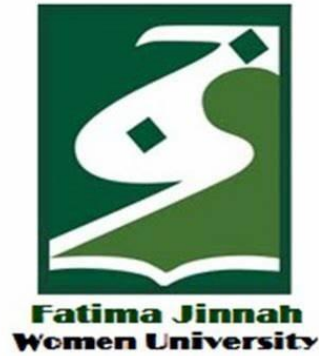# CLOUD COMPUTING LAB



**SUBMITTED TO**
SIR WAQAS SALEEM

**SUBMITTED BY**
HAMNA MAHMOOD
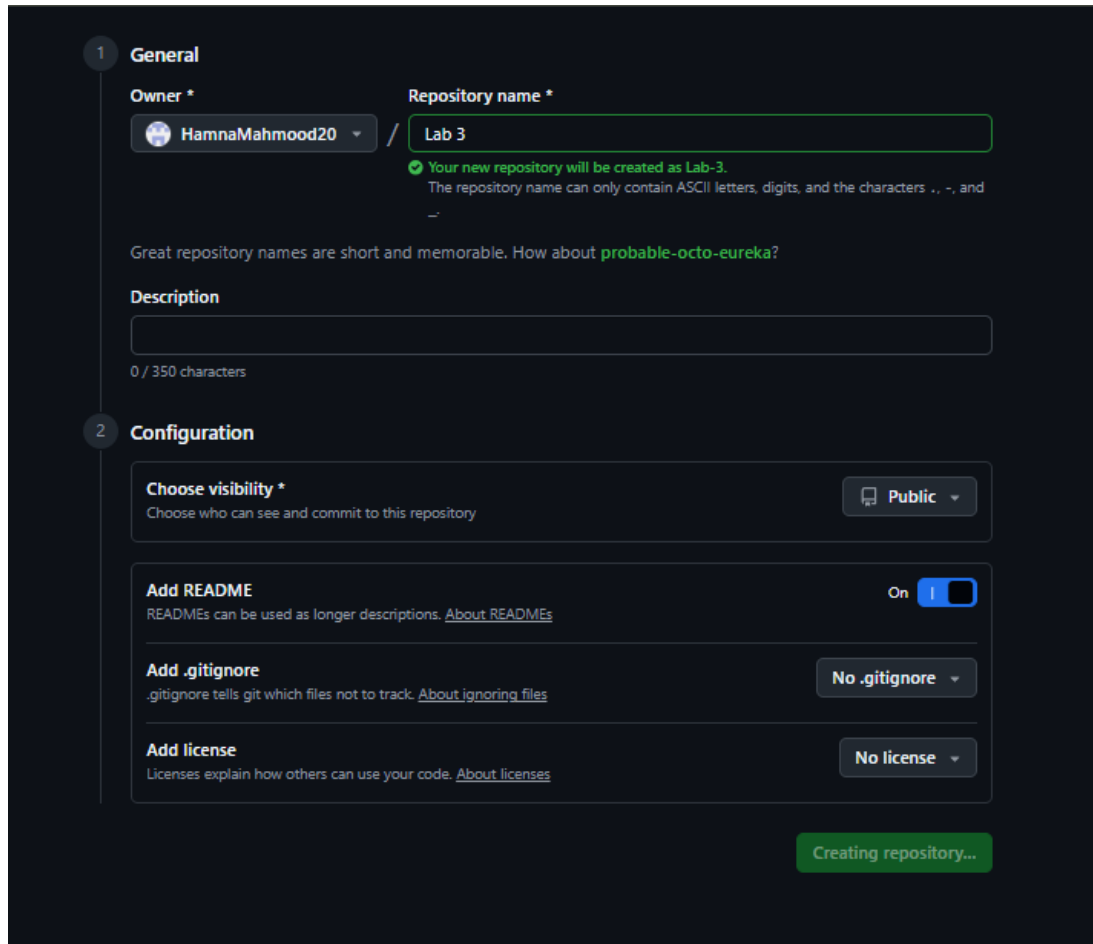2023-BSE-025

BSE V-A

# LAB 03

## Working with Git History, Stashing, and Reverting Commits

**Task 1**

**Handling Local and Remote Commit Conflicts (Pull vs Pull --rebase)**

**Save a screenshot of your terminal as local_commit.png.**

First making a new repository of Lab 3,

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git push origin main
To https://github.com/HamnaMahmood20/Lab-3.git
 ! [rejected]        main -> main (fetch first)
error: failed to push some refs to 'https://github.com/HamnaMahmood20/Lab-3.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.
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main|MERGI
NG)
$ git commit -m "Resolved merge conflict in README.md"
[main 7e8395d] Resolved merge conflict in README.md

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git  pull --no-rebase origin main
From https://github.com/HamnaMahmood20/Lab-3
 * branch           main       -> FETCH_HEAD
Already up to date.
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git push -u origin main
Enumerating objects: 10, done.
Counting objects: 100% (10/10), done.
Delta compression using up to 4 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (6/6), 678 bytes | 84.00 KiB/s, done.
Total 6 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/HamnaMahmood20/Lab-3.git
   9260ac7..7e8395d  main -> main
branch 'main' set up to track 'origin/main'.
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git pull --rebase origin main
From https://github.com/HamnaMahmood20/Lab-3
 * branch            main         -> FETCH_HEAD
Auto-merging README.md
CONFLICT (content): Merge conflict in README.md
error: could not apply ef01b52... Updated README>md
hint: Resolve all conflicts manually, mark them as resolved with
hint: "git add/rm <conflicted_files>", then run "git rebase --continue".
hint: You can instead skip this commit: run "git rebase --skip".
hint: To abort and get back to the state before "git rebase", run "git rebase --
abort".
hint: Disable this message with "git config set advice.mergeConflict false"
Could not apply ef01b52... # Updated README>md

