



Cloud Computing Lab

Lab #3

Submitted to:

Engr. Muhammad Shoaib

Submitted by:

Hania Akbar

Reg no:

2023-BSE-026

Section:

A

Task 1 – Handling Local and Remote Commit Conflicts (Pull vs Pull --rebase)

1

General

Owner *

HaniaAkbar

Repository name *

CC_Lab3

✓ CC_Lab3 is available.

Great repository names are short and memorable. How about **turbo-spoon**?

Description

0 / 350 characters

2

Configuration

Choose visibility *

Choose who can see and commit to this repository

Public

Add README

READMEs can be used as longer descriptions. [About READMEs](#)

Off

Add .gitignore

.gitignore tells git which files not to track. [About ignoring files](#)

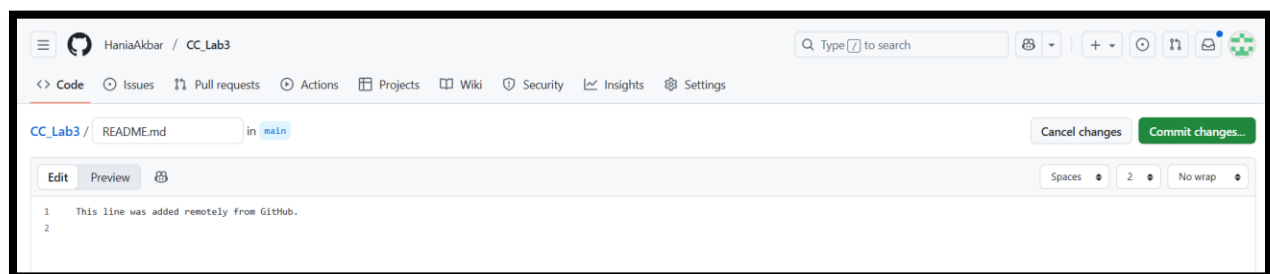
No .gitignore

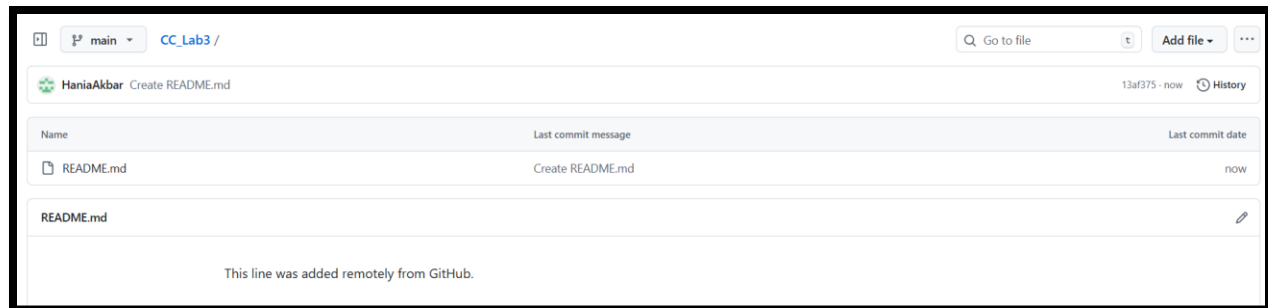
Add license

Licenses explain how others can use your code. [About licenses](#)

No license

Create repository





```
DELL@DESKTOP-KR71OCM MINGW64 ~ (master)
$ git clone https://github.com/HaniaAkbar/CC_Lab3
Cloning into 'CC_Lab3'...
warning: You appear to have cloned an empty repository.
```

```
DELL@DESKTOP-KR71OCM MINGW64 ~ (master)
$ |
```

```
DELL@DESKTOP-KR71OCM MINGW64 ~ (master)
$ git add README.md
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it

DELL@DESKTOP-KR71OCM MINGW64 ~ (master)
$ git commit -m "This line was added locally."
[master 2d92a3e] This line was added locally.
1 file changed, 1 insertion(+), 1 deletion(-)

DELL@DESKTOP-KR71OCM MINGW64 ~ (master)
```

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ echo "This line was added locally" > README.md

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/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

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git commit -m "Local update to README"
[main (root-commit) a67e36e] Local update to README
1 file changed, 1 insertion(+)
create mode 100644 README.md

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git log --oneline -n3
a67e36e (HEAD -> main) Local update to README
```

```

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git pull --no-rebase origin main
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), 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), 965 bytes | 23.00 KiB/s, done.
From github.com:Hafsa-Khalid021/Lab3
* branch      main      -> FETCH_HEAD
* [new branch] main      -> origin/main
fatal: refusing to merge unrelated histories

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git push -u origin main
To github.com:Hafsa-Khalid021/Lab3.git
! [rejected]        main -> main (non-fast-forward)
error: failed to push some refs to 'github.com:Hafsa-Khalid021/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.

