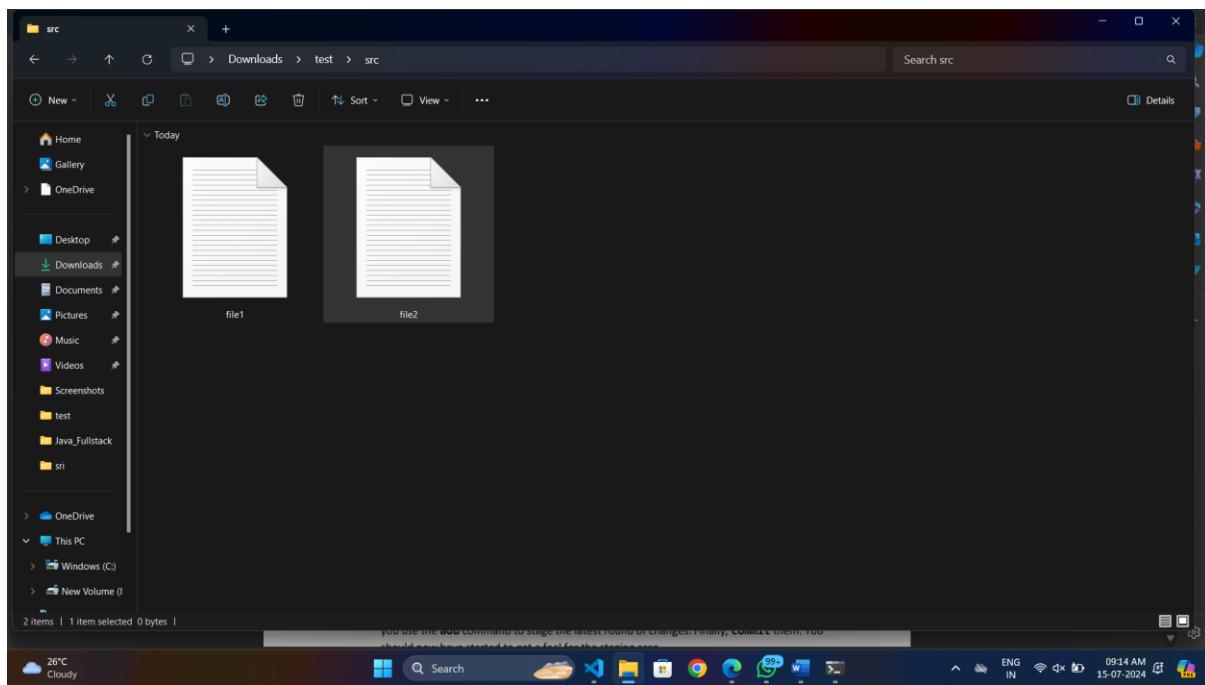
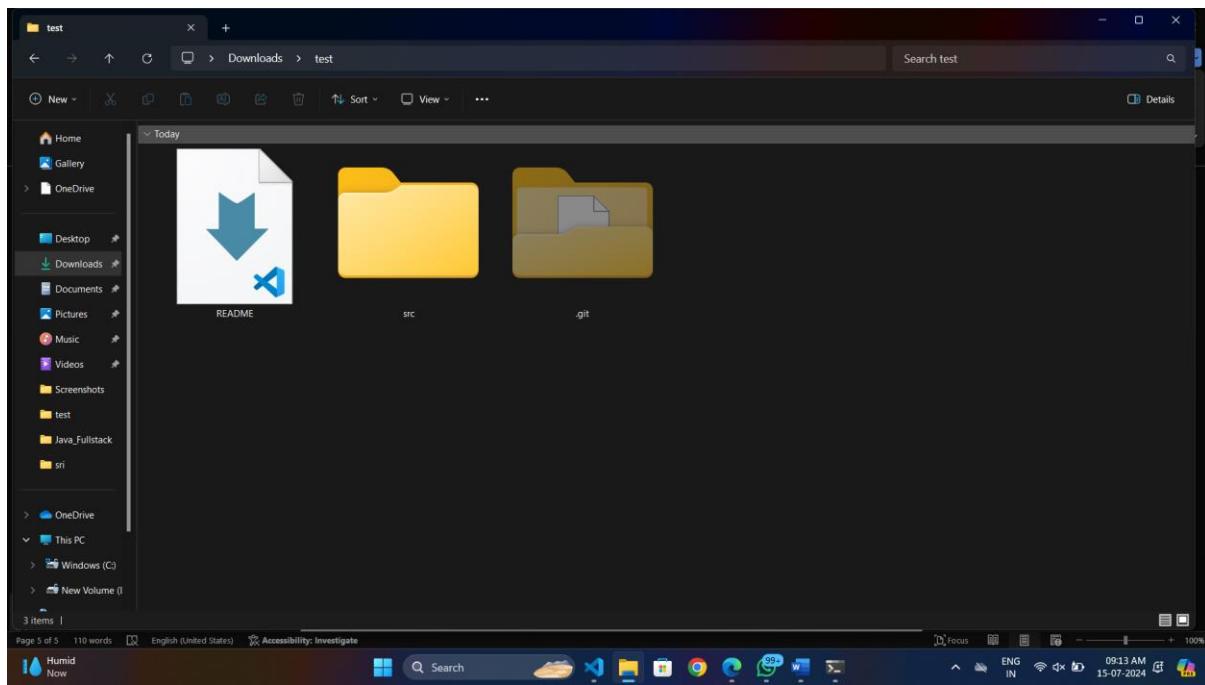


```
C:\Users\Ramya>cd downloads
C:\Users\Ramya\Downloads>cd test
C:\Users\Ramya\Downloads\test>git init
Initialized empty Git repository in C:/Users/Ramya/Downloads/test/.git/
C:\Users\Ramya\Downloads\test>git status
On branch master

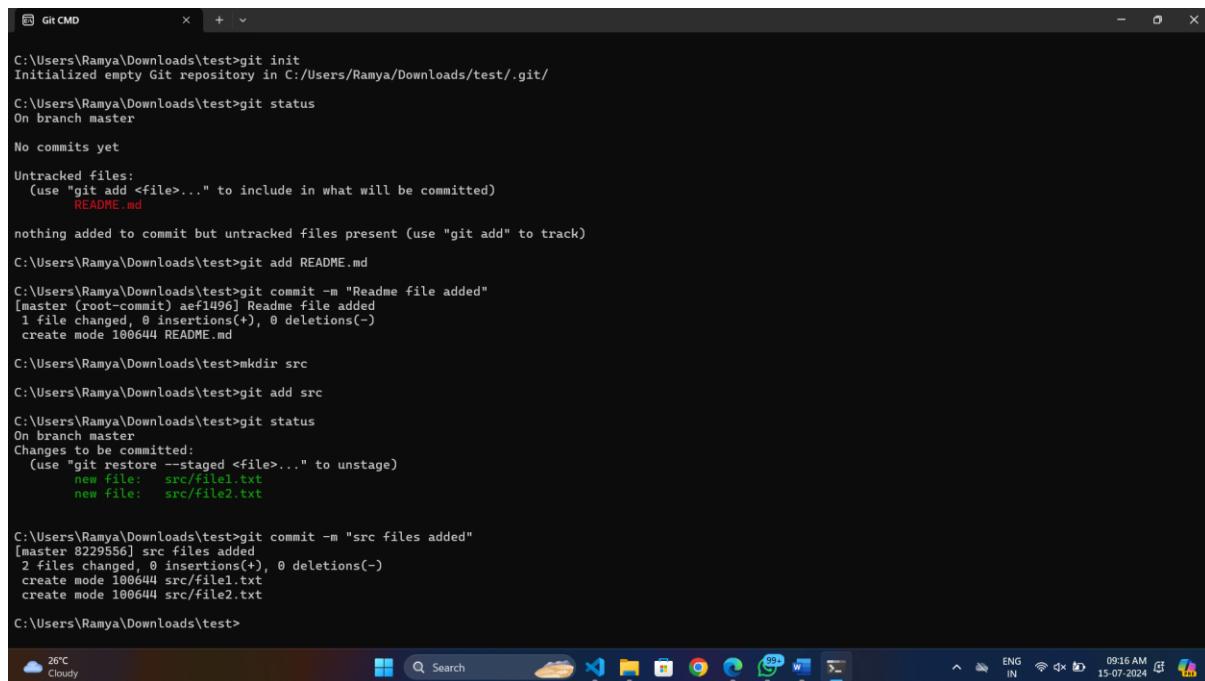
No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    README.md

nothing added to commit but untracked files present (use "git add" to track)
C:\Users\Ramya\Downloads\test>git add README.md
C:\Users\Ramya\Downloads\test>git commit -m "Readme file added"
[master (root-commit) aeef1496] Readme file added
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 README.md
C:\Users\Ramya\Downloads\test>mkdir src
C:\Users\Ramya\Downloads\test>
```



9. Use the add command, but name the directory, not the individual files.
 Use the status command. See how both files have been staged. Commit them.



```
C:\Users\Ramya\Downloads\test>git init
Initialized empty Git repository in C:/Users/Ramya/Downloads/test/.git/
C:\Users\Ramya\Downloads\test>git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    README.md

nothing added to commit but untracked files present (use "git add" to track)

C:\Users\Ramya\Downloads\test>git add README.md

C:\Users\Ramya\Downloads\test>git commit -m "Readme file added"
[master root-commit) aeef1496] Readme file added
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 README.md

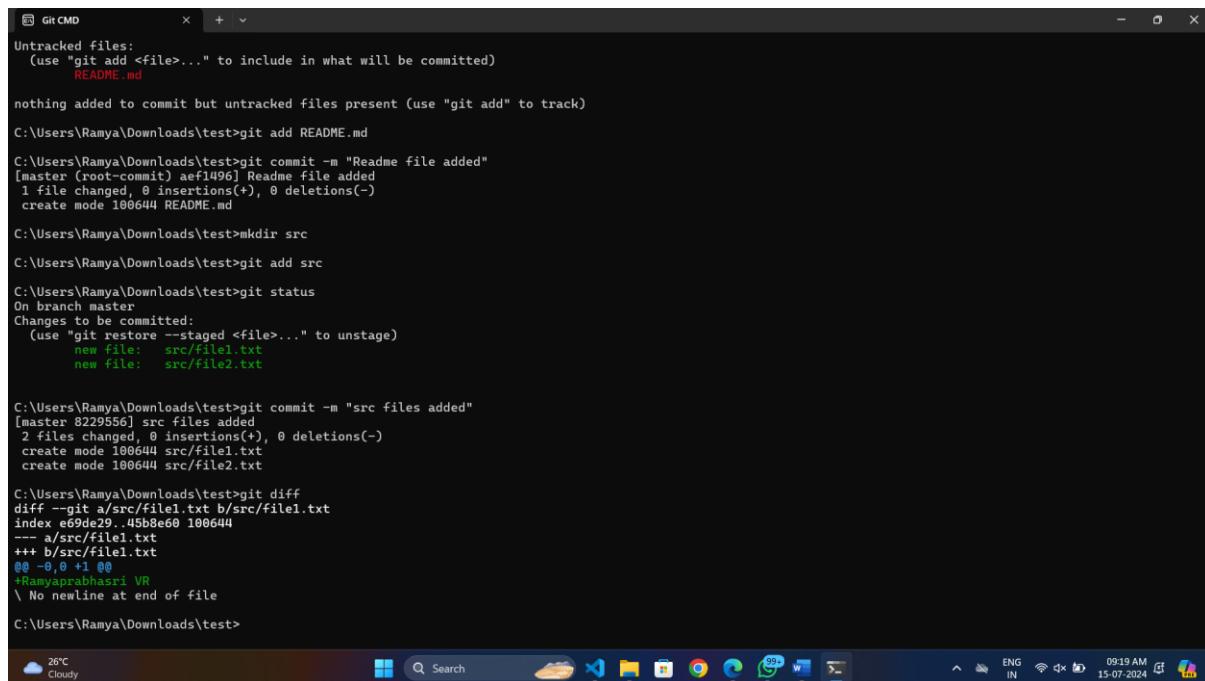
C:\Users\Ramya\Downloads\test>mkdir src
C:\Users\Ramya\Downloads\test>git add src

C:\Users\Ramya\Downloads\test>git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   src/file1.txt
    new file:   src/file2.txt

C:\Users\Ramya\Downloads\test>git commit -m "src files added"
[master 8229556] src files added
 2 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 src/file1.txt
 create mode 100644 src/file2.txt

C:\Users\Ramya\Downloads\test>
```

10. Make a change to one of the files. Use the diff command to view the details of the change.



```
C:\Users\Ramya\Downloads\test>git add README.md

nothing added to commit but untracked files present (use "git add" to track)

C:\Users\Ramya\Downloads\test>git commit -m "Readme file added"
[master root-commit) aeef1496] Readme file added
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 README.md

C:\Users\Ramya\Downloads\test>mkdir src
C:\Users\Ramya\Downloads\test>git add src

C:\Users\Ramya\Downloads\test>git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   src/file1.txt
    new file:   src/file2.txt

C:\Users\Ramya\Downloads\test>git commit -m "src files added"
[master 8229556] src files added
 2 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 src/file1.txt
 create mode 100644 src/file2.txt

C:\Users\Ramya\Downloads\test>git diff
diff --git a/src/file1.txt b/src/file1.txt
index e69de29..45b8e60 100644
--- a/src/file1.txt
+++ b/src/file1.txt
@@ -0,0 +1 @@
+Ramayaprabhansri VR
\ No newline at end of file

C:\Users\Ramya\Downloads\test>
```

11. Next, add the changed file, and notice how it moves to the staging area in the status output. Also observe that the diff command you did before using add now gives no output. Why not? What do you have to do to see a diff of the things in the staging area?

```

Git CMD

--- a/src/file1.txt
+++ b/src/file1.txt
@@ -0,0 +1 @@
+Ramyaprabhasri VR
\ No newline at end of file

C:\Users\Ramya\Downloads\test>cd src
C:\Users\Ramya\Downloads\test\src>git add file1.txt

C:\Users\Ramya\Downloads\test\src>git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    modified:   file1.txt

C:\Users\Ramya\Downloads\test\src>git diff

C:\Users\Ramya\Downloads\test\src>git log
commit 8229556972f90ccaddba9c51813d90e61d001962 (HEAD -> master)
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:16:48 2024 +0530

  src files added

commit ae1f149674dbe5cddb28ed6ee3e35f6062cc0f57
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:11:03 2024 +0530

  Readme file added

C:\Users\Ramya\Downloads\test\src>git diff 8229556972f90ccaddba9c51813d90e61d001962 ae1f149674dbe5cddb28ed6ee3e35f6062cc0f57
diff --git a/src/file1.txt b/src/file1.txt
deleted file mode 100644
index e69de29..000000
diff --git a/src/file2.txt b/src/file2.txt
deleted file mode 100644
index e69de29..000000

C:\Users\Ramya\Downloads\test\src>

```

12. Now – without committing – make another change to the same file. Look at the status output, and the diff output. Observe the difference when you use the add command to stage the latest round of changes. Finally, commit them. You should now have started to get a feel for the staging area.

```

Git CMD

C:\Users\Ramya\Downloads\test\src>git log
commit 8229556972f90ccaddba9c51813d90e61d001962 (HEAD -> master)
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:16:48 2024 +0530

  src files added

commit ae1f149674dbe5cddb28ed6ee3e35f6062cc0f57
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:11:03 2024 +0530

  Readme file added

C:\Users\Ramya\Downloads\test\src>git diff 8229556972f90ccaddba9c51813d90e61d001962 ae1f149674dbe5cddb28ed6ee3e35f6062cc0f57
diff --git a/src/file1.txt b/src/file1.txt
deleted file mode 100644
index e69de29..000000
diff --git a/src/file2.txt b/src/file2.txt
deleted file mode 100644
index e69de29..000000

C:\Users\Ramya\Downloads\test\src>git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    modified:   file1.txt

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
    modified:   file1.txt

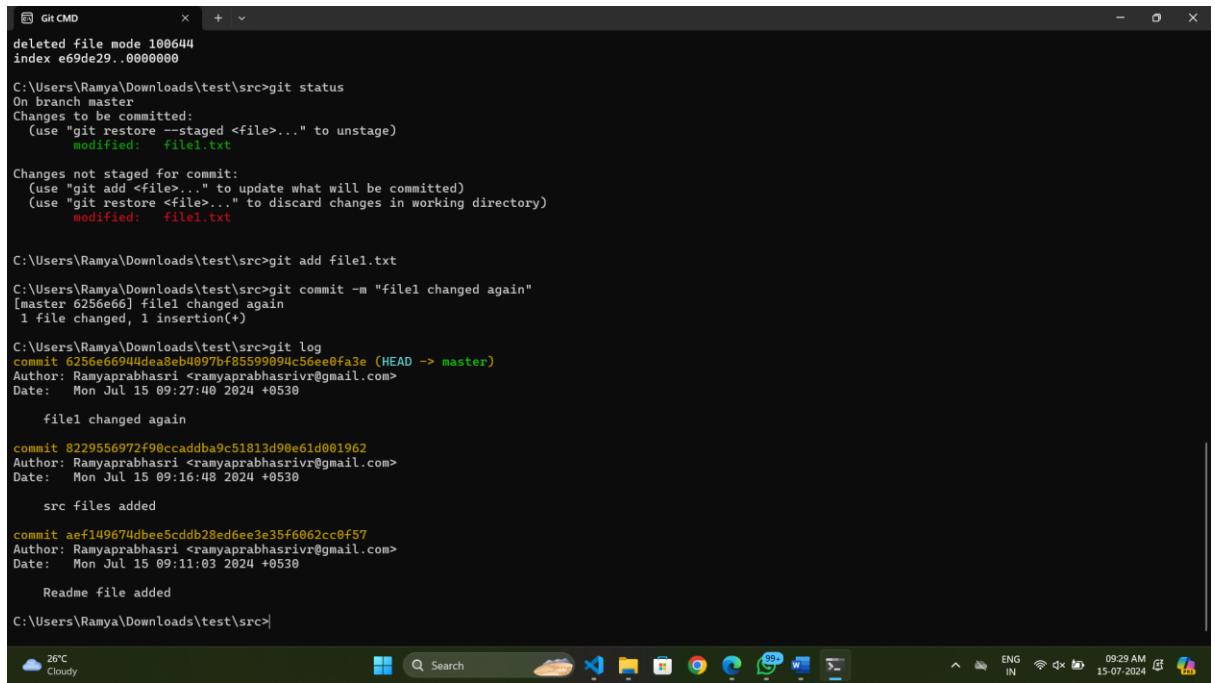
C:\Users\Ramya\Downloads\test\src>git add file1.txt

C:\Users\Ramya\Downloads\test\src>git commit -m "file1 changed again"
[master 6256e66] file1 changed again
 1 file changed, 1 insertion(+)

C:\Users\Ramya\Downloads\test\src>

```

13. Use the log command in order to see all of the commits you made so far.



```
Git CMD
deleted file mode 100644
index e69de29..0000000
C:\Users\Ramya\Downloads\test\src>git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    modified:   file1.txt

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
    modified:   file1.txt

C:\Users\Ramya\Downloads\test\src>git add file1.txt
C:\Users\Ramya\Downloads\test\src>git commit -m "file1 changed again"
[master 6256e66] file1 changed again
 1 file changed, 1 insertion(+)

C:\Users\Ramya\Downloads\test\src>git log
commit 6256e66944dea8eb4097bf85599094c56ee0fa3e (HEAD -> master)
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:27:40 2024 +0530

  file1 changed again

commit 8229556972f90ccaddba9c51813d90e61d001962
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:16:48 2024 +0530

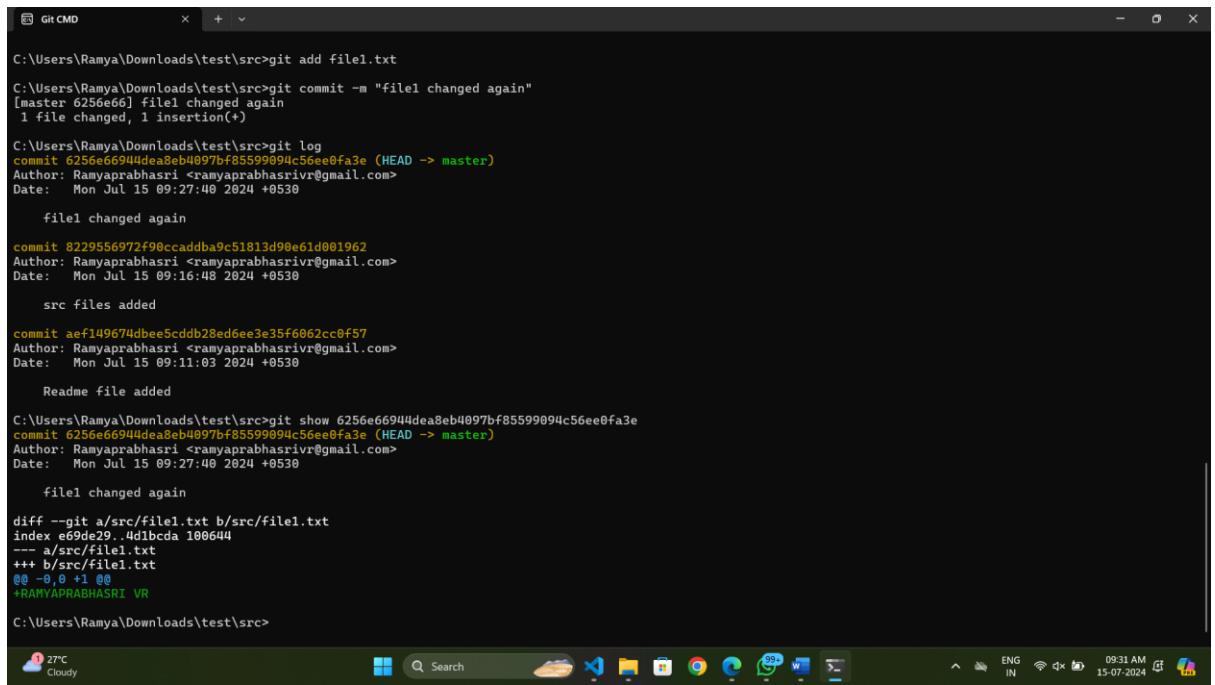
  src files added

commit ae149674dbe5cddb28ed6ee3e35f6062cc0f57
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:11:03 2024 +0530

  Readme file added

C:\Users\Ramya\Downloads\test\src>
```

14. Use the show command to look at an individual commit.



```
Git CMD
C:\Users\Ramya\Downloads\test\src>git add file1.txt
C:\Users\Ramya\Downloads\test\src>git commit -m "file1 changed again"
[master 6256e66] file1 changed again
 1 file changed, 1 insertion(+)

C:\Users\Ramya\Downloads\test\src>git log
commit 6256e66944dea8eb4097bf85599094c56ee0fa3e (HEAD -> master)
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:27:40 2024 +0530

  file1 changed again

commit 8229556972f90ccaddba9c51813d90e61d001962
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:16:48 2024 +0530

  src files added

commit ae149674dbe5cddb28ed6ee3e35f6062cc0f57
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:11:03 2024 +0530

  Readme file added

C:\Users\Ramya\Downloads\test\src>git show 6256e66944dea8eb4097bf85599094c56ee0fa3e
commit 6256e66944dea8eb4097bf85599094c56ee0fa3e (HEAD -> master)
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:27:40 2024 +0530

  file1 changed again

diff --git a/src/file1.txt b/src/file1.txt
index e69de29..4d1bcda 100644
--- a/src/file1.txt
+++ b/src/file1.txt
@@ -0,0 +1 @@
+RAMYAPRABHASRI VR

C:\Users\Ramya\Downloads\test\src>
```

```

Git CMD x + -
README.md => README.txt.md | 0
 1 file changed, 0 insertions(+), 0 deletions(-)

commit cad40bad27014f5af6910187fe016dec86503f88
Author: Ramyaprabhasri <ramyaprabhasirvr@gmail.com>
Date: Mon Jul 15 09:42:51 2024 +0530

  deleted two files

src/file2.txt | 0
src/file3.txt | 1 -
2 files changed, 1 deletion(-)

C:\Users\Ramya\Downloads\test>git show 4
fatal: ambiguous argument '4': unknown revision or path not in the working tree.
Use '--' to separate paths from revisions, like this:
'git <command> [<revision>... -- [<file>...]'"

C:\Users\Ramya\Downloads\test>git show 4ab
fatal: ambiguous argument '4ab': unknown revision or path not in the working tree.
Use '--' to separate paths from revisions, like this:
'git <command> [<revision>... -- [<file>...]'"

C:\Users\Ramya\Downloads\test>git show 4ab3
commit 4ab3505681d98f8c987f43e455cc0eb70441fa6
Author: Ramyaprabhasri <ramyaprabhasirvr@gmail.com>
Date: Mon Jul 15 09:46:17 2024 +0530

  Renamed a file

diff --git a/README.md b/README.txt.md
similarity index 100%
rename from README.md
rename to README.txt.md

C:\Users\Ramya\Downloads\test>

```

Cloudy 27°C

Search ENG IN 10:01 AM 15-07-2024

In Git, the minimum number of characters you need to type for the commit identifier is 4 but it will be risky. So typically its 7.

