



Fatima Jinnah Women University

Opening Portals of Excellence Through Higher Education

CLOUD COMPUTING LAB 2

Hands-On Git & Version Control Lab

Submitted to: Engr. Waqas Saleem

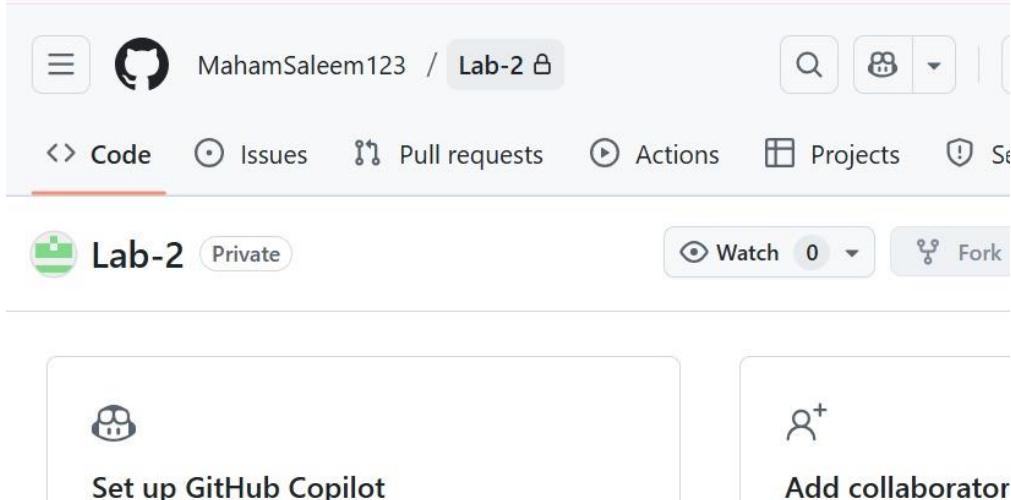
Engr. Muhammad Shahzad

Submitted by: Maham Saleem

Registration no.: 2023-BSE-035

Task 1: Create Private GitHub Repository

repo_private.png



Task 2: Connect Repository via SSH

ssh_keygen.png

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\USeR> git --version
git version 2.51.0.windows.2
PS C:\Users\USeR> ssh-keygen -t ed25519 -C "23-22411-035@se.fjwu.edu.pk"
Generating public/private ed25519 key pair.
Enter file in which to save the key (C:\Users\USeR/.ssh/id_ed25519):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in C:\Users\USeR/.ssh/id_ed25519
Your public key has been saved in C:\Users\USeR/.ssh/id_ed25519.pub
The key fingerprint is:
SHA256:D75GqApkcurGno1901dKm3f2Yzf/nbJL2i3aly8/g5A 23-22411-035@se.fjwu.edu.pk
The key's randomart image is:
++-[ED25519 256]++
| .o. .S .
| +o ...+ E
| + ...o * ....
| .+= .o ..* .=*oB=
| o=.+..o .o+=0*/|
+---[SHA256]-----+
PS C:\Users\USeR> |
```

Github_sshkey.png



This is a list of SSH keys associated with your account. Remove any keys that you do not recognize.

Authentication keys

Lab2	
	SHA256:vhP//33tu0tbG+nqyoHDlcn4byA3nYjt+gKTZaBvaE
SSH	Added on Oct 3, 2025
	Never used — Read/write

Check out our guide to [connecting to GitHub using SSH keys](#) or troubleshoot [common SSH problems](#).

Ssh_clone.png

```
Windows PowerShell

PS C:\Users\USer> mkdir $env:USERPROFILE\Desktop\Lab2

Directory: C:\Users\USer\Desktop

Mode                LastWriteTime         Length Name
----                -              -          -
d----        10/3/2025   8:57 PM           Lab2