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git pull origin main --allow-unrelated-histories
From github.com:Hafsa-Khalid021/Lab3
* branch      main      -> FETCH_HEAD
Auto-merging README.md
CONFLICT (add/add): Merge conflict in README.md
Automatic merge failed; fix conflicts and then commit the result.

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main|MERGING)
$ git push -u origin main
To github.com:Hafsa-Khalid021/Lab3.git
! [rejected]        main -> main (non-fast-forward)
error: failed to push some refs to 'github.com:Hafsa-Khalid021/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.

```

```

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main|MERGING)
$ git status
On branch main
Your branch and 'origin/main' have diverged,
and have 1 and 1 different commits each, respectively.
  (use "git pull" if you want to integrate the remote branch with yours)

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 added:      README.md

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

```

```

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main|MERGING)
$ notepad README.md

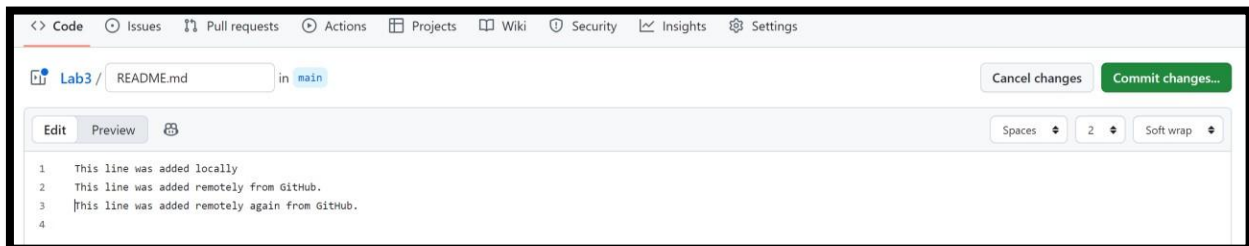
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main|MERGING)
$ cat README.md
This line was added locally
This line was added remotely from GitHub.

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main|MERGING)
$ git add README.md

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main|MERGING)
$ git commit -m "Resolved merge conflict in README.md"
[main 3a85bef] Resolved merge conflict in README.md

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git push -u origin main
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (6/6), 594 bytes | 54.00 KiB/s, done.
Total 6 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To github.com:Hafsa-Khalid021/Lab3.git
   d854637..3a85bef  main -> main
branch 'main' set up to track 'origin/main'.

```



Commit changes

Commit message

Second Remote update to README.md

Extended description

Add an optional extended description...

☒ Commit directly to the main branch

☐ Create a new branch for this commit and start a pull request [Learn more about pull requests](#)

Cancel

Commit changes



```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ echo "This second line was added locally" > README.md

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/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

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git commit -m "Local second update to README"
[main 177c0c6] Local second update to README
1 file changed, 1 insertion(+), 3 deletions(-)


HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/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), 972 bytes | 30.00 KiB/s, done.
From github.com:Hafsa-Khalid021/Lab3
 * branch          main      -> FETCH_HEAD
   3a85bef..54d57f1 main      -> origin/main
Auto-merging README.md
CONFLICT (content): Merge conflict in README.md
error: could not apply 177c0c6... Local second update to README
hint: Resolve all conflicts manually, mark them as resolved with
      'git commit --amend --no-edit', or to push without solving
      conflicts with 'git push --force'
Local second update to README
```

```
[detached HEAD 4fecdfc] Local second update to README
1 file changed, 3 insertions(+)
Successfully rebased and updated refs/heads/main.

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git push -u origin main --force
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), 343 bytes | 68.00 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:Hafsa-Khalid021/Lab3.git
   54d57f1..4fecdfc main -> main
branch 'main' set up to track 'origin/main'.
```



```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git log --oneline --graph --decorate -n 10
* 4fecdfc (HEAD -> main, origin/main) Local second update to README
* 54d57f1 Second Remote update to README.md
* 3a85bef Resolved merge conflict in README.md
| \
|  * d854637 Remote update to README.md
|  * a67e36e Local update to README
```

Task 2 – Creating and Resolving Merge Conflicts Manually

 README.md

Local second update to README

3 hours ago

 README 

This line was added locally This line was added remotely from GitHub. This line was added remotely again from GitHub. This second line was added locally


Lab3 / README.md in main



Cancel changes Commit changes...

Edit Preview 

Spaces 2 Soft wrap

```
1
2 This line was added locally
3 This line was added remotely from GitHub.
4 This second line was added locally
5 This line was updated remotely again.
```

Preview Code Blame 8 lines (4 loc) · 147 Bytes 

Raw   

This line was added locally This line was added remotely from GitHub. This second line was added locally This line was updated remotely again.

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git branch
* main

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ echo "This line was updated locallaly at the same time" > README.md

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/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

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git commit -m "Local conflicting change"
[main 0721c68] Local conflicting change
1 file changed, 1 insertion(+), 6 deletions(-)

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git push -u origin main
To github.com:Hafsa-Khalid021/Lab3.git
 ! [rejected]        main -> main (fetch first)
error: failed to push some refs to 'github.com:Hafsa-Khalid021/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.
```



```

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/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 1), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 963 bytes | 60.00 KiB/s, done.
From github.com:Hafsa-Khalid021/Lab3
* branch          main          -> FETCH_HEAD
  4fecdfc..cd17f84 main          -> origin/main
Auto-merging README.md
CONFLICT (content): Merge conflict in README.md
error: could not apply 0721c68... Local conflicting 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 0721c68... # Local conflicting change