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main|REBAS
E 1/1)
$ ^C

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main|REBAS
E 1/1)
$ notepad README.md

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main|REBAS
E 1/1)
$ git add README.md

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main|REBAS
E 1/1)
$ git rebase --continue
[detached HEAD 9917c97] Updated README>md
 1 file changed, 4 insertions(+)
Successfully rebased and updated refs/heads/main.
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git push -u origin main
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 327 bytes | 109.00 KiB/s, done.
Total 3 (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/HamnaMahmood20/Lab-3.git
   c5fc1c0..9917c97  main -> main
branch 'main' set up to track 'origin/main'.
```

**Task 2**

**Creating and Resolving Merge Conflicts Manually**
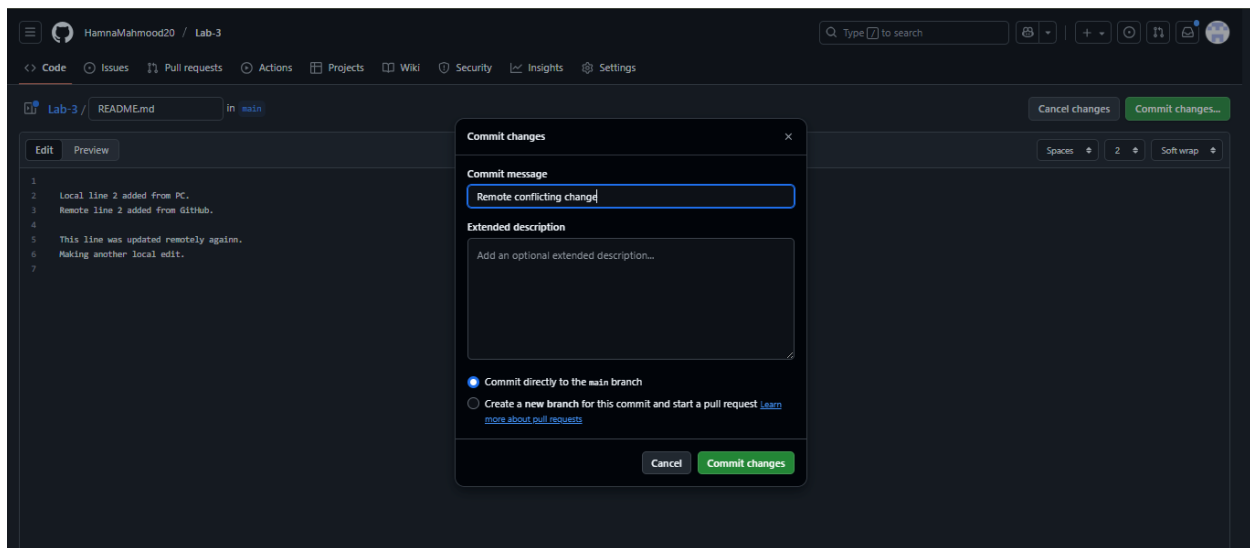
README.md - Notepad

File   Edit   Format   View   Help

Local line 2 added from PC.
Remote line 2 added from GitHub.

This line was edited locally againn.

Making another local edit.



```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git add README.md

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git commit -m "Local conflictingc change"
[main 9c1bc8d] Local conflictingc change
 1 file changed, 1 insertion(+), 1 deletion(-)
```

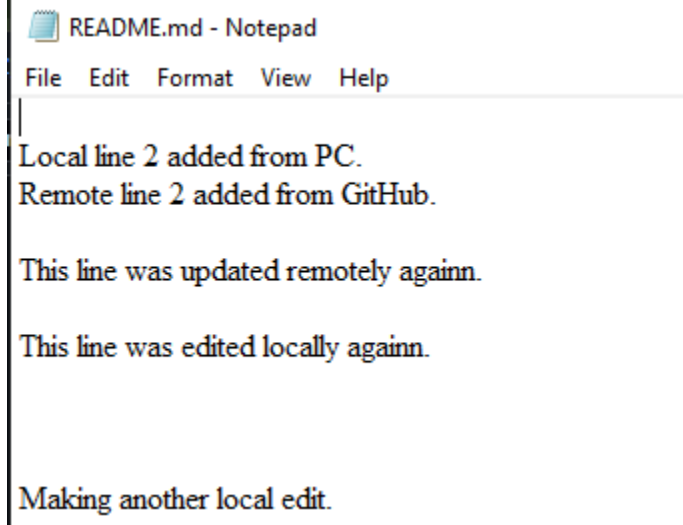```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git push -u origin main
To https://github.com/HamnaMahmood20/Lab-3.git
 ! [rejected]        main -> main (fetch first)
error: failed to push some refs to 'https://github.com/HamnaMahmood20/Lab-3.git'
hint: Updates were 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.
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git pull --rebase origin main
remote: Enumerating objects: 8, done.
remote: Counting objects: 100% (8/8), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 6 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (6/6), 1.88 KiB | 53.00 KiB/s, done.
From https://github.com/HamnaMahmood20/Lab-3
 * branch            main        -> FETCH_HEAD
   9917c97..926bfd5  main        -> origin/main
Auto-merging README.md
CONFLICT (content): Merge conflict in README.md
error: could not apply 9c1bc8d... Local conflictingc change
hint: Resolve all conflicts manually, mark them as resolved with
hint: "git add/rm <conflicted_files>", then run "git rebase --continue".
hint: You can instead skip this commit: run "git rebase --skip".
hint: To abort and get back to the state before "git rebase", run "git rebase --
abort".
hint: Disable this message with "git config set advice.mergeConflict false"
Could not apply 9c1bc8d... # Local conflictingc change
```

README.md - Notepad

File   Edit   Format   View   Help

Local line 2 added from PC.
Remote line 2 added from GitHub.