PS C:\Users\USer> cd $env:USERPROFILE\Desktop\Lab2
PS C:\Users\USer\Desktop\Lab2> git clone git@github.com:MahamSaleem123/Lab-2.git
Cloning into 'Lab-2'...
The authenticity of host 'github.com (20.207.73.82)' can't be established.
ED25519 key fingerprint is SHA256:+DiY3wvvV6TuJJhbpZisF/zLDA0zPMSvHdkr4UvCOqU.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'github.com' (ED25519) to the list of known hosts.
remote: Enumerating objects: 9, done.
remote: Counting objects: 100% (9/9), done.
remote: Compressing objects: 100% (8/8), done.
remote: Total 9 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (9/9), 180.39 KiB | 473.00 KiB/s, done.
Resolving deltas: 100% (1/1), done.
PS C:\Users\USer\Desktop\Lab2> ssh -T git@github.com
Hi MahamSaleem123! You've successfully authenticated, but GitHub does not provide shell access.
```

Task 3: Configure Git Username and Email

Git_identity.png

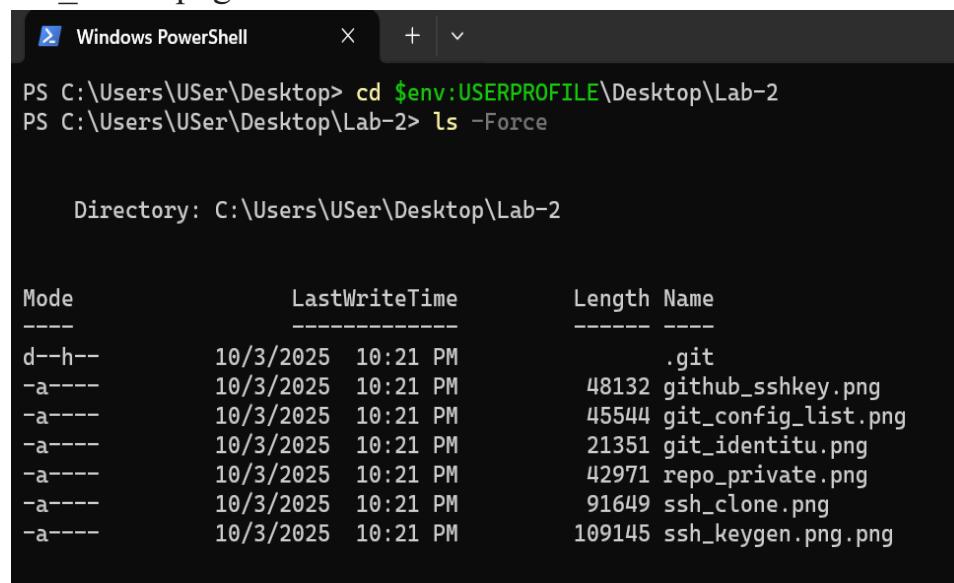
```
PS C:\Users\USeR\Desktop> git config --global user.name "Maham Saleem"
PS C:\Users\USeR\Desktop> git config --global user.email "23-22411-035@se.fjwu.edu.pk"
PS C:\Users\USeR\Desktop>
```

Git_config_list.png

```
PS C:\Users\USeR\Desktop> git config --list
diff.astextplain.textconv=astextplain
filter.lfs.clean=git-lfs clean -- %f
filter.lfs.smudge=git-lfs smudge -- %f
filter.lfs.process=git-lfs filter-process
filter.lfs.required=true
http.sslbackend=schannel
core.autocrlf=true
core.fscache=true
core.symlinks=false
pull.rebase=false
credential.helper=manager
credential.https://dev.azure.com.usehttppath=true
init.defaultbranch=master
user.name=Maham Saleem
user.email=23-22411-035@se.fjwu.edu.pk
PS C:\Users\USeR\Desktop>
```

Task 4: Explore the .git Folder

Git_folder.png



The screenshot shows a Windows PowerShell window titled 'Windows PowerShell'. The command 'cd \$env:USERPROFILE\Desktop\Lab-2' changes the directory to 'C:\Users\USeR\Desktop\Lab-2'. The command 'ls -Force' lists the files in the directory. The output shows the following files:

Mode	LastWriteTime	Length	Name
d---	10/3/2025 10:21 PM		.git
-a---	10/3/2025 10:21 PM	48132	github_sshkey.png
-a---	10/3/2025 10:21 PM	45544	git_config_list.png
-a---	10/3/2025 10:21 PM	21351	git_identitu.png
-a---	10/3/2025 10:21 PM	42971	repo_private.png
-a---	10/3/2025 10:21 PM	91649	ssh_clone.png
-a---	10/3/2025 10:21 PM	109145	ssh_keygen.png.png

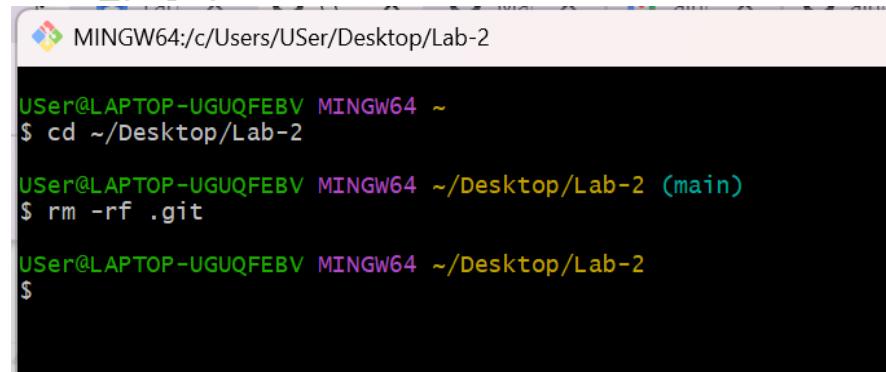
```
PS C:\Users\USeR\Desktop\Lab-2> ls -Force .git