```

```

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main|REBASE 1/1)
$ notepad README.md

```

Local conflicting change

```

# Conflicts:
#     README.md

# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
#
# interactive rebase in progress; onto cd17f84
# Last command done (1 command done):
#   pick 0721c68 # Local conflicting change
# No commands remaining.
# You are currently rebasing branch 'main' on 'cd17f84'.
#
# Changes to be committed:
#   modified:   README.md
#
~
~
~
~
~
~
~
~
~
~

```

```

.git/COMMIT_EDITMSG [unix] (15:25 12/10/2025)
~/Desktop/Lab3/.git/COMMIT_EDITMSG" [unix] 17L, 456B

```



```
[detached HEAD 9cf4c42] Local conflicting change
1 file changed, 2 insertions(+), 3 deletions(-)
successfully rebased and updated refs/heads/main.
```

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (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), 336 bytes | 336.00 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:Hafsa-Khalid021/Lab3.git
   cd17f84..9cf4c42  main -> main
branch 'main' set up to track 'origin/main'.
```

Task 3 – Managing Ignored Files with .gitignore and Removing Tracked Files

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ mkdir textfiles

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ echo "File A content" > textfiles/a.txt

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ echo "File B content" > textfiles/b.txt

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ echo "File C content" > textfiles/c.txt

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git add .
warning: in the working copy of 'textfiles/a.txt', LF will be replaced by CRLF the next time Git touches i
t
warning: in the working copy of 'textfiles/b.txt', LF will be replaced by CRLF the next time Git touches i
t
warning: in the working copy of 'textfiles/c.txt', LF will be replaced by CRLF the next time Git touches i
t

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git commit -m "Added textfiles directory with three files"
[main 99f3677] 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

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git push origin main
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (6/6), 473 bytes | 157.00 KiB/s, done.
Total 6 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To github.com:Hafsa-Khalid021/Lab3.git
   9cf4c42..99f3677  main -> main
```

```




HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ echo "textfiles/*" > .gitignore

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git add .gitignore
warning: in the working copy of '.gitignore', LF will be replaced by CRLF the next time Git touches it

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git commit -m "Added .gitignore to ignore textfiles directory"
[main 2cf1d3d] Added .gitignore to ignore textfiles directory
1 file changed, 1 insertion(+)
create mode 100644 .gitignore

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (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), 360 bytes | 180.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To github.com:Hafsa-Khalid021/Lab3.git
99f3677..2cf1d3d main -> main

```

 textfiles	Added textfiles directory with three files	4 minutes ago
 .gitignore	Added .gitignore to ignore textfiles directory	1 minute ago
 README.md	Local conflicting change	24 minutes ago

```

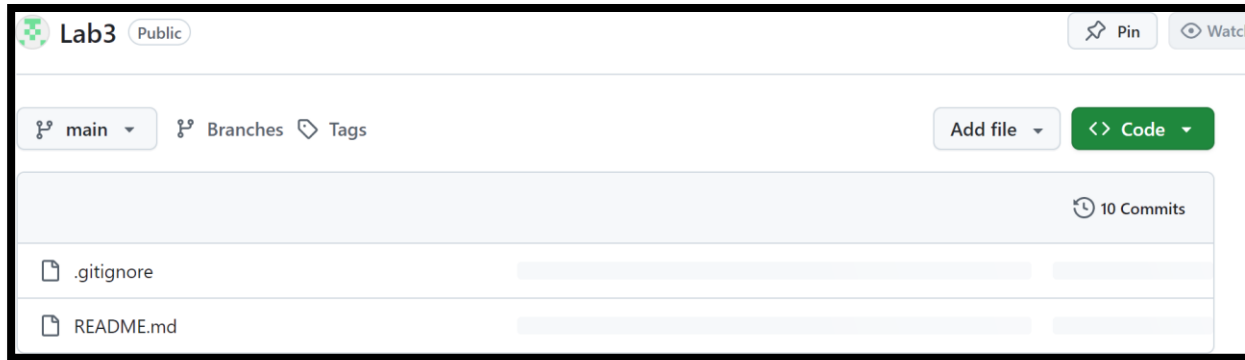
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git rm -r --cached textfiles
rm 'textfiles/a.txt'
rm 'textfiles/b.txt'
rm 'textfiles/c.txt'

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git add .

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git commit -m "Removed tracked textfiles directory"
[main c88177e] 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

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (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), 251 bytes | 251.00 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:Hafsa-Khalid021/Lab3.git
2cf1d3d..c88177e main -> main