This line was updated remotely againn.

This line was edited locally againn.

Making another local edit.

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main|REBAS
E 1/1)
$ git add README.md

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main|REBAS
E 1/1)
$ git rebase --continue
[detached HEAD 4f62d10] Local conflictingc change
 1 file changed, 5 insertions(+)
Successfully rebased and updated refs/heads/main.
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git push -u origin main
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 377 bytes | 188.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/HamnaMahmood20/Lab-3.git
   926bfd5..4f62d10  main -> main
branch 'main' set up to track 'origin/main'.
```

## Task 3

**Managing Ignored Files with .gitignore and Removing Tracked Files**

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git add .
warning: in the working copy of 'textfiles/a.txt', LF will be replaced by CRLF t
he next time Git touches it

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git commit -m "Added textfiles directory with three files"
[main dea0f57] Added textfiles directory with three files
 1 file changed, 1 insertion(+)
 create mode 100644 textfiles/a.txt

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git push origin main
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 370 bytes | 185.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/HamnaMahmood20/Lab-3.git
   4f62d10..dea0f57  main -> main
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git add .gitignore
warning: in the working copy of '.gitignore', LF will be replaced by CRLF the n
xt time Git touches it

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git commit -m "Added .gitignore to ignore textfiles directory"
[main 9931e66] Added .gitignore to ignore textfiles directory
 1 file changed, 1 insertion(+)
 create mode 100644 .gitignore

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git push origin main
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 358 bytes | 179.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/HamnaMahmood20/Lab-3.git
   dea0f57..9931e66  main -> main
```

Files

main

Go to file

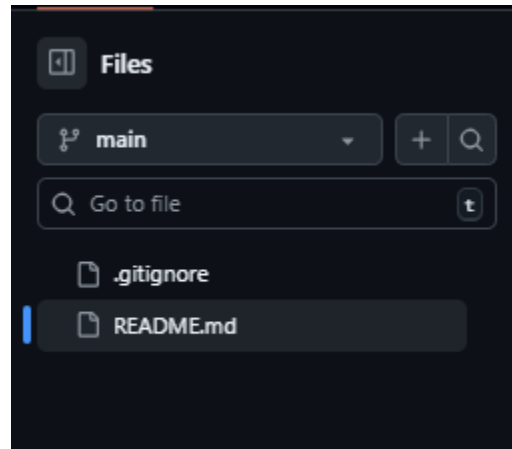> textfiles
.gitignore
README.md
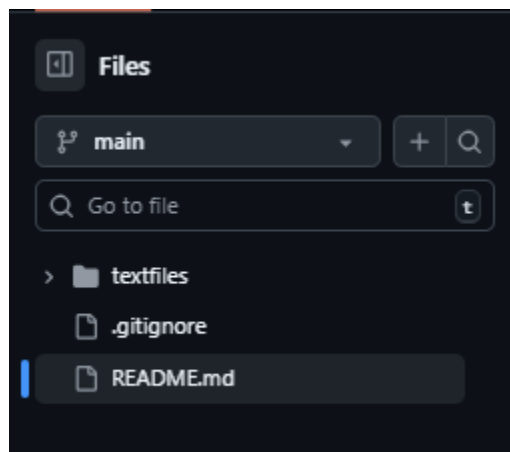
```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git add .

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git commit -m "Removed tracked textfiles diretory"
[main 313c0d2] Removed tracked textfiles diretory
 1 file changed, 1 deletion(-)
 delete mode 100644 textfiles/a.txt

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git push origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (2/2), 247 bytes | 123.00 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/HamnaMahmood20/Lab-3.git
   9931e66..313c0d2  main -> main
```

**Task 4**

**Create Temporary Changes and Use git stash**

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3
anch)
$ git add README.md

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3
anch)
$ git commit -m "Changes the README.md file"
On branch feature-branch
nothing to commit, working tree clean
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3
anch)
$ git add README.md

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3
anch)
$ git commit -m "Changes the README.md file"
On branch feature-branch
nothing to commit, working tree clean
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (feature-b
anch)
$ git stash
Saved working directory and index state WIP on feature-branch: 313c0d2 Removed
racked textfiles diretory
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3
anch)
$ git checkout main
Switched to branch 'main'
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (
anch)
$ git checkout main
Switched to branch 'main'
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (
anch)
$ git status
On branch feature-branch
nothing to commit, working tree clean
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (feature-
anch)
$ git stash pop
On branch feature-branch
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:   README.md

no changes added to commit (use "git add" and/or "git commit -a")
Dropped refs/stash@{0} (0fb73c4e207aa875dba3b469abf6ff6646c07e81)
```

**Task 5**

**Checkout a Specific Commit Using git log**

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (
anch)
$ git log --oneline
313c0d2 (HEAD -> feature-branch, origin/main, origin/HEAD) Removed tra
iles diretory
9931e66 Added .gitignore to ignore textfiles directory
dea0f57 Added textfiles directory with three files
4f62d10 Local conflictingc change
926bfd5 Remote conflicting change
8d2e6cc Update README.md
9917c97 Updated README>md
c5fc1c0 Update README.md
7e8395d Resolved merge conflict in README.md
48e6e09 Second local edit
9260ac7 Second remote edit
b1dd2f9 Local update to README
41918f6 Remote update to README
554170f Initial commit
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (
anch)
$ git checkout 554170f
error: Your local changes to the following files would be overwritten
t:
        README.md
Please commit your changes or stash them before you switch branches.
Aborting
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3
anch)
$ git checkout main
error: Your local changes to the following files would be overwritten
t:
        README.md
Please commit your changes or stash them before you switch branches.
```

**Task 6**

**Resetting Commits (Soft vs Hard Reset) (With Verification Steps)**

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3
anch)
$ git add .

