



*Fatima Jinnah Women University*

*Opening Portals of Excellence Through Higher Education*

## **CLOUD COMPUTING LAB 3**

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

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

remote\_edit.png

The screenshot shows a GitHub repository page for 'MahamSaleem123 / Maham-Saleem-035'. The 'Code' tab is selected. Below it, the file 'README.md' is shown under the 'main' branch. A commit by 'MahamSaleem123' titled 'Remote update to READMEs' is visible, with the commit hash 'ba6e0e1 · now'. The commit message contains the text: 'Maham Saleem Roll No: 035 This repository is for lab work. This line was added remotely from GitHub.' Below the commit message, there are tabs for 'Preview', 'Code', and 'Blame', and a set of download and edit icons.

local\_commit.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ cd ~/Maham-Saleem-035

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ notepad README.md

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git add README.md

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git commit -m "Local update to README"
[main 11599b6] Local update to README
 1 file changed, 1 insertion(+)
```

push\_error.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git push origin main
To https://github.com/MahamSaleem123/Maham-Saleem-035.git
  ! [rejected]          main -> main (fetch first)
error: failed to push some refs to 'https://github.com/MahamSaleem
123/Maham-Saleem-035.git'
hint: Updates were rejected because the remote contains work that
you do not
hint: have locally. This is usually caused by another repository p
ushing to
hint: the same ref. If you want to integrate the remote changes, u
se
hint: 'git pull' before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for
details.
```

merge\_commit.png

```
remote: Enumerating objects: 14, done.
remote: Counting objects: 100% (14/14), done.
remote: Compressing objects: 100% (12/12), done.
remote: Total 12 (delta 3), reused 0 (delta 0), pack-reused 0 (fro
m 0)
Unpacking objects: 100% (12/12), 209.47 KiB | 313.00 KiB/s, done.
From https://github.com/MahamSaleem123/Maham-Saleem-035
 * branch            main      -> FETCH_HEAD
   623f6f0..0108ca5  main      -> origin/main
Merge made by the 'ort' strategy.
Lab-3/image.png | Bin 0 -> 34687 bytes
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 Lab-3/image.png
```

push\_after\_merge.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git push -u origin main
branch 'main' set up to track 'origin/main'.
Everything up-to-date
```

rebase\_pull.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git pull --rebase origin main
remote: Enumerating objects: 13, done.
remote: Counting objects: 100% (13/13), done.
remote: Compressing objects: 100% (10/10), done.
remote: Total 10 (delta 5), reused 0 (delta 0), pack-reused 0 (from
m 0)
Unpacking objects: 100% (10/10), 69.12 KiB | 164.00 KiB/s, done.
From https://github.com/MahamSaleem123/Maham-Saleem-035
 * branch            main      -> FETCH_HEAD
   cc37746..0eab24b  main      -> origin/main
Updating cc37746..0eab24b
Fast-forward
 Lab-3/push_after_merge.png | Bin 0 -> 68502 bytes
 README.md                | 1 +
 2 files changed, 1 insertion(+)
 create mode 100644 Lab-3/push_after_merge.png
```

push\_after\_rebase.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git fetch origin
remote: Enumerating objects: 9, done.
remote: Counting objects: 100% (9/9), done.
remote: Compressing objects: 100% (7/7), done.
remote: Total 7 (delta 4), reused 0 (delta 0), pack-reused 0 (from
0)
Unpacking objects: 100% (7/7), 43.93 KiB | 123.00 KiB/s, done.
From https://github.com/MahamSaleem123/Maham-Saleem-035
 0eab24b..067e71e  main      -> origin/main

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git rebase origin/main
Successfully rebased and updated refs/heads/main.

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git push origin main
Everything up-to-date

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git push -u origin main
branch 'main' set up to track 'origin/main'.
Everything up-to-date
```

## Task 2 – Creating and Resolving Merge Conflicts Manually

remote\_conflict\_edit.png

The screenshot shows a GitHub repository interface. At the top, it displays the repository name "MahamSaleem123 / CC\_Maham\_Saleem\_035". Below the header are navigation links for Code, Issues, Pull requests, Actions, Projects, Wiki, and more. The main content area shows a file named "README.md" under the "main" branch. A commit by "MahamSaleem123" titled "Update README.md" is visible, with the commit ID "81f895f · now". The commit message contains the text: "Maham Saleem Roll No: 035 This repository is for lab work. This line was updated remotely again. This line was added locally. Another remote line for rebase test." Below the commit message, there are tabs for Preview, Code, and Blame, along with raw file download and edit options.

local\_conflict\_edit.png