```



Task 4 – Create Temporary Changes and Use git stash

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git checkout -b feature-branch
Switched to a new branch 'feature-branch'

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (feature-branch)
$ echo "This is a test line for stash demo" > README.md

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (feature-branch)
$ git add README.md
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (feature-branch)
$ git commit -m "Changes thes README.md file"
[feature-branch 22ec766] Changes thes README.md file
1 file changed, 1 insertion(+), 7 deletions(-)

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (feature-branch)
$ echo "Adding more temporary lines that will be stashed" > README.md

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/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
```

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (feature-branch)
$ git stash
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it
Saved working directory and index state WIP on feature-branch: 22ec766 Changes thes README.md file
```

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (feature-branch)
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
```

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git checkout feature-branch
Switched to branch 'feature-branch'
```

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/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} (479cda369ff2251ebbccc97f5f6685b0aeca2a7)
```

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (feature-branch)
$ git status
On branch feature-branch
nothing to commit, working tree clean
```

Task 5 – Checkout a Specific Commit Using git log

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (feature-branch)
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git log --oneline
c88177e (HEAD -> main, origin/main) Removed tracked textfiles directory
2cf1d3d Added .gitignore to ignore textfiles directory
99f3677 Added textfiles directory with three files
9cf4c42 Local conflicting change
cd17f84 Remote conflicting change
4fecdfc Local second update to README
54d57f1 Second Remote update to README.md
3a85bef Resolved merge conflict in README.md
a67e36e Local update to README
d854637 Remote update to README.md
```

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git checkout 3a85bef
Note: switching to '3a85bef'.
```

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 3a85bef Resolved merge conflict in README.md

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 ((3a85bef...))
$ git checkout main
Previous HEAD position was 3a85bef Resolved merge conflict in README.md
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
```

Task 6 – Resetting Commits (Soft vs Hard Reset) (With Verification Steps)

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git checkout main
M      README.md
Already on 'main'
Your branch is up to date with 'origin/main'.

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ echo "This is the first test line for reset" > README.md

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git add .
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git commit -m "Added test line"
[main c7e0708] Added test line
1 file changed, 1 insertion(+), 7 deletions(-)
```

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ echo "This is the second test line for reset" > README.md

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git add .
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git commit -m "Second test commit"
[main c7ea962] Second test commit
1 file changed, 1 insertion(+), 1 deletion(-)
```

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git log --oneline
c7ea962 (HEAD -> main) Second test commit
c7e0708 Added test line
```

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ cat README.md
This is the first test line for reset
This is the second test line for reset
```

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git reset --soft HEAD~1
```



```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git log --oneline
c7e0708 (HEAD -> main) Added test line
```

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ cat README.md
This is the first test line for reset
This is the second test line for reset
```

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git commit -m "Second test commit"
[main 0f6554b] second test commit
1 file changed, 1 insertion(+), 1 deletion(-)
```

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git log --oneline
c7e0708 (HEAD -> main) Added test line
c88177e (origin/main) Removed tracked textfiles directory
2cf1d3d Added .gitignore to ignore textfiles directory
99f3677 Added textfiles directory with three files
9cf4c42 Local conflicting change
cd17f84 Remote conflicting change
4fecdfc Local second update to README
54d57f1 Second Remote update to README.md
3a85bef Resolved merge conflict in README.md
a67e36e Local update to README
d854637 Remote update to README.md
```

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ cat README.md
This is the first test line for reset
```

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/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
```

Task 7 – Amending the Last Commit


```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git log --oneline
b9f7af9 (HEAD -> main) Fix log message
```




Task 8 – Reverting a Commit (Safe Undo on Remote Branch)

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ echo "temporary text" >> temp.txt

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git add .
warning: in the working copy of 'temp.txt', LF will be replaced by CRLF the next time Git touches it

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git commit -m "Added temporary text file"
[main f76a28b] Added temporary text file
1 file changed, 1 insertion(+)
create mode 100644 temp.txt

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git push origin main
Enumerating objects: 14, done.
Counting objects: 100% (14/14), done.
Delta compression using up to 4 threads
Compressing objects: 100% (8/8), done.
Writing objects: 100% (12/12), 1.15 KiB | 98.00 KiB/s, done.
Total 12 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), done.
To github.com:Hafsa-Khalid021/Lab3.git
c88177e..f76a28b main -> main
```

 .gitignore	Added .gitignore to ignore textfiles directory	1 hour ago
 README.md	Fix log message	6 minutes ago
 temp.txt	Added temporary text file	3 minutes ago

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git log --oneline
f76a28b (HEAD -> main, origin/main) Added temporary text file
43d8e2d Fix log message
d9366a8 Fix log message
c7e0708 Added test line
c88177e Removed tracked textfiles directory
2cf1d3d Added .gitignore to ignore textfiles directory
99f3677 Added textfiles directory with three files
9cf4c42 Local conflicting change
cd17f84 Remote conflicting change
4fecdfc Local second update to README
54d57f1 Second Remote update to README.md
3a85bef Resolved merge conflict in README.md
a67e36e Local update to README
d854637 Remote update to README.md