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3
anch)
$ git commit -m "Added a test line"
[feature-branch 7c7d283] Added a test line
 1 file changed, 5 insertions(+)
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3
anch)
$ git add .

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3
anch)
$ git commit -m "Second test commit"
On branch feature-branch
nothing to commit, working tree clean
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (f
anch)
$ git log --oneline
7c7d283 (HEAD -> feature-branch) Added a test line
313c0d2 (origin/main, origin/HEAD) Removed tracked textfiles diretory
9931e66 Added .gitignore to ignore textfiles directory
dea0f57 Added textfiles directory with three files
4f62d10 Local conflictingc change
926bfd5 Remote conflicting change
8d2e6cc Update README.md
9917c97 Updated README>md
c5fc1c0 Update README.md
7e8395d Resolved merge conflict in README.md
48e6e09 Second local edit
9260ac7 Second remote edit
b1dd2f9 Local update to README
41918f6 Remote update to README
554170f Initial commit
```

Local line 2 added from PC.
Remote line 2 added from GitHub.

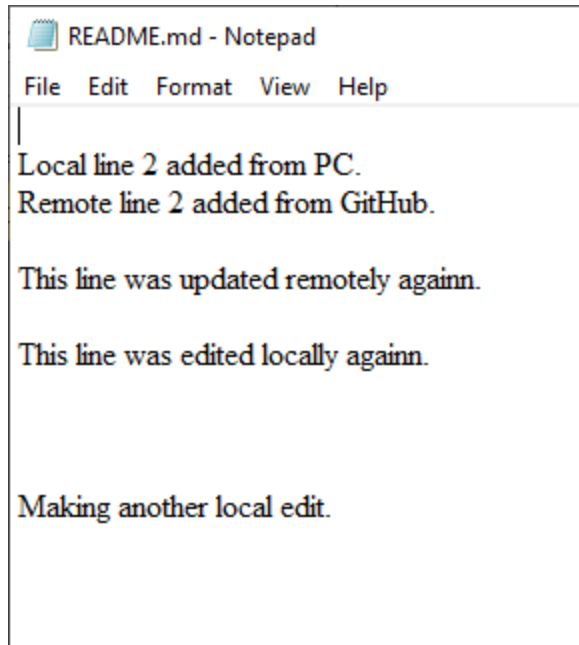This line was updated remotely againn.

This line was edited locally againn.

Making another local edit.

Editing for STEP 4

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3
anch)
$ git reset --soft HEAD~1
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (feature-b
anch)
$ git log --oneline
9931e66 (HEAD -> feature-branch) Added .gitignore to ignore textfiles directory
dea0f57 Added textfiles directory with three files
4f62d10 Local conflictingc change
926bfd5 Remote conflicting change
8d2e6cc Update README.md
9917c97 Updated README>md
c5fc1c0 Update README.md
7e8395d Resolved merge conflict in README.md
48e6e09 Second local edit
9260ac7 Second remote edit
b1dd2f9 Local update to README
41918f6 Remote update to README
554170f Initial commit
```

**README.md - Notepad**

File  Edit  Format  View  Help

Local line 2 added from PC.
Remote line 2 added from GitHub.

This line was updated remotely againn.

This line was edited locally againn.

Making another local edit.

Editing for STEP 4

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3
anch)
$ git commit -m "Second Test commit"
[feature-branch 7f96ddb] Second Test commit
 2 files changed, 5 insertions(+), 2 deletions(-)
 delete mode 100644 textfiles/a.txt
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3
anch)
$ git reset --hard HEAD~1
HEAD is now at 9931e66 Added .gitignore to ignore textfiles directory
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3
anch)
$ git log --oneline
9931e66 (HEAD -> feature-branch) Added .gitignore to ignore textfiles
dea0f57 Added textfiles directory with three files
4f62d10 Local conflictingc change
926bfd5 Remote conflicting change
8d2e6cc Update README.md
9917c97 Updated README>md
c5fc1c0 Update README.md
7e8395d Resolved merge conflict in README.md
48e6e09 Second local edit
9260ac7 Second remote edit
b1dd2f9 Local update to README
41918f6 Remote update to README
554170f Initial commit
```

README.md - Notepad

File  Edit  Format  View  Help

Local line 2 added from PC.
Remote line 2 added from GitHub.

This line was updated remotely againn.

This line was edited locally againn.

Making another local edit.

## Task 7

### Amending the Last Commit



```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3
anch)
$ notepad README.md

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3
anch)
$ git add .

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3
anch)
$ git commit -m "Fix log message"
[feature-branch c328c50] Fix log message
 1 file changed, 1 insertion(+), 1 deletion(-)
```



```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3
anch)
$ notepad README.md

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3
anch)
$ git add .

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3
anch)
$ git commit --amend
[feature-branch 8ad911a] Fix log message
 Date: Sat Oct 18 00:01:09 2025 +0500
 1 file changed, 2 insertions(+), 1 deletion(-)
```

**Task 8**

**Reverting a Commit (Safe Undo on Remote Branch)**

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git push origin main
Enumerating objects: 10, done.
Counting objects: 100% (10/10), done.
Delta compression using up to 4 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (6/6), 692 bytes | 230.00 KiB/s, done.
Total 6 (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/HamnaMahmood20/Lab-3.git
   4448540..9fea0b5  main -> main
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git log --oneline
a645bb7 (HEAD -> main, origin/main, origin/HEAD) Added temporary text file for r
evert
9fea0b5 Merge branch 'main' of https://github.com/HamnaMahmood20/Lab-3
4448540 Update README.md
5960793 Update README.md
a7dc850 Unique update on main branch
ad286c0 Update README.md
313c0d2 Removed tracked textfiles diretory
9931e66 Added .gitignore to ignore textfiles directory
dea0f57 Added textfiles directory with three files
4f62d10 Local conflictingc change
926bfd5 Remote conflicting change
8d2e6cc Update README.md
9917c97 Updated README>md
c5fc1c0 Update README.md
7e8395d Resolved merge conflict in README.md
48e6e09 Second local edit
9260ac7 Second remote edit
b1dd2f9 Local update to README
41918f6 Remote update to README
554170f Initial commit

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git revert a645bb7
[main 67d9918] Revert "Added temporary text file for revert"
 2 files changed, 2 deletions(-)
 delete mode 100644 temp.text
 delete mode 100644 temp.txt
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git push origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (2/2), 274 bytes | 274.00 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/HamnaMahmood20/Lab-3.git
   a645bb7..67d9918  main -> main
```