```
Hp_Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git diff
diff --git a/README.md b/README.md
index 4aff2ff..9656152 100644
--- a/README.md
+++ b/README.md
@@ -1,6 +1,6 @@
 Maham Saleem
 Roll No: 035
 This repository is for lab work.
-This line was added remotely from GitHub.
+This line was updated locally at the same time.
· This line was added locally.
 Another remote line for rebase test.
```

local\_conflict\_commit.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git commit -m "Local conflicting change"
[main de101ef] Local conflicting change
 1 file changed, 1 insertion(+), 1 deletion(-)
```

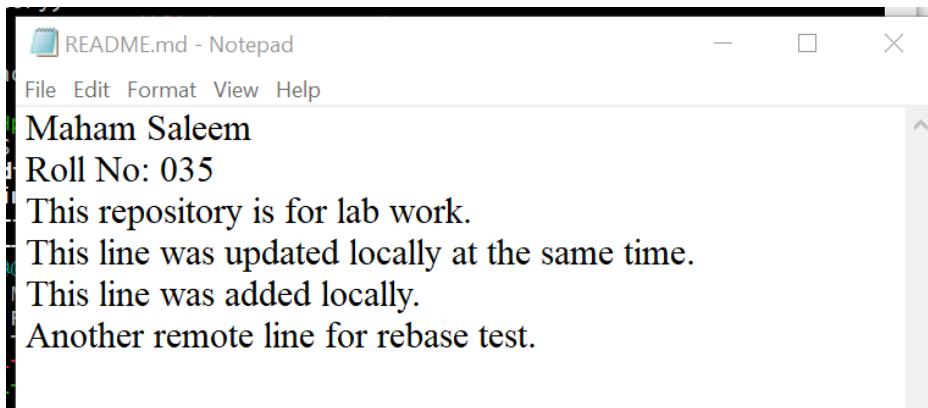
conflict\_push\_error.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git push -u origin main
remote: Repository not found.
fatal: repository 'https://github.com/MahamSaleem123/CC_MahamSaleem_035.git/' not found
```

conflict\_message.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git pull --rebase origin main
remote: Repository not found.
fatal: repository 'https://github.com/MahamSaleem123/CC_MahamSaleem_035.git/' not found
```

resolved\_readme.png



rebase\_continue.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (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

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git log --oneline -5
de101ef (HEAD -> main) Local conflicting change
e067e71e (origin/main, origin/HEAD) Rename image.png to rebase_pull
h.png
h32375b2 rebase_pull.png
h0eab24b Update README.md
c5bd5d2a Rename image.png to push_after_merge.png

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git add README.md

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git rebase --continue
fatal: no rebase in progress
```

### 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 co
mmit.
#
# interactive rebase in progress; onto 29be07d
# Last command done (1 command done):
#   pick de101ef # Local conflicting change
# No commands remaining.
# You are currently rebasing branch 'main' on '29be07d'.
#
# Changes to be committed:
#       modified:   README.md
#
```

push\_after\_resolve.png

```
[detached HEAD 921dad] Local conflicting change
 1 file changed, 1 insertion(+)
Successfully rebased and updated refs/heads/main.

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (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

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git push -u origin main --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), 425 bytes | 212.00 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/MahamSaleem123/CC_Maham_Saleem_035.git
  29be07d..921dad  main -> main
branch 'main' set up to track 'origin/main'.
```

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

push\_textfiles.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ cd ~/Maham-Saleem-035

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ mkdir textfiles

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ echo "File A content" > textfiles/a.txt

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ echo "File B content" > textfiles/b.txt

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ echo "File C content" > textfiles/c.txt
```

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (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
warning: in the working copy of 'textfiles/b.txt', LF will be replaced by CRLF t
he next time Git touches it
warning: in the working copy of 'textfiles/c.txt', LF will be replaced by CRLF t
he next time Git touches it

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git commit -m "Added textfiles directory with three files"
[main d5eb2ed] 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 Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git pull origin main --rebase
remote: Enumerating objects: 9, done.
remote: Counting objects: 100% (9/9), done.
remote: Compressing objects: 100% (7/7), done.
remote: Total 7 (delta 4), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (7/7), 57.48 KiB | 214.00 KiB/s, done.
From https://github.com/MahamSaleem123/CC_Maham_Saleem_035
 * branch            main      -> FETCH_HEAD
   921dad..b807990  main      -> origin/main
Successfully rebased and updated refs/heads/main.
```

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (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), 465 bytes | 66.00 KiB/s, done.
Total 6 (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/MahamSaleem123/CC_Maham_Saleem_035.git
  b807990..3712de2  main -> main
```

gitignore\_push.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git push origin main
HEnumerating 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), 323 bytes | 161.00 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/MahamSaleem123/CC_Maham_Saleem_035.git
  da5e742..6eda6de  main -> main
```

repo\_still\_has\_textfiles.png

A screenshot of a GitHub repository page. The repository name is "CC\_Maham\_Saleem\_035". The current branch is "main". A commit by user "MahamSaleem123" is shown, which added ".gitignore" to ignore text files. The commit message is "Added .gitignore to ignore tex...". The commit was made 13 minutes ago at 6eda6de. Below the commit, it says "1 lines (1 loc) · 12 Bytes". There are tabs for "Code" and "Blame", and icons for "Raw", "Copy", "Download", "Edit", and "Diff". The code in the .gitignore file is "textfiles/\*".