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git revert f76a28b
```



```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (main)
$ git checkout -b test-force
switched to a new branch 'test-force'
```

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (test-force)
$ echo "This line is for force push demo" > README.md

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (test-force)
$ git add .
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it

HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (test-force)
$ git commit -m "Added a line for force push test"
[test-force 999b32a] Added a line for force push test
1 file changed, 1 insertion(+), 1 deletion(-)
```

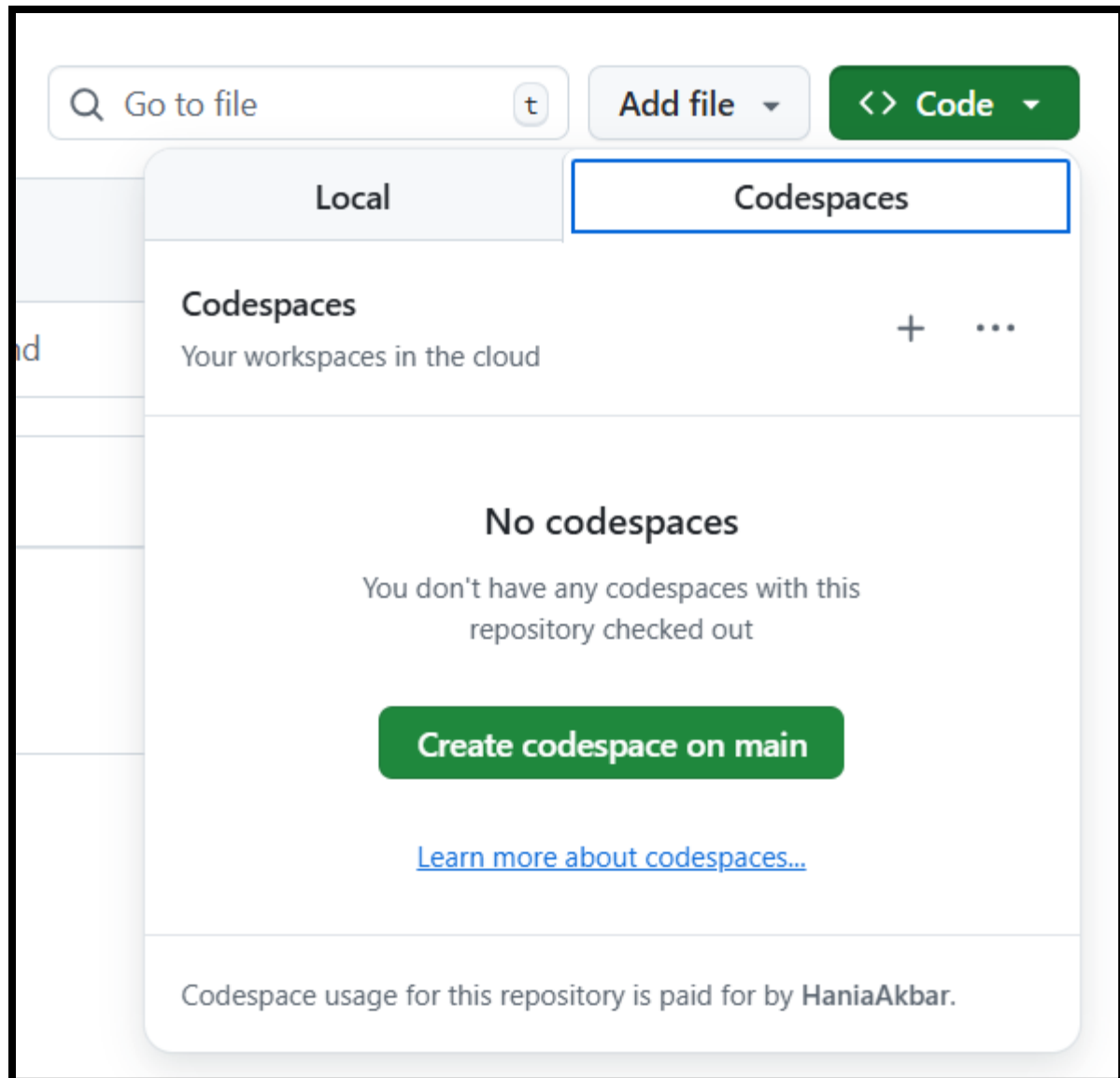
```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (test-force)
$ git push origin test-force
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 335 bytes | 335.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'test-force' on GitHub by visiting:
remote:   https://github.com/Hafsa-Khalid021/Lab3/pull/new/test-force
remote:
To github.com:Hafsa-Khalid021/Lab3.git
 * [new branch]      test-force -> test-force
```