15. Make a couple more commits, at least one of which should add an extra file.

```

Git CMD x + -
C:\Users\Ramya\Downloads\test\src>git add file3.txt
C:\Users\Ramya\Downloads\test\src>git commit -m "new file added"
[master 72b2e11] new file added
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 src/file3.txt

C:\Users\Ramya\Downloads\test\src>git status
On branch master
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
    modified:   file3.txt

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

C:\Users\Ramya\Downloads\test\src>git add file3.txt
C:\Users\Ramya\Downloads\test\src>git commit -m "new file modified"
[master 538cf15] new file modified
 1 file changed, 1 insertion(+)

C:\Users\Ramya\Downloads\test\src>git status
On branch master
nothing to commit, working tree clean

C:\Users\Ramya\Downloads\test\src>git log
commit 538cf15e47c389961c88bb9d6265b983d5ef7fe48 (HEAD -> master)
Author: Ramyaprabhasri <ramyaprabhasirvr@gmail.com>
Date: Mon Jul 15 09:34:53 2024 +0530

  new file modified

commit 72b2e11adcf53624325614ac17820e9f7cbe849b
Author: Ramyaprabhasri <ramyaprabhasirvr@gmail.com>
Date: Mon Jul 15 09:33:37 2024 +0530

  new file added

commit 6256e66944dea8eb4097bf85599094c56ee0fa3e

```

High winds In 1 hour

Search ENG IN 09:35 AM 15-07-2024

Stretch Task

1. Use the Git rm command to remove a file. Look at the status afterwards.
Now commit the deletion.

A screenshot of a Windows desktop environment. In the center is a terminal window titled "Git CMD" showing a history of git commands and their outputs. The terminal shows several commits, then a "git rm" command being run to delete a file named "file3.txt", followed by a "git status" command showing the deleted file. The taskbar at the bottom has icons for various applications like File Explorer, Edge, and FileZilla. The system tray shows the date as 15-07-2024 and the time as 09:38 AM.

```
commit 538cf15e47c389961c8bb9d6265b983d3ef7fe48 (HEAD -> master)
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:34:53 2024 +0530

    new file modified

commit 72b2e11adcf53624325614ac17820e9f7cbe849b
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:33:37 2024 +0530

    new file added

commit 6256e66944dea8eb4097bf85599094c56ee0fa3e
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:27:40 2024 +0530

    file1 changed again

commit 8229556972f90ccaddba9c51813d90e61d001962
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:16:48 2024 +0530

    src files added

commit ae1f149674dbe5cd5db28ed6ee3e35f6062cc0f57
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:11:03 2024 +0530

    Readme file added

C:\Users\Ramya\Downloads\test\src>git rm file3.txt
rm 'src/file3.txt'

C:\Users\Ramya\Downloads\test\src>git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    deleted:   file3.txt

C:\Users\Ramya\Downloads\test\src>
```

2. Delete another file, but this time do not use Git to do it; e.g. if you are on Linux, just use the normal (non-Git) rm command; on Windows use del.

A screenshot of a Windows desktop environment, similar to the one above. It shows a terminal window with a history of git commands and a manual "del" command used to delete a file. The taskbar and system tray are visible at the bottom.

```
Date: Mon Jul 15 09:34:53 2024 +0530

    new file modified

commit 72b2e11adcf53624325614ac17820e9f7cbe849b
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:33:37 2024 +0530

    new file added

commit 6256e66944dea8eb4097bf85599094c56ee0fa3e
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:27:40 2024 +0530

    file1 changed again

commit 8229556972f90ccaddba9c51813d90e61d001962
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:16:48 2024 +0530

    src files added

commit ae1f149674dbe5cd5db28ed6ee3e35f6062cc0f57
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:11:03 2024 +0530

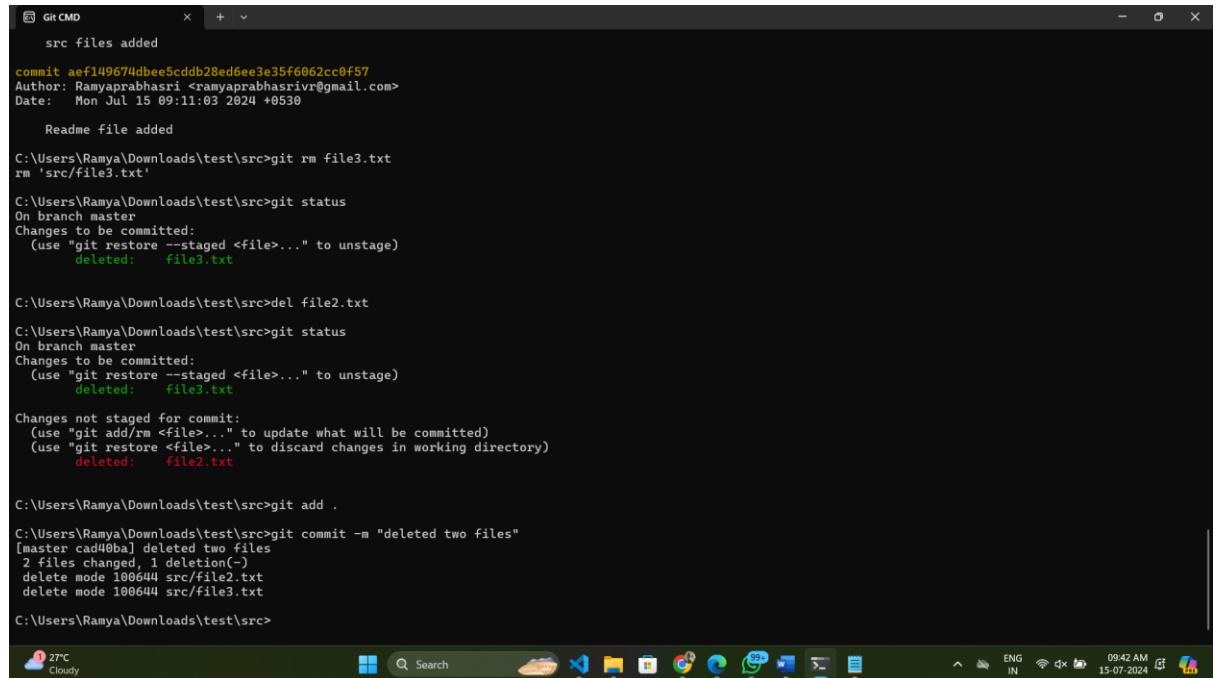
    Readme file added

C:\Users\Ramya\Downloads\test\src>git rm file3.txt
rm 'src/file3.txt'

C:\Users\Ramya\Downloads\test\src>git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    deleted:   file3.txt

C:\Users\Ramya\Downloads\test\src>del file2.txt
C:\Users\Ramya\Downloads\test\src>
```

3. Look at the status. Compare it to the status output you had after using the Git built-in rm command.



```
Git CMD
src files added
commit aeef149674dbbee5cddb28ed6ee3e35f6062cc0f57
Author: Ramyaprabhasri <ramyaprabhasri@gmail.com>
Date: Mon Jul 15 09:11:03 2024 +0530

    Readme file added

C:\Users\Ramya\Downloads\test\src>git rm file3.txt
rm 'src/file3.txt'

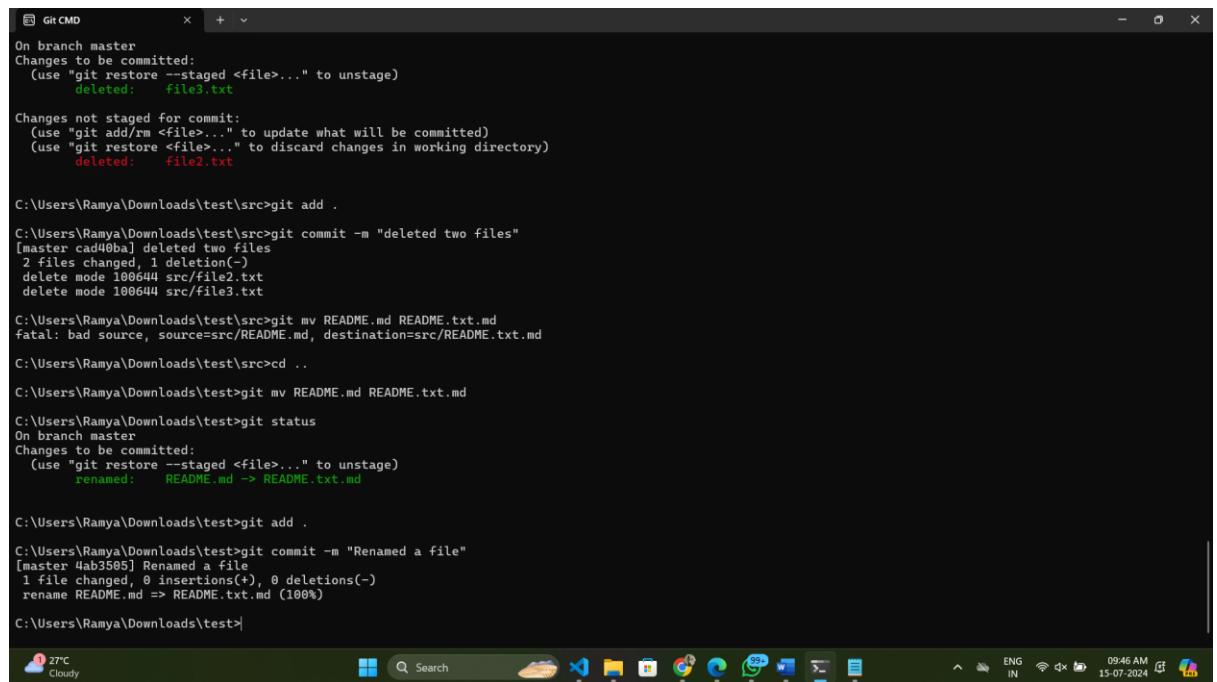
C:\Users\Ramya\Downloads\test\src>git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    deleted:   file3.txt

C:\Users\Ramya\Downloads\test\src>del file2.txt
C:\Users\Ramya\Downloads\test\src>git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    deleted:   file3.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:   file2.txt

C:\Users\Ramya\Downloads\test\src>git add .
C:\Users\Ramya\Downloads\test\src>git commit -m "deleted two files"
[master cad40ba] deleted two files
 2 files changed, 1 deletion(-)
 delete mode 100644 src/file2.txt
 delete mode 100644 src/file3.txt
C:\Users\Ramya\Downloads\test\src>
```

4. Use the Git mv command to move or rename a file; for example, rename README to README.txt. Look at the status. Commit the change.



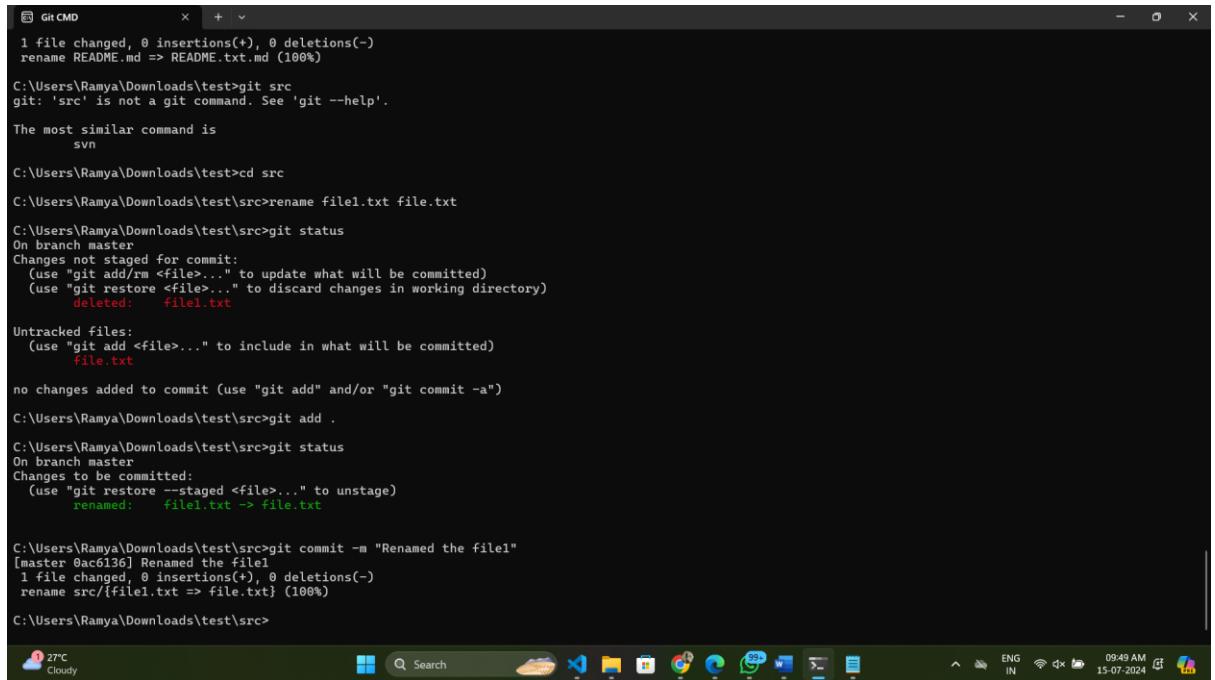
```
Git CMD
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    deleted:   file3.txt

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:   file2.txt

C:\Users\Ramya\Downloads\test\src>git add .
C:\Users\Ramya\Downloads\test\src>git commit -m "deleted two files"
[master cad40ba] deleted two files
 2 files changed, 1 deletion(-)
 delete mode 100644 src/file2.txt
 delete mode 100644 src/file3.txt
C:\Users\Ramya\Downloads\test\src>git mv README.md README.txt.md
fatal: bad source, source=src/README.md, destination=src/README.txt.md
C:\Users\Ramya\Downloads\test\src>cd ..
C:\Users\Ramya\Downloads\test>git mv README.md README.txt.md
C:\Users\Ramya\Downloads\test>git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    renamed:   README.md => README.txt.md

C:\Users\Ramya\Downloads\test>git add .
C:\Users\Ramya\Downloads\test>git commit -m "Renamed a file"
[master 4ab2505] Renamed a file
 1 file changed, 0 insertions(+), 0 deletions(-)
 rename README.md => README.txt.md (100%)
C:\Users\Ramya\Downloads\test>
```

5. Now do another rename, but this time using the operating system's command to do so.



```
Git CMD
1 file changed, 0 insertions(+), 0 deletions(-)
rename README.md => README.txt.md (100%)

C:\Users\Ramya\Downloads\test>git src
git: 'src' is not a git command. See 'git --help'.

The most similar command is
    svn

C:\Users\Ramya\Downloads\test>cd src
C:\Users\Ramya\Downloads\test\src>rename file1.txt file.txt

C:\Users\Ramya\Downloads\test\src>git status
On branch master
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:   file1.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        file.txt

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

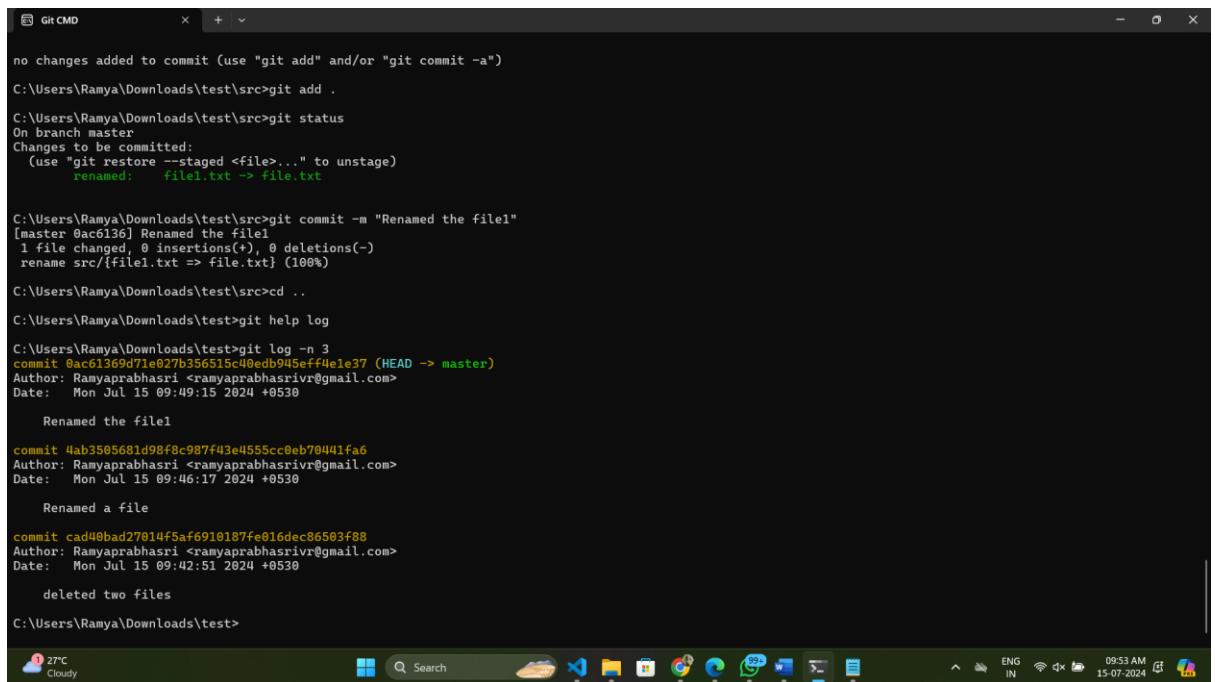
C:\Users\Ramya\Downloads\test\src>git add .

C:\Users\Ramya\Downloads\test\src>git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        renamed:   file1.txt -> file.txt

C:\Users\Ramya\Downloads\test\src>git commit -m "Renamed the file1"
[master 0ac6136] Renamed the file1
 1 file changed, 0 insertions(+), 0 deletions(-)
 rename src/{file1.txt => file.txt} (100%)

C:\Users\Ramya\Downloads\test\src>
```

6. Use git help log to find out how to get Git to display just the most recent 3 commits. Try it.



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

C:\Users\Ramya\Downloads\test\src>git add .

C:\Users\Ramya\Downloads\test\src>git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        renamed:   file1.txt -> file.txt

C:\Users\Ramya\Downloads\test\src>git commit -m "Renamed the file1"
[master 0ac6136] Renamed the file1
 1 file changed, 0 insertions(+), 0 deletions(-)
 rename src/{file1.txt => file.txt} (100%)

C:\Users\Ramya\Downloads\test\src>cd ..

C:\Users\Ramya\Downloads\test>git help log

C:\Users\Ramya\Downloads\test>git log -n 3
commit 0ac61369d71e027b356515c04bedb945efffe1e37 (HEAD -> master)
Author: Ramyaprabharsi <ramyaprabhасrив@gmail.com>
Date: Mon Jul 15 09:49:15 2024 +0530

  Renamed the file1

commit 4ab3505681d98f8c987ff43e4555cc0eb70441fa6
Author: Ramyaprabharsi <ramyaprabhасrив@gmail.com>
Date: Mon Jul 15 09:46:17 2024 +0530

  Renamed a file

commit cad40bad27014f5af6910187fe016dec86503f88
Author: Ramyaprabhасrив@gmail.com
Date: Mon Jul 15 09:42:51 2024 +0530

  deleted two files

C:\Users\Ramya\Downloads\test>
```

7. If you don't remember, look back in the slides to see what the --stat option did on the diff command.

```

Git CMD

src/file3.txt | 1 +
1 file changed, 1 insertion(+)

commit 72b2e11adcF53624325614ac17820e9f7cbe849b
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:33:37 2024 +0530

    new file added

src/file3.txt | 0

C:/Users/Ramya/Downloads/test>git log -n 3 --stat
commit 0ac61369d71e027b356515c04bedb945efffe1e37 (HEAD -> master)
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:49:15 2024 +0530

    Renamed the file1

src/{file1.txt => file.txt} | 0
1 file changed, 0 insertions(+), 0 deletions(-)

commit 4ab3505681d98f8c987f43e455cc0eb70441fa6
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:46:17 2024 +0530

    Renamed a file

README.md => README.txt.md | 0
1 file changed, 0 insertions(+), 0 deletions(-)

commit cad40bad27014f5af6910187fe016dec86503f88
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:02:51 2024 +0530

    deleted two files

src/file2.txt | 0
src/file3.txt | 1 -
2 files changed, 1 deletion(-)

C:/Users/Ramya/Downloads/test>

```

8. Imagine you want to see a diff that summarizes all that happened between two commit identifiers. Use the diff command, specifying two commit identifiers joined by two dots (that is, something like abc123..def456).

```

Git CMD

src/File2.txt | 0
src/File3.txt | 1 -
2 files changed, 1 deletion(-)

C:/Users/Ramya/Downloads/test>git show 4
fatal: ambiguous argument '4': unknown revision or path not in the working tree.
Use '--' to separate paths from revisions, like this:
'git <command> [<revision>... -- [<file>...]'"

C:/Users/Ramya/Downloads/test>git show 4a
fatal: ambiguous argument '4a': unknown revision or path not in the working tree.
Use '--' to separate paths from revisions, like this:
'git <command> [<revision>... -- [<file>...]'"

C:/Users/Ramya/Downloads/test>git show 4ab3
fatal: ambiguous argument '4ab3': unknown revision or path not in the working tree.
Use '--' to separate paths from revisions, like this:
'git <command> [<revision>... -- [<file>...]'"

C:/Users/Ramya/Downloads/test>git show 4ab3
commit 4ab3505681d98f8c987f43e455cc0eb70441fa6
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:46:17 2024 +0530

    Renamed a file

diff --git a/README.md b/README.txt.md
similarity index 100%
rename from README.md
rename to README.txt.md

C:/Users/Ramya/Downloads/test>git diff cad4..4ab3
diff --git a/README.md b/README.txt.md
similarity index 100%
rename from README.md
rename to README.txt.md

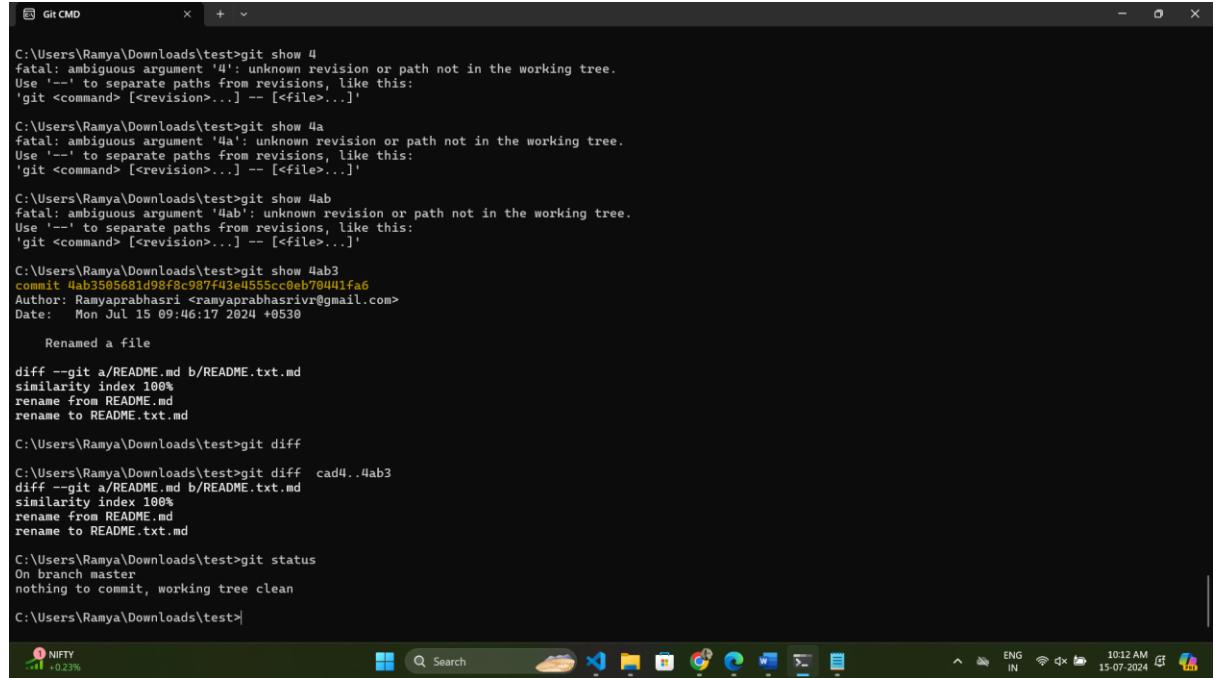
C:/Users/Ramya/Downloads/test>

```

Exercise 2

Main Task

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



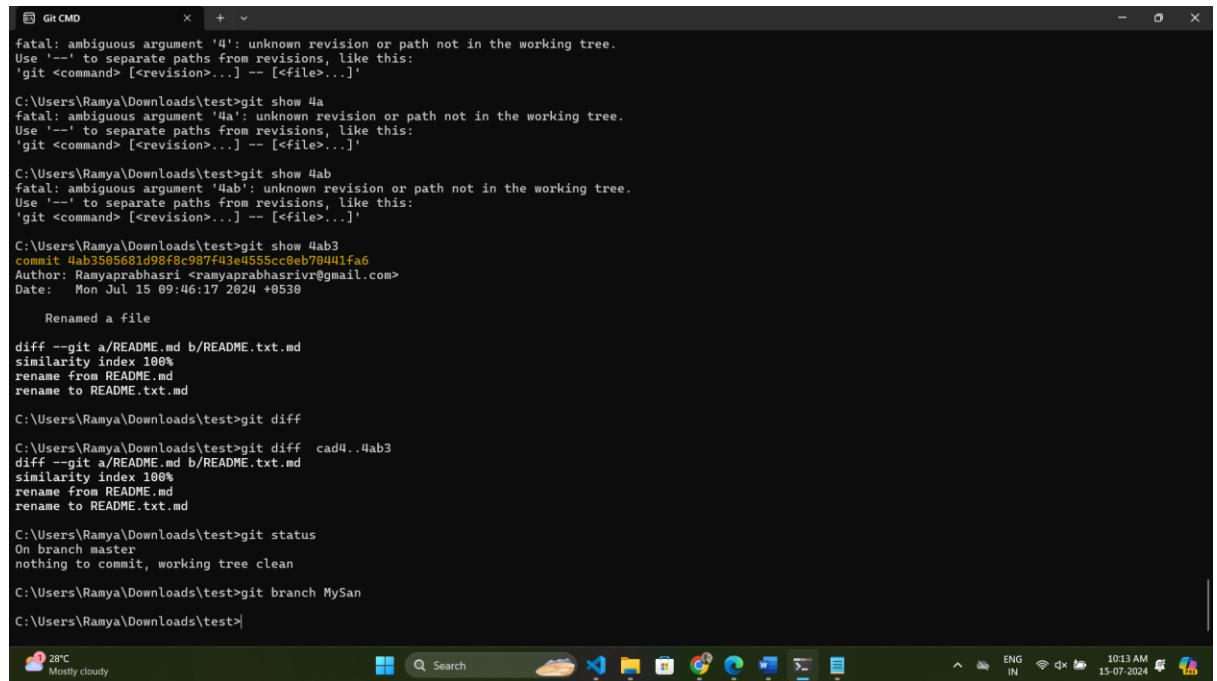
A screenshot of a Windows desktop. At the top is a taskbar with various icons. In the center is a 'Git CMD' window showing a command-line session. The session starts with three 'git show 4' commands, each resulting in a fatal error about an ambiguous argument. Then, a 'git show 4ab' command is run, showing a commit log for a file named 'README.md'. This is followed by a 'git diff' command comparing 'a/README.md' and 'b/README.txt.md', showing they are 100% similar. Finally, a 'git status' command is run, indicating the branch is 'master' and there is nothing to commit, the working tree is clean. The command prompt ends with 'C:\Users\Ramya\Downloads\test>'.