**Task 9**

**Force Push (With Caution)**

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (main)
$ git checkout -b test-force
Switched to a new branch 'test-force'
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (test-force
)
$ notepad README.md

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (test-force
)
$ git add .

ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (test-force
)
$ git commit -m "Made a small change"
[test-force 2a40e0d] Made a small change
 1 file changed, 1 insertion(+)
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (test-force
)
$ git push origin test-force
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 344 bytes | 172.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
remote:
remote: Create a pull request for 'test-force' on GitHub by visiting:
remote:      https://github.com/HamnaMahmood20/Lab-3/pull/new/test-force
remote:
To https://github.com/HamnaMahmood20/Lab-3.git
 * [new branch]      test-force -> test-force
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (test-force
)
$ git reset --hard HEAD~1
HEAD is now at 67d9918 Revert "Added temporary text file for revert"
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (test-force
)
$ git push origin test-force
To https://github.com/HamnaMahmood20/Lab-3.git
 ! [rejected]        test-force -> test-force (non-fast-forward)
error: failed to push some refs to 'https://github.com/HamnaMahmood20/Lab-3.git'
hint: Updates were rejected because the tip of your current branch is behind
hint: its remote counterpart. If you want to integrate the remote changes,
hint: use 'git pull' before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
```

```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3 (test-force
)
$ git push origin test-force --force
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/HamnaMahmood20/Lab-3.git
 + 2a40e0d...67d9918 test-force -> test-force (forced update)
```

**Task 10**

**Running Gitea in GitHub Codespaces via Docker Compose**

```
@HamnaMahmood20 →/workspaces/Gitea (main) $ docker compose up -d
[+] Running 19/19
 ✓ gitea Pulled
 ✓ db Pulled



[+] Running 5/5
 ✓ Network webnet              Created
 ✓ Volume "gitea_postgres"     Created
 ✓ Volume "gitea"              Created
 ✓ Container gitea_db          Started
 ✓ Container gitea             Started
```

## Initial Configuration

If you run Gitea inside Docker, please read the documentation before changing any settings.

### Database Settings

Gitea requires MySQL, PostgreSQL, MSSQL, SQLite3 or TiDB (MySQL protocol).

| | |
|---|---|
| Database Type * | MySQL ▾ |
| Host * | db:5432 |
| Username * | gitea |
| Password * | ••••• |
| Database Name * | gitea |

### General Settings

| | |
|---|---|
| Site Title * | Gitea: Git with a cup of tea |
| | You can enter your company name here. |
| Repository Root Path * | /data/git/repositories |
| | Remote Git repositories will be saved to this directory. |

▼ Administrator Account Settings

Creating an administrator account is optional. The first registered user will automatically become an administrator.

Administrator Username    hamna

Email Address    hamnamahmood004@gmail.com

Password    ••••••••••

Confirm Password    ••••••••••



Issues    Pull Requests    Milestones    Explore

hamna ▾

No Activity

You are currently not following any repositories or users, so there is no content to display. You can explore repositories or users of interest from the links below.

Explore repositories · Explore users

Repository    Organization

Repositories    +

There are no repositories yet.

**Task 11**

**Creating a GitHub Pages Portfolio Site**