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (test-force)
$ git reset --hard HEAD~1
HEAD is now at 628b37b Revert "Added temporary text file"

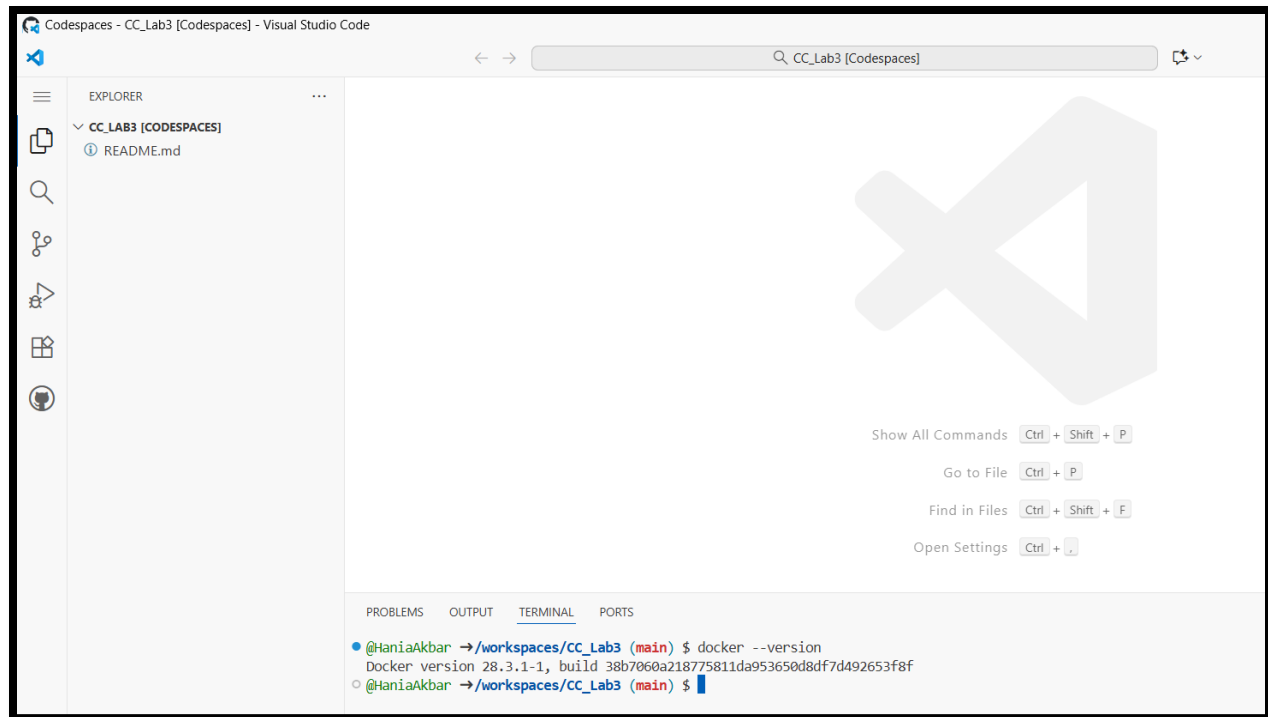
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/Lab3 (test-force)
$ git push origin test-force
To github.com:Hafsa-Khalid021/Lab3.git
 ! [rejected]        test-force -> test-force (non-fast-forward)
error: failed to push some refs to 'github.com:Hafsa-Khalid021/Lab3.git'
hint: Updates were rejected because the 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.
```

```
HP@DESKTOP-UGL3JHC MINGW64 ~/Desktop/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:Hafsa-Khalid021/Lab3.git
 + 999b32a...628b37b test-force -> test-force (forced update)
```

Task 10 – Running Gitea in GitHub Codespaces via Docker Compose



PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS 1				
Port	Forwarded Address	Running Process	Visibility	Origin
3000	https://special-guacamole-...	/usr/bin/docker-proxy -proto tcp -host-ip 0.0.0.0 -host-p...	Public	User Forwarded
Add Port				