```
C:\Users\Ramya\Downloads\test>git show 4
fatal: ambiguous argument '4': unknown revision or path not in the working tree.
Use '--' to separate paths from revisions, like this:
'git <command> [<revision>... -- [<file>...]'  
C:\Users\Ramya\Downloads\test>git show 4a
fatal: ambiguous argument '4a': unknown revision or path not in the working tree.
Use '--' to separate paths from revisions, like this:
'git <command> [<revision>... -- [<file>...]'  
C:\Users\Ramya\Downloads\test>git show 4ab
commit 4ab3505681d98f8c987f43e455cc0eb70441fa6
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:46:17 2024 +0530

    Renamed a file

diff --git a/README.md b/README.txt.md
similarity index 100%
rename from README.md
rename to README.txt.md  
C:\Users\Ramya\Downloads\test>git diff
C:\Users\Ramya\Downloads\test>git diff  cad4..4ab3
diff --git a/README.md b/README.txt.md
similarity index 100%
rename from README.md
rename to README.txt.md  
C:\Users\Ramya\Downloads\test>git status
On branch master
nothing to commit, working tree clean
C:\Users\Ramya\Downloads\test>
```

- Use the branch command to create a new branch.



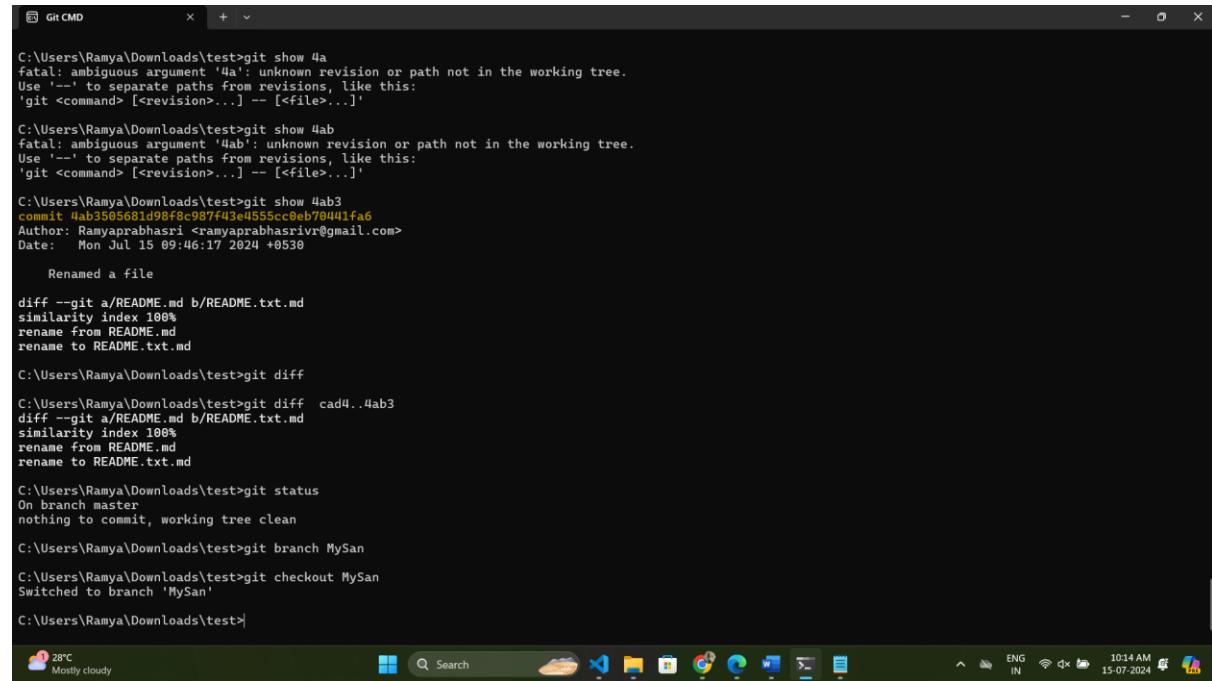
A screenshot of a Windows desktop. At the top is a taskbar with various icons. In the center is a 'Git CMD' window showing a command-line session. It starts with three 'git show 4' commands, each resulting in a fatal error. Then, a 'git show 4ab' command is run, showing a commit log for a file named 'README.md'. This is followed by a 'git diff' command comparing 'a/README.md' and 'b/README.txt.md', showing they are 100% similar. Finally, a 'git status' command is run, indicating the branch is 'master' and there is nothing to commit, the working tree is clean. A 'git branch MySan' command is then run, creating a new branch named 'MySan'. The command prompt ends with 'C:\Users\Ramya\Downloads\test>'.

```
C:\Users\Ramya\Downloads\test>git show 4
fatal: ambiguous argument '4': unknown revision or path not in the working tree.
Use '--' to separate paths from revisions, like this:
'git <command> [<revision>... -- [<file>...]'  
C:\Users\Ramya\Downloads\test>git show 4a
fatal: ambiguous argument '4a': unknown revision or path not in the working tree.
Use '--' to separate paths from revisions, like this:
'git <command> [<revision>... -- [<file>...]'  
C:\Users\Ramya\Downloads\test>git show 4ab
commit 4ab3505681d98f8c987f43e455cc0eb70441fa6
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:46:17 2024 +0530

    Renamed a file

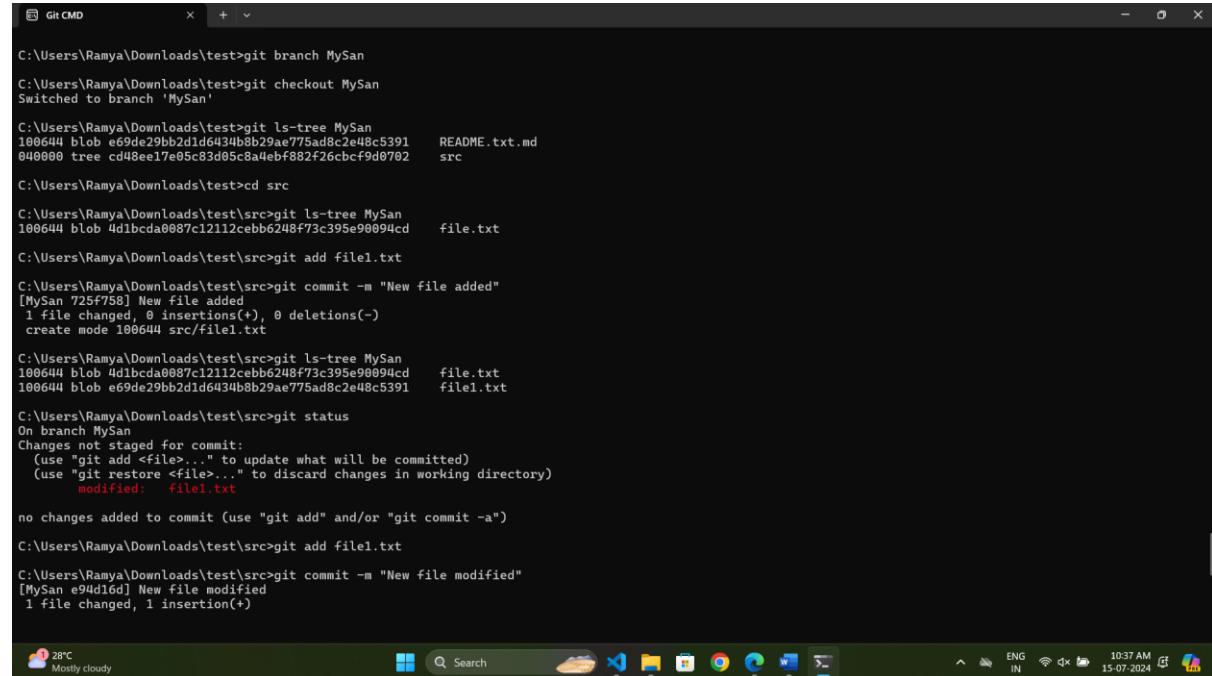
diff --git a/README.md b/README.txt.md
similarity index 100%
rename from README.md
rename to README.txt.md  
C:\Users\Ramya\Downloads\test>git diff
C:\Users\Ramya\Downloads\test>git diff  cad4..4ab3
diff --git a/README.md b/README.txt.md
similarity index 100%
rename from README.md
rename to README.txt.md  
C:\Users\Ramya\Downloads\test>git status
On branch master
nothing to commit, working tree clean
C:\Users\Ramya\Downloads\test>git branch MySan
C:\Users\Ramya\Downloads\test>
```

3. Use the checkout command to switch to it.



```
C:\Users\Ramya\Downloads\test>git show 4a
fatal: ambiguous argument '4a': unknown revision or path not in the working tree.
Use '--' to separate paths from revisions, like this:
'git <command> [<revision>...] -- [<file>...]'  
C:\Users\Ramya\Downloads\test>git show 4ab
fatal: ambiguous argument '4ab': unknown revision or path not in the working tree.
Use '--' to separate paths from revisions, like this:
'git <command> [<revision>...] -- [<file>...]'  
C:\Users\Ramya\Downloads\test>git show 4ab3
commit 4ab3505681d098f8c987f43e4555cc0eb70441fa6
Author: Ramyaprabhasri <ramyaprabhasri@gmail.com>
Date: Mon Jul 15 09:46:17 2024 +0530  
Renamed a file  
diff --git a/README.md b/README.txt.md  
similarity index 100%  
rename from README.md  
rename to README.txt.md  
C:\Users\Ramya\Downloads\test>git diff  
C:\Users\Ramya\Downloads\test>git diff cad4..4ab3  
diff --git a/README.md b/README.txt.md  
similarity index 100%  
rename from README.md  
rename to README.txt.md  
C:\Users\Ramya\Downloads\test>git status  
On branch master  
nothing to commit, working tree clean  
C:\Users\Ramya\Downloads\test>git branch MySan  
C:\Users\Ramya\Downloads\test>git checkout MySan  
Switched to branch 'MySan'  
C:\Users\Ramya\Downloads\test>
```

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



```
C:\Users\Ramya\Downloads\test>git branch MySan  
C:\Users\Ramya\Downloads\test>git checkout MySan  
Switched to branch 'MySan'  
C:\Users\Ramya\Downloads\test>git ls-tree MySan  
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391 README.txt.md  
040000 tree cd48ee17e05c83d05c8a4ebf882f26cbcf9d0702 src  
C:\Users\Ramya\Downloads\test>cd src  
C:\Users\Ramya\Downloads\test>src>git ls-tree MySan  
100644 blob 4d1bca0087c12112cebb6248f73c395e9094cd file.txt  
C:\Users\Ramya\Downloads\test>src>git add file1.txt  
C:\Users\Ramya\Downloads\test>src>git commit -m "New file added"  
[MySan 725f758] New file added  
1 file changed, 0 insertions(+), 0 deletions(-)  
create mode 100644 src/file1.txt  
C:\Users\Ramya\Downloads\test>src>git ls-tree MySan  
100644 blob 4d1bca0087c12112cebb6248f73c395e9094cd file.txt  
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391 file1.txt  
C:\Users\Ramya\Downloads\test>src>git status  
On branch MySan  
Changes not staged for commit:  
(use "git add <file>..." to update what will be committed)  
(use "git restore <file>..." to discard changes in working directory)  
modified: file1.txt  
no changes added to commit (use "git add" and/or "git commit -a")  
C:\Users\Ramya\Downloads\test>src>git add file1.txt  
C:\Users\Ramya\Downloads\test>src>git commit -m "New file modified"  
[MySan e94d16d] New file modified  
1 file changed, 1 insertion(+)
```

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

```

Git CMD - *C:\Users\Ramya\A* + -
C:\Users\Ramya\Downloads\test\src>git log
commit e94d16db433847e1ab9c4d77206a48cdea50bb8 (HEAD -> MySan)
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 10:36:18 2024 +0530

    New file modified

commit 725f7580605e3f6be3b4f16017f851be05962bc4
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 10:26:47 2024 +0530

    New file added

commit 0ac61369d71e027b356515c40edb945eff4ele37 (master)
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:49:15 2024 +0530

    Renamed the file1

commit 4ab3505681d98f8c987f43e4555cc0eb70441fa6
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:46:17 2024 +0530

    Renamed a file

commit cad40bad27014f5af6910187fe016dec86503f88
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:42:51 2024 +0530

    deleted two files

commit 538cf15e07c389961c8bb9d6265b983d3ef7fe48
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:34:53 2024 +0530

    new file modified

commit 72b2e11adcf53624325614ac17820e9f7cbe849b
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:33:37 2024 +0530

```

The screenshot shows a Windows desktop environment. In the foreground, there is a Git Command Prompt window titled "Git CMD - *C:\Users\Ramya\A*". The window displays the output of the "git log" command, showing several commits. The commits are listed in chronological order from bottom to top. The commits are as follows:

- commit e94d16db433847e1ab9c4d77206a48cdea50bb8 (HEAD -> MySan) - Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com> Date: Mon Jul 15 10:36:18 2024 +0530. Description: New file modified.
- commit 725f7580605e3f6be3b4f16017f851be05962bc4 - Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com> Date: Mon Jul 15 10:26:47 2024 +0530. Description: New file added.
- commit 0ac61369d71e027b356515c40edb945eff4ele37 (master) - Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com> Date: Mon Jul 15 09:49:15 2024 +0530. Description: Renamed the file1.
- commit 4ab3505681d98f8c987f43e4555cc0eb70441fa6 - Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com> Date: Mon Jul 15 09:46:17 2024 +0530. Description: Renamed a file.
- commit cad40bad27014f5af6910187fe016dec86503f88 - Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com> Date: Mon Jul 15 09:42:51 2024 +0530. Description: deleted two files.
- commit 538cf15e07c389961c8bb9d6265b983d3ef7fe48 - Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com> Date: Mon Jul 15 09:34:53 2024 +0530. Description: new file modified.
- commit 72b2e11adcf53624325614ac17820e9f7cbe849b - Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com> Date: Mon Jul 15 09:33:37 2024 +0530. Description: new file added.

In the background, the Windows taskbar is visible, showing various pinned icons and the system tray with the date and time (10:41 AM, 15-07-2024).

6. Use the checkout command to switch back to the master branch. Run log again.

```

Git CMD - *C:\Users\Ramya\A* + -
C:\Users\Ramya\Downloads\test>git log
commit 0ac61369d71e027b356515c40edb945eff4ele37 (HEAD -> master)
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:49:15 2024 +0530

    Renamed the file1

commit 4ab3505681d98f8c987f43e4555cc0eb70441fa6
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:46:17 2024 +0530

    Renamed a file

commit cad40bad27014f5af6910187fe016dec86503f88
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:42:51 2024 +0530

    deleted two files

commit 538cf15e07c389961c8bb9d6265b983d3ef7fe48
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:34:53 2024 +0530

    new file modified

commit 72b2e11adcf53624325614ac17820e9f7cbe849b
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:33:37 2024 +0530

    new file added

commit 6256e66944dea8eb4097bf85599094c56ee0fa3e
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:27:40 2024 +0530

    file1 changed again

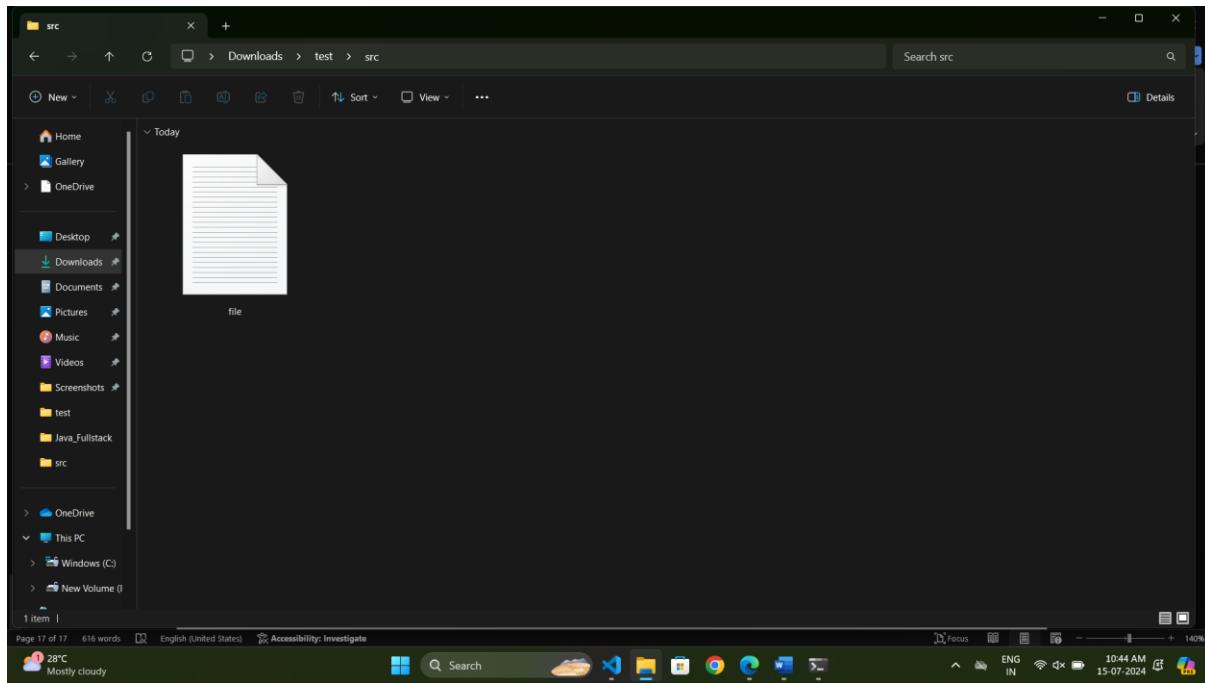
commit 8229556972f90ccaddba9c51813d90e61d001962
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:16:48 2024 +0530

```

The screenshot shows a Windows desktop environment. In the foreground, there is a Git Command Prompt window titled "Git CMD - *C:\Users\Ramya\A*". The window displays the output of the "git log" command, showing several commits. The commits are listed in chronological order from bottom to top. The commits are as follows:

- commit 0ac61369d71e027b356515c40edb945eff4ele37 (master) - Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com> Date: Mon Jul 15 09:49:15 2024 +0530. Description: Renamed the file1.
- commit 4ab3505681d98f8c987f43e4555cc0eb70441fa6 - Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com> Date: Mon Jul 15 09:46:17 2024 +0530. Description: Renamed a file.
- commit cad40bad27014f5af6910187fe016dec86503f88 - Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com> Date: Mon Jul 15 09:42:51 2024 +0530. Description: deleted two files.
- commit 538cf15e07c389961c8bb9d6265b983d3ef7fe48 - Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com> Date: Mon Jul 15 09:34:53 2024 +0530. Description: new file modified.
- commit 72b2e11adcf53624325614ac17820e9f7cbe849b - Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com> Date: Mon Jul 15 09:33:37 2024 +0530. Description: new file added.
- commit 6256e66944dea8eb4097bf85599094c56ee0fa3e - Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com> Date: Mon Jul 15 09:27:40 2024 +0530. Description: file1 changed again.
- commit 8229556972f90ccaddba9c51813d90e61d001962 - Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com> Date: Mon Jul 15 09:16:48 2024 +0530. Description:

In the background, the Windows taskbar is visible, showing various pinned icons and the system tray with the date and time (10:44 AM, 15-07-2024).



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.

```
Git CMD
commit 4ab3505681d98f8c987f43e4555cc0eb70441fa6
Author: Ramyaprabharsi <ramyaprabhасиr@ymail.com>
Date: Mon Jul 15 09:46:17 2024 +0530

    Renamed a file

commit cad40bad27014f5af6910187fe016dec86503f88
Author: Ramyaprabhасиr <ramyaprabhасиr@ymail.com>
Date: Mon Jul 15 09:42:51 2024 +0530

    deleted two files

commit 538cf15e47c389961c8bb9d6265b983d3ef7fe48
Author: Ramyaprabhасиr <ramyaprabhасиr@ymail.com>
Date: Mon Jul 15 09:34:53 2024 +0530

    new file modified

commit 72b2e11adc53624325614ac17820e9f7cbe849b
Author: Ramyaprabhасиr <ramyaprabhасиr@ymail.com>
Date: Mon Jul 15 09:33:37 2024 +0530

    new file added

commit 6256e669ff4deaaeb4097bf85599094c56ee0fa3e
Author: Ramyaprabhасиr <ramyaprabhасиr@ymail.com>
Date: Mon Jul 15 09:27:46 2024 +0530

    file1 changed again

commit 8229556972f90ccaddba9c51813d98e61d001962
Author: Ramyaprabhасиr <ramyaprabhасиr@ymail.com>
Date: Mon Jul 15 09:16:48 2024 +0530

C:\Users\Ramya\Downloads\test>git checkout MySan
Switched to branch 'MySan'

C:\Users\Ramya\Downloads\test>gitk

C:\Users\Ramya\Downloads\test>
```

gitk interface showing a linear commit history:

- SHA1 ID: e94d16db4338471elab9c4d77206a40cdea50bb8
- Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
- Date: 2024-07-15 10:36:18
- Commit message: New file added
- File: src/file1.txt
- Content of src/file1.txt (diff):

```
----- src/file1.txt -----
index e94d16db..d285b0aa 100644
--- /dev/null
+++ b/src/file1.txt
@@ -0,0 +1 @@
+Assignment 2
\ No newline at end of file
```

It is a linear commit history since it looks like a straight line.

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

Git CMD window showing the linear commit history:

```

New file modified
commit 725f7580605e3f6be3b4f16017f851be05962bc4
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 10:26:47 2024 +0530

New file added
commit 0ac61369d71e6027b356515c40edb945eff4e1e37
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:49:15 2024 +0530

Renamed the file1
commit 4ab3505681d98f8c9087f43e4555cc0eb70441fa6
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:46:17 2024 +0530

Renamed a file
commit cad48bad27014f5af6910187fe016dec86503f88
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:42:51 2024 +0530

deleted two files
commit 538cf15e47c389961c8bb9d6265b983d3ef7fe48
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:34:53 2024 +0530

new file modified
commit 72b2e11adcf53624325614ac17820e9f7cbe849b
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 09:33:37 2024 +0530
```

C:\Users\Ramya\Downloads\test>gitk
C:\Users\Ramya\Downloads\test>

gitk - test: All files - gitk

File Edit View Help

MySan [master] New file modified

- New file added
- Renamed this file
- Replaced this file
- deleted two files
- new file modified
- new file added
- All files modified again
- src files added
- Readme file added

SHA1 ID: e94d16db4338471elab9c4d77206a40cdea50bbb ↵ → Row| 1 / 10 |

Find ↓ up commit containing: ↵

Search Patch Tree

Diff Old version New version Lines of context: 3 5 Ignore space change Line diff

Author: Ramyaprabhasari <ramyaprabhasir@gmail.com> 2024-07-15 10:36:18
Committer: Ramyaprabhasari <ramyaprabhasir@gmail.com> 2024-07-15 10:36:18
Parent: 54ceb48 [MySan] file2 modified (New file added)
Branches: MySan, master
Follows:
Precedes:

New file modified

```
----- src/file1.txt -----
index e94d16db..d285b0aa 100644
@@ -0,0 +1 @@
+Assignment 2
\ No newline at end of file
```

28°C Mostly cloudy Search ENG IN 11:04 AM 15-07-2024

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

```
Git CMD C:\Users\Ramya\Downloads\test>cd src
C:\Users\Ramya\Downloads\test\src>touch file2.txt
'touch' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\Ramya\Downloads\test\src>git add file2.txt
C:\Users\Ramya\Downloads\test\src>git commit -m "File2 added"
[MySan dda7fec] File2 added
 1 file changed, 0 insertions(+), 0 deletions(-)
   create mode 100644 src/file2.txt

C:\Users\Ramya\Downloads\test\src>git status
On branch MySan
nothing to commit, working tree clean

C:\Users\Ramya\Downloads\test\src>git status
On branch MySan
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
    modified:   file2.txt

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

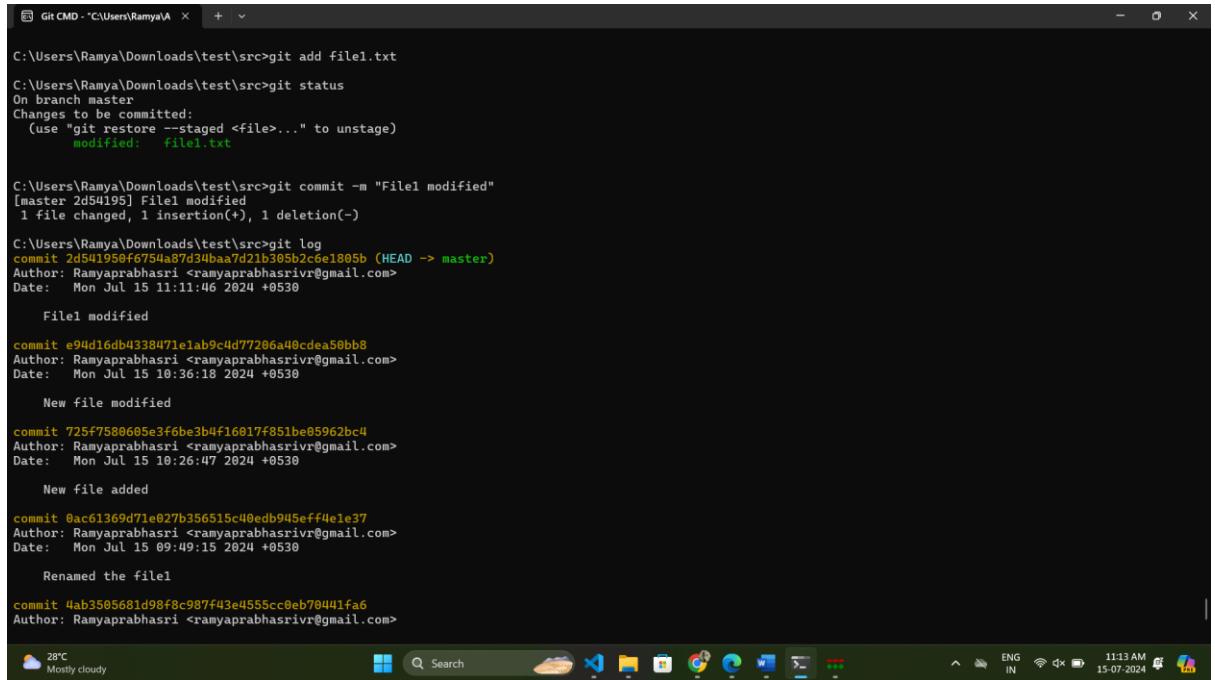
C:\Users\Ramya\Downloads\test\src>git add file2.txt
C:\Users\Ramya\Downloads\test\src>git status
On branch MySan
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    modified:   file2.txt

C:\Users\Ramya\Downloads\test\src>git commit -m "File2 modified"
[MySan 54ceb48] File2 modified
 1 file changed, 1 insertion(+)

C:\Users\Ramya\Downloads\test\src>
```

28°C Mostly cloudy Search ENG IN 11:09 AM 15-07-2024

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.