Directory: C:\Users\USeR\Desktop\Lab-2\.git

Mode                LastWriteTime       Length Name
----                -----          ----  --
d----        10/3/2025 10:21 PM           hooks
d----        10/3/2025 10:21 PM           info
d----        10/3/2025 10:21 PM           logs
d----        10/3/2025 10:21 PM           objects
d----        10/3/2025 10:21 PM           refs
-a---        10/3/2025 10:21 PM         298 config
-a---        10/3/2025 10:21 PM         73  description
-a---        10/3/2025 10:21 PM         21  HEAD
-a---        10/3/2025 10:21 PM        561 index
-a---        10/3/2025 10:21 PM        112 packed-refs
```

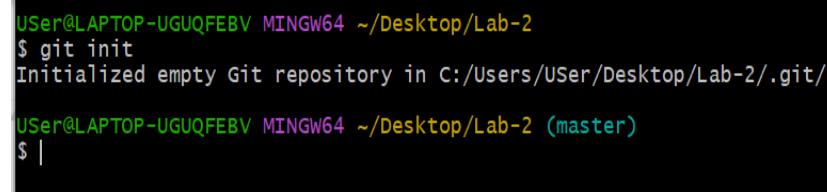
Task 5: Local Repository Management

delete_git.png



```
MINGW64:/c/Users/USeR/Desktop/Lab-2
User@LAPTOP-UGUQFEBV MINGW64 ~
$ cd ~/Desktop/Lab-2
User@LAPTOP-UGUQFEBV MINGW64 ~/Desktop/Lab-2 (main)
$ rm -rf .git
User@LAPTOP-UGUQFEBV MINGW64 ~/Desktop/Lab-2
$
```

Git_init.png



```
User@LAPTOP-UGUQFEBV MINGW64 ~/Desktop/Lab-2
$ git init
Initialized empty Git repository in C:/Users/USeR/Desktop/Lab-2/.git/
User@LAPTOP-UGUQFEBV MINGW64 ~/Desktop/Lab-2 (master)
$ |
```

First_commit.png

```
User@LAPTOP-UGUQFEBV MINGW64 ~/Desktop/Lab-2 (master)
$ echo "# Lab2 Git Practice" > README.md

User@LAPTOP-UGUQFEBV MINGW64 ~/Desktop/Lab-2 (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

User@LAPTOP-UGUQFEBV MINGW64 ~/Desktop/Lab-2 (master)
$ git commit -m "Initial commit"
[master (root-commit) 716d6b8] Initial commit
 1 file changed, 1 insertion(+)
 create mode 100644 README.md
```

first_push.png

```
User@LAPTOP-UGUQFEBV MINGW64 ~/Desktop/Lab-2 (main)
$ git remote add origin git@github.com:MahamSaleem123/Lab-2.git
error: remote origin already exists.