```
✓ CV                                    [icons]
    images.png
<> index.html
#  styles.css
```
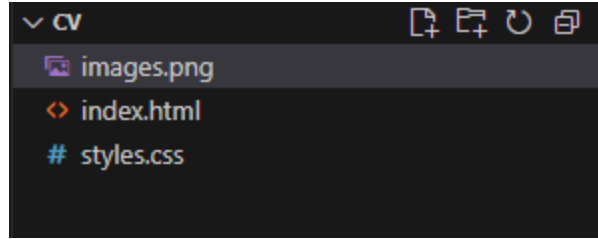
```
ABC@DESKTOP-7VVTN59 MINGW64 ~/Lab-2/CC-Hamna-Mahmood-25-BSE-VA/Lab-3
)
$ git push -u origin main
branch 'main' set up to track 'origin/main'.
Everything up-to-date
```



GitHub Pages

GitHub Pages is designed to host your personal, organization, or project pages from a GitHub repository.

Your site is live at https://hamnamahmood20.github.io/    [Visit site]  [Unpublish site]
Last deployed by HamnaMahmood20 1 minute ago

Build and deployment

Source
Deploy from a branch ▾

Branch
Your GitHub Pages site is currently being built from the main branch. Learn more about configuring the publishing source for your site.

main ▾      / (root) ▾      Save

Learn how to add a Jekyll theme to your site.

Your site was last deployed to the github-pages environment by the pages build and deployment workflow.
Learn more about deploying to GitHub Pages using custom workflows

# Hamna Mahmood

## *Video Editor*

📞 +923108329962

✉ hamnamahmood004@gmail.com

📍 Khalid colony phase 2, Chakri road, Rawalpindi

**Nationality:** Pakistani

**Date of birth:** 14-07-2001
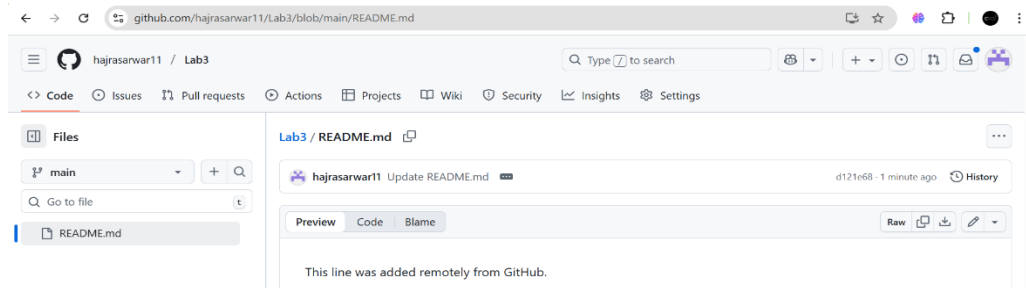
**Gender:** Female

**Marital Status:** Single

# Exam Evaluation Questions

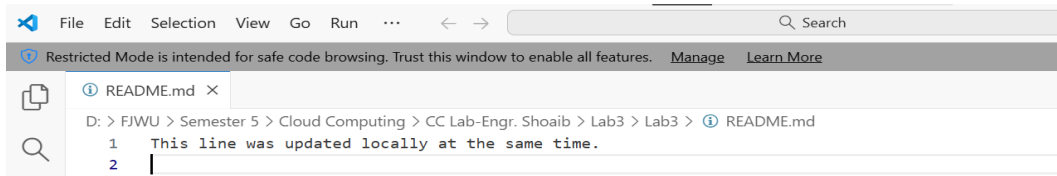## 1. Local vs Remote Conflict Resolution