```
Git CMD - "C:\Users\Ramya\A" + 

C:\Users\Ramya\Downloads\test\src>git add file1.txt
C:\Users\Ramya\Downloads\test\src>git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    modified:   file1.txt

C:\Users\Ramya\Downloads\test\src>git commit -m "File1 modified"
[master 2d50195] File1 modified
 1 file changed, 1 insertion(+), 1 deletion(-)

C:\Users\Ramya\Downloads\test\src>git log
commit 2d501950f6754a87d34baa7d21b305b2c6e1805b (HEAD -> master)
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date:  Mon Jul 15 11:14:20 2024 +0530

  File1 modified

commit e94d16db4338471elab9c4d77206a40cdea50bb8
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date:  Mon Jul 15 10:36:18 2024 +0530

  New file modified

commit 725f7580605e3f6be3b4f16017f851be05962bc4
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date:  Mon Jul 15 10:26:47 2024 +0530

  New file added

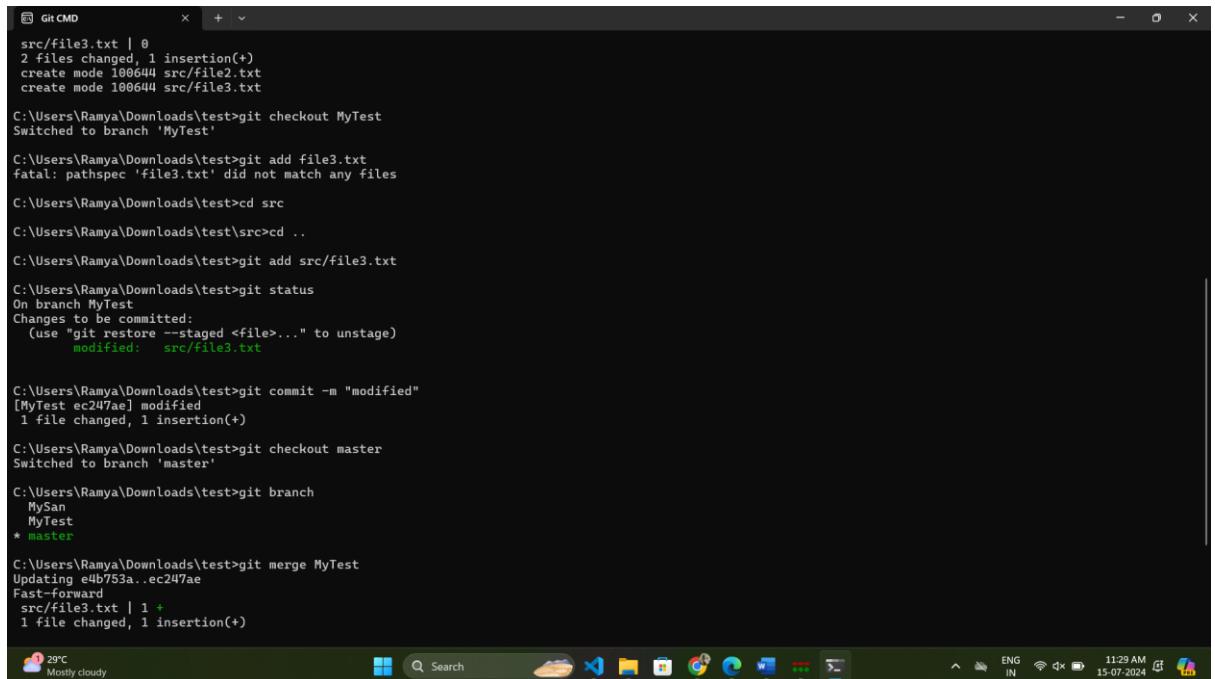
commit 0ac61369d71e027b356515c40edb945eff4e1e37
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date:  Mon Jul 15 09:49:15 2024 +0530

  Renamed the file1

commit 4ab3505681d98f8c987f43e4555cc0eb70441fa6
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>

28°C Mostly cloudy Search 11:13 AM 15-07-2024 ENG IN
```

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.



```
Git CMD - "C:\Users\Ramya\Downloads\test" + 

src/file3.txt | 0
2 files changed, 1 insertion(+)
create mode 100644 src/file2.txt
create mode 100644 src/file3.txt

C:\Users\Ramya\Downloads\test>git checkout MyTest
Switched to branch 'MyTest'

C:\Users\Ramya\Downloads\test>git add file3.txt
fatal: pathspec 'file3.txt' did not match any files

C:\Users\Ramya\Downloads\test>cd src
C:\Users\Ramya\Downloads\test\src>cd ..
C:\Users\Ramya\Downloads\test>git add src/file3.txt
C:\Users\Ramya\Downloads\test>git status
On branch MyTest
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    modified:   src/file3.txt

C:\Users\Ramya\Downloads\test>git commit -m "modified"
[MyTest ec247ae] modified
 1 file changed, 1 insertion(+)

C:\Users\Ramya\Downloads\test>git checkout master
Switched to branch 'master'

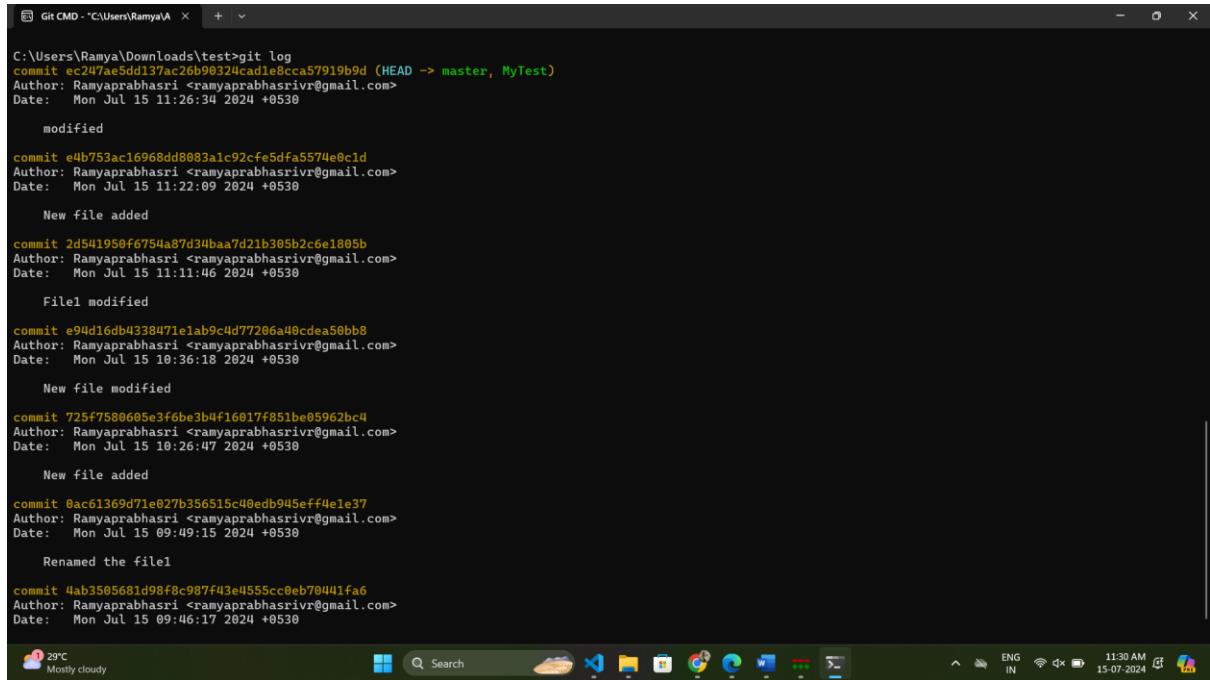
C:\Users\Ramya\Downloads\test>git branch
  MySan
  MyTest
* master

C:\Users\Ramya\Downloads\test>git merge MyTest
Updating e4b753a..ec247ae
Fast-forward
  src/file3.txt | 1 +
  1 file changed, 1 insertion(+)

29°C Mostly cloudy Search 11:29 AM 15-07-2024 ENG IN
```

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.



C:\Users\Ramya\Downloads\test>git log

```
commit ec247ae5dd137ac26b90324cad1e8cca57919b9d (HEAD -> master, MyTest)
Author: Ramyaprabhasri <ramyaprabhasivr@gmail.com>
Date: Mon Jul 15 11:26:34 2024 +0530

    modified

commit e4b753ac16968dd8083alc92cfe5dfa5574e0c1d
Author: Ramyaprabhasri <ramyaprabhasivr@gmail.com>
Date: Mon Jul 15 11:22:09 2024 +0530

    New file added

commit 2d541950f6754a87d34baa7d21b305b2c6e1805b
Author: Ramyaprabhasri <ramyaprabhasivr@gmail.com>
Date: Mon Jul 15 11:11:46 2024 +0530

    File1 modified

commit e94d16db4338471elab9c4d7206a40cdea50bb8
Author: Ramyaprabhasri <ramyaprabhasivr@gmail.com>
Date: Mon Jul 15 10:36:18 2024 +0530

    New file modified

commit 725f7580605e3f6be3b4f16017f851be05962bc4
Author: Ramyaprabhasri <ramyaprabhasivr@gmail.com>
Date: Mon Jul 15 10:26:47 2024 +0530

    New file added

commit 8ac61369d71e027b356515c40edb945eff4e1e37
Author: Ramyaprabhasri <ramyaprabhasivr@gmail.com>
Date: Mon Jul 15 09:49:15 2024 +0530

    Renamed the file1

commit 4ab3505681d98f8c987f43e4555cc0eb70441fa6
Author: Ramyaprabhasri <ramyaprabhasivr@gmail.com>
Date: Mon Jul 15 09:46:17 2024 +0530
```

SHA1 ID: 1f0cf13bca44b61baeef569c9bdb9dc91d0c9d661 ← → Row | 1 / 17 |

Find ↓ ↑ commt containing: ↴

Search | Patch | Tree | Comments | Exact | All fields ↴

Diff | Old version | New version | Lines of context: 3 | Ignore space change | Line diff |

Author: Ramyaprabhasri <ramyaprabhasivr@gmail.com> 2024-07-15 11:35:54
Committer: Ramyaprabhasri <ramyaprabhasivr@gmail.com> 2024-07-15 11:35:54
Parent: [ec247ae5dd137ac26b90324cad1e8cca57919b9d](#) (modified)
Same: [ec247ae5dd137ac26b90324cad1e8cca57919b9d](#) (Ramyas file added)
Branch: master
Follows:
Precedes:
Merged

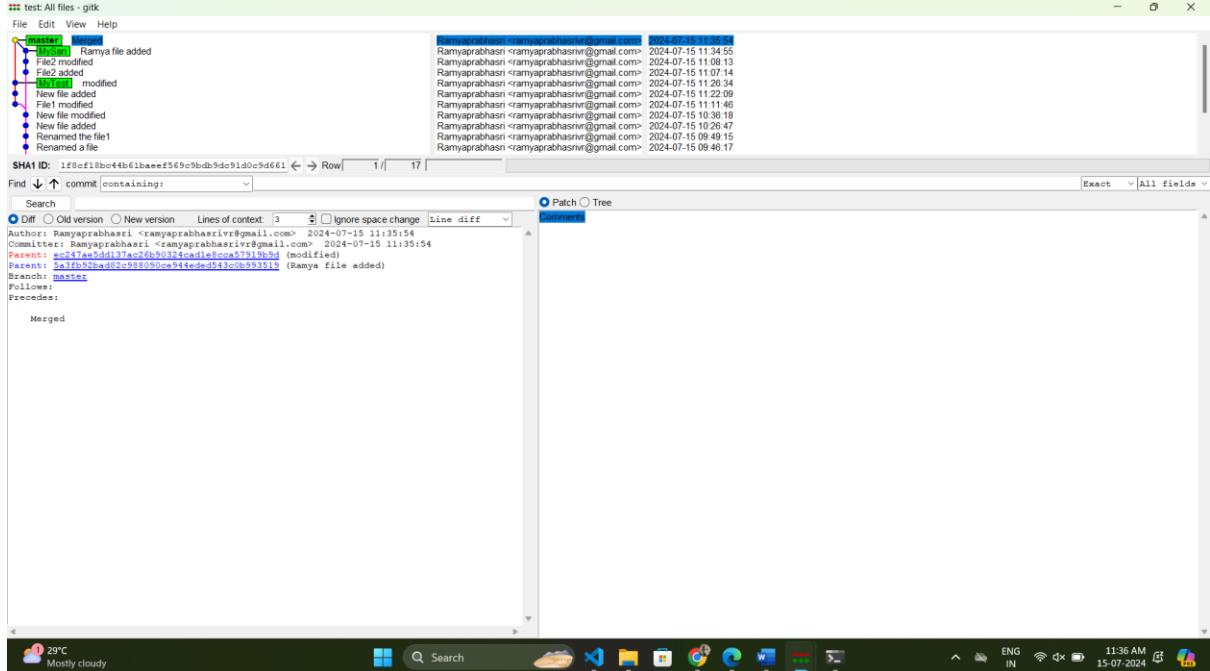
Cloudy 29°C Mostly cloudy

Search | Patch | Tree | Comments | Exact | All fields ↴

Diff | Old version | New version | Lines of context: 3 | Ignore space change | Line diff |

Author: Ramyaprabhasri <ramyaprabhasivr@gmail.com> 2024-07-15 11:34:55
Committer: Ramyaprabhasri <ramyaprabhasivr@gmail.com> 2024-07-15 11:08:13
Parent: [e4b753ac16968dd8083alc92cfe5dfa5574e0c1d](#) (modified)
Same: [e4b753ac16968dd8083alc92cfe5dfa5574e0c1d](#) (Ramyas file added)
Branch: master
Follows:
Precedes:

Cloudy 29°C Mostly cloudy



Stretch Task

1. Once again, checkout your branch. Make a couple of commits.

A screenshot of a Windows desktop. In the center is a command prompt window titled "Git CMD". The window displays a series of git commit logs and terminal commands. The commits show changes to files named "File1" and "File2". The user then switches to the "MySan" branch, adds a file named "Ramya.txt", and makes a commit. They then add another file named "prabha.txt" and make another commit. The taskbar at the bottom shows various icons for Microsoft Office applications like Word, Excel, and PowerPoint, along with a weather widget indicating 29°C and mostly cloudy conditions. The system tray shows the date as 15-07-2024 and the time as 11:39 AM.

```
commit e4b753ac16968dd8083a1c92cf5dfa5574e0c1d
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 11:22:09 2024 +0530

    New file added

commit 2d541950f6754a87d34baa7d21b305b2c6e1805b
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 11:11:46 2024 +0530

    File1 modified

commit 54ceb48b7f3ca24747ac8059e0c0eb3199c98202
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 11:08:13 2024 +0530

    File2 modified

commit dda7fecc23ecf160f11481ccc06f3fa594af744d
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 11:07:14 2024 +0530

C:\Users\Ramya\Downloads\test>gitk

C:\Users\Ramya\Downloads\test>git checkout MySan
Switched to branch 'MySan'

C:\Users\Ramya\Downloads\test>git add src/Ramya.txt

C:\Users\Ramya\Downloads\test>git commit -m "Ramya file modified"
[MySan df348b8] Ramya file modified
1 file changed, 1 insertion(+)

C:\Users\Ramya\Downloads\test>git add src/prabha.txt

C:\Users\Ramya\Downloads\test>git commit -m "Prabha file added"
[MySan 69c5771] Prabha file added
1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 src/prabha.txt

C:\Users\Ramya\Downloads\test>
```

2. Return to your master branch. Make a commit there that changes the exact same line, or lines, as commits in your branch did.

A screenshot of a Windows desktop. In the center is a command prompt window titled "Git CMD". The window displays a series of git commands and their outputs. The user first adds a file "S.txt" and makes a commit. They then switch to the "master" branch, switch back to "MySan", and switch back to "master". They add "Ramya.txt" and make a commit, then add "src/Ramya.txt" and make another commit. Finally, they add "src/Ramya.txt" again and make a third commit. The taskbar at the bottom shows various icons for Microsoft Office applications like Word, Excel, and PowerPoint, along with a weather widget indicating 29°C and mostly cloudy conditions. The system tray shows the date as 15-07-2024 and the time as 11:52 AM.

```
C:\Users\Ramya\Downloads\test>git add src/S.txt

C:\Users\Ramya\Downloads\test>git commit -m "S"
[MySan f9089d3] S
1 file changed, 1 insertion(+)
 create mode 100644 src/S.txt

C:\Users\Ramya\Downloads\test>git checkout master
Switched to branch 'master'

C:\Users\Ramya\Downloads\test>git checkout MySan
Switched to branch 'MySan'

C:\Users\Ramya\Downloads\test>git checkout master
Switched to branch 'master'

C:\Users\Ramya\Downloads\test>git checkout MySan
Switched to branch 'MySan'

C:\Users\Ramya\Downloads\test>git add src/Ramya.txt

C:\Users\Ramya\Downloads\test>git commit -m "modified"
[MySan f95df1f] modified
1 file changed, 1 insertion(+), 1 deletion(-)

C:\Users\Ramya\Downloads\test>git add src/Ramya.txt

C:\Users\Ramya\Downloads\test>git commit -m "modified again"
[MySan 792834c] modified again
1 file changed, 1 insertion(+), 1 deletion(-)

C:\Users\Ramya\Downloads\test>git checkout master
Switched to branch 'master'

C:\Users\Ramya\Downloads\test>git add src/Ramya.txt

C:\Users\Ramya\Downloads\test>git commit -m "modified"
[master e2194ca] modified
1 file changed, 1 insertion(+)
```

3. Now try to merge your branch. You should get a conflict.

A screenshot of a Windows desktop. At the top is the taskbar with various icons. In the center is a Git CMD window titled "Git CMD" showing a command-line session. The session starts with creating a file "src/S.txt", then switching to the "master" branch, then to a new branch "MySan". It then switches back to "master", adds the file "src/Ramya.txt" to the staging area, and commits it with message "modified". It then creates another commit with message "modified again". Finally, it merges the "MySan" branch into "master", resulting in a merge conflict in "src/Ramya.txt". The file explorer window shows several files in the background.

```
Git CMD
create mode 100644 src/S.txt
C:\Users\Ramya\Downloads\test>git checkout master
Switched to branch 'master'
C:\Users\Ramya\Downloads\test>git checkout MySan
Switched to branch 'MySan'
C:\Users\Ramya\Downloads\test>git checkout master
Switched to branch 'master'
C:\Users\Ramya\Downloads\test>git checkout MySan
Switched to branch 'MySan'
C:\Users\Ramya\Downloads\test>git add src/Ramya.txt
C:\Users\Ramya\Downloads\test>git commit -m "modified"
[MySan f95df1f] modified
 1 file changed, 1 insertion(+), 1 deletion(-)
C:\Users\Ramya\Downloads\test>git add src/Ramya.txt
C:\Users\Ramya\Downloads\test>git commit -m "modified again"
[MySan 792834c] modified again
 1 file changed, 1 insertion(+), 1 deletion(-)
C:\Users\Ramya\Downloads\test>git checkout master
Switched to branch 'master'
C:\Users\Ramya\Downloads\test>git add src/Ramya.txt
C:\Users\Ramya\Downloads\test>git commit -m "modified"
[master e3194ca] modified
 1 file changed, 1 insertion(+)
C:\Users\Ramya\Downloads\test>git merge MySan
Auto-merging src/Ramya.txt
CONFLICT (content): Merge conflict in src/Ramya.txt
Automatic merge failed; fix conflicts and then commit the result.
C:\Users\Ramya\Downloads\test>
```

4. Open the file(s) that is in conflict. Search for the conflict marker. Edit the file to remove the conflict markers and resolve the conflict.

A screenshot of a Windows desktop. At the top is the taskbar with various icons. In the center is a code editor window titled "Ramy" showing a file with merge冲突 markers. The file contains:
<<<<< HEAD
ramya
=====
This is Ramyaprabha|
>>>>> Mysan

The code editor has tabs for file1.txt, file3.txt, file1.txt, file.txt, file2.txt, file1.txt, file3.txt, Ramya.txt, RP.txt, S.txt, Ramya.txt, Ramya.txt, Ramya.txt, and Ramy. The status bar at the bottom shows "Ln 4, Col 20 61 characters", "100% Windows (CRLF)", and "UTF-8". The file explorer window is visible in the background.

5. Now try to commit. Notice that Git will not allow you to do this when you still have potentially unresolved conflicts. Look at the output of status too.

```

Git CMD
C:\Users\Ramya\Downloads\test>git add src/Ramya.txt
C:\Users\Ramya\Downloads\test>git commit -m "modified again"
[MySan c3cc114] modified again
 1 file changed, 1 insertion(+), 1 deletion(-)
C:\Users\Ramya\Downloads\test>git checkout master
Switched to branch 'master'
C:\Users\Ramya\Downloads\test>git add src/Ramya.txt
C:\Users\Ramya\Downloads\test>git commit -m "Again again modified"
[master f97a6ed] Again again modified
 1 file changed, 1 insertion(+), 1 deletion(-)
C:\Users\Ramya\Downloads\test>git merge MySan
Auto-merging src/Ramya.txt
CONFLICT (content): Merge conflict in src/Ramya.txt
Automatic merge failed; fix conflicts and then commit the result.
C:\Users\Ramya\Downloads\test>git commit -m "m1"
U     src/Ramya.txt
error: Committing is not possible because you have unmerged files.
hint: Fix them up in the work tree, and then use 'git add/rm <file>'.
hint: as appropriate to mark resolution and make a commit.
fatal: Exiting because of an unresolved conflict.
C:\Users\Ramya\Downloads\test>git status
On branch master
You have unmerged paths.
  (fix conflicts and run "git commit")
  (use "git merge --abort" to abort the merge)

Unmerged paths:
  (use "git add <file>..." to mark resolution)
    both modified:  src/Ramya.txt

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

C:\Users\Ramya\Downloads\test>

```

6. Use the add command to add the files that you have resolved conflicts in to the staging area. Then use commit to commit the merge commit.