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git rm -r --cached textfiles
rm 'textfiles/a.txt'
rm 'textfiles/b.txt'
rm 'textfiles/c.txt'

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git add .

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git commit -m "Removed tracked textfiles directory"
[main 2561bab] 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 Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (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), 256 bytes | 256.00 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/MahamSaleem123/CC_Maham_Saleem_035.git
 0fc9ab0..222a828 main -> main
```

repo\_textfiles\_removed.png

```
Hp_Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ cd ~/Maham-Saleem-035

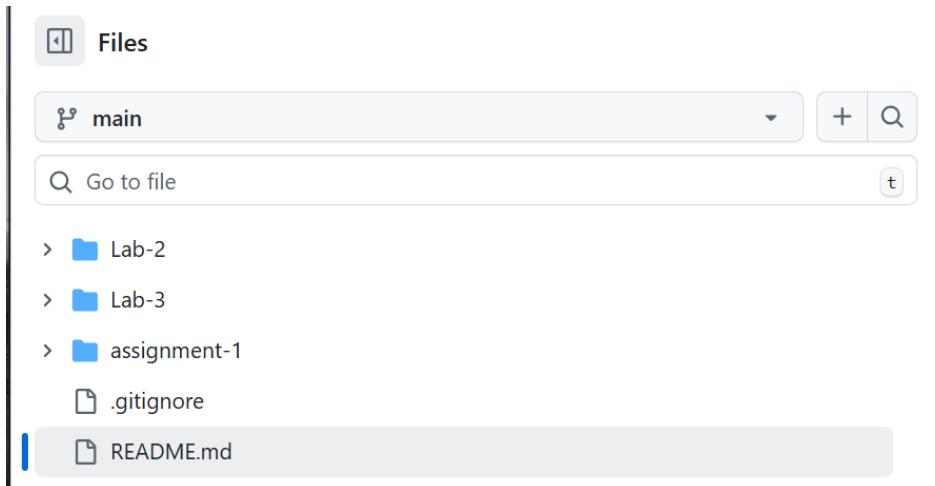
Hp_Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ cat .gitignore
textfiles/*

Hp_Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git add .gitignore

Hp_Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git commit -m "Added .gitignore to ignore textfiles directory"
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean

Hp_Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ git push origin main
Everything up-to-date
```



## Task 4 – Create Temporary Changes and Use git stash

modified\_readme.png

```
Hp_Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ git checkout -b feature-branch
Switched to a new branch 'feature-branch'
```

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (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 Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (feature-branch)
$ git commit -m "Changes the README.md file"
[feature-branch 8c72a95] Changes the README.md file
 1 file changed, 1 insertion(+)
 create mode 100644 README.md
```

checkout\_error.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (feature-branch)
$ notepad README.md

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (feature-branch)
$ git status
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")

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (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
```

stash\_command.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (feature-branch)
$ git stash
Saved working directory and index state WIP on feature-branch: 8c72a95
  Changes the README.md file
```

branch\_switched.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (feature-b
ranch)
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
```

back\_to\_feature.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ git checkout feature-branch
Switched to branch 'feature-branch'
```

status\_clean.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (feature-b
ranch)
$ git status
On branch feature-branch
nothing to commit, working tree clean
```

stash\_pop.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (feature-b
ranch)
$ 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} (c62102d586f51077461487821190d3582e213597)
```

## Task 5 – Checkout a Specific Commit Using git log

log\_before\_checkout.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (feature-b
ranch)
$ git log --oneline
8c72a95 (HEAD -> feature-branch) Changes the README.md file
ec86f66 (origin/main, main) Initial commit for new repo
```

detached\_head.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (feature-b
ranch)
$ git checkout ec86f66
Note: switching to 'ec86f66'.

You are in 'detached HEAD' state. You can look around, make experiments
a
changes and commit them, and you can discard any commits you make in t
his
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 m
ay
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 ec86f66 Initial commit for new repo
```

back\_to\_main.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 ((ec86f66.
..))
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
```

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

first\_commit.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ notepad README.md

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ git add .

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ git commit -m "Added test line"
[main a5f33cf] Added test line
 1 file changed, 1 deletion(-)
```

second\_commit.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ notepad README.md

