

NAME: SANA TARIQ

CLASS: BSE 5B

REG.NO: 058

SUBJECT: CLOUD COMPUTING

LAB#03

TASK#01:

[Handling Local and Remote Commit Conflicts \(Pull vs Pull --rebase\)](#)

Remote edit on GitHub

Local edit & commit

Try to push

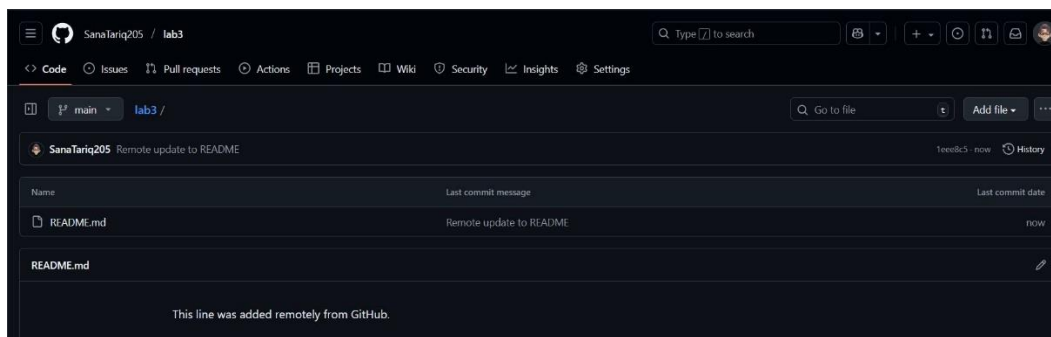
Resolve via merge (default pull)

Push after merge

Make another remote edit

Make another local edit & commit

Pull with rebase



```
Sana@DESKTOP-OOECUUI MINGW64 ~  
$ git clone git@github.com:SanaTariq205/lab3.git  
Cloning into 'lab3'...  
warning: You appear to have cloned an empty repository.
```

```
Sana@DESKTOP-00ECUUI MINGW64 ~
$ cd lab3

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git checkout main
error: pathspec 'main' did not match any file(s) known to git

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git add README.md
fatal: pathspec 'README.md' did not match any files

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git commit -m "Local update to README"
On branch main

Initial commit

nothing to commit (create/copy files and use "git add" to track)
```

```
Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git push origin main
error: src refspec main does not match any
error: failed to push some refs to 'github.com:SanaTariq205/lab3.git'
```

```
Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git pull --no-rebase origin main
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 905 bytes | 75.00 KiB/s, done.
From github.com:SanaTariq205/lab3
 * branch          main      -> FETCH_HEAD
 * [new branch]    main      -> origin/main

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$
```

```
Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git push -u origin main
branch 'main' set up to track 'origin/main'.
Everything up-to-date
```

```
Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git commit -m "Local update 2"
On branch main
Your branch is up to date with 'origin/main'.

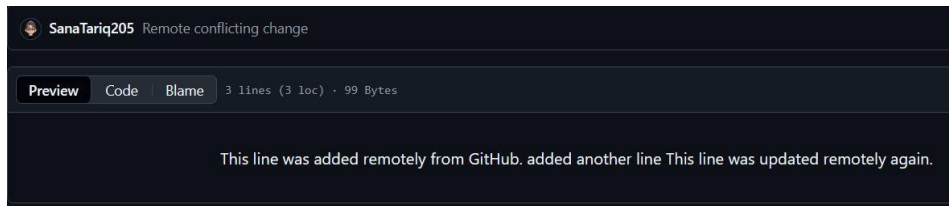
nothing to commit, working tree clean

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git pull --rebase origin main
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 949 bytes | 105.00 KiB/s, done.
From github.com:SanaTariq205/lab3
 * branch          main      -> FETCH_HEAD
 * ac99c72..1867c91 main      -> origin/main
Updating ac99c72..1867c91
Fast-forward
 README.md | 1 +
 1 file changed, 1 insertion(+)

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git push -u origin main
branch 'main' set up to track 'origin/main'.
Everything up-to-date
```