```

Git CMD
C:\Users\Ramya\Downloads\test>git checkout master
Switched to branch 'master'
C:\Users\Ramya\Downloads\test>git add src/Ramya.txt
C:\Users\Ramya\Downloads\test>git commit -m "Again again modified"
[master f97a6ed] Again again modified
 1 file changed, 1 insertion(+), 1 deletion(-)
C:\Users\Ramya\Downloads\test>git merge MySan
Auto-merging src/Ramya.txt
CONFLICT (content): Merge conflict in src/Ramya.txt
Automatic merge failed; fix conflicts and then commit the result.
C:\Users\Ramya\Downloads\test>git commit -m "m1"
U     src/Ramya.txt
error: Committing is not possible because you have unmerged files.
hint: Fix them up in the work tree, and then use 'git add/rm <file>'.
hint: as appropriate to mark resolution and make a commit.
fatal: Exiting because of an unresolved conflict.
C:\Users\Ramya\Downloads\test>git status
On branch master
You have unmerged paths.
  (fix conflicts and run "git commit")
  (use "git merge --abort" to abort the merge)

Unmerged paths:
  (use "git add <file>..." to mark resolution)
    both modified:  src/Ramya.txt

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

C:\Users\Ramya\Downloads\test>git add src/Ramya.txt
C:\Users\Ramya\Downloads\test>git add src/Ramya.txt
C:\Users\Ramya\Downloads\test>git commit -m "m1"
[master 89b3dd2] m1
C:\Users\Ramya\Downloads\test>

```

7. Take a look at git log and gitk, and make sure things are as you expected.

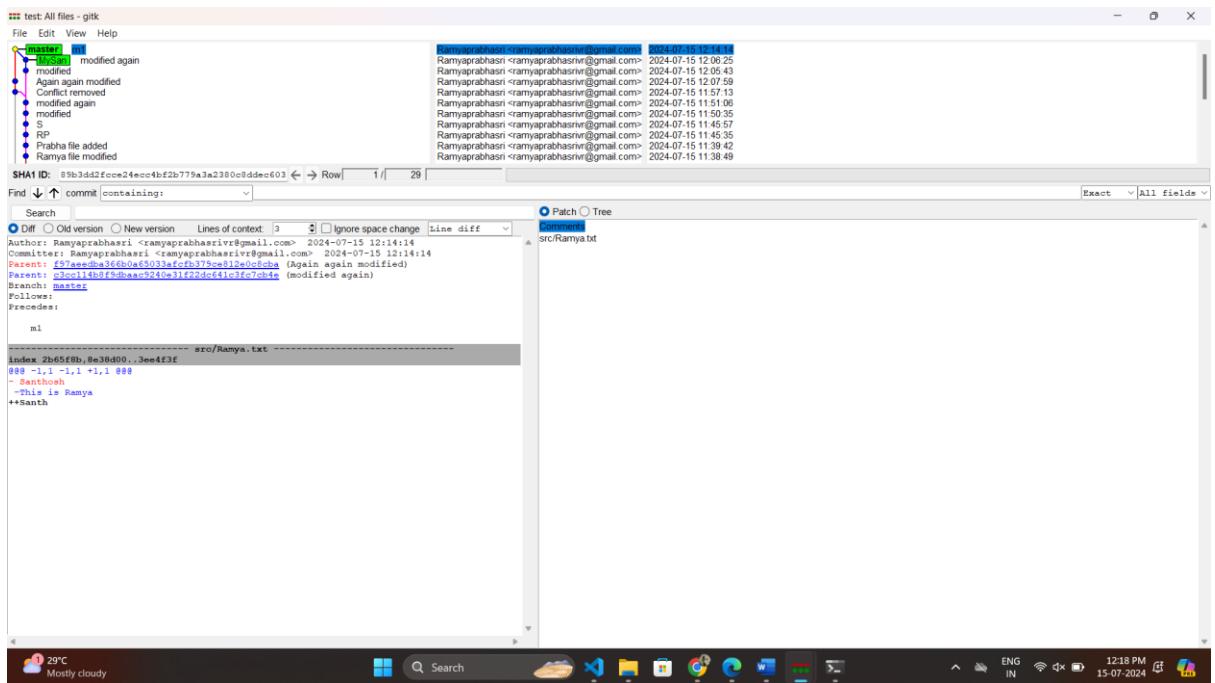
Git CMD

```
Date: Mon Jul 15 12:14:14 2024 +0530
m1
commit f97aeedba366b0a65033afcfb379ce812e0c8cba
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 12:07:59 2024 +0530
    Again again modified
commit c3cc114b8f9dba9240e31f22dc641c3fc7cb4e (MySan)
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 12:06:25 2024 +0530
    modified again
commit 73c076121fa6f70272c8e3c5f95d26001cea1908
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 12:05:43 2024 +0530
    modified
commit ce5e75e8ecfd18a2c12628d827b470af0afb433f
Merge: e3194ca 792834c
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 11:57:13 2024 +0530
    Conflict removed
commit e3194ca65fa42accfc74faf5a3bd199881d8f9d4
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Mon Jul 15 11:51:53 2024 +0530
    modified
commit 792834cc683cd827cf6e1d42f24c5ca20bd11762
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
C:\Users\Ramya\Downloads\test>gitk
C:\Users\Ramya\Downloads\test>
```

29°C Mostly cloudy

Search

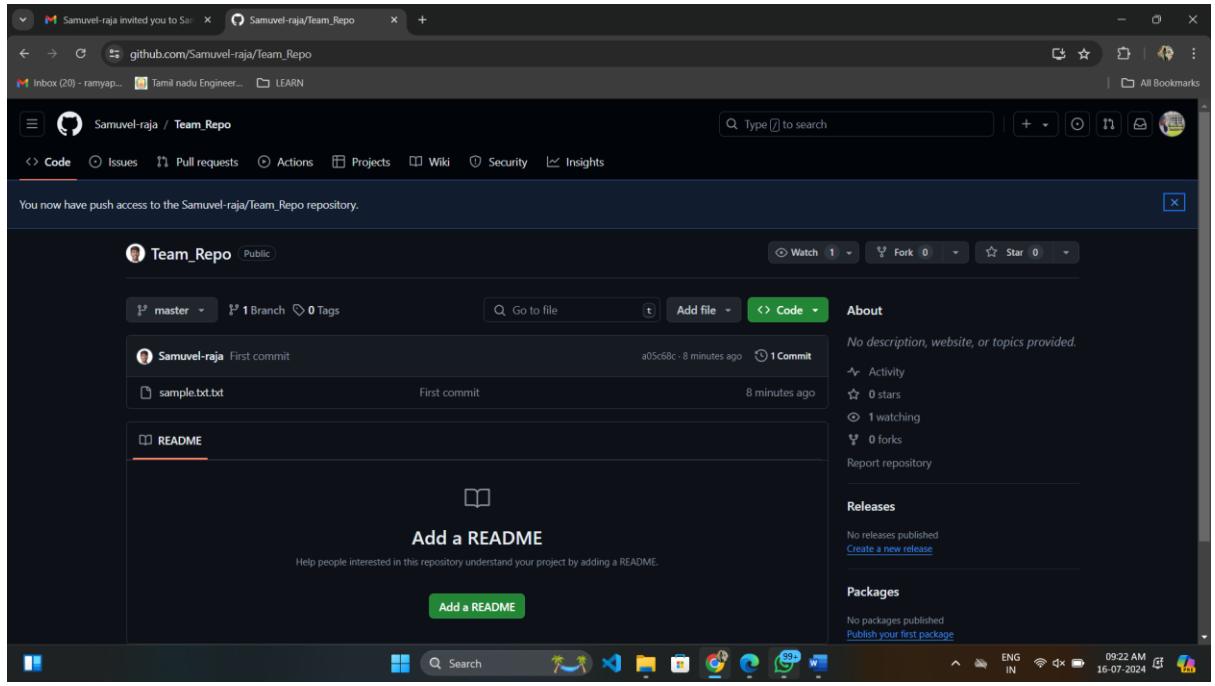
ENG IN 12:17 PM 15-07-2024



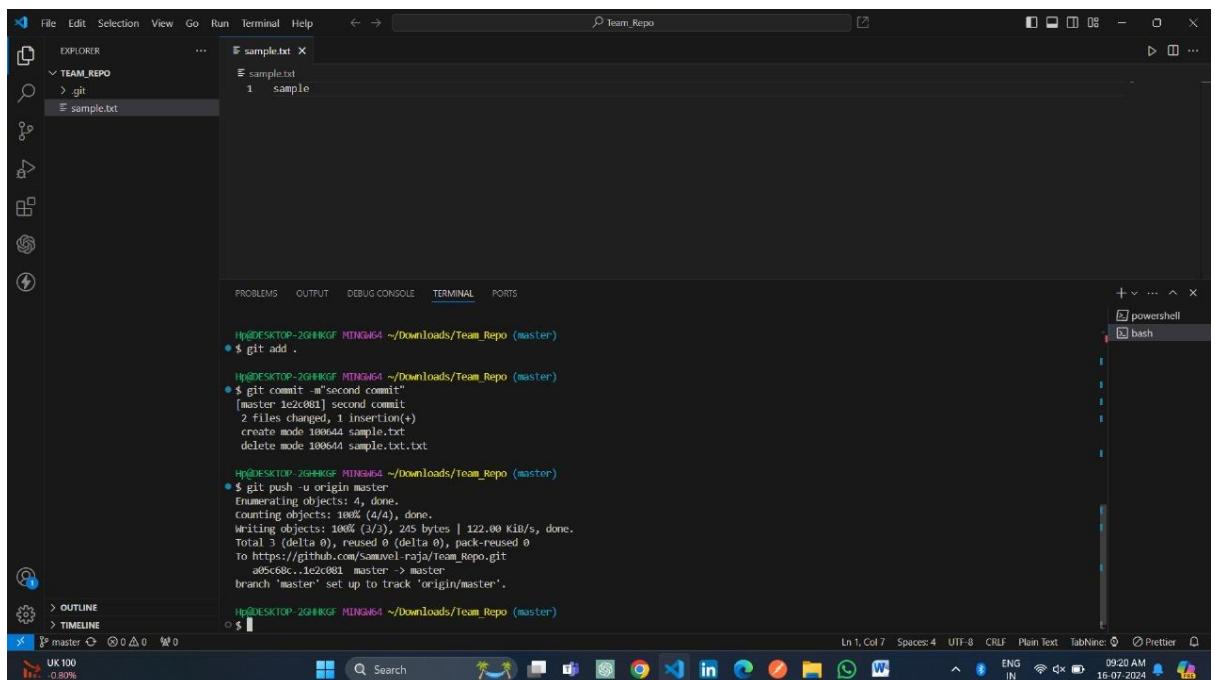
Exercise 3

Main Task

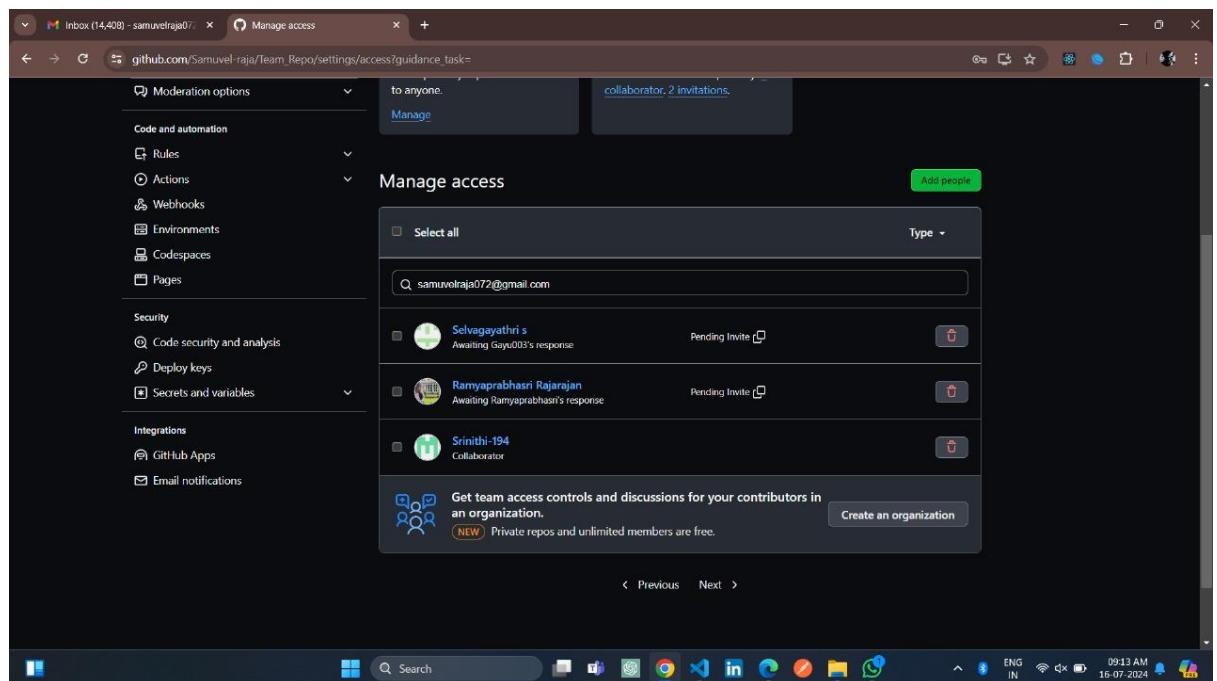
1. First, one person in the group should create a public repository using their GitHub account.



2. This same person should then follow the instructions from GitHub to add a remote, and then push their repository. Do not forget the `-u` flag, as suggested by GitHub!



3. All of the other members of the group should then be added as collaborators, so they can commit to the repository also.



4. Next, everyone else in the group should clone the repository from GitHub. Verify that the context of the repository is what is expected.

```
C:\Users\Ramya>cd Downloads
C:\Users\Ramya\Downloads>cd team
C:\Users\Ramya\Downloads\team> git clone https://github.com/Samuelvel-raja/Team_Repo.git
Cloning into 'Team_Repo'...
remote: Enumerating objects: 6, done.
remote: Counting objects: 100% (6/6), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 6 (delta 0), reused 6 (delta 0), pack-reused 0
Receiving objects: 100% (6/6), done.
C:\Users\Ramya\Downloads\team>
```

A screenshot of a Windows Command Prompt window titled 'Git CMD'. The user has navigated to the 'team' directory in their Downloads folder and run the command 'git clone https://github.com/Samuelvel-raja/Team_Repo.git'. The output shows the cloning process, including object enumeration, counting, compressing, and receiving, all completed successfully. The command prompt is located on a Windows desktop with a taskbar at the bottom showing various icons and system status.

- One of the group members who just cloned should now make a local commit, then push it. Everyone should verify that when they pull, that commit is added to their local repository (use git log to check for it).

The screenshot shows a Windows desktop environment. At the top is a taskbar with various icons for applications like File Explorer, Edge, and Google Chrome. In the center is a command-line interface window titled "Git CMD - C:\Users\Ramya\A". The window displays a git log output from a repository named "Team_Repo". The log shows several commits, including one from the user "Ramya" and another from "samuelvelraja". The commits are dated Tuesday, July 16, 2024, at 09:42:19. The log ends with a merge message from "https://github.com/Samuelvelraja/Team_Repo". The system tray at the bottom right shows the date as 16-07-2024 and the time as 10:00 AM.

```

Git CMD - C:\Users\Ramya\A
C:\Users\Ramya\Downloads\team\Team_Repo>git log
commit 9f0eachea507ef0a88cd99396ea60da484fac73b (HEAD --> master)
Author: Srinithi-194 <balasubramaniansrinithi@gmail.com>
Date: Tue Jul 16 09:57:25 2024 +0530

Text Document

commit 51451422722a5b6533bb755aee3f1ac23ff51924e (origin/master, origin/HEAD)
Merge: 514e5d5 e181cb8
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Tue Jul 16 09:47:04 2024 +0530

m1

commit 514e5d540a994ed87e4024489e10cf8a32fb2fbc
Merge: 37f8861 77d8490
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Tue Jul 16 09:42:58 2024 +0530

Ramyas text file added

commit e181cb894d882ecfd3b5a7f431148c8affbf6dea
Merge: d4ecf24 2a11039
Author: Gayu003 <selvagayathri2003@gmail.com>
Date: Tue Jul 16 09:42:19 2024 +0530

Merge branch 'master' of https://github.com/Samuelvelraja/Team_Repo

commit 2a11039d99f36ae62984e1c2cef3a963951c9c
Merge: 77d8490 37f8861
Author: samuelvelraja <samuelvelraja072@gmail.com>
Date: Tue Jul 16 09:39:55 2024 +0530

Merge https://github.com/Samuelvelraja/Team_Repo

commit d4ecf24c7ce1e68530b8864afc54253fc26f698cb
Author: Gayu003 <selvagayathri2003@gmail.com>
Date: Tue Jul 16 09:38:13 2024 +0530

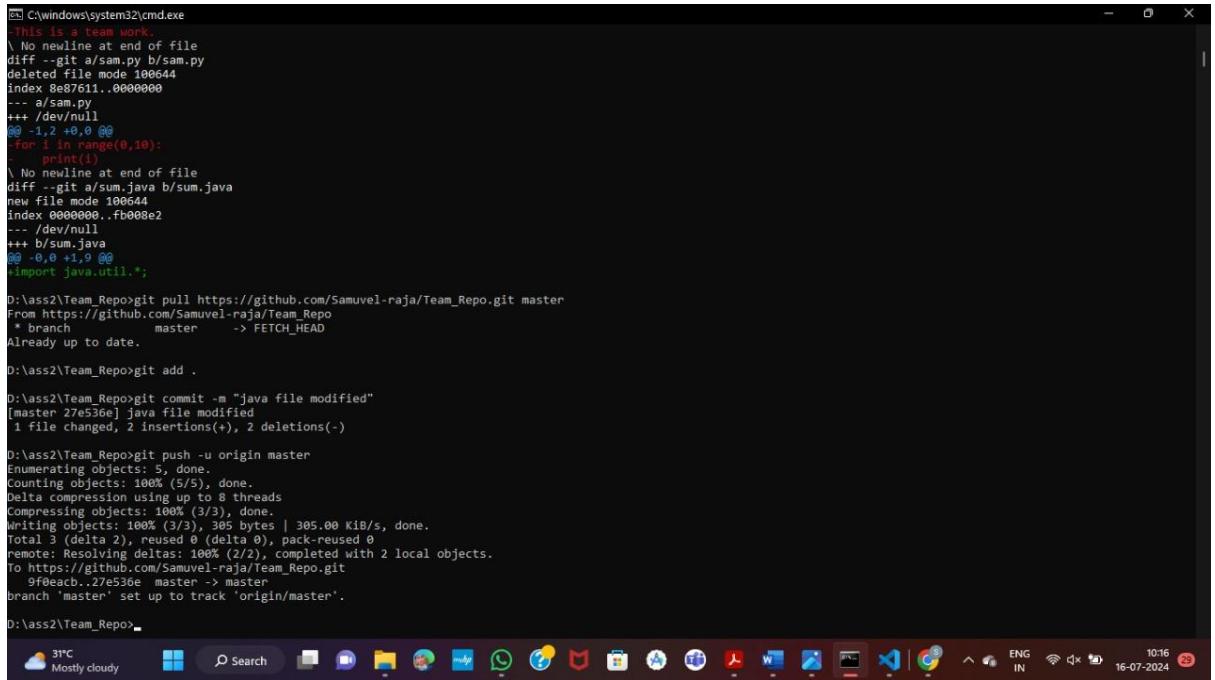
new java file added

```

- Look at each other's git log output. Notice how the SHA-1 is the same for a given commit across every copy of the repository. Why is this important?

Yes, the SHA-1 is the same for a given commit across every copy of the repository. The SHA-1 hash allows for consistency across these distributed copies. Since the hash is based on the commit content, the same commit will have the same hash in every clone of the repository, ensuring that everyone is referring to the exact same data.

- Two members of the group should now make a commit locally, and race to push it. To keep things simple, be sure to edit different files. What happens to the runner-up?



```
C:\windows\system32\cmd.exe
This is a new work.
\ No newline at end of file
diff -git a/sam.py b/sam.py
deleted file mode 100644
index e8e7611..0000000
--- a/sam.py
+++ /dev/null
@@ -1,2 +0,0 @@
for i in range(0,10):
    print(i)
\ No newline at end of file
diff --git a/sum.java b/sum.java
new file mode 100644
index 0000000..f0e008e2
--- /dev/null
+++ b/sum.java
@@ -0,0 +1,9 @@
import java.util.*;

D:\ass2\Team_Repo>git pull https://github.com/Samuvel-raja/Team_Repo.git master
From https://github.com/Samuvel-raja/Team_Repo
 * branch            master      -> FETCH_HEAD
Already up to date.

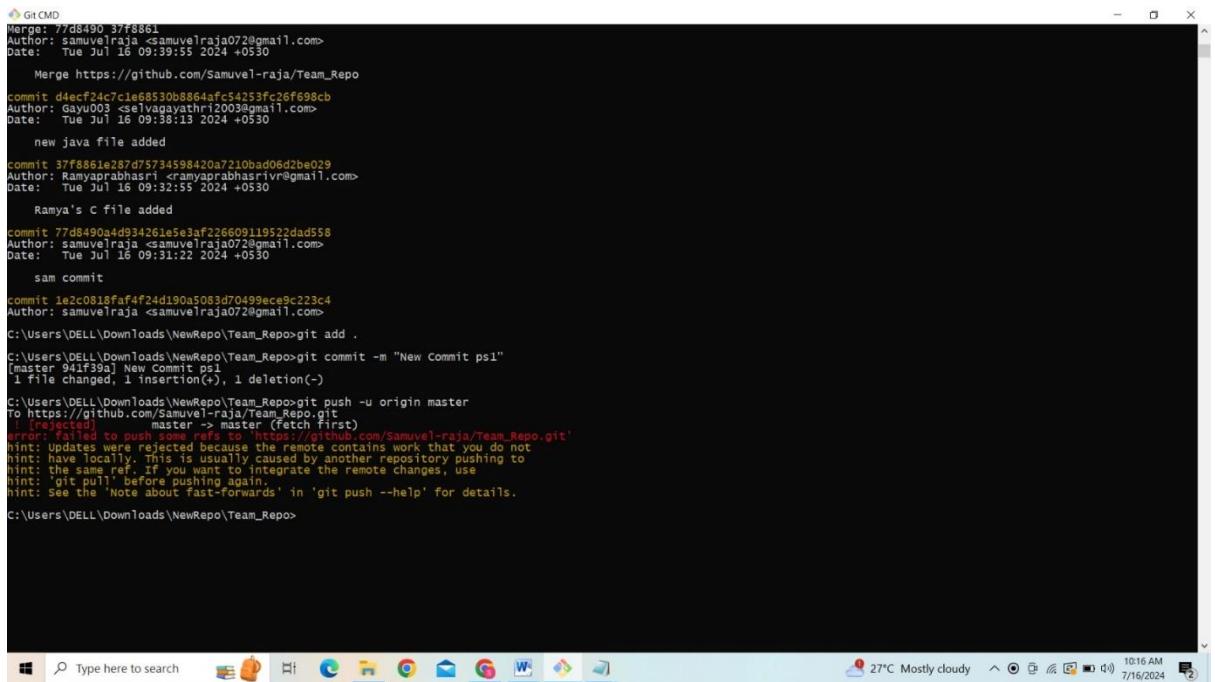
D:\ass2\Team_Repo>git add .

D:\ass2\Team_Repo>git commit -m "java file modified"
[master 27e536e] java file modified
 1 file changed, 2 insertions(+), 2 deletions(-)

D:\ass2\Team_Repo>git push -u origin master
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads.
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 305 bytes | 305.00 KiB/s, done.
Total 3 (delta 2), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
To https://github.com/Samuvel-raja/Team_Repo.git
   9fdeacb..27e536e master -> master
branch 'master' set up to track 'origin/master'.

D:\ass2\Team_Repo>
```

The screenshot shows a Windows Command Prompt window with the title 'C:\windows\system32\cmd.exe'. It displays a local git repository setup, a pull operation from the remote, and a local commit followed by a push attempt. The push attempt fails with a 'rejected' error due to a fast-forward conflict.



```
Git CMD
Merge: 77d8490 37f8861
Author: samuveiraja <samuveiraja072@gmail.com>
Date: Tue Jul 16 09:39:55 2024 +0530

Merge https://github.com/Samuvel-raja/Team_Repo
commit d4ecf24c7c1e68530b8864fc5423f3fc26f698cb
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Tue Jul 16 09:38:13 2024 +0530

  new java file added

commit 37f8861e287d5734598420a7210bad06d2be029
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Tue Jul 16 09:32:55 2024 +0530

  Ramya's C file added

commit 77d8490ad934261a5e3af226609119522dad558
Author: samuveiraja <samuveiraja072@gmail.com>
Date: Tue Jul 16 09:31:22 2024 +0530

  sam commit

commit 1e2c0818faf4f24d190a5083d70499ece9c223c4
Author: samuveiraja <samuveiraja072@gmail.com>
C:\Users\DELL\Downloads\NewRepo\Team_Repo>git add .