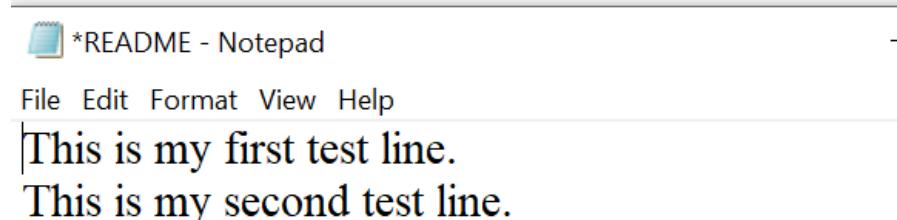
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ git add .

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ git commit -m "Second test commit"
[main 3fb07ed] Second test commit
 1 file changed, 2 insertions(+)
```

log\_before\_reset.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ git log --oneline
3fb07ed (HEAD -> main) Second test commit
a5f33cf Added test line
38c2c87 Add README.md file to main branch
ec86f66 Initial commit for new repo
```

file\_before\_reset.png



soft\_reset.png

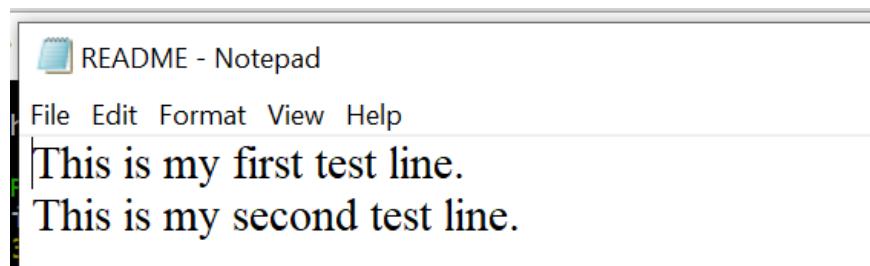
```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ git reset --soft HEAD~1
```

log\_after\_soft\_reset.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ git reset --soft HEAD~1

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ git log --oneline
a5f33cf (HEAD -> main) Added test line
38c2c87 Add README.md file to main branch
ec86f66 Initial commit for new repo
```

file\_after\_soft\_reset.png



```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ git status
On branch main
Your branch and 'origin/main' have diverged,
and have 1 and 26 different commits each, respectively.
(use "git pull" if you want to integrate the remote branch with yours)

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    modified:   README.md
```

file\_after\_hard\_reset.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ git commit -m "Second Test commit"
[main 5a850d4] Second Test commit
 1 file changed, 2 insertions(+)
```

hard\_reset.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ git reset --hard HEAD~1
HEAD is now at a5f33cf Added test line
```

log\_after\_hard\_reset.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ git log --oneline
a5f33cf (HEAD -> main) Added test line
38c2c87 Add README.md file to main branch
ec86f66 Initial commit for new repo
```

file\_after\_hard\_reset.png



```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ git status
On branch main
Your branch and 'origin/main' have diverged,
and have 1 and 26 different commits each, respectively.
  (use "git pull" if you want to integrate the remote branch with yours)

nothing to commit, working tree clean
```

## Task 7 – Amending the Last Commit

first\_amend\_commit.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ notepad README.md

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ git add .

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ git commit -m "Fix log message"
[main c56b690] Fix log message
 1 file changed, 1 insertion(+)
```

amend\_commit.png

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

commit temp file.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ echo "temporary text" >> temp.txt

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ git add .
warning: in the working copy of 'temp.txt', LF will be replaced by CRLF the next
time Git touches it

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main)
$ git commit -m "Added temporary text file"
[main 635aecc] Added temporary text file
 1 file changed, 1 insertion(+)
 create mode 100644 temp.txt
```

```
Hp_Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main|REBASE 2/3)
$ git push origin main
Everything up-to-date
```

revert\_commit.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main|REBASE 2/3)
$ git log --oneline
227228c (HEAD) Added temporary text file
b7288b7 Added test line
c9fc7ca Resolve merge conflict in README.md
38c2c87 Add README.md file to main branch
b75f2fb Rename image.png to back_to_main.png
7c7b846 back_to_main.png
61184ba Rename image.png to detached_head.png
d3602f7 detached_head.png
5a72b08 Rename image.png to log_before_checkout.png
056bb03 Log_before_checkout.png
5f704d0 Rename image.png to branch_switched.png
fdb259b branch_switched.png
a46de77 Rename image.png to back_to_feature.png
3c1cb82 back_to_feature.png
18a7632 Rename image.png to status_clean.png
c3dbb74 status_clean.png
65b38f0 Rename image.png to stash_pop.png
04d4436 stash_pop.png
db76215 Rename image.png to stash_command.png
6b11ead stash_command.png
70648de Rename image.png to checkout_error.png
```

```
e16dbe4 modified_readme.png
Revert "Added temporary text file"

This reverts commit 227228c43d78011b479b2a812c340a7e9db1736e.