User@LAPTOP-UGUQFEBV MINGW64 ~/Desktop/Lab-2 (main)
$ git push -u origin main
branch 'main' set up to track 'origin/main'.
Everything up-to-date

User@LAPTOP-UGUQFEBV MINGW64 ~/Desktop/Lab-2 (main)
$ |
```

Task 6: File Status & Staging

Status1.png

```
User@LAPTOP-UGUQFEBV MINGW64 ~ (master)
$ mkdir MyRepo

User@LAPTOP-UGUQFEBV MINGW64 ~ (master)
$ cd MyRepo

User@LAPTOP-UGUQFEBV MINGW64 ~/MyRepo (master)
$ git init
Initialized empty Git repository in C:/Users/USeR/MyRepo/.git/

User@LAPTOP-UGUQFEBV MINGW64 ~/MyRepo (master)
$ echo "This is my first note." > notes.txt

User@LAPTOP-UGUQFEBV MINGW64 ~/MyRepo (master)
$ git status
On branch master

No commits yet

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

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

Commit_notes.png

```
User@LAPTOP-UGUQFEBV MINGW64 ~/MyRepo (master)
$ git add notes.txt
warning: in the working copy of 'notes.txt', LF will be replaced by CRLF the next time Git touches it

User@LAPTOP-UGUQFEBV MINGW64 ~/MyRepo (master)
$ git commit -m "Add notes.txt"
[master (root-commit) fb47e2b] Add notes.txt
 1 file changed, 1 insertion(+)
 create mode 100644 notes.txt

User@LAPTOP-UGUQFEBV MINGW64 ~/MyRepo (master)
$ |
```

Task 7: Branch Creation Using GitHub GUI

bugfix_branch_gui.png

The screenshot shows the GitHub desktop application interface. At the top right, there is a green button labeled "New branch". Below it, a search bar contains the placeholder text "Search branches...".

Default

Branch	Updated	Check status	Behind	Ahead	Pull req
main	12 minutes ago	Default			

Your branches

Branch	Updated	Check status	Behind
bugfix/user-auth-error	1 minute ago	0	

Active branches

Branch	Updated	Check status	Behind
bugfix/user-auth-error	1 minute ago	0	

Bugfix_branch_local.png

```
User@LAPTOP-UGUQFEBV MINGW64 ~/MyRepo (master)
$ git remote add origin https://github.com/MahamSaleem123/Lab-2.git

User@LAPTOP-UGUQFEBV MINGW64 ~/MyRepo (master)
$ git remote -v
origin  https://github.com/MahamSaleem123/Lab-2.git (fetch)
origin  https://github.com/MahamSaleem123/Lab-2.git (push)

User@LAPTOP-UGUQFEBV MINGW64 ~/MyRepo (master)
$ git pull origin bugfix/user-auth-error
info: please complete authentication in your browser...

User@LAPTOP-UGUQFEBV MINGW64 ~/MyRepo (master)
$ git pull origin bugfix/user-auth-error
info: please complete authentication in your browser...
remote: Enumerating objects: 44, done.
remote: Counting objects: 100% (44/44), done.
remote: Compressing objects: 100% (40/40), done.
remote: Total 44 (delta 12), reused 5 (delta 1), pack-reused 0 (from 0)
Unpacking objects: 100% (44/44), 581.00 KiB | 718.00 KiB/s, done.
From https://github.com/MahamSaleem123/Lab-2
 * branch            bugfix/user-auth-error  -> FETCH_HEAD
 * [new branch]      bugfix/user-auth-error  -> origin/bugfix/user-auth-error
fatal: refusing to merge unrelated histories

User@LAPTOP-UGUQFEBV MINGW64 ~/MyRepo (master)
$ git fetch origin
From https://github.com/MahamSaleem123/Lab-2
 * [new branch]      main           -> origin/main

User@LAPTOP-UGUQFEBV MINGW64 ~/MyRepo (master)
$ git checkout bugfix/user-auth-error
branch 'bugfix/user-auth-error' set up to track 'origin/bugfix/user-auth-error'.
Switched to a new branch 'bugfix/user-auth-error'

User@LAPTOP-UGUQFEBV MINGW64 ~/MyRepo (bugfix/user-auth-error)
$ git pull origin bugfix/user-auth-error
From https://github.com/MahamSaleem123/Lab-2
 * branch            bugfix/user-auth-error  -> FETCH_HEAD
Already up to date.

User@LAPTOP-UGUQFEBV MINGW64 ~/MyRepo (bugfix/user-auth-error)
$ git branch
* bugfix/user-auth-error
  master
```