C:\Users\DELL\Downloads\NewRepo\Team_Repo>git commit -m "New Commit psi"
[Master 941f39a] New Commit psi
 1 file changed, 1 insertion(+), 1 deletion(-)

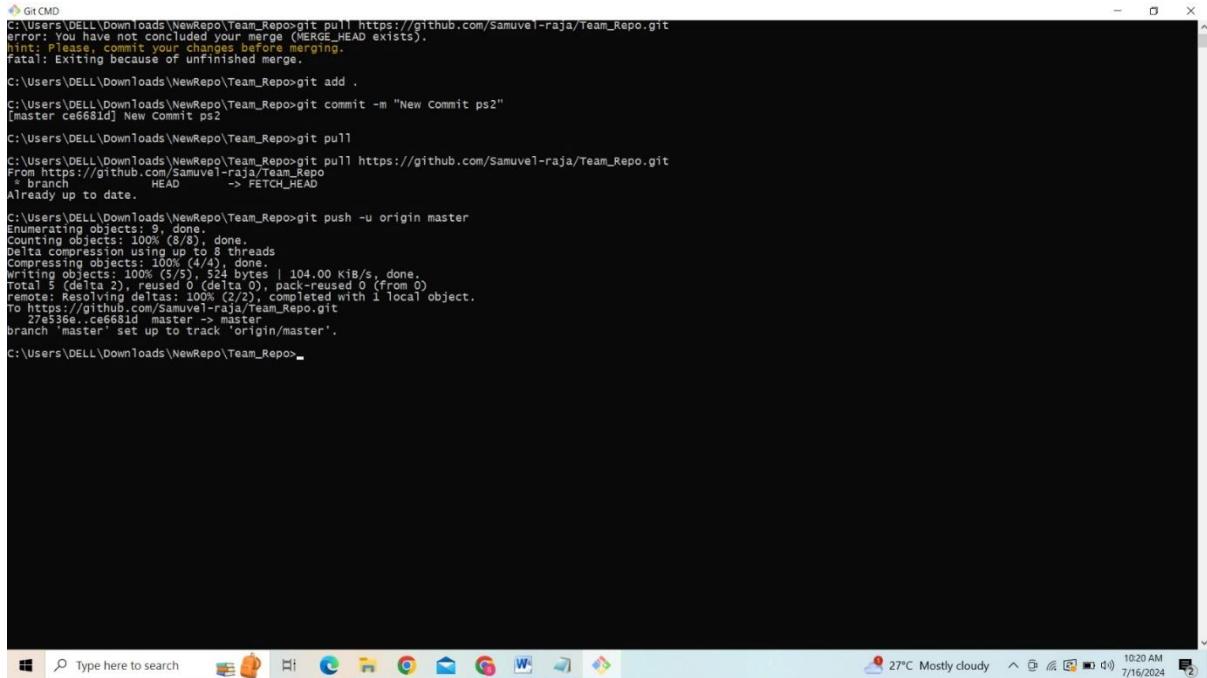
C:\Users\DELL\Downloads\NewRepo\Team_Repo>git push -u origin master
To https://github.com/Samuvel-raja/Team_Repo.git
 ! [rejected]          master -> master (fetch first)
error: failed to push some refs to 'https://github.com/Samuvel-raja/Team_Repo.git'
hint: Updates were rejected because the remote contains work that you do not
have locally. This is equivalent to pushing to another repository pushing to
hint: the same ref. If you want to integrate the remote changes, use
hint: 'git pull' before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.

C:\Users\DELL\Downloads\NewRepo\Team_Repo>
```

The screenshot shows a Windows Command Prompt window with the title 'Git CMD'. It displays a local git repository setup, a pull operation from the remote, and a local commit followed by a push attempt. The push attempt fails with a 'rejected' error due to a fast-forward conflict.

The runner-up's push will be rejected because their local repository is out of sync with the remote. They will need to pull the latest changes from the remote repository, merge them with their local changes, and then push again.

8. The runner-up should now pull. As a group, look at the output of the command. Additionally, look at the git log, and notice that there is a merge commit. You may also wish to view the DAG in gitk.



```

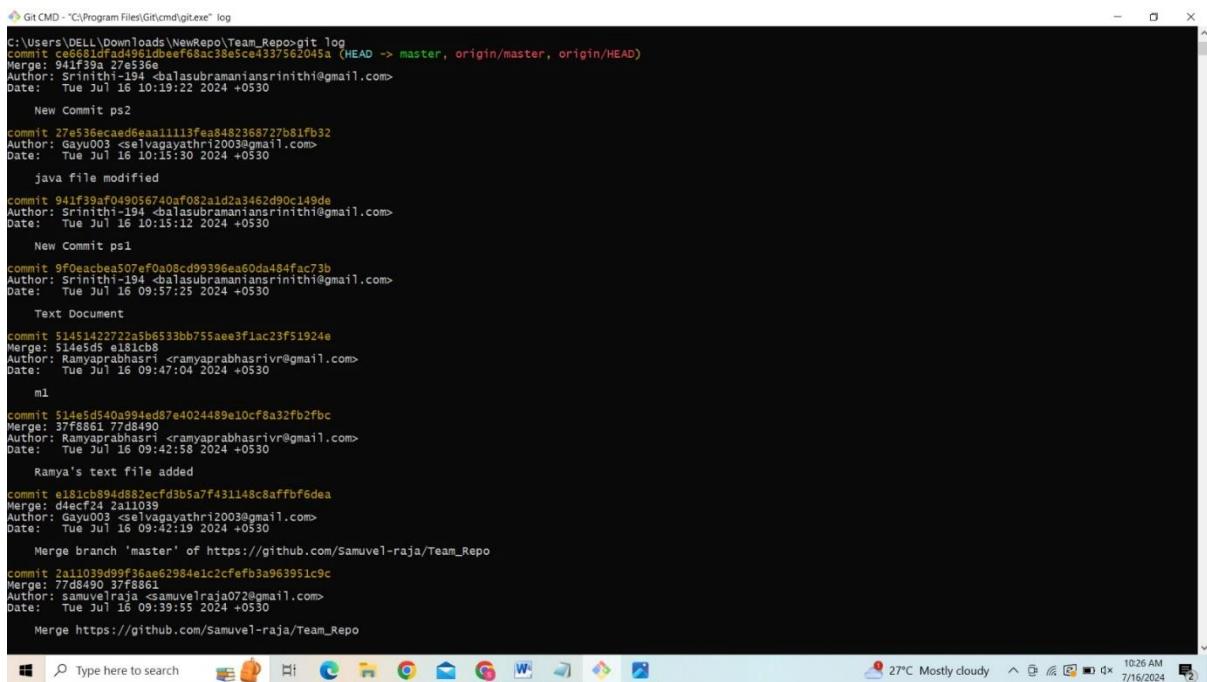
Git CMD
C:\Users\DELL\Downloads\NewRepo\Team_Repo>git pull https://github.com/Samuvel-raja/Team_Repo.git
error: You have not concluded your merge (MERGE_HEAD exists).
hint: Please, commit your changes before merging.
fatal: Exiting because of unfinished merge.

C:\Users\DELL\Downloads\NewRepo\Team_Repo>git add .
C:\Users\DELL\Downloads\NewRepo\Team_Repo>git commit -m "New Commit ps2"
[master ce6681d] New Commit ps2
C:\Users\DELL\Downloads\NewRepo\Team_Repo>git pull
C:\Users\DELL\Downloads\NewRepo\Team_Repo>git pull https://github.com/Samuvel-raja/Team_Repo.git
From https://github.com/Samuvel-raja/Team_Repo
 * branch      HEAD      -> FETCH_HEAD
Already up to date.

C:\Users\DELL\Downloads\NewRepo\Team_Repo>git push -u origin master
Enumerating objects: 9, done.
Counting objects: 9, done.
Delta compression using up to 8 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (5/5), 524 bytes | 104.00 KiB/s, done.
Total 5 (delta 2), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (2/2) completed with 1 local object.
To https://github.com/Samuvel-raja/Team_Repo.git
   27e536e..ce6681d master -> master
branch 'master' set up to track 'origin/master'.

C:\Users\DELL\Downloads\NewRepo\Team_Repo>

```



```

Git CMD - "C:\Program Files(Git\cmd\git.exe)" log
C:\Users\DELL\Downloads\NewRepo\Team_Repo>git log
commit ce6681d4dd41d0beef68ac38e5ce437562045a (HEAD -> master, origin/master, origin/HEAD)
Merge: 941f39af049056740af082a1d2a3462d90c149de
Author: Srinithi-194 <balasubramaniansrinithi@gmail.com>
Date: Tue Jul 16 10:19:22 2024 +0530

    New Commit ps2

commit 27e536e5cad6ea11113fe8482368727b81fb32
Author: Gayu003 <selvagayathri2003@gmail.com>
Date: Tue Jul 16 10:15:30 2024 +0530

        java file modified

commit 941f39af049056740af082a1d2a3462d90c149de
Author: Srinithi-194 <balasubramaniansrinithi@gmail.com>
Date: Tue Jul 16 10:15:12 2024 +0530

    New Commit ps1

commit 9f0eacbea507ef0a08cd99396ea60da484fac73b
Author: Srinithi-194 <balasubramaniansrinithi@gmail.com>
Date: Tue Jul 16 09:57:25 2024 +0530

    Text Document

commit 51451422722a5b653bb755aae3f1ac23f51924e
Merge: 51451422722a5b653bb755aae3f1ac23f51924e
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Tue Jul 16 09:47:04 2024 +0530

    m1

commit 514e5d540a994ed87e4024489e10cf8a32fb2fbcc
Merge: 37f8861 77d8490
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Tue Jul 16 09:42:58 2024 +0530

    Ramya's text file added

commit e181cb94d82ecfd3b5a7f431148c8affbf6dea
Merge: d4e8cf24 2a1039
Author: Gayu003 <selvagayathri2003@gmail.com>
Date: Tue Jul 16 09:42:19 2024 +0530

    Merge branch 'master' of https://github.com/Samuvel-raja/Team_Repo

commit 2a103940f975a62984e1c2cefbd3a963951c9c
Merge: 77d8490 37f8861
Author: samuvelraja <samuvelraja072@gmail.com>
Date: Tue Jul 16 09:39:55 2024 +0530

    Merge https://github.com/Samuvel-raja/Team_Repo

```

The screenshot shows the GitHub interface for a repository named 'Team_Repo'. At the top, there's a navigation bar with 'File', 'Edit', 'View', and 'Help' options. Below the navigation bar, a commit history is displayed. A specific commit is selected, showing its details: it's a merge commit from 'origin/master' into 'master'. The commit message is 'Merge branch 'master' of https://github.com/Samuvel-raja/Team_Repo into master'. The commit was made by 'Samuel' at 10:19:22 on July 16, 2024. It has two parents: '27e536ecad6ea1113fea0482368727b81fb32' (Java file modified) and '2e6681d1fad4961dbbeef69ac30e5ce4337562045a' (New Commit ps1). The commit has several authors listed in the commit message: Srinithi-194, balasubramaniamsrinithi@gmail.com, Gayu003, ramyaprabhasrivr@gmail.com, Srini-194, balasubramaniamsrinithi@gmail.com, Ramyaprabhasri, ramyaprabhasrivr@gmail.com, Gayu003, selvagayathri2003@gmail.com, Gayu003, ramyaprabhasrivr@gmail.com, Gayu003, ramyaprabhasrivr@gmail.com, samuelraja, samuelraja072@gmail.com, Ramyaprabhasri, ramyaprabhasrivr@gmail.com, samuelraja, samuelraja072@gmail.com, and Ramyaprabhasri, ramyaprabhasrivr@gmail.com. The commit was pushed at 10:19:22 on July 16, 2024. The commit message also includes 'Ramya's text file added' and 'sam commit'. Below the commit details, there's a search bar and a patch viewer.

Stretch Task

1. Now create a situation where two group members both edit the same line in the same file and commit it locally. Race to push

The screenshot shows a Windows terminal window titled 'Git CMD'. The command history is as follows:

```

Merge: 514e5d5 e181cb8
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Tue Jul 16 09:47:04 2024 +0530

m1

commit 514e5d540a994ed87e4024489e10cf8a32fb2fbc
Merge: 37f8861 77d8490
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Tue Jul 16 09:42:58 2024 +0530

    Ramya's text file added

commit e181cb894d882ecfd3b5a7f431148c8affbf6dea

C:\Users\Ramya\Downloads\team\Team_Repo>git

C:\Users\Ramya\Downloads\team\Team_Repo>git pull https://github.com/Samuvel-raja/Team_Repo.git master
From https://github.com/Samuvel-raja/Team_Repo
 * branch      master       -> FETCH_HEAD
Already up to date.

C:\Users\Ramya\Downloads\team\Team_Repo>git add .

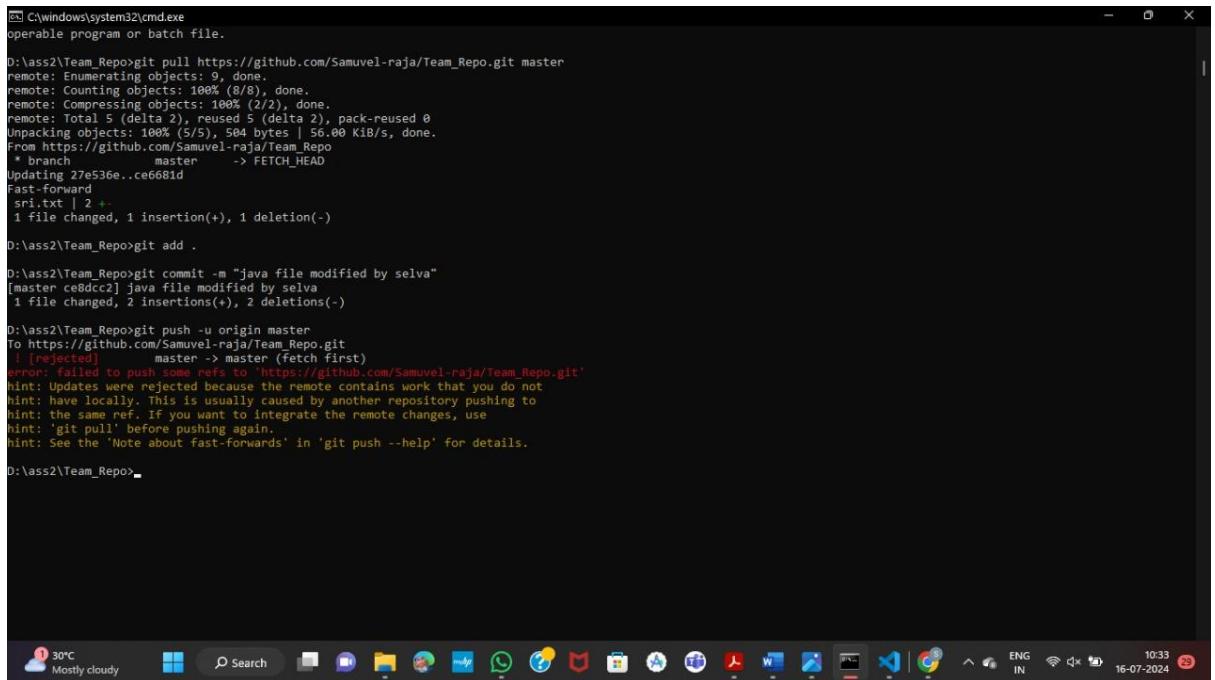
C:\Users\Ramya\Downloads\team\Team_Repo>git commit -m "java file modified by Ramya"
[master 17a3df9] java file modified by Ramya
 1 file changed, 2 insertions(+), 2 deletions(-)

C:\Users\Ramya\Downloads\team\Team_Repo>git push -u origin master
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 12 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 309 bytes | 309.00 KiB/s, done.
Total 3 (delta 2), reused 0 (delta 0), pack-reused 0 (from 0).
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
To https://github.com/Samuvel-raja/Team_Repo.git
  ce6681d..17a3df9 master -> master
branch 'master' set up to track 'origin/master'.

C:\Users\Ramya\Downloads\team\Team_Repo>

```

The task involves creating a situation where two group members edit the same line in the same file locally and then race to push their changes to the remote repository. This can be achieved by having one member make a local commit and then another member making a local commit before the first one is pushed, causing a conflict during the pull operation.



```
C:\windows\system32\cmd.exe
operable program or batch file.

D:\ass2\Team_Repo>git pull https://github.com/Samuvel-raja/Team_Repo.git master
remote: Enumerating objects: 9, done.
remote: Counting objects: 100% (8/8), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 5 (delta 2), reused 5 (delta 2), pack-reused 0
Unpacking objects: 100% (5/5), 584 bytes | 56.00 KiB/s, done.
From https://github.com/Samuvel-raja/Team_Repo
 * branch      master    -> FETCH_HEAD
Updating 27e536e..ce6681d
Fast-Forward
 sri.txt | 2 ++
 1 file changed, 1 insertion(+), 1 deletion(-)

D:\ass2\Team_Repo>git add .

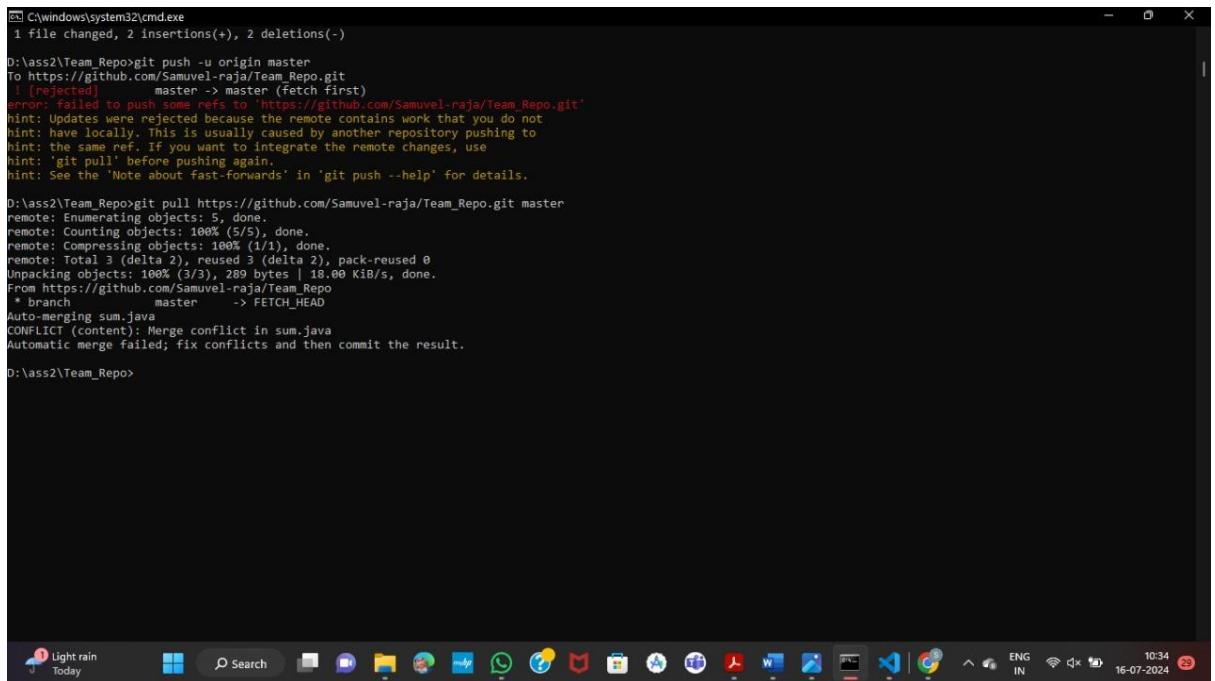
D:\ass2\Team_Repo>git commit -m "java file modified by selva"
[master ce8dcfc] java file modified by selva
 1 file changed, 2 insertions(+), 2 deletions(-)

D:\ass2\Team_Repo>git push -u origin master
To https://github.com/Samuvel-raja/Team_Repo.git
 ! [rejected]      master -> master (fetch first)
error: failed to push some refs to 'https://github.com/Samuvel-raja/Team_Repo.git'
hint: Updates were rejected because the remote contains work that you do not
hint: have locally. This is usually caused by another repository pushing to
hint: the same ref. If you want to integrate the remote changes, use
hint: 'git pull' before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.

D:\ass2\Team_Repo>
```

When two group members edit the same line in the same file and commit it locally, the first member to push their changes will succeed. The second member's push will be rejected because their local repository is out of sync with the remote.

2. When the runner-up does a pull, they should get a merge conflict.



```
C:\windows\system32\cmd.exe
1 file changed, 2 insertions(+), 2 deletions(-)

D:\ass2\Team_Repo>git push -u origin master
To https://github.com/Samuvel-raja/Team_Repo.git
 ! [rejected]      master -> master (fetch first)
error: failed to push some refs to 'https://github.com/Samuvel-raja/Team_Repo.git'
hint: Updates were rejected because the remote contains work that you do not
hint: have locally. This is usually caused by another repository pushing to
hint: the same ref. If you want to integrate the remote changes, use
hint: 'git pull' before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.

D:\ass2\Team_Repo>git pull https://github.com/Samuvel-raja/Team_Repo.git master
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (1/1), done.
remote: Total 3 (delta 2), reused 3 (delta 2), pack-reused 0
Unpacking objects: 100% (3/3), 289 bytes | 18.00 KiB/s, done.
From https://github.com/Samuvel-raja/Team_Repo
 * branch      master    -> FETCH_HEAD
Auto-merging sum.java
CONFLICT (content): Merge conflict in sum.java
Automatic merge failed; fix conflicts and then commit the result.

D:\ass2\Team_Repo>
```

3. Look as a group at the file in conflict, and resolve it.

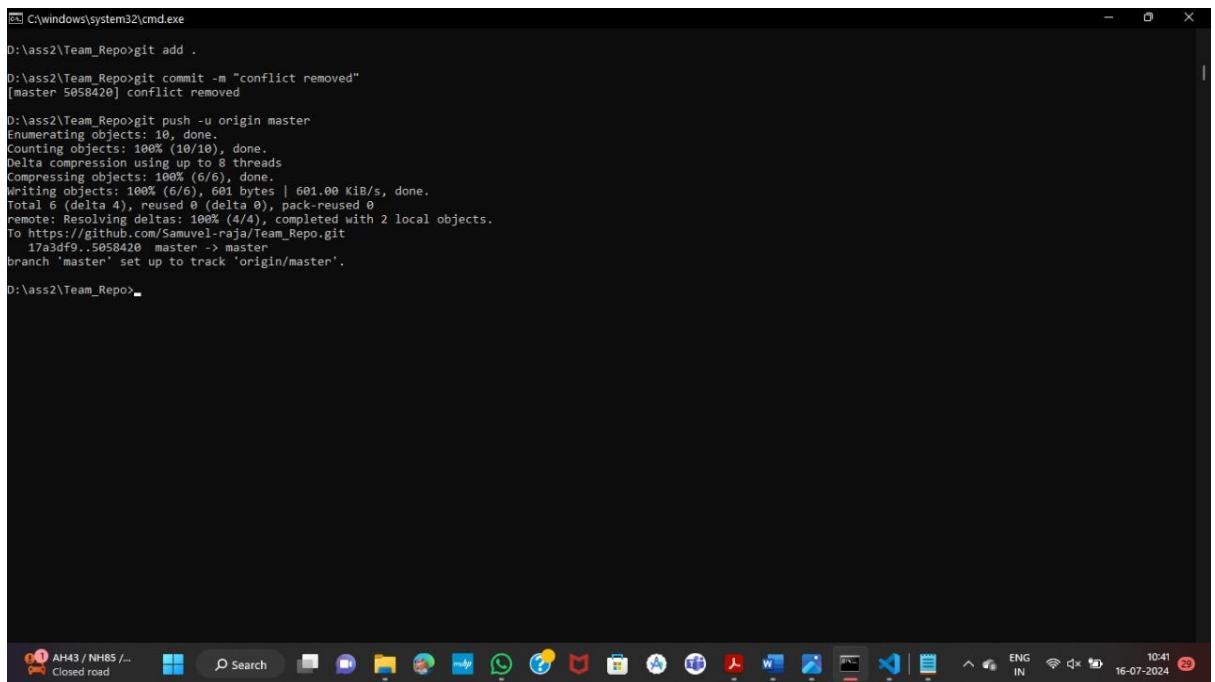
A screenshot of a Windows desktop environment. The main window is a code editor showing a Java file named 'sum.java'. The code contains a conflict between two versions of the same file. The conflict is indicated by markers: '<<<<< HEAD' and '>>>>> 17a3df9f2e8063b15752e30640a1f273dc78bc93'. The code editor interface includes tabs for other files like 'rl.txt', 'al.txt', and 'Selva.txt', and a status bar at the bottom showing 'Ln 14, Col 2 276 characters' and system information including the date and time (16-07-2024 10:39).

```
import java.util.*;
class sum{
    public static void main(String[] args){
        int x=8;
        int y=5;
        <<<<< HEAD
        int addition=x+y;
        System.out.println(addition);
        =====
        int add=x+y;
        System.out.println(add);
        >>>>> 17a3df9f2e8063b15752e30640a1f273dc78bc93
    }
}
```

4. Use the add command to stage the fix, and then use commit to make the merge commit. Notice how this procedure is exactly the one you got used to when resolving conflicts in branches.

A screenshot of a Windows desktop environment, similar to the previous one but showing a different state. The code editor now displays a resolved version of the 'sum.java' file. The conflict markers ('<<<<< HEAD' and '>>>>> 17a3df9f2e8063b15752e30640a1f273dc78bc93') have been removed, indicating the conflict has been resolved. The code editor interface and status bar are identical to the first screenshot, showing the same file list and system information.