TASK#02:



```
Sana@DESKTOP-OOECUUI MINGW64 ~/lab3 (main)
$ echo "This line was updated locally at the same time.">>README.md

Sana@DESKTOP-OOECUUI MINGW64 ~/lab3 (main)
$ git add README.md
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it

Sana@DESKTOP-OOECUUI MINGW64 ~/lab3 (main)
$ git commit -m "Local conflicting change"
[main 5cdc56d] Local conflicting change
1 file changed, 1 insertion(+)

Sana@DESKTOP-OOECUUI MINGW64 ~/lab3 (main)
$ git push -u origin main
To github.com:SanaTariq205/lab3.git
 ! [rejected]        main -> main (fetch first)
error: failed to push some refs to 'github.com:SanaTariq205/lab3.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.
```

```
Sana@DESKTOP-OOECUUI MINGW64 ~/lab3 (main|REBASE 1/1)
$ git rebase --continue
Successfully rebased and updated refs/heads/main.

Sana@DESKTOP-OOECUUI MINGW64 ~/lab3 (main)
$ git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean

Sana@DESKTOP-OOECUUI MINGW64 ~/lab3 (main)
$ git push -u origin main
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 353 bytes | 353.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To github.com:SanaTariq205/lab3.git
   e251986..342cb61  main -> main
branch 'main' set up to track 'origin/main'.
```

TASK#03:

```

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ mkdir textfiles

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ echo "File A content" > textfiles/a.txt

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ echo "File B content" > textfiles/b.txt

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ echo "File C content" > textfiles/c.txt

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git add .
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

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git commit -m "Added textfiles directory with three files"
[main 8cac9ed] 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

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git push origin main
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), 466 bytes | 466.00 KiB/s, done.
Total 6 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To github.com:SanaTariq205/lab3.git
342cb61..8cac9ed main -> main

```

```

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ echo "textfiles/*" > .gitignore

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git add .gitignore
warning: in the working copy of '.gitignore', LF will be replaced by CRLF the next time Git touches it

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git commit -m "Added .gitignore to ignore textfiles directory"
[main 2ea921c] Added .gitignore to ignore textfiles directory
1 file changed, 1 insertion(+)
create mode 100644 .gitignore

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git push origin main
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 | 355.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To github.com:SanaTariq205/lab3.git
8cac9ed..2ea921c main -> main

```

SanaTariq205 / lab3

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Pin

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main

1 Branch

0 Tags

Go to file

Add file

Code

SanaTariq205

Added .gitignore to ignore textfiles directory

2ea921c · 1 minute ago

6 Commits

textfiles

Added textfiles directory with three files

2 minutes ago

.gitignore

Added .gitignore to ignore textfiles directory

1 minute ago

README.md

Local conflicting change

16 minutes ago

README

```

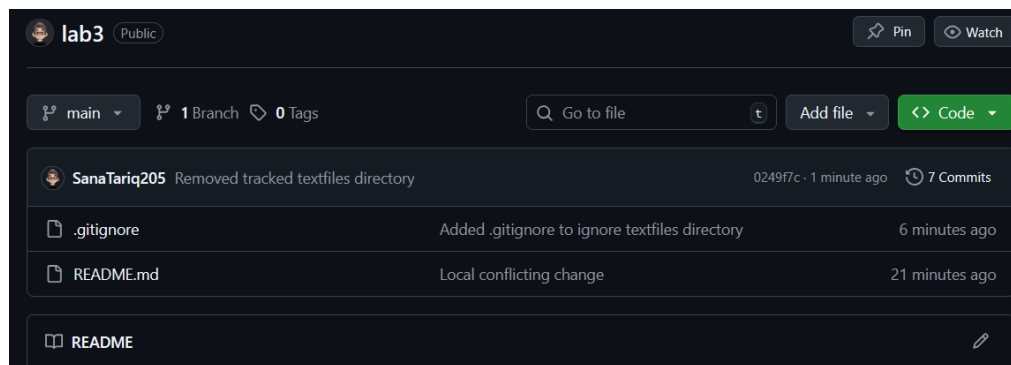
Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git rm -r --cached textfiles
rm 'textfiles/a.txt'
rm 'textfiles/b.txt'
rm 'textfiles/c.txt'

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git add .

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git commit -m "Removed tracked textfiles directory"
[main 0249f7c] Removed tracked textfiles directory
3 files changed, 3 deletions(-)
delete mode 100644 textfiles/a.txt
delete mode 100644 textfiles/b.txt
delete mode 100644 textfiles/c.txt

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git push origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (2/2), 243 bytes | 243.00 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 github.com:SanaTariq205/lab3.git
2ea921c..0249f7c  main -> main