```
@HaniaAkbar -> /workspaces/CC_Lab3 (main) $ mkdir gitea && cd gitea
@HaniaAkbar -> /workspaces/CC_Lab3/gitea (main) $ docker run -d --name=gitea -p 3000:3000 gitea/gitea:latest
Unable to find image 'gitea/gitea:latest' locally
latest: Pulling from gitea/gitea
9824c27679d3: Pull complete
307c463a9ebe: Pull complete
89986d54bad9: Pull complete
e7ea2b7110b2: Pull complete
dc71ac9fe925: Pull complete
a4ebd224fde1: Pull complete
3b7dba00267e: Pull complete
Digest: sha256:2edc102cbb636ae1ddac5fa0c715aa5b03079dee13ac6800b2cef6d4e912e718
Status: Downloaded newer image for gitea/gitea:latest
82ff05b7eef0f7b977855d33abff94f753dd83bb3156775d62b54dd88efe27c4
@HaniaAkbar -> /workspaces/CC_Lab3/gitea (main) $
```

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 *	<input type="text" value="PostgreSQL"/>
Host *	<input type="text" value="db:5432"/>
Username *	<input type="text" value="gitea"/>
Password *	<input type="password" value="...."/>
Database Name *	<input type="text" value="gitea"/>
SSL *	<input type="text" value="Disable"/>
Schema	<input type="text"/>

Leave blank for database default ("public").

General Settings

Site Title *	<input type="text" value="My Gitea server"/>
--------------	--

You can enter your company name here.

General Settings

Site Title *

My Gitea server

You can enter your company name here.

Repository Root Path *

/data/git/repositories

Remote Git repositories will be saved to this directory.

Git LFS Root Path

/data/git/lfs

Files tracked by Git LFS will be stored in this directory. Leave empty to disable.

Run As Username *

git

The operating system username that Gitea runs as. Note that this user must have access to the repository root path.

Server Domain *

special-quacamole-ijp576gg4wrp2pvpp-3000.app.github.dev

Domain or host address for the server.

SSH Server Port

22

Port number your SSH server listens on. Leave empty to disable.

Gitea HTTP Listen Port *

3000

Port number the Giteas web server will listen on.

Gitea Base URL *

https://special-quacamole-ijp576gg4wrp2pvpp-3000.app.github.dev/

Base address for HTTP(S) clone URLs and email notifications.

Log Path *

/data/gitea/log

Log files will be written to this directory.

☐ Enable Update Checker

Checks for new version releases periodically by connecting to gitea.io.

Optional Settings

► Email Settings

► Server and Third-Party Service Settings

▼ Administrator Account Settings

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

Administrator Username

Hania

Email Address


23-22411-026@se.fjwu.edu.pk

Password

.....

Confirm Password

.....|

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


Install Gitea

[Issues](#) [Pull Requests](#) [Milestones](#) [Explore](#)

New Repository

A repository contains all project files, including revision history. Already hosting one elsewhere? [Migrate repository.](#)

Owner *

 Hania

Some organizations may not show up in the dropdown due to a maximum repository count limit.

Repository Name *

CC_Lab3

Good repository names use short, memorable and unique keywords. A repository named ".profile" or ".profile-private" could be used to add a README.md for the user/organization profile.

Visibility

☐ Make repository private

Only the owner or the organization members if they have rights, will be able to see it.

Description

Enter short description (optional)

Template

Select a template.


Issue Labels

Select an issue label set.

.gitignore

Select .gitignore templates.


Choose which files not to track from a list of templates for

 **Hania / CC_Lab3**

[Code](#) [Issues](#) [Packages](#) [Projects](#) [Wiki](#)


CC_Lab3 /

README.md

 or [Cancel](#)

[New File](#) [Preview](#)