```
import java.util.*;
class sum{
    public static void main(String[] args){
        int x=8;
        int y=5;
        int add=x+y;
        System.out.println(add);
    }
}
```



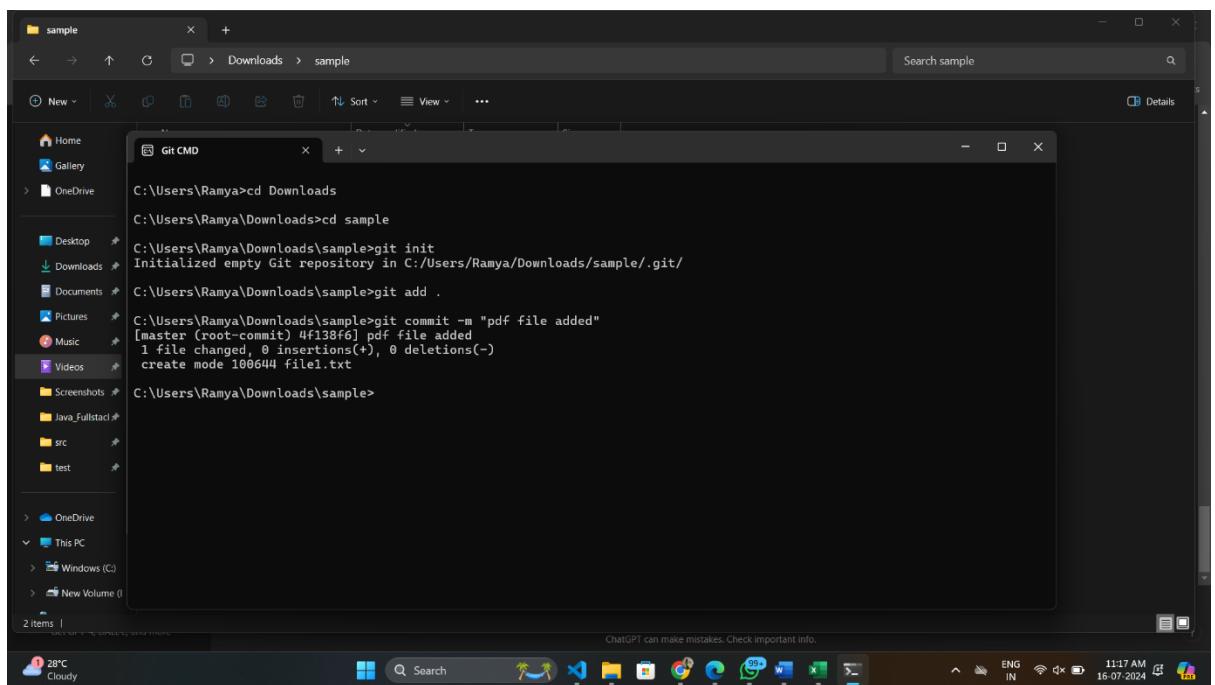
```
C:\windows\system32\cmd.exe
D:\ass2\Team_Repo>git add .
D:\ass2\Team_Repo>git commit -m "conflict removed"
[master 5058420] conflict removed
D:\ass2\Team_Repo>git push -u origin master
Enumerating objects: 10, done.
Counting objects: 100% (10/10), done.
Delta compression using up to 8 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (6/6), 601 bytes | 601.00 KiB/s, done.
Total 6 (delta 4), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (4/4), completed with 2 local objects.
To https://github.com/Samuvvel-raja/Team_Repo.git
  17a3d4f9..5058420 master -> master
branch 'master' set up to track 'origin/master'.
D:\ass2\Team_Repo>
```

As a group, open the conflicted file, discuss and manually edit it to resolve the differences, then save, add, commit, and push the resolved changes.

Exercise 4

Main Task

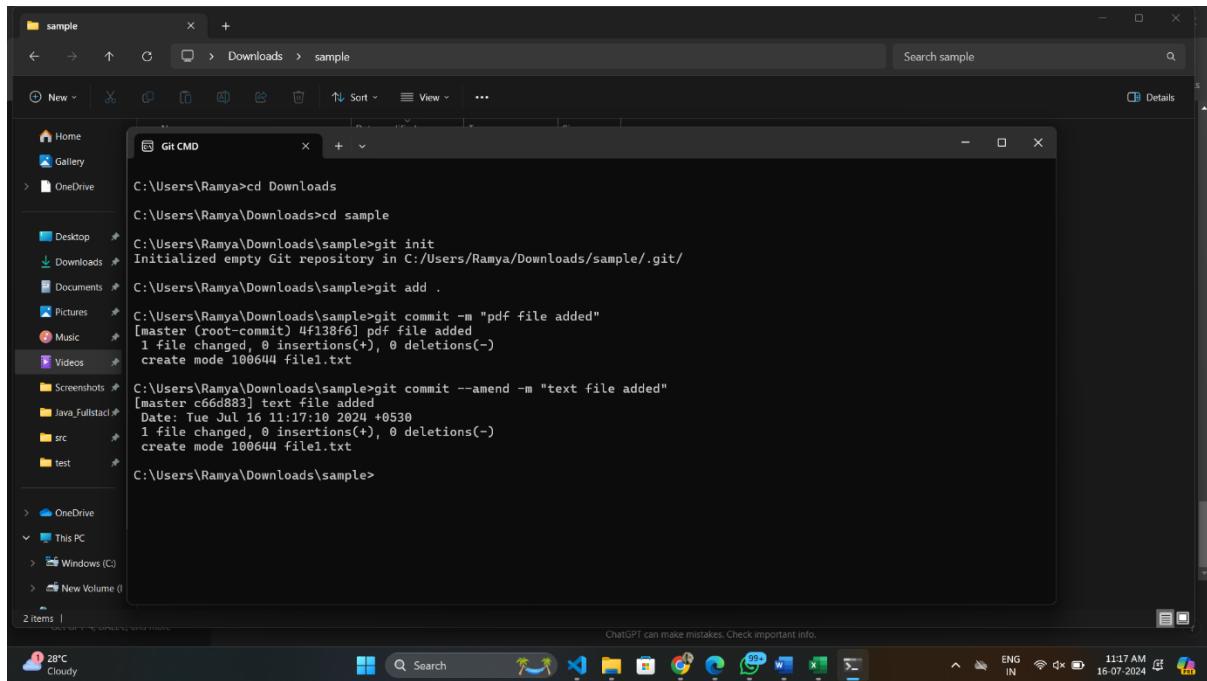
1. Make a commit, and make a silly typo in the commit message.



```
sample
New + Details
Downloads > sample
Search sample
Home
Gallery
OneDrive
Desktop
Downloads
Documents
Pictures
Music
Videos
Screenshots
Java_Fullstack
src
test
OneDrive
This PC
Windows (C)
New Volume (I)
2 items

GIT CMD
C:\Users\Ramya>cd Downloads
C:\Users\Ramya\Downloads>cd sample
C:\Users\Ramya\Downloads\sample>git init
Initialized empty Git repository in C:/Users/Ramya/Downloads/sample/.git/
C:\Users\Ramya\Downloads\sample>git add .
C:\Users\Ramya\Downloads\sample>git commit -m "pdf file added"
[master (root-commit) 4f138f6] pdf file added
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 file1.txt
C:\Users\Ramya\Downloads\sample>
```

2. Use the --amend flag to enable you to fix the commit message.

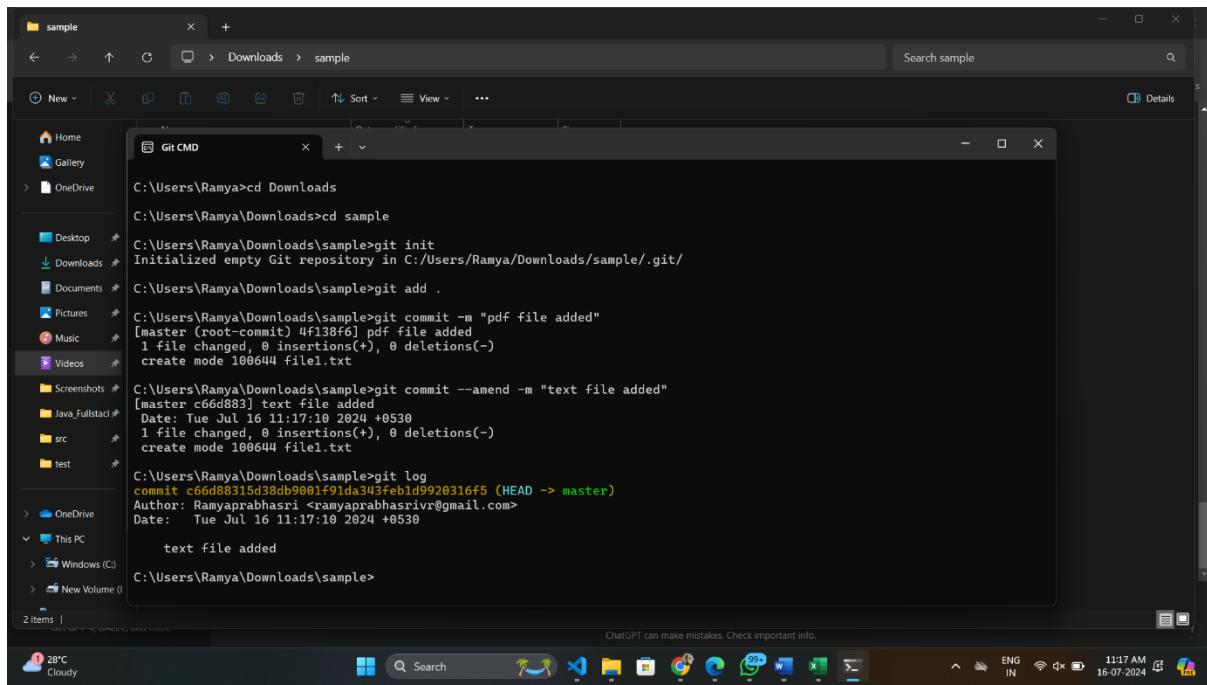


A screenshot of a Windows desktop environment. On the left, there is a File Explorer window titled 'sample' showing a directory structure under 'Downloads'. In the center, there is a terminal window titled 'Git CMD' showing the following command-line session:

```
C:\Users\Ramya>cd Downloads
C:\Users\Ramya\Downloads>cd sample
C:\Users\Ramya\Downloads\sample>git init
Initialized empty Git repository in C:/Users/Ramya/Downloads/sample/.git/
C:\Users\Ramya\Downloads\sample>git add .
C:\Users\Ramya\Downloads\sample>git commit -m "pdf file added"
[master 4f138f6] pdf file added
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 file1.txt
C:\Users\Ramya\Downloads\sample>git commit --amend -m "text file added"
[master c66d883] text file added
Date: Tue Jul 16 11:17:10 2024 +0530
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 file1.txt
C:\Users\Ramya\Downloads\sample>
```

The taskbar at the bottom shows various pinned icons and the system tray indicates it's 11:17 AM on 16-07-2024.

3. Look at the log and notice how the mistake is magically gone.



A screenshot of a Windows desktop environment, similar to the previous one. The File Explorer window on the left shows the 'sample' folder in the 'Downloads' directory. The central terminal window titled 'Git CMD' shows the command-line session from the previous step, followed by the output of the 'git log' command:

```
C:\Users\Ramya>cd Downloads
C:\Users\Ramya\Downloads>cd sample
C:\Users\Ramya\Downloads\sample>git init
Initialized empty Git repository in C:/Users/Ramya/Downloads/sample/.git/
C:\Users\Ramya\Downloads\sample>git add .
C:\Users\Ramya\Downloads\sample>git commit -m "pdf file added"
[master 4f138f6] pdf file added
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 file1.txt
C:\Users\Ramya\Downloads\sample>git commit --amend -m "text file added"
[master c66d883] text file added
Date: Tue Jul 16 11:17:10 2024 +0530
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 file1.txt
C:\Users\Ramya\Downloads\sample>git log
commit c66d88315d38db9001f91da343febd9920316f5 (HEAD -> master)
Author: Ramyaprabhansari <ramyaprabhansivr@gmail.com>
Date:  Tue Jul 16 11:17:10 2024 +0530

  text file added
C:\Users\Ramya\Downloads\sample>
```

The taskbar at the bottom shows various pinned icons and the system tray indicates it's 11:17 AM on 16-07-2024.

- Now make a commit where you make a typo in one of the files. Once again, use --amend to magic away your problems.

A screenshot of a Windows desktop environment. At the top is a black taskbar with various icons for search, file explorer, and other applications. In the center is a white Git CMD window titled "Git CMD". The window contains a command-line session:

```

commit c66d88315d38db9001f91da343feb1d9920316f5
Author: Ramyaprabhasari <ramyaprabhasirvr@gmail.com>
Date: Tue Jul 16 11:17:10 2024 +0530

    text file added

C:\Users\Ramya\Downloads\sample>git add .

C:\Users\Ramya\Downloads\sample>git commit -m "file1 modified"
[master 393d821] file1 modified
 1 file changed, 0 insertions(+), 0 deletions(-)
 rename file1.txt => file.txt (100%)

C:\Users\Ramya\Downloads\sample>git commit --amend -m "file modified"
[master 2d4474a] file modified
 1 file changed, 0 insertions(+), 0 deletions(-)
 rename file1.txt => file.txt (100%)

C:\Users\Ramya\Downloads\sample>git log
commit 2d4474a89f59d896280c842419cef80ce8288a5a (HEAD -> master)
Author: Ramyaprabhasari <ramyaprabhasirvr@gmail.com>
Date: Fri Jul 19 10:00:32 2024 +0530

    file modified

commit 95ae260f59d8a96fc9ac81de8db2aced90b76b59
Author: Ramyaprabhasari <ramyaprabhasirvr@gmail.com>
Date: Fri Jul 19 09:58:29 2024 +0530

    file2 added

commit c66d88315d38db9001f91da343feb1d9920316f5
Author: Ramyaprabhasari <ramyaprabhasirvr@gmail.com>
Date: Tue Jul 16 11:17:10 2024 +0530

    text file added

C:\Users\Ramya\Downloads\sample>

```

- Create a branch. Make a commit.

A screenshot of a Windows desktop environment. At the top is a black taskbar with various icons for search, file explorer, and other applications. In the center is a white Git CMD window titled "Git CMD". The window contains a command-line session:

```

C:\Users\Ramya\Downloads\sample>git commit --amend -m "file modified"
[master 2d4474a] file modified
 1 file changed, 0 insertions(+), 0 deletions(-)
 rename file1.txt => file.txt (100%)

C:\Users\Ramya\Downloads\sample>git log
commit 2d4474a89f59d896280c842419cef80ce8288a5a (HEAD -> master)
Author: Ramyaprabhasari <ramyaprabhasirvr@gmail.com>
Date: Fri Jul 19 10:00:32 2024 +0530

    file modified

commit 95ae260f59d8a96fc9ac81de8db2aced90b76b59
Author: Ramyaprabhasari <ramyaprabhasirvr@gmail.com>
Date: Fri Jul 19 09:58:29 2024 +0530

    file2 added

commit c66d88315d38db9001f91da343feb1d9920316f5
Author: Ramyaprabhasari <ramyaprabhasirvr@gmail.com>
Date: Tue Jul 16 11:17:10 2024 +0530

    text file added

C:\Users\Ramya\Downloads\sample>git branch
* master

C:\Users\Ramya\Downloads\sample>git branch MySample
C:\Users\Ramya\Downloads\sample>git checkout MySample
Switched to branch 'MySample'

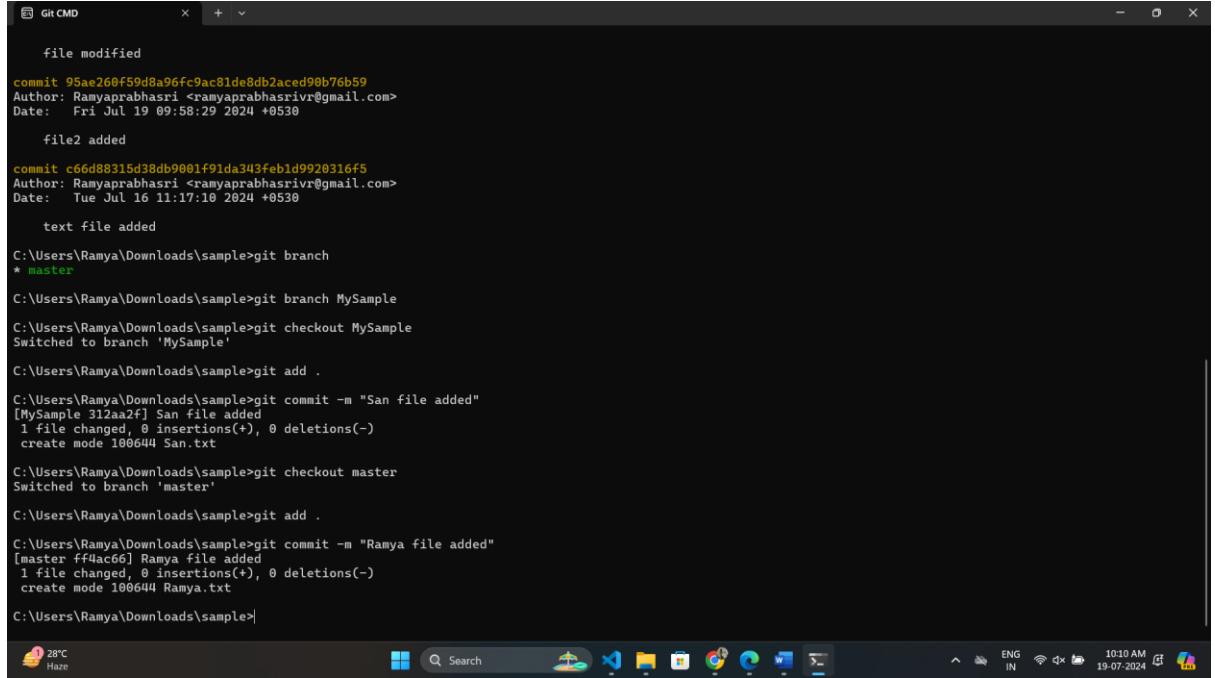
C:\Users\Ramya\Downloads\sample>git add .

C:\Users\Ramya\Downloads\sample>git commit -m "San file added"
[MySample 312aa2f] San file added
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 San.txt

C:\Users\Ramya\Downloads\sample>

```

6. Now switch back to your master branch. Make a (non-conflicting) commit there also.



```
Git CMD

file modified
commit 95ae260f59d8a96fc9ac81de8db2aced90b76b59
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date:   Fri Jul 19 09:58:29 2024 +0530

file2 added

commit c66d88315d38db9001f91da343feb1d9920316f5
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date:   Tue Jul 16 11:17:10 2024 +0530

text file added

C:\Users\Ramya\Downloads\sample>git branch
* master

C:\Users\Ramya\Downloads\sample>git branch MySample
C:\Users\Ramya\Downloads\sample>git checkout MySample
Switched to branch 'MySample'

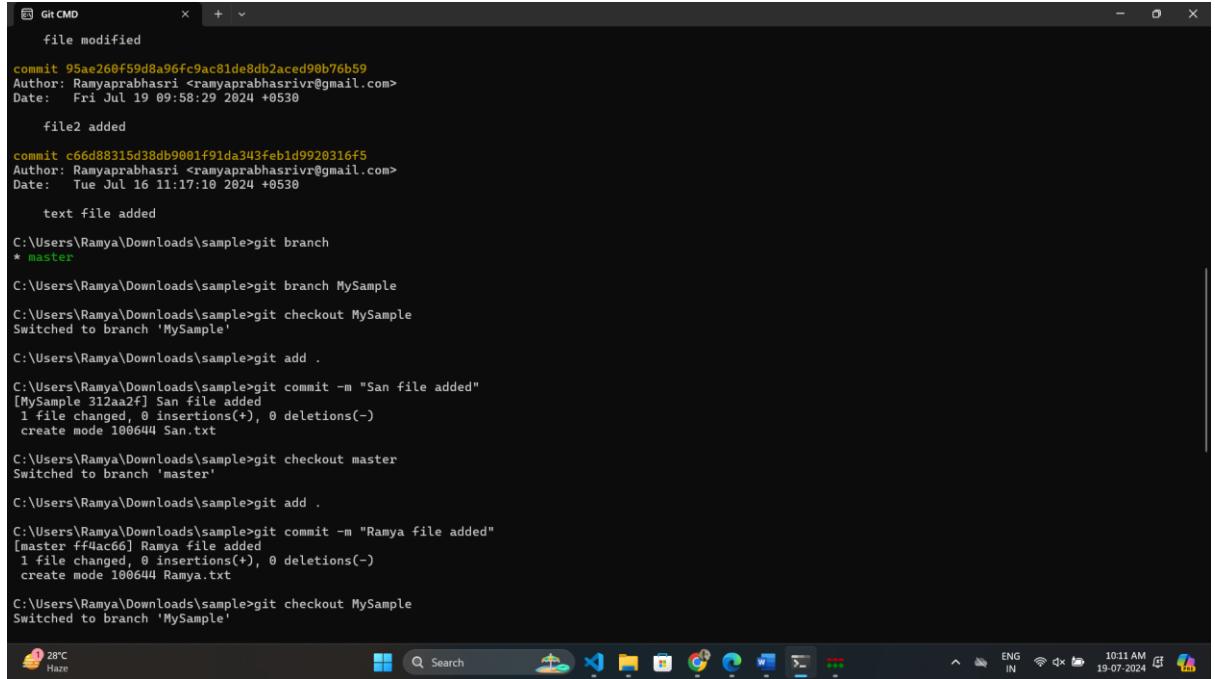
C:\Users\Ramya\Downloads\sample>git add .
C:\Users\Ramya\Downloads\sample>git commit -m "San file added"
[MySample 312aa2f] San file added
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 San.txt

C:\Users\Ramya\Downloads\sample>git checkout master
Switched to branch 'master'

C:\Users\Ramya\Downloads\sample>git add .
C:\Users\Ramya\Downloads\sample>git commit -m "Ramya file added"
[master ff4ac66] Ramya file added
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 Ramya.txt

C:\Users\Ramya\Downloads\sample>
```

7. Now switch back to your branch.



```
Git CMD

file modified
commit 95ae260f59d8a96fc9ac81de8db2aced90b76b59
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date:   Fri Jul 19 09:58:29 2024 +0530

file2 added

commit c66d88315d38db9001f91da343feb1d9920316f5
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date:   Tue Jul 16 11:17:10 2024 +0530

text file added

C:\Users\Ramya\Downloads\sample>git branch
* master

C:\Users\Ramya\Downloads\sample>git branch MySample
C:\Users\Ramya\Downloads\sample>git checkout MySample
Switched to branch 'MySample'

C:\Users\Ramya\Downloads\sample>git add .
C:\Users\Ramya\Downloads\sample>git commit -m "San file added"
[MySample 312aa2f] San file added
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 San.txt

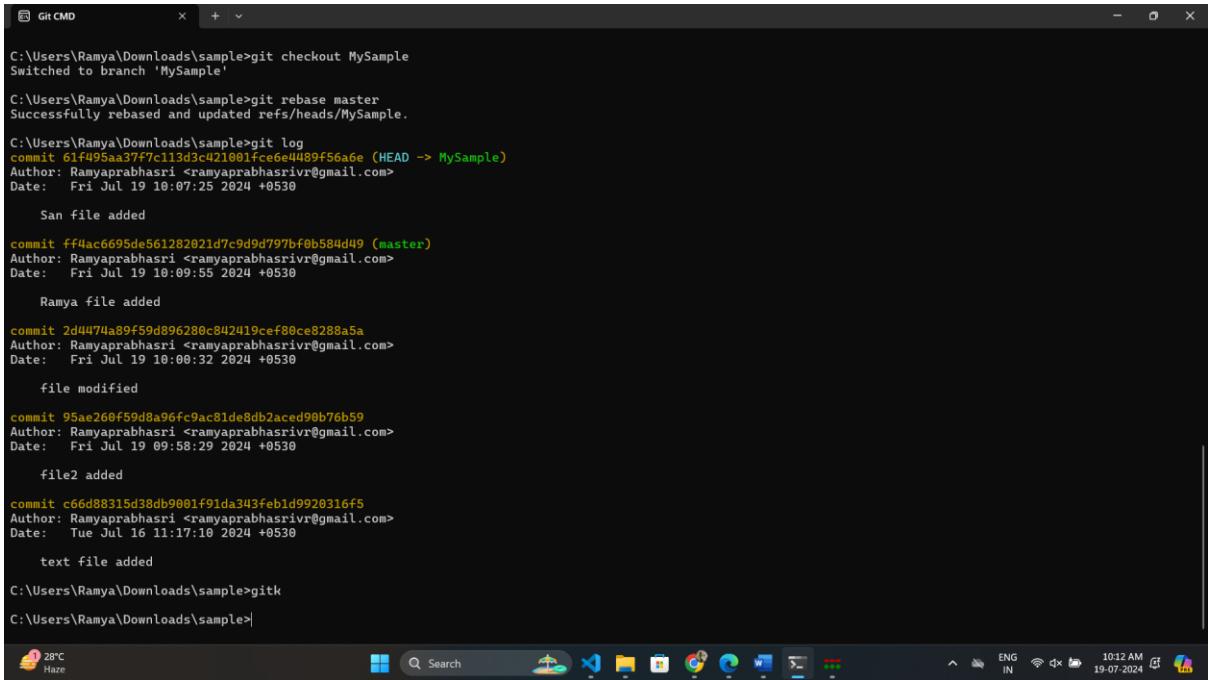
C:\Users\Ramya\Downloads\sample>git checkout master
Switched to branch 'master'

C:\Users\Ramya\Downloads\sample>git add .