```



TASK#04:

```

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git checkout -b feature-branch
Switched to a new branch 'feature-branch'

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (feature-branch)
$ nano README.md

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (feature-branch)
$ git add README.md

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (feature-branch)
$ git commit -m "Changes the README.md file"
[feature-branch f2f9f8d] Changes the README.md file
1 file changed, 1 insertion(+)

```

```
Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (feature-branch)
$ nano README.md

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (feature-branch)
$ git checkout main
error: Your local changes to the following files would be overwritten by checkout:
      README.md
Please commit your changes or stash them before you switch branches.
Aborting
```

```
Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (feature-branch)
$ git stash
Saved working directory and index state WIP on feature-branch: f2f9f8d Changes the README.md file

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (feature-branch)
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git checkout feature-branch
Switched to branch 'feature-branch'

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (feature-branch)
$ git status
On branch feature-branch
nothing to commit, working tree clean
```

```
Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (feature-branch)
$ 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} (d80f113d6e4505e209b130bbccb86e7072b9751d)
```

TASK#05:

```
Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (feature-branch)
$ git log --oneline --graph --decorate -n 20
* f2f9f8d (HEAD -> feature-branch) Changes the README.md file
* 0249f7c (origin/main, main) Removed tracked textfiles directory
* 2ea921c Added .gitignore to ignore textfiles directory
* 8cac9ed Added textfiles directory with three files
* 342cb61 Local conflicting change
* e251986 Remote conflicting change
* 1867c91 Remote update 2
* ac99c72 Remote update to README
```

```

Sana@DESKTOP-OOECUUI MINGW64 ~/lab3 (feature-branch)
$ git checkout ac99c72
error: Your local changes to the following files would be overwritten by checkout:
      README.md
Please commit your changes or stash them before you switch branches.
Aborting

Sana@DESKTOP-OOECUUI MINGW64 ~/lab3 (feature-branch)
$ git stash
Saved working directory and index state WIP on feature-branch: f2f9f8d Changes the README.md file

Sana@DESKTOP-OOECUUI MINGW64 ~/lab3 (feature-branch)
$ git checkout ac99c72
Note: switching to 'ac99c72'.

You are in 'detached HEAD' state. You can look around, make experimental
changes and commit them, and you can discard any commits you make in this
state without impacting any branches by switching back to a branch.

If you want to create a new branch to retain commits you create, you may
do so (now or later) by using -c with the switch command. Example:

    git switch -c <new-branch-name>

Or undo this operation with:

    git switch -

Turn off this advice by setting config variable advice.detachedHead to false

HEAD is now at ac99c72 Remote update to README

Sana@DESKTOP-OOECUUI MINGW64 ~/lab3 ((ac99c72...))
$ cat README.md
This line was added remotely from GitHub.

Sana@DESKTOP-OOECUUI MINGW64 ~/lab3 ((ac99c72...))
$ git checkout main
Previous HEAD position was ac99c72 Remote update to README
Switched to branch 'main'
Your branch is up to date with 'origin/main'.