```
1  this file was added remotely|
```



Commit Changes

file added

Add an optional extended description...

☐ Add a Signed-off-by trailer by the committer at the end of the commit log message.
☒ Commit directly to the `main` branch.

Commit Changes

Cancel

Hania / CC_Lab3


[Code](#) [Issues](#) [Pull Requests](#) [Actions](#) [Packages](#) [Projects](#) [Releases](#) [Wiki](#) [Activity](#)

Files

main

CC_Lab3 / README.md

README.md

 Hania `024dbb6af6` file added

29 B

this file was added remotely

User Settings

Profile

Account

Appearance

Security

Blocked users

Applications

SSH / GPG Keys

Actions >

Packages

Webhooks

Organizations

Repositories

Manage Access Tokens

These tokens grant access to your account using the Gitea API.

▼ Generate New Token

Token Name

PAT

Repository and Organization Access

☐ Public only

☒ All (public, private, and limited)

Selected token permissions limit authorization only to the corresponding [API routes](#). Read the [documentation](#) for more information.

activitypub	<input checked="" type="radio"/> No Access	<input type="radio"/> Read	<input type="radio"/> Read and Write
admin	<input type="radio"/> No Access	<input type="radio"/> Read	<input checked="" type="radio"/> Read and Write
issue	<input checked="" type="radio"/> No Access	<input type="radio"/> Read	<input type="radio"/> Read and Write
misc	<input checked="" type="radio"/> No Access	<input type="radio"/> Read	<input type="radio"/> Read and Write
notification	<input checked="" type="radio"/> No Access	<input type="radio"/> Read	<input type="radio"/> Read and Write
organization	<input checked="" type="radio"/> No Access	<input type="radio"/> Read	<input type="radio"/> Read and Write
package	<input checked="" type="radio"/> No Access	<input type="radio"/> Read	<input type="radio"/> Read and Write
repository	<input type="radio"/> No Access	<input type="radio"/> Read	<input checked="" type="radio"/> Read and Write
user	<input checked="" type="radio"/> No Access	<input type="radio"/> Read	<input type="radio"/> Read and Write

Generate Token

Hania / CC_Lab3

<> Code

Issues

Pull Requests

Actions

Packages

Projects

Releases

Wiki

Activity

2 Commits

1 Branch

0 Tags

main

Go to file

Add File

<> Code

HaniaAkbar

fe6275f7aa

Hania Akbar -026

38 minutes ago

README.md

Hania Akbar -026



38 minutes ago

README.md

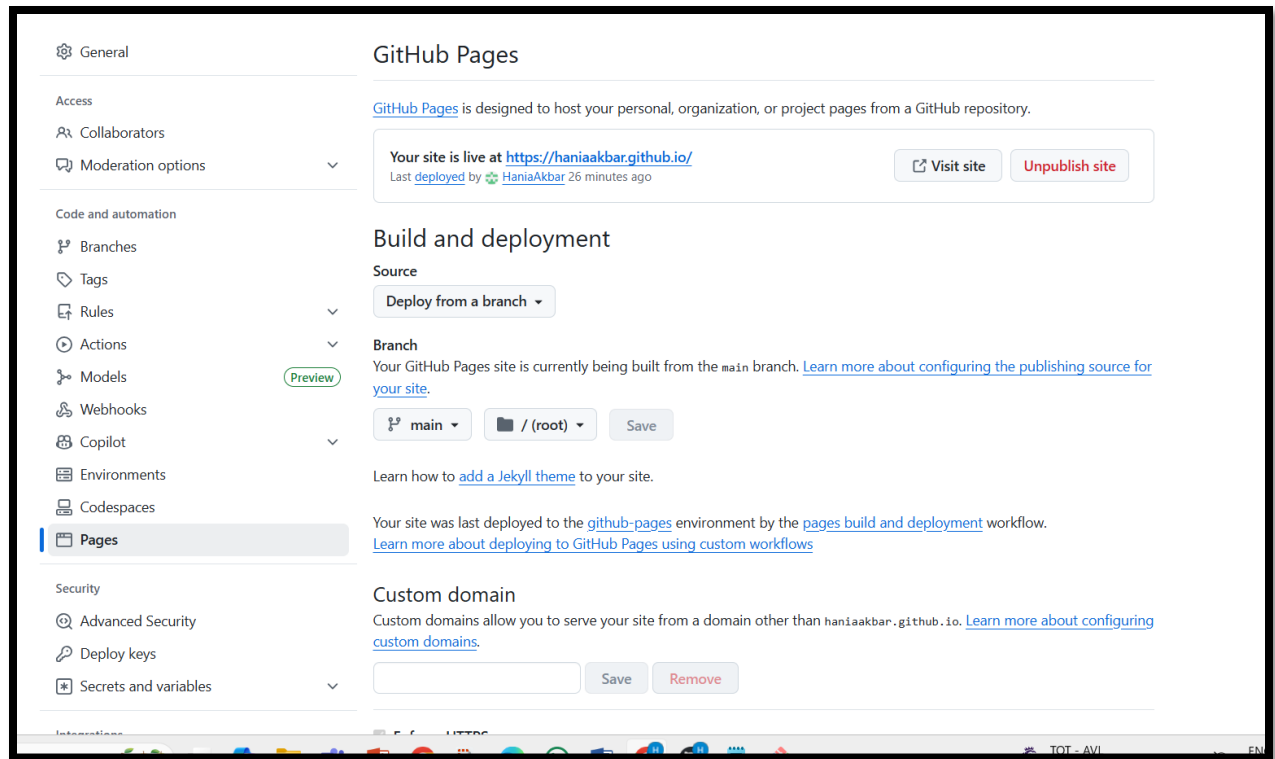
Hania Akbar -026

Task 11 – Creating a GitHub Pages Portfolio Site

> This PC > Desktop > Portfolio >

Name	Date modified	Type	Size
 index.html	10/14/2025 9:21 AM	File folder	
 style.css	10/14/2025 9:21 AM	Cascading Style Shee...	2 KB

```
PS C:\Users\HP\Desktop\Portfolio> git init
Initialized empty Git repository in C:/Users/HP/Desktop/Portfolio/.git/
PS C:\Users\HP\Desktop\Portfolio> git remote add origin https://github.com/Hafsa-Khalid021/Hafsa-Khalid021.github.io.git>>
PS C:\Users\HP\Desktop\Portfolio> git add .
PS C:\Users\HP\Desktop\Portfolio> git commit -m "Add portfolio site for GitHub Pages"
>>
[master (root-commit) 4d2fc40] Add portfolio site for GitHub Pages
 3 files changed, 236 insertions(+)
 create mode 100644 index.html/index.html
 create mode 100644 index.html/style.css
 create mode 100644 style.css
PS C:\Users\HP\Desktop\Portfolio> git branch -M 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% (5/5), done.
Writing objects: 100% (5/5), 1.74 KiB | 446.00 KiB/s, done.
Total 5 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/Hafsa-Khalid021/Hafsa-Khalid021.github.io.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
```



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