# 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 c9fc7ca
# Last commands done (2 commands done):
#   pick a5f33cf # Added test line
#   pick 3920f30 # Fix log message
# Next command to do (1 remaining command):
#   pick 635aecc # Added temporary text file
# You are currently rebasing branch 'main' on 'c9fc7ca'.
#
# Changes to be committed:
#       modified:   README.md
#       deleted:   temp.txt
#
~
~
~
~

.git/COMMIT_EDITMSG [unix] (20:17 23/10/2025) 1,1 All
```

revert\_push.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main|REBASE 2/3)
$ git push origin main
Everything up-to-date
```

## Task 9 – Force Push (With Caution)

new\_branch.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main|REBASE 2/3)
$ git checkout -b test-force
Switched to a new branch 'test-force'
```

force\_commit.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main|REBASE 2/3)
$ notepad README.md

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main|REBASE 2/3)
$ git add .

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main|REBASE 2/3)
$ git commit -m "Add test force push line"
[test-force 7ac49ce] Add test force push line
 1 file changed, 1 insertion(+), 4 deletions(-)
```

push\_force\_branch.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main|REBASE 2/3)
$ git push origin test-force
Enumerating objects: 81, done.
Counting objects: 100% (81/81), done.
Delta compression using up to 8 threads
Compressing objects: 100% (76/76), done.
Writing objects: 100% (78/78), 555.53 KiB | 6.86 MiB/s, done.
Total 78 (delta 33), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (33/33), completed with 1 local object.
remote:
remote: Create a pull request for 'test-force' on GitHub by visiting:
remote:   https://github.com/MahamSaleem123/Lab-3/pull/new/test-force
remote:
To https://github.com/MahamSaleem123/Lab-3.git
 * [new branch]      test-force -> test-force
```

hard\_reset\_force.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main|REBASE 2/3)
$ git reset --hard HEAD~1
HEAD is now at 4962f3f Revert "Added temporary text file"
```

normal\_push.png

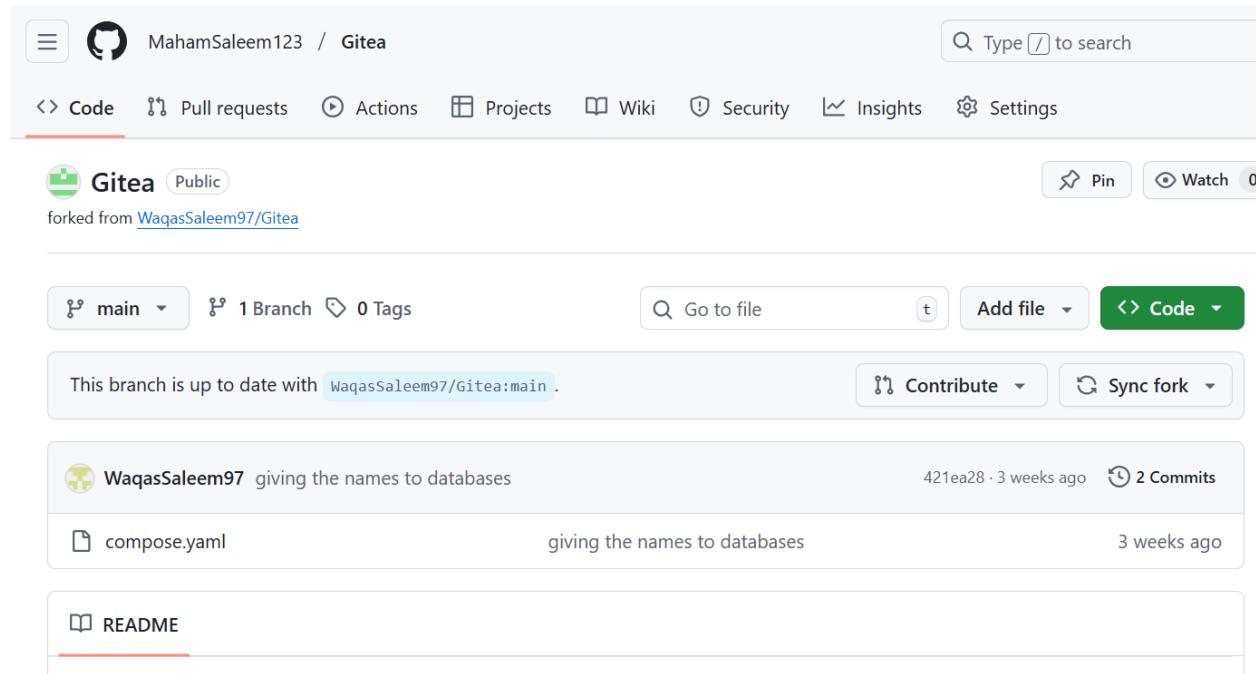
```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main|REBASE 2/3)
$ git push origin test-force
To https://github.com/MahamSaleem123/Lab-3.git
 ! [rejected]      test-force -> test-force (non-fast-forward)
error: failed to push some refs to 'https://github.com/MahamSaleem123/Lab-3.git'
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.
```