```

TASK#06:

```

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git add .

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git commit -m "Added test line"
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git add .

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git commit -m "Second test commit"
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ nano README.md

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git add README.md

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git commit -m "Added test line for Task 6"
[main 2b8a3ac] Added test line for Task 6
1 file changed, 2 insertions(+)

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git push origin main
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), 348 bytes | 174.00 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 github.com:SanaTariq205/lab3.git
0249f7c..2b8a3ac main -> main

```

```

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ nano README.md

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git add README.md

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git commit -m "Second test commit for Task 6"
[main 137e8a5] Second test commit for Task 6
1 file changed, 1 insertion(+)

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git log --oneline
137e8a5 (HEAD -> main) Second test commit for Task 6
2b8a3ac (origin/main) Added test line for Task 6
0249f7c Removed tracked textfiles directory
2ea921c Added .gitignore to ignore textfiles directory
8cac9ed Added textfiles directory with three files
342cb61 Local conflicting change
e251986 Remote conflicting change
1867c91 Remote update 2
ac99c72 Remote update to README

```



```

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git reset --soft HEAD~1

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git log --oneline
2b8a3ac (HEAD -> main, origin/main) Added test line for Task 6
0249f7c Removed tracked textfiles directory
2ea921c Added .gitignore to ignore textfiles directory
8cac9ed Added textfiles directory with three files
342cb61 Local conflicting change
e251986 Remote conflicting change
1867c91 Remote update 2
ac99c72 Remote update to README

```

```

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git commit -m "Recommit after soft reset"
[main fdb11d0] Recommit after soft reset
 1 file changed, 1 insertion(+)

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git reset --hard HEAD~1
HEAD is now at 2b8a3ac Added test line for Task 6

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean

```

TASK#07:

```

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ nano README.md

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git add README.md

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git commit -m "Fix log message"
[main 3d9a2c1] Fix log message
 1 file changed, 1 insertion(+)

```

```

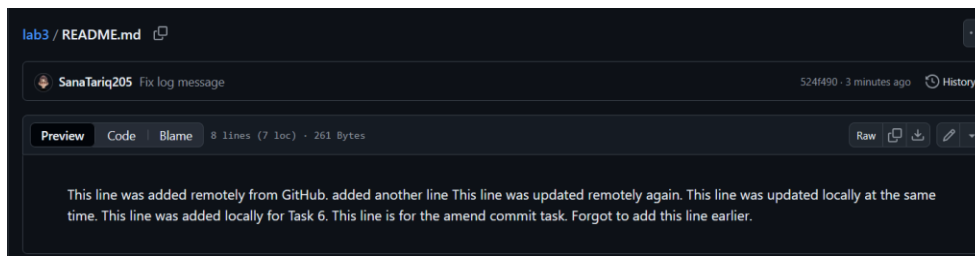
Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ nano README.md

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git commit --amend
[main 524f490] Fix log message
Date: Fri Oct 17 10:29:26 2025 +0500
 1 file changed, 2 insertions(+)

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git log --oneline -1
524f490 (HEAD -> main) Fix log message

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git push origin main
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), 387 bytes | 193.00 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 github.com:SanaTariq205/lab3.git
 2b8a3ac..524f490  main -> main

```



TASK#08:

```
Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ echo "temporary text" >> temp.txt

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git add .
warning: in the working copy of 'temp.txt', LF will be replaced by CRLF the next time Git touches it

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git commit -m "Added temporary text file"
[main a7e3468] Added temporary text file
 1 file changed, 1 insertion(+)
 create mode 100644 temp.txt

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git push origin main
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), 344 bytes | 38.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To github.com:SanaTariq205/lab3.git
 524f490..a7e3468  main -> main
```

```
Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git log --oneline
a7e3468 (HEAD -> main, origin/main) Added temporary text file
524f490 Fix log message
2b8a3ac Added test line for Task 6
0249f7c Removed tracked textfiles directory
2ea921c Added .gitignore to ignore textfiles directory
8cac9ed Added textfiles directory with three files
342cb61 Local conflicting change
e251986 Remote conflicting change
1867c91 Remote update 2
ac99c72 Remote update to README
```

```
Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git revert a7e3468
[main c1027ff] Revert "Added temporary text file"
 1 file changed, 1 deletion(-)
 delete mode 100644 temp.txt

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git push origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (2/2), 265 bytes | 265.00 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 github.com:SanaTariq205/lab3.git
 a7e3468..c1027ff  main -> main
```