C:\Users\Ramya\Downloads\sample>git commit -m "Ramya file added"
[master ff4ac66] Ramya file added
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 Ramya.txt

C:\Users\Ramya\Downloads\sample>git checkout MySample
Switched to branch 'MySample'
```

8. Use the rebase command in your branch. Look at the DAG in gitk, and note that you have the commit from the master branch, but no merge commit.



```
C:\Users\Ramya\Downloads\sample>git checkout MySample
Switched to branch 'MySample'

C:\Users\Ramya\Downloads\sample>git rebase master
Successfully rebased and updated refs/heads/MySample.

C:\Users\Ramya\Downloads\sample>git log
commit 61f495aa37fc113d3c421001fce6e4489f56a6e (HEAD -> MySample)
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date:   Fri Jul 19 10:07:25 2024 +0530

    San file added

commit ff4ac6695de561282021d7c9d9d797bf0b584d49 (master)
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date:   Fri Jul 19 10:09:55 2024 +0530

    Ramya file added

commit 2d474a89f59d896280c842419cef80ce8288a5a
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date:   Fri Jul 19 10:00:32 2024 +0530

    file modified

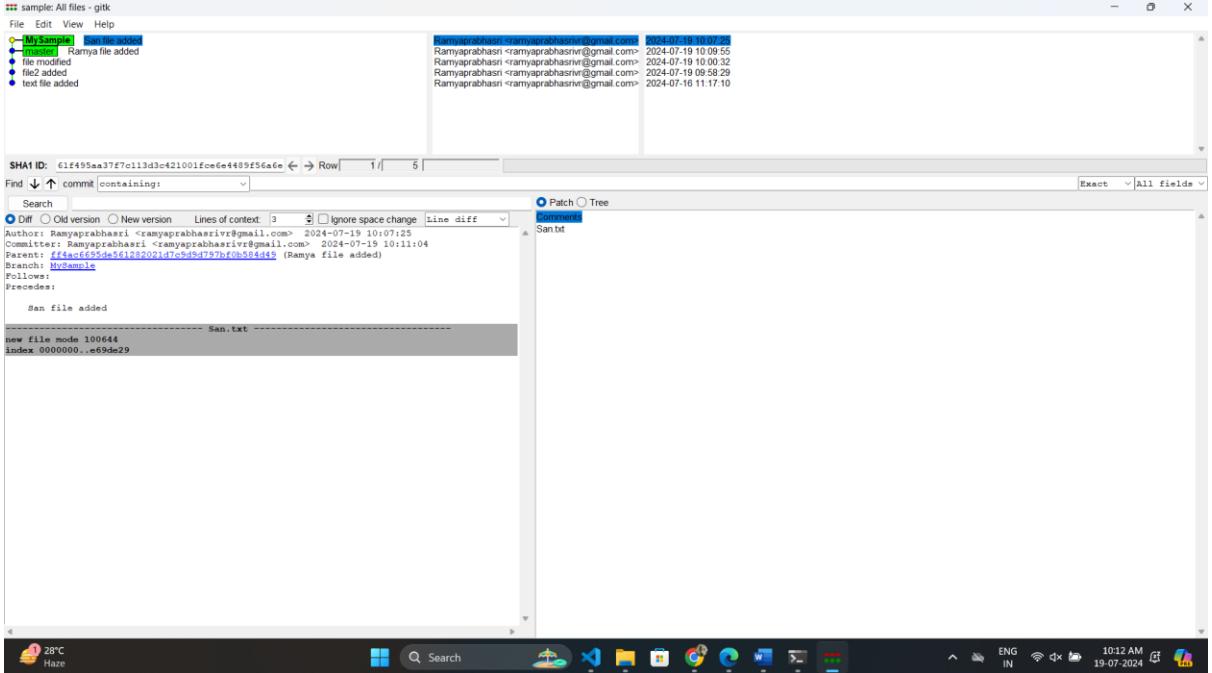
commit 95ae260f59d8a96fc9ac81de8db2aced90b76b59
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date:   Fri Jul 19 09:58:29 2024 +0530

    file2 added

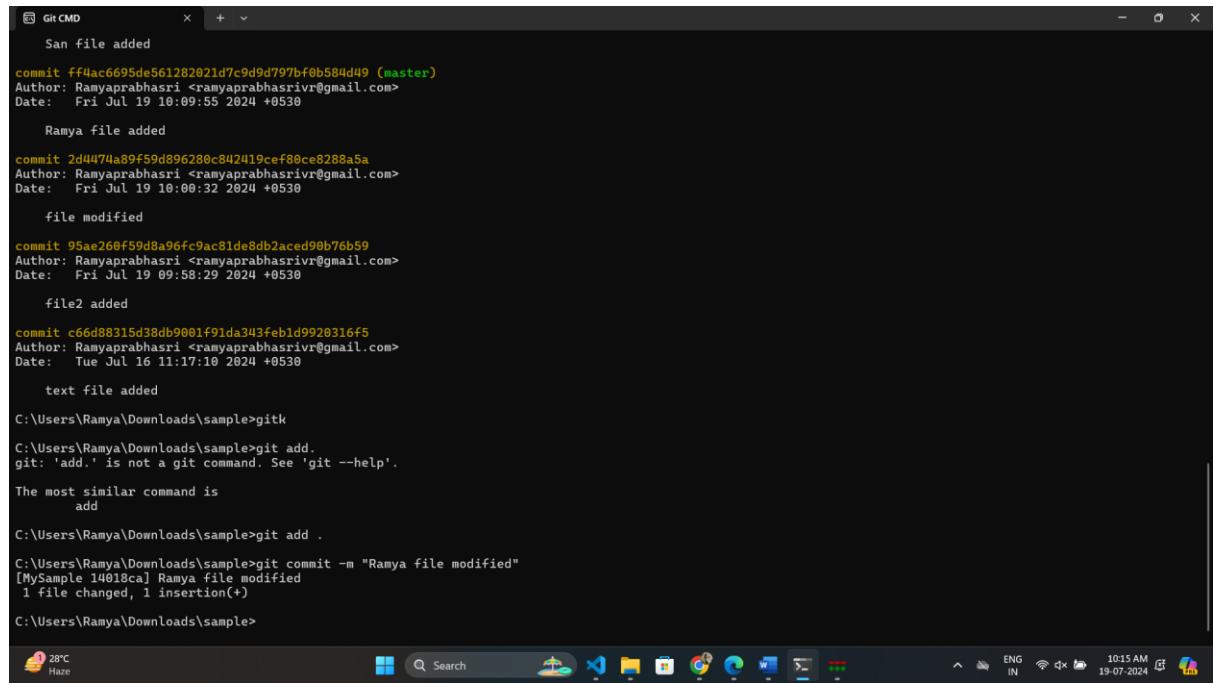
commit c66d88315d38db9001f91da343feb1d9920316f5
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date:   Tue Jul 16 11:17:10 2024 +0530

    text file added

C:\Users\Ramya\Downloads\sample>gitk
C:\Users\Ramya\Downloads\sample>
```



9. Make one more commit in your branch.



```
Git CMD
San file added

commit ff4ac6695de561282021d7c9d9d797bf0b584d49 (master)
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Fri Jul 19 10:09:55 2024 +0530

    Ramya file added

commit 2d4474a89f59d896280c842419cef80ce8288a5a
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Fri Jul 19 10:00:32 2024 +0530

    file modified

commit 95ae260f59d8a96fc9ac81de8db2aced90b76b59
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Fri Jul 19 09:58:29 2024 +0530

    file2 added

commit c66d88315d38db9001f91da343feb1d9920316f5
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Tue Jul 16 11:17:10 2024 +0530

    text file added

C:\Users\Ramya\Downloads\sample>gitk

C:\Users\Ramya\Downloads\sample>git add .
git: 'add.' is not a git command. See 'git --help'.

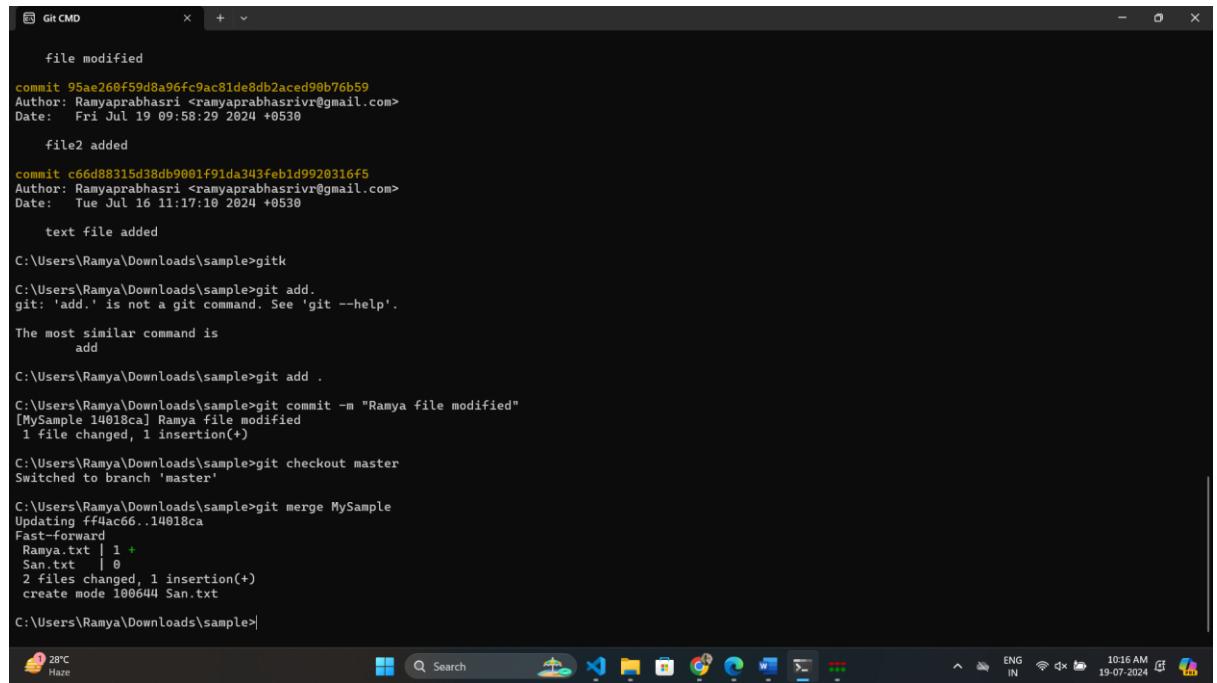
The most similar command is
    add

C:\Users\Ramya\Downloads\sample>git add .

C:\Users\Ramya\Downloads\sample>git commit -m "Ramya file modified"
[MySample 14018ca] Ramya file modified
 1 file changed, 1 insertion(+)

C:\Users\Ramya\Downloads\sample>
```

10. Return to master. Merge your branch. Notice how, thanks to the rebase, this is a fast-forward merge.



```
Git CMD
file modified

commit 95ae260f59d8a96fc9ac81de8db2aced90b76b59
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Fri Jul 19 09:58:29 2024 +0530

    file2 added

commit c66d88315d38db9001f91da343feb1d9920316f5
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date: Tue Jul 16 11:17:10 2024 +0530

    text file added

C:\Users\Ramya\Downloads\sample>gitk

C:\Users\Ramya\Downloads\sample>git add .
git: 'add.' is not a git command. See 'git --help'.

The most similar command is
    add

C:\Users\Ramya\Downloads\sample>git add .

C:\Users\Ramya\Downloads\sample>git commit -m "Ramya file modified"
[MySample 14018ca] Ramya file modified
 1 file changed, 1 insertion(+)

C:\Users\Ramya\Downloads\sample>git checkout master
Switched to branch 'master'

C:\Users\Ramya\Downloads\sample>git merge MySample
Updating ff4ac66..14018ca
Fast-forward
  Ramya.txt | 1 +
  San.txt    0
 2 files changed, 1 insertion(+)
 create mode 100644 San.txt

C:\Users\Ramya\Downloads\sample>
```

Stretch Task

1. Find somebody from your team from the previous exercise. Have them push a commit to the central repository.
2. Make a commit locally yourself also. Note that you should not have pulled their commit at this point.

A screenshot of a Windows desktop. At the top is a taskbar with various icons. In the center is a command prompt window titled "Git CMD". The command history shows:

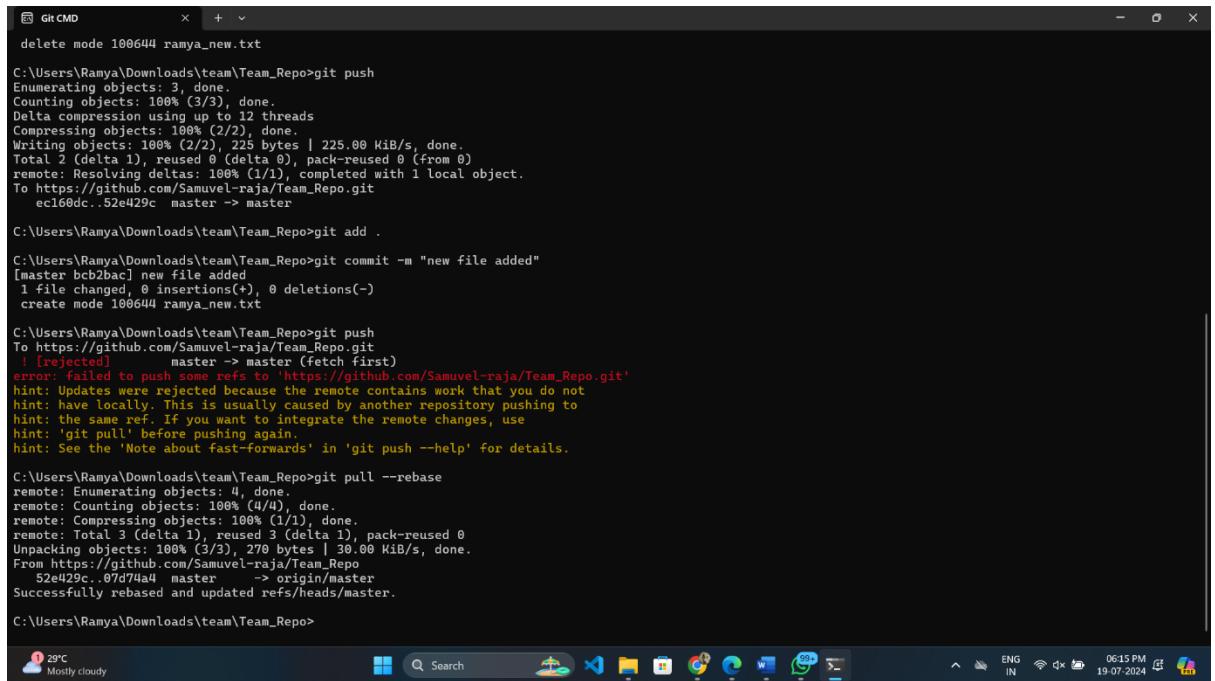
```
C:\Users\Ramya>cd Downloads
C:\Users\Ramya\Downloads>cd Team_Repo
The system cannot find the path specified.
C:\Users\Ramya\Downloads>cd team
C:\Users\Ramya\Downloads\team>cd Team_Repo
C:\Users\Ramya\Downloads\team\Team_Repo>git add .
C:\Users\Ramya\Downloads\team\Team_Repo>git commit -m "new file added"
[master 3113caa] new file added
 1 file changed, 1 insertion(+)
C:\Users\Ramya\Downloads\team\Team_Repo>
```

3. Try to push, and watch it fail.

A screenshot of a Windows desktop. At the top is a taskbar with various icons. In the center is a command prompt window titled "Git CMD". The command history shows:

```
C:\Users\Ramya\Downloads\team\Team_Repo>git add .
C:\Users\Ramya\Downloads\team\Team_Repo>git commit -m "deleted"
[master 52e429c] deleted
 2 files changed, 0 insertions(+), 0 deletions(-)
 delete mode 100644 new.txt
 delete mode 100644 ramya_new.txt
C:\Users\Ramya\Downloads\team\Team_Repo>git push
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (2/2), 225 bytes | 225.00 KiB/s, done.
Total 2 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/Samuvel-raja/Team_Repo.git
  ec160dc..52e429c master -> master
C:\Users\Ramya\Downloads\team\Team_Repo>git add .
C:\Users\Ramya\Downloads\team\Team_Repo>git commit -m "new file added"
[master bcb2bac] new file added
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 ramya_new.txt
C:\Users\Ramya\Downloads\team\Team_Repo>git push
To https://github.com/Samuvel-raja/Team_Repo.git
 ! [rejected]          master -> master (fetch first)
error: failed to push some refs to 'https://github.com/Samuvel-raja/Team_Repo.git'
hint: Updates were rejected because the remote contains work that you do not
hint: have locally. This is usually caused by another repository pushing to
hint: the same ref. If you want to integrate the remote changes, use
hint: 'git pull' before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
C:\Users\Ramya\Downloads\team\Team_Repo>
```

4. Now, pull but using the --rebase flag.



```
Git CMD - C:\Users\Ramya\Downloads\team\Team_Repo > git push
delete mode 100644 ramya_new.txt
C:\Users\Ramya\Downloads\team\Team_Repo>git push
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (2/2), 225 bytes | 225.00 KiB/s, done.
Total 2 (delta 1), reused 0 (delta 0), pack-reused 0 (from origin)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/Samuvvel-raja/Team_Repo.git
  e1c160dc..52e429c master -> master

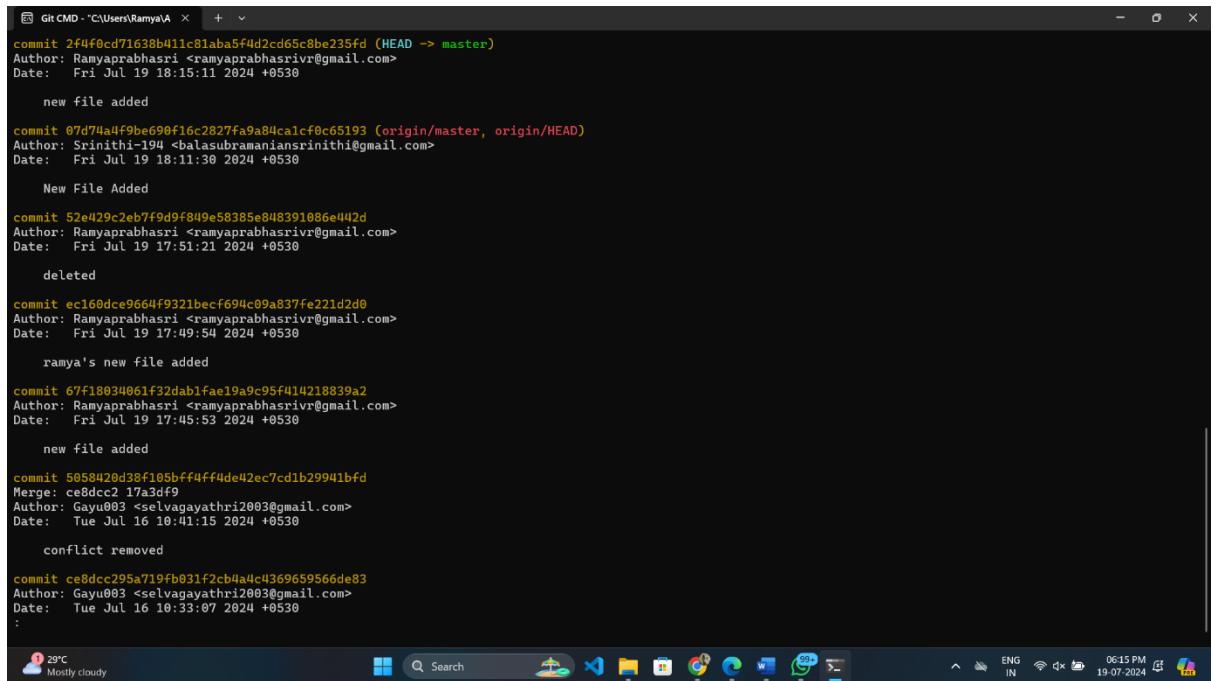
C:\Users\Ramya\Downloads\team\Team_Repo>git add .
C:\Users\Ramya\Downloads\team\Team_Repo>git commit -m "new file added"
[master bcb2bac] new file added
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 ramya_new.txt

C:\Users\Ramya\Downloads\team\Team_Repo>git push
To https://github.com/Samuvvel-raja/Team_Repo.git
 ! [rejected]      master -> master (fetch first)
error: failed to push some refs to 'https://github.com/Samuvvel-raja/Team_Repo.git'
hint: Updates were rejected because the remote contains work that you do not
hint: have locally. This is usually caused by another repository pushing to
hint: the same ref. If you want to integrate the remote changes, use
hint: 'git pull' before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.

C:\Users\Ramya\Downloads\team\Team_Repo>git pull --rebase
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (1/1), done.
remote: Total 3 (delta 1), reused 3 (delta 1), pack-reused 0
Unpacking objects: 100% (3/3), 270 bytes | 30.00 KiB/s, done.
From https://github.com/Samuvvel-raja/Team_Repo
  52e429c..07d74a4 master      -> origin/master
Successfully rebased and updated refs/heads/master.

C:\Users\Ramya\Downloads\team\Team_Repo>
```

5. Use git log and gitk to verify that there is no merge commit, and the DAG is linear.



```
Git CMD - C:\Users\Ramya\Downloads\team\Team_Repo > git log
commit 2f4f0cd71638b411c81aba5f4dd2cd65c8be235fd (HEAD -> master)
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date:   Fri Jul 19 18:15:11 2024 +0530

    new file added

commit 07d74a4f9be690f16c2827fa9a84calcfc0c65193 (origin/master, origin/HEAD)
Author: Srinithi-194 <balasubramaniansrinithi@gmail.com>
Date:   Fri Jul 19 18:11:30 2024 +0530

    New File Added

commit 52e429c2eb7f9d9f89e58385e848391086e442d
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date:   Fri Jul 19 17:51:21 2024 +0530

    deleted

commit ec160dce9664f9321becf694c09a837fe221d2d0
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date:   Fri Jul 19 17:49:54 2024 +0530

    ramya's new file added

commit 67f18034061f32dab1fae19a9c95f414218839a2
Author: Ramyaprabhasri <ramyaprabhasrivr@gmail.com>
Date:   Fri Jul 19 17:45:53 2024 +0530

    new file added

commit 5058a20d38f185bfff4ff4de42ec7cd1b29941bfd
Merge: ce8dcc2 17a3df9
Author: Gayu003 <selvagayathri2003@gmail.com>
Date:   Tue Jul 16 10:41:15 2024 +0530

    conflict removed

commit ce8dc295a719fb031f2cb4a4c4369659566de83
Author: Gayu003 <selvagayathri2003@gmail.com>
Date:   Tue Jul 16 10:33:07 2024 +0530
:
```

The screenshot shows a Git commit history in a graphical interface. The commit log includes the following entries:

- Ramyaprabhasri <ramyaprabhasirv@gmail.com> 2024-07-19 18:11:30
- Ramyaprabhasri <ramyaprabhasirv@gmail.com> 2024-07-19 17:51:21
- Ramyaprabhasri <ramyaprabhasirv@gmail.com> 2024-07-19 17:45:54
- Ramyaprabhasri <ramyaprabhasirv@gmail.com> 2024-07-19 17:45:53
- Gayu003 <selvagayath2003@gmail.com> 2024-07-16 10:41:15
- Ramyaprabhasri <ramyaprabhasirv@gmail.com> 2024-07-16 10:32:23
- Ramyaprabhasri <ramyaprabhasirv@gmail.com> 2024-07-16 10:32:22
- Srinithi-194 <balasubramaniansrinith@gmail.com> 2024-07-16 10:19:27
- Srinithi-194 <balasubramaniansrinith@gmail.com> 2024-07-16 10:19:22
- Gayu003 <selvagayath2003@gmail.com> 2024-07-16 10:19:20
- Srinithi-194 <balasubramaniansrinith@gmail.com> 2024-07-16 10:15:30
- Srinithi-194 <balasubramaniansrinith@gmail.com> 2024-07-16 10:15:29
- Srinithi-194 <balasubramaniansrinith@gmail.com> 2024-07-16 10:15:12
- Ramyaprabhasri <ramyaprabhasirv@gmail.com> 2024-07-16 10:15:11

The commit message for the highlighted commit is:

```

new file added
----- ramya_new.txt -----
new file mode 100644
index 0000000..e69de2d

```

- Notice that your commit is the latest one, even though temporally the other member of your team made their commit afterwards. Why is this?

When you use `git pull --rebase`, Git temporarily removes your local commits that aren't in the central repository, fetches the latest changes from the remote repository, and then reapplies your local commits on top of those changes. This process ensures a linear commit history without merge commits.

Name: Ramyaprabhasri V R

Reg No.: 73772114185

Department: Computer Science
and Engineering

Year / Sec: IV / B