Task 8: Branch Creation and Push Using Git Bash

Feature_db_branch.png

```
User@LAPTOP-UGUQFEBV MINGW64 ~ (feature/db-connection)
$ cd /c/Users/User/Desktop/Lab-2

User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (main)
$ git remote -v
origin git@github.com:MahamSaleem123/Lab-2.git (fetch)
origin git@github.com:MahamSaleem123/Lab-2.git (push)

User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (main)
$ git checkout -b feature/db-connection
Switched to a new branch 'feature/db-connection'

User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (feature/db-connection)
$ git push --set-upstream origin feature/db-connection
Enumerating objects: 26, done.
Counting objects: 100% (26/26), done.
Delta compression using up to 12 threads
Compressing objects: 100% (23/23), done.
Writing objects: 100% (26/26), 406.79 KiB | 1.15 MiB/s, done.
Total 26 (delta 6), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (6/6), done.
remote:
remote: Create a pull request for 'feature/db-connection' on GitHub by visiting
remote:   https://github.com/MahamSaleem123/Lab-2/pull/new/feature/db-connection
remote:
remote: To github.com:MahamSaleem123/Lab-2.git
 * [new branch]      feature/db-connection -> feature/db-connection
branch 'feature/db-connection' set up to track 'origin/feature/db-connection'.

User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (feature/db-connection)
$
```

Task 9: Branching & Merging

Branch_create.png

```
User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (feature/db-connection)
$ git checkout -b feature-1
Switched to a new branch 'feature-1'

User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (feature-1)
$ |
```

Feature_commit.png

```
User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (feature-1)
$ notepad main.py

User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (feature-1)
$ git add main.py

User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (feature-1)
$ git commit -m "Add new function to main.py"
[feature-1 a5c5bf2] Add new function to main.py
 1 file changed, 2 insertions(+)
 create mode 100644 main.py
```

Merge.png

```
User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (feature-1)
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.

User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (main)
$ git merge feature-1
Updating 76afff5..a5c5bf2
Fast-forward
  main.py | 2 ++
  1 file changed, 2 insertions(+)
  create mode 100644 main.py
```

Push_branches.png

```
User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (main)
$ git push origin main
ssh: Could not resolve hostname github.com: Name or service not known
fatal: Could not read from remote repository.

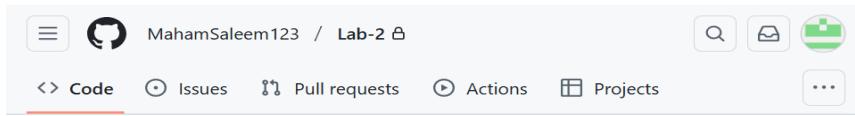
Please make sure you have the correct access rights
remote: Enumerating objects: 28, done.
remote: Counting objects: 100% (28/28), done.
remote: Compressing objects: 100% (27/27), done.
remote: Total 27 (delta 8), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (27/27), 431.47 KiB | 30.00 KiB/s, done.
From https://github.com/MahamSaleem123/Lab-2
 * branch            main      -> FETCH_HEAD
   76afff5..4cbc67f  main      -> origin/main
Successfully rebased and updated refs/heads/main.

User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (main)
$ git push origin main
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 363 bytes | 121.00 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/Lab-2.git
  4cbc67f..355ae9b  main -> main

User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (main)
$ git push origin feature-1
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 355 bytes | 177.00 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 'feature-1' on GitHub by visiting:
remote:     https://github.com/MahamSaleem123/Lab-2/pull/new/feature-1
remote:
To https://github.com/MahamSaleem123/Lab-2.git
 * [new branch]      feature-1 -> feature-1
```

Task 10: Pull Request and Branch Review (GitHub GUI)