TASK#09:

```
Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (main)
$ git checkout -b test-force
Switched to a new branch 'test-force'

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (test-force)
$ echo "Force push testing line" >> README.md

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (test-force)
$ git add README.md
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (test-force)
$ git commit -m "Add test line for force push"
[test-force be8ee4e] Add test line for force push
1 file changed, 1 insertion(+)
```

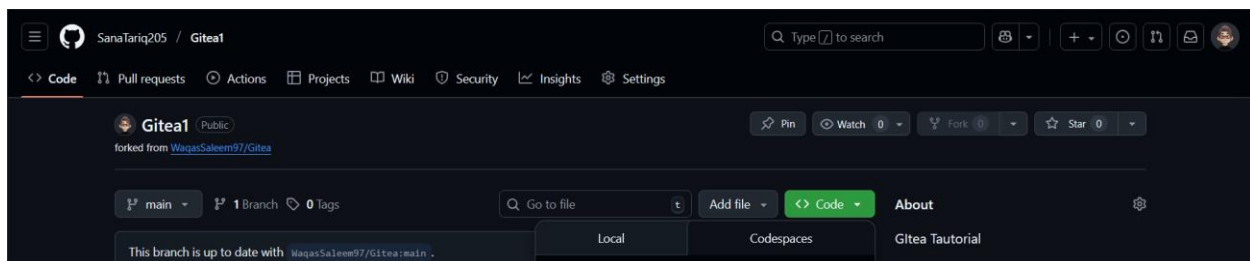
```
Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (test-force)
$ git push origin test-force
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 351 bytes | 117.00 KiB/s, done.
Total 3 (delta 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/SanaTariq205/lab3/pull/new/test-force
remote:
To github.com:SanaTariq205/lab3.git
 * [new branch]      test-force -> test-force

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (test-force)
$ git reset --hard HEAD~1
HEAD is now at c1027ff Revert "Added temporary text file"
```

```
Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (test-force)
$ git push origin test-force
To github.com:SanaTariq205/lab3.git
 ! [rejected]        test-force -> test-force (non-fast-forward)
error: failed to push some refs to 'github.com:SanaTariq205/lab3.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.

Sana@DESKTOP-00ECUUI MINGW64 ~/lab3 (test-force)
$ git push origin test-force --force
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To github.com:SanaTariq205/lab3.git
 + be8ee4e...c1027ff test-force -> test-force (forced update)
```

TASK#10:





Setting up your codespace

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
@SanaTariq205 → /workspaces/Gitea1 (main) $ ls
compose.yaml
@SanaTariq205 → /workspaces/Gitea1 (main) $ docker compose up -d
[+] Running 17/19
  db [=====] 108.9MB / 111.5MB Pulling 15.4s
    ✓ 2d35ebdb57d9 Pull complete 3.8s
    ✓ 46db23e05a56 Pull complete 4.0s
    ✓ 833fdfa073fc Pull complete 4.4s
    ✓ 7c4d4fb41140 Pull complete 5.4s
    .. 0a2085b16e4b Extracting [=====] ... 10.8s
    ✓ 6d26df99ae56 Download complete 4.7s
    ✓ 467ef20d83f9 Download complete 5.4s
    ✓ fb36e12c7408 Download complete 5.6s
    ✓ b3171638045e Download complete 6.0s
    ✓ d2409d732065 Download complete 6.4s
  ✓ gitea Pulled 14.1s
    ✓ 9824c27679d3 Pull complete 1.3s
    ✓ 307c463a9e8e Pull complete 3.1s
    ✓ 89986d54bad9 Pull complete 3.7s
    ✓ e7ea2b7110b2 Pull complete 3.8s
    ✓ dc71ac9fe925 Pull complete 8.2s
    ✓ a4ebd224fde1 Pull complete 9.1s
    ✓ 3b7dba00267e Pull complete 9.6s
```

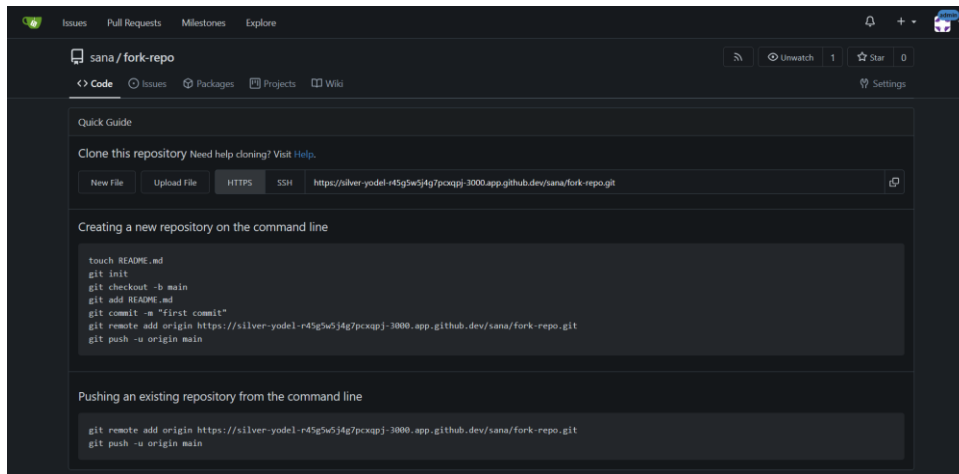
Optional Settings

- ▶ Email Settings
- ▶ Server and Third-Party Service Settings
- ▶ Administrator Account Settings

These configuration options will be written into: `/data/gitea/conf/app.ini`

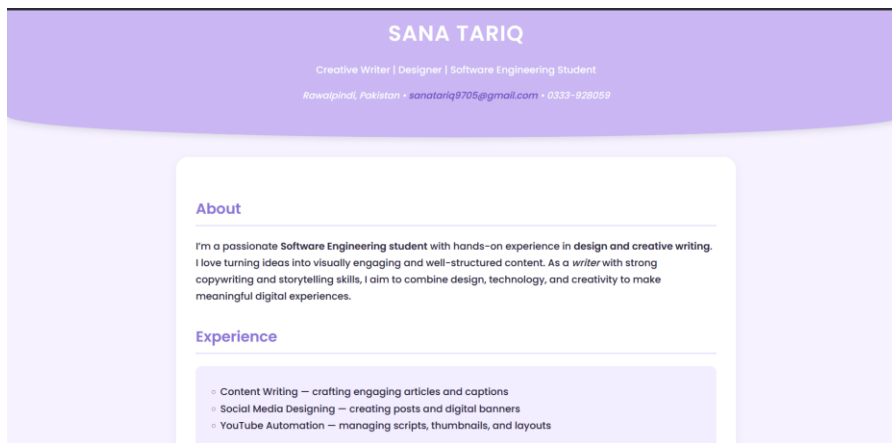
Install Gitea

```
@SanaTariq205 → /workspaces/Gitea1 (main) $ docker exec -it gitea /bin/bash
b9782b2358b1:/# su git
b9782b2358b1:/# /app/gitea/gitea admin user create --username sana --password sukuna --email sanatariq9705@gmail
1.com --admin
New user 'sana' has been successfully created!
b9782b2358b1:/# exit
exit
b9782b2358b1:/#
```



TASK#11:

<https://sanatariq205.github.io/>



1. Local vs Remote Conflict Resolution

Steps:

On GitHub, edit a file (e.g., README.md) and commit the change.

Screenshot as Q1_remote_edit.png

On your local machine, edit the same file differently (Avoid Conflict) and commit.

Screenshot as Q1_local_edit.png

Try to push your local commit and observe the error.

Screenshot as Q1_push_error.png

Resolve the conflict by running git pull (merge), then push.

Screenshot as Q1_merge_resolution.png

Repeat with another remote/local change, but resolve using git pull --rebase, then push.

Screenshot as Q1_rebase_resolution.png

```
Sana@DESKTOP-00ECUUI MINGW64 ~
$ git clone git@github.com:SanaTariq205/testingrepo.git
Cloning into 'testingrepo'...
warning: You appear to have cloned an empty repository.