force\_push.png

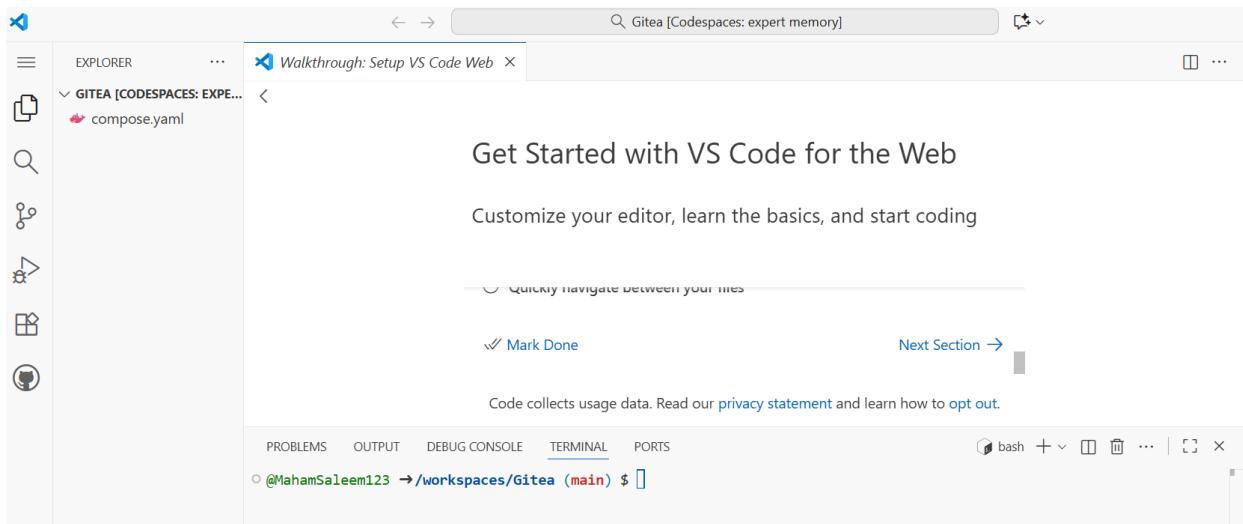
```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main|REBASE 2/3)
$ git push origin test-force --force
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/MahamSaleem123/Lab-3.git
 + 7ac49ce...4962f3f test-force -> test-force (forced update)
```