**Step 1: On GitHub, edit a file (e.g., README.md) and commit the change.**
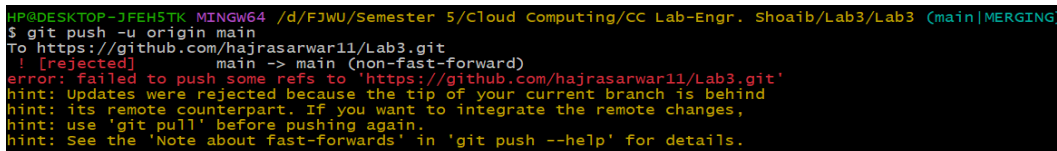**Screenshot:**



**Step 2: On your local machine, edit the same file differently (avoid conflict) and commit.**
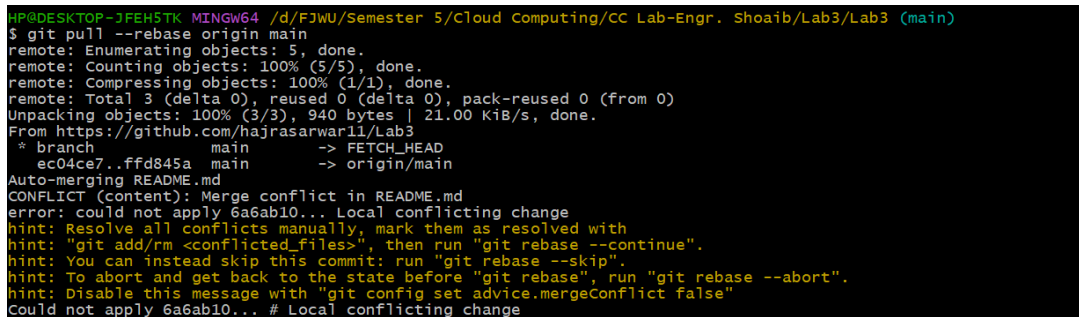**Screenshot:**



**Step 3: Try to push your local commit and observe the error.**
**Screenshot:**



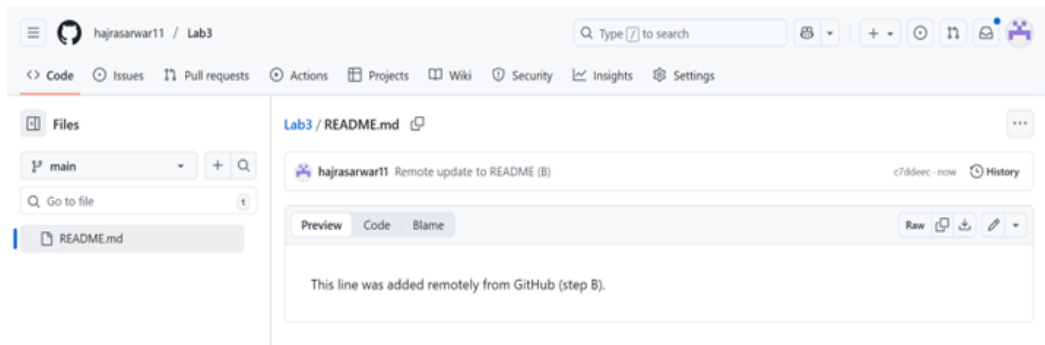**Step 5: Repeat with another remote/local change, but resolve using git pull --rebase, then push.**
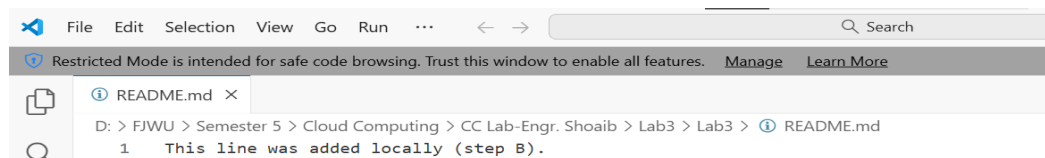**Screenshot:**

## 2. Manual Merge Conflict Handling

### Step 1: On GitHub, change a specific line in a file and commit.
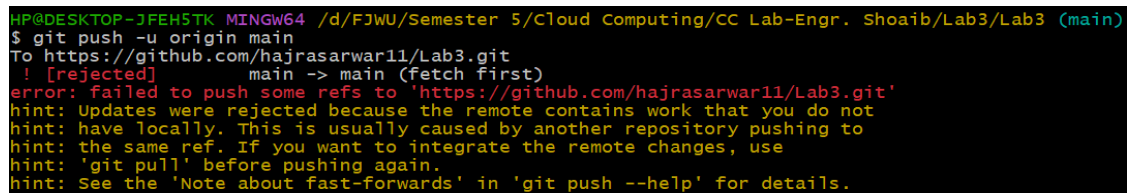### Screenshot:



### Step 2: Locally, change the same line differently and commit.
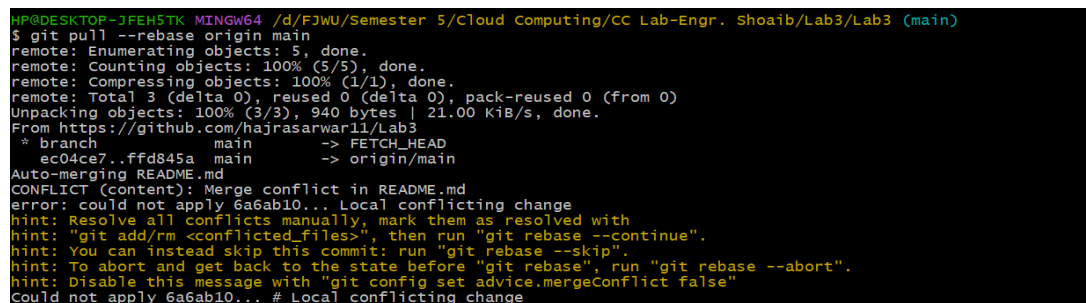### Screenshot:



### Step 3: Try to push your local change and observe the conflict error.
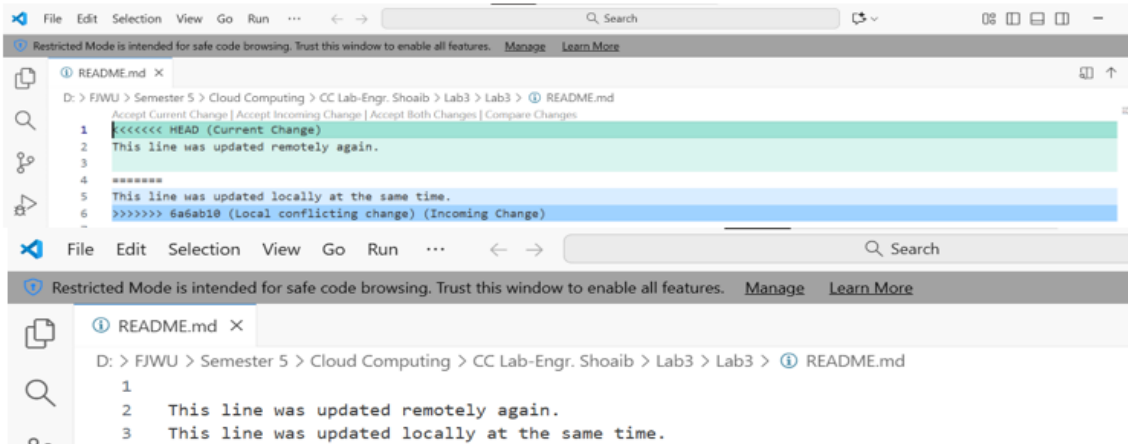### Screenshot:



### Step 4: Use git pull --rebase to fetch changes and trigger the conflict.
### Screenshot:



### Step 5: Edit the conflicted file to resolve the conflict manually.
### Screenshot:

## Step 6: Mark the conflict resolved (git add <file>, git rebase --continue) and push.
### Screenshot:



## 3. Managing Ignored and Tracked Files

## Step 1: Create a new folder (e.g., DocFiles) and add several files inside.
### Screenshot:



## Step 2: Commit and push the folder/files to GitHub.
### Screenshot:

```
HP@DESKTOP-JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab3/Lab3 (main)
$ git add .
git commit -m "Added textfiles directory with three files"
git push origin main
warning: in the working copy of 'textfiles/a.txt', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'textfiles/b.txt', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'textfiles/c.txt', LF will be replaced by CRLF the next time Git touches it
[main 149c401] Added textfiles directory with three files
 3 files changed, 3 insertions(+)
 create mode 100644 textfiles/a.txt
 create mode 100644 textfiles/b.txt
 create mode 100644 textfiles/c.txt
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (6/6), 467 bytes | 66.00 KiB/s, done.
Total 6 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/hajrasarwar11/Lab3.git
   9d47d7a..149c401  main -> main
```

**Step 3: Add the folder to your .gitignore file.**
**Screenshot:**

```
HP@DESKTOP-JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab3/Lab3 (main)
$ echo "textfiles/*" > .gitignore
```

**Step 4: Commit and push the .gitignore update.**
**Screenshot:**

```
HP@DESKTOP-JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab3/Lab3 (main)
$ git add .gitignore
git commit -m "Added .gitignore to ignore textfiles directory"
git push origin main
warning: in the working copy of '.gitignore', LF will be replaced by CRLF the next time Git touches it
[main b869d8a] Added .gitignore to ignore textfiles directory
 1 file changed, 1 insertion(+)
 create mode 100644 .gitignore
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 355 bytes | 177.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/hajrasarwar11/Lab3.git
   149c401..b869d8a  main -> main
```

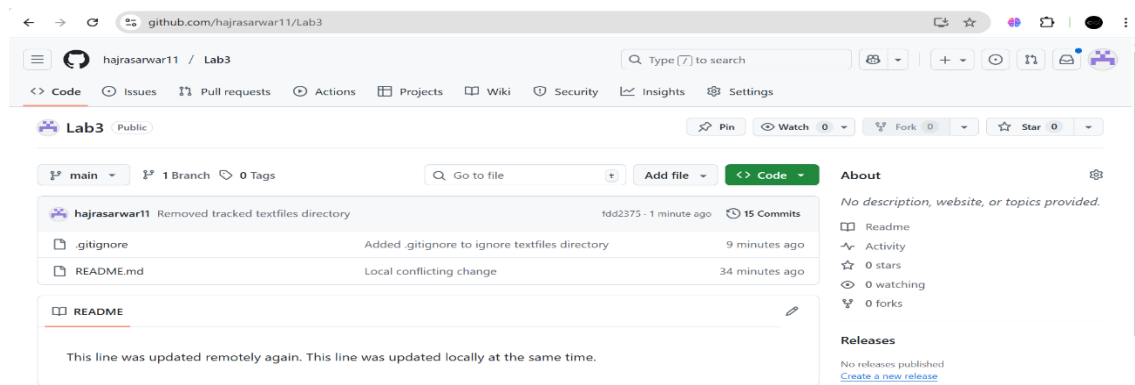**Step 5: Remove the folder from tracking using git rm -r --cached <folder>.**
**Screenshot:**

```
HP@DESKTOP-JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab3/Lab3 (main)
$ git rm -r --cached textfiles
rm 'textfiles/a.txt'
rm 'textfiles/b.txt'
rm 'textfiles/c.txt'
```

**Step 6: Commit and push the change, then verify the folder is no longer tracked on GitHub.**
**Screenshot:**

# 4. Commit History Manipulation and Recovery

## Step 1: Make a change and commit it.
### Screenshot:

```
HP@DESKTOP-JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab3/Lab3 (main)
$ git add .

HP@DESKTOP-JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab3/Lab3 (main)
$ git commit -m "Added test line"
[main 685e2a5] Added test line
 1 file changed, 2 insertions(+)
```

## Step 2: Make another change and commit again.
### Screenshot:

```
HP@DESKTOP-JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab3/Lab3 (main)
$ git add .
git commit -m "Second test commit"
[main 97772a1] Second test commit
 1 file changed, 2 insertions(+)

HP@DESKTOP-JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab3/Lab3 (main)
$ |
```

## Step 3: View your commit history.
### Screenshot:

```
HP@DESKTOP-JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab3/Lab3 (main)
$ git log --oneline
97772a1 (HEAD -> main) Second test commit
685e2a5 Added test line
fdd2375 (origin/main, origin/HEAD) Removed tracked textfiles directory
b869d8a Added .gitignore to ignore textfiles directory
149c401 Added textfiles directory with three files
9d47d7a Local conflicting change
ffd845a Remote conflicting change
ec04ce7 Local update to README (B)
df97ab4 Remote update to README (B)
c7ddeec Remote update to README (B)
9339f5f Resolve merge conflict in README.md (merge remote changes)
77e6bd2 Local update to README (A)
22fa12a Remote update to README (A)
e2f594f Local update to README
c1da5cc Update README.md
d121e68 Update README.md
28e9511 Initial commit
```

## Step 4: Perform a soft reset (git reset --soft HEAD~1) and observe your file and history.
### Screenshot:

```
HP@DESKTOP-JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab3/Lab3 (main)
$ git reset --soft HEAD~1

HP@DESKTOP-JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab3/Lab3 (main)
$ git log --oneline
685e2a5 (HEAD -> main) Added test line
fdd2375 (origin/main, origin/HEAD) Removed tracked textfiles directory
b869d8a Added .gitignore to ignore textfiles directory
149c401 Added textfiles directory with three files
9d47d7a Local conflicting change
ffd845a Remote conflicting change
ec04ce7 Local update to README (B)
df97ab4 Remote update to README (B)
c7ddeec Remote update to README (B)
9339f5f Resolve merge conflict in README.md (merge remote changes)
77e6bd2 Local update to README (A)
22fa12a Remote update to README (A)
e2f594f Local update to README
c1da5cc Update README.md
d121e68 Update README.md
28e9511 Initial commit
```

## Step 5: Make commit again.
### Screenshot:

```
HP@DESKTOP-JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab3/Lab3 (main)
$ git commit -m "Second Test commit"
[main 5e5eabd] Second Test commit
 1 file changed, 2 insertions(+)
```

**Step 6: Perform a hard reset (git reset --hard HEAD~1) and observe the changes.**
**Screenshot:**



```
HP@DESKTOP-JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab3/Lab3 (main)
$ git reset --hard HEAD~1
HEAD is now at 685e2a5 Added test line

HP@DESKTOP-JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab3/Lab3 (main)
$ git log --oneline
685e2a5 (HEAD -> main) Added test line
fdd2375 (origin/main, origin/HEAD) Removed tracked textfiles directory
b869d8a Added .gitignore to ignore textfiles directory
149c401 Added textfiles directory with three files
9d47d7a Local conflicting change
ffd845a Remote conflicting change
ec04ce7 Local update to README (B)
df97ab4 Remote update to README (B)
c7ddeec Remote update to README (B)
9339f5f Resolve merge conflict in README.md (merge remote changes)
77e6bd2 Local update to README (A)
22fa12a Remote update to README (A)
e2f594f Local update to README
c1da5cc Update README.md
d121e68 Update README.md
28e9511 Initial commit
```