Sana@DESKTOP-00ECUUI MINGW64 ~
$ cd testingrepo

Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (main)
$ git checkout -b git-exercises
Switched to a new branch 'git-exercises'
```


```
Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ echo "First commit on git-exercises" > test.txt


Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ git add test.txt
warning: in the working copy of 'test.txt', LF will be replaced by CRLF the next time Git touches it


Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ git commit -m "Initial commit on git-exercises"
[git-exercises (root-commit) 46ee541] Initial commit on git-exercises
1 file changed, 1 insertion(+)
create mode 100644 test.txt

Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ git push -u origin git-exercises
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 263 bytes | 131.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To github.com:SanaTariq205/testingrepo.git
 * [new branch]      git-exercises -> git-exercises
branch 'git-exercises' set up to track 'origin/git-exercises'.

Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ git add test.txt
```

 git-exercises ▾ testingrepo /

 **SanaTariq205** Q1 remote edit

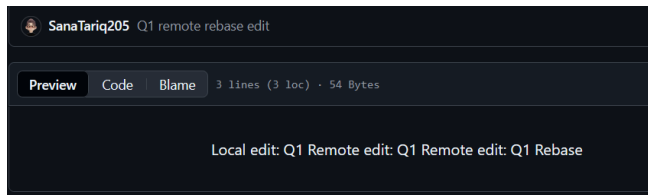
Name	Last commit message
 README.md	Q1 remote edit

```
Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ nano README.md

Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ git add README.md
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it

Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ git commit -m "Q1 local edit"
[git-exercises ce36d3f] Q1 local edit
1 file changed, 1 insertion(+)
create mode 100644 README.md
```

```
Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ git push
To github.com:SanaTariq205/testingrepo.git
! [rejected]        git-exercises -> git-exercises (fetch first)
error: failed to push some refs to 'github.com:SanaTariq205/testingrepo.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.
```



```
Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises|REBASE 1/1)
$ git rebase --continue
[detached HEAD c3de340] Q1 local rebase edit
1 file changed, 1 insertion(+)
Successfully rebased and updated refs/heads/git-exercises.

Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ git push
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), 332 bytes | 332.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To github.com:SanaTariq205/testingrepo.git
f4dcc63..c3de340 git-exercises -> git-exercises
```

2. Manual Merge Conflict Handling

Steps:

On GitHub, change a specific line in a file and commit.

Screenshot as Q2_remote_conflict_edit.png

Locally, change the same line differently and commit.

Screenshot as Q2_local_conflict_edit.png

Try to push your local change and observe the conflict error.

Screenshot as Q2_conflict_push_error.png

Use git pull --rebase to fetch changes and trigger the conflict.

Screenshot as Q2_rebase_conflict.png

Edit the conflicted file to resolve the conflict manually.

Screenshot as Q2_resolved_file.png

Mark the conflict resolved (git add <file>, git rebase --continue) and push.

Screenshot as Q2_resolution_complete.png

```
Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises|MERGING)
$ nano README.md

Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises|MERGING)
$ git add README.md

Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises|MERGING)
$ git commit -m "Resolved merge conflict between main and git-exercises"
[git-exercises f4e0ae5] Resolved merge conflict between main and git-exercises

Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ git push
Enumerating objects: 11, done.
Counting objects: 100% (11/11), done.
Delta compression using up to 8 threads
Compressing objects: 100% (8/8), done.
Writing objects: 100% (9/9), 1.00 KiB | 513.00 KiB/s, done.
Total 9 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), done.
To github.com:SanaTariq205/testingrepo.git
 c3de340..f4e0ae5  git-exercises -> git-exercises
```

3. Managing Ignored and Tracked Files

Steps:

Create a new folder (e.g., DocFiles) and add several files inside.

Screenshot as Q3_folder_created.png

Commit and push the folder/files to GitHub.

Screenshot as Q3_files_pushed.png

Add the folder to your .gitignore file.

Screenshot as Q3_gitignore_added.png

Commit and push the .gitignore update.

Screenshot as Q3_gitignore_pushed.png

Remove the folder from tracking using `git rm -r --cached <folder>`.

Screenshot as Q3_folder_untracked.png

Commit and push the change, then verify the folder is no longer tracked on GitHub.

Screenshot as Q3_folder_removed_github.png


```

Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ nano README.md

Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ git stash
Saved working directory and index state WIP on git-exercises: f4e0ae5 Resolved merge conflict bet
ises

Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ git stash list
stash@{0}: WIP on git-exercises: f4e0ae5 Resolved merge conflict between main and git-exercises

Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ git stash pop
On branch git-exercises
Your branch is up to date with 'origin/git-exercises'.

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} (aa236270858f52743959df764345117792df3f3e)

```

```

Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ git add README.md

Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ git commit -m "Stashed and restored changes"
[git-exercises fdf060e] Stashed and restored changes
1 file changed, 1 insertion(+)

Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ git push
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), 367 bytes | 367.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To github.com:SanaTariq205/testingrepo.git
f4e0ae5..fdf060e git-exercises: git-exercises

```

4. Commit History Manipulation and Recovery

Steps:

Make a change and commit it.

Screenshot as Q4_first_commit.png

Make another change and commit again.

Screenshot as Q4_second_commit.png

View your commit history.

Screenshot as Q4_commit_history.png

Perform a soft reset (git reset --soft HEAD~1) and observe your file and history.

Screenshot as Q4_soft_reset.png

Make commit again.

Screenshot as Q4_third_commit.png

Perform a hard reset (git reset --hard HEAD~1) and observe the changes.

Screenshot as Q4_hard_reset.png

```
Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ git log --oneline
de85f01 (HEAD -> git-exercises, origin/git-exercises, origin/HEAD) Q4: second commit
7ee8ba3 Q4: first commit
fdf060e Stashed and restored changes
f4e0ae5 Resolved merge conflict between main and git-exercises
a698320 Conflicting change on git-exercises
6e2aa80 (main) Local conflicting change on main
c3de340 Q1 local rebase edit
f4dcc63 Q1 remote rebase edit
9a09d8e Q1 merge conflict resolved
ce36d3f Q1 local edit
0358bb3 Q1 remote edit
46ee541 Initial commit on git-exercises
```

```
Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ git reset --soft HEAD~1

Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ git log --oneline
7ee8ba3 (HEAD -> git-exercises) Q4: first commit
fdf060e Stashed and restored changes
f4e0ae5 Resolved merge conflict between main and git-exercises
a698320 Conflicting change on git-exercises
6e2aa80 (main) Local conflicting change on main
c3de340 Q1 local rebase edit
f4dcc63 Q1 remote rebase edit
9a09d8e Q1 merge conflict resolved
ce36d3f Q1 local edit
0358bb3 Q1 remote edit
46ee541 Initial commit on git-exercises
```

```
Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ git reset --hard HEAD~1
HEAD is now at 7ee8ba3 Q4: first commit

Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ git log --oneline
7ee8ba3 (HEAD -> git-exercises) Q4: first commit
fdf060e Stashed and restored changes
f4e0ae5 Resolved merge conflict between main and git-exercises
a698320 Conflicting change on git-exercises
6e2aa80 (main) Local conflicting change on main
c3de340 Q1 local rebase edit
f4dcc63 Q1 remote rebase edit
9a09d8e Q1 merge conflict resolved
ce36d3f Q1 local edit
0358bb3 Q1 remote edit
46ee541 Initial commit on git-exercises
```

```
Sana@DESKTOP-00ECUUI MINGW64 ~/testingrepo (git-exercises)
$ git push --force
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To github.com:SanaTariq205/testingrepo.git
+ 849efa5...7ee8ba3 git-exercises -> git-exercises (forced update)
```