## Task 10 – Running Gitea in GitHub Codespaces via Docker Compose

forked\_gitea.png



codespace\_loading.png

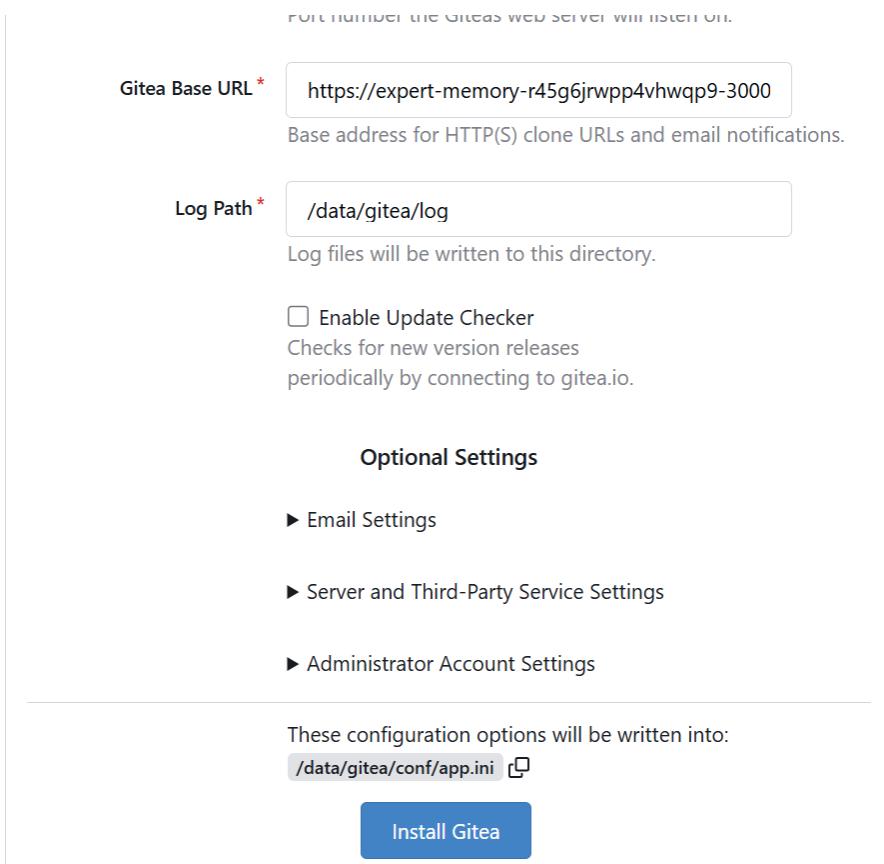


docker\_up.png

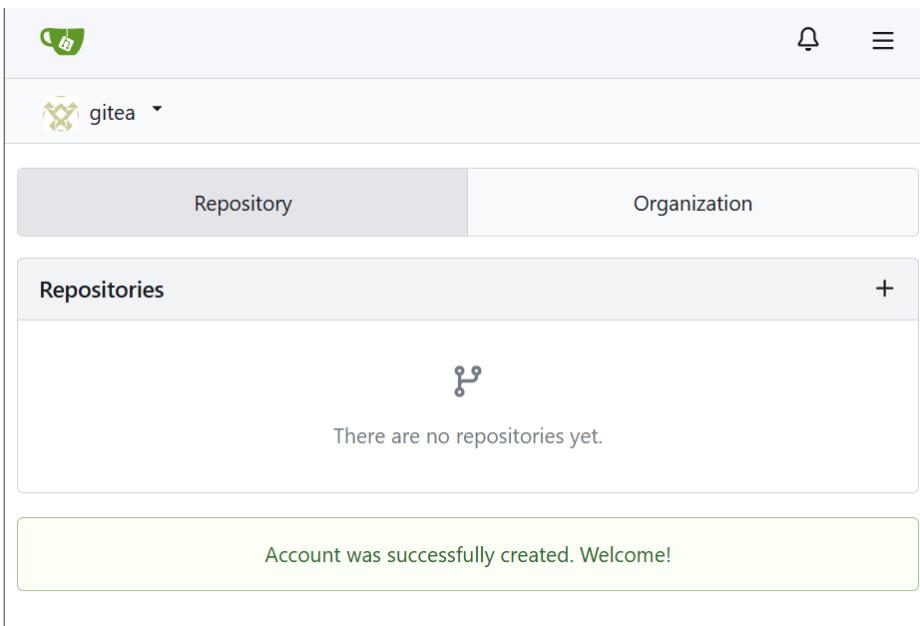
```
● @MahamSaleem123 → /workspaces/Gitea (main) $ docker compose up -d
[+] Running 19/19
  ✓ db Pulled
  ✓ gitea Pulled
[+] Running 5/5
  ✓ Network webnet          Created
  ✓ Volume "gitea_postgres"  Created
  ✓ Volume "gitea"           Created
  ✓ Container gitea_db       Started
  ✓ Container gitea          Started
○ @MahamSaleem123 → /workspaces/Gitea (main) $
```

PROBLEMS	OUTPUT	DEBUG CONSOLE	TERMINAL	PORTS 1
Port	Forwarded Address	Running Process	Visibility	Origin
● 3000	https://expert-memory-r45...	/usr/bin/docker-proxy -proto tcp -host-ip 0.0.0.0 -host-p...	ⓘ Public	Auto Forwarded
	Add Port			

gitea\_install\_page.png



gitea\_dashboard.png



## New Repository

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

### Owner \*



gitea

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

### Repository Name \*

CC\_MahamSaleem\_035

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

Gitea assignment by Maham Saleem (2023-BSE-035)

gitea\_new\_repo.png

The screenshot shows the Gitea web interface for creating a new repository. At the top, there are navigation links for Issues, Pull Requests, Milestones, and Explore. On the right, there are notifications, a '+' button, and an 'admin' dropdown. The main header displays the repository path 'gitea / CC\_MahamSaleem\_035'. Below the header, there are tabs for Code, Issues, Packages, Projects, and Wiki, with 'Code' being the active tab. A 'Quick Guide' section provides instructions for cloning the repository, mentioning 'New File', 'Upload File', 'HTTPS', 'SSH', and a copy link. Another section titled 'Creating a new repository on the command line' shows the terminal commands 'touch README.md' and 'git init'.

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~
$ cd ~/Lab-3
bash: cd: /c/Users/Hp Probook/Lab-3: No such file or directory

Hp Probook@DESKTOP-HB3S03U MINGW64 ~
$ cd ~/Maham-Saleem-035

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ cd ~/Lab-3
bash: cd: /c/Users/Hp Probook/Lab-3: No such file or directory

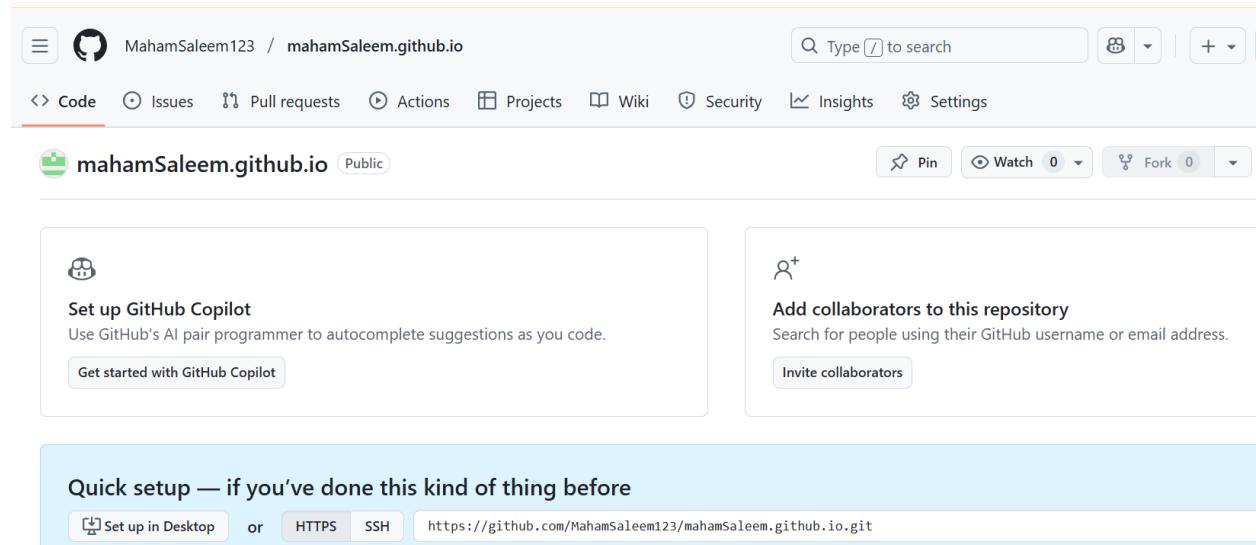
R Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035 (main)
$ cd Lab-3

Hp Probook@DESKTOP-HB3S03U MINGW64 ~/Maham-Saleem-035/Lab-3 (main|REBASE 2/3)
$ pwd
/c/Users/Hp Probook/Maham-Saleem-035/Lab-3

227228c (HEAD) Added temporary text file
b7288b7 Added test line
c9fc7ca Resolve merge conflict in README.md
38c2c87 Add README.md file to main branch
b75f2fb Rename image.png to back_to_main.png
7c7b846 back_to_main.png
```

## Task 11 – Creating a GitHub Pages Portfolio Site

github\_pages\_repo.png



push\_static\_site.png

```
Hp Probook@DESKTOP-HB3S03U MINGW64 ~/PortfolioSite (main)
$ git push -u origin main
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 8 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (4/4), 2.68 KiB | 916.00 KiB/s, done.
Total 4 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
remote: This repository moved. Please use the new location:
remote: https://github.com/MahamSaleem123/mahamsaleem123.github.io.git
To https://github.com/MahamSaleem123/MahamSaleem123.github.io.git
 e40e9ce..6ad5f2c main -> main
branch 'main' set up to track 'origin/main'.
```

# Maham Saleem

Software Engineering Student

## About Me

I am a passionate Software Engineering student at Fatima Jinnah Women University, currently in my 5th semester. I have a keen interest in cloud computing, web development, and software design.

## Education

Degree: BS Software Engineering

University: Fatima Jinnah Women University

Roll Number: 2023-BSE-035

Current Semester: 5th (2025)

## Skills

Cloud Computing

Git & GitHub

Version Control

HTML/CSS

JavaScript

Software Engineering

Web Development

Git LFS

Docker

## Projects

Project 1: Cloud Computing Assignment - Git Workflow

Implemented complete Git workflow using Gitea, GitHub, Git LFS, and GitHub Pages for version control and deployment.

## Contact

Email: maham.saleem@example.com

GitHub: github.com/your-username