Pr_creation.png



Comparing changes

Choose two branches to see what's changed or to start a new pull request. If you need to, you can also [compare across forks](#) or [learn more about diff comparisons](#).

base: main ▾ ← ... compare: feature/db-connection ▾



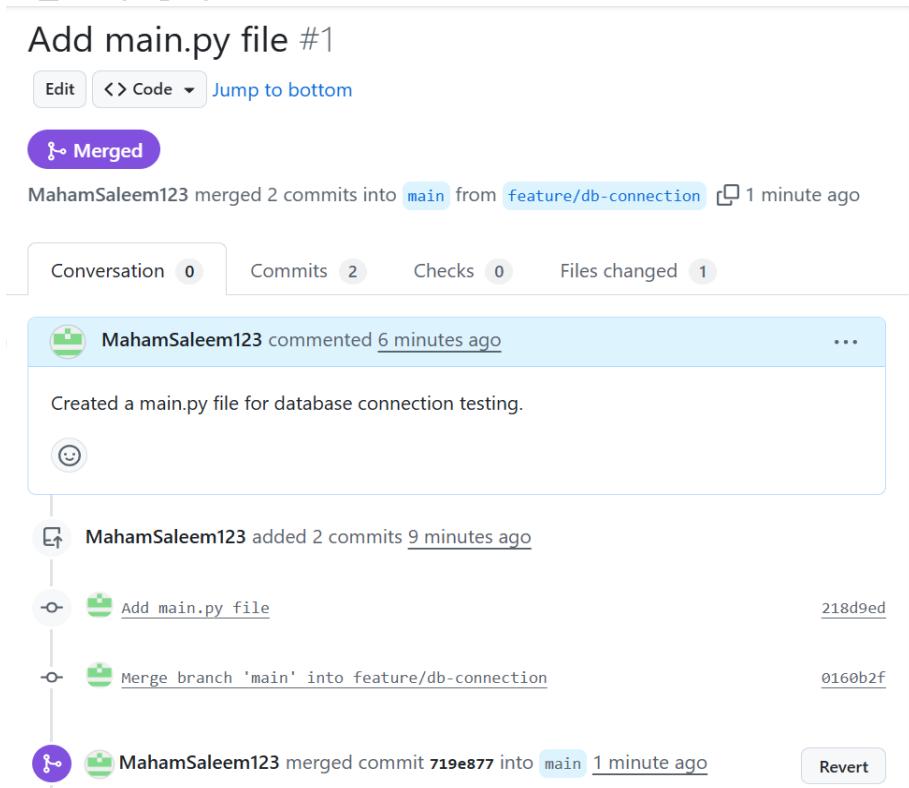
There isn't anything to compare.

main is up to date with all commits from feature/db-connection. Try [switching the base](#) for your comparison.

Showing 0 changed files with 0 additions and 0 deletions.

Split Unified

Pr_merge.png



Branch_delete.png

Add main.py file #1
Merged MahamSaleem123 merged 2 commits into `main` from `feature/db-connect...` ...

-O Add `main.py` file 218d9ed
-O Merge branch 'main' into `feature/db-connection` 0160b2f
MahamSaleem123 merged commit `719e877` into `main` 3 minutes ago Revert

MahamSaleem123 deleted the `feature/db-connection` branch 1 minute ago Restore branch

Pull request successfully merged and closed
You're all set — the branch has been merged.

Add a comment

Write Preview H B I ━ <> ⌂ | ━ ━ ━ | ⌂ @ ⌂ ...

Add your comment here...

Task 11: Detailed Branch Strategy (Develop/Staging)

Branch_strategy.png

Branches New branch

Overview Yours Active Stale All

Search branches...

Default

Branch	Updated	Check status	Behind	Ahead	Pull req
<code>main</code>	7 minutes ago	Default			

Your branches

Branch	Updated	Check status	Behind
staging	1 minute ago		0 1
develop	1 minute ago		0 1
feature-1	15 hours ago		22 1
bugfix/user-auth-error	yesterday		16 1

Active branches

Branch merges.png

The screenshot shows a GitHub repository page for a private repository named "Branch merges.png". The top navigation bar includes icons for eye, fork, star, and settings, followed by statistics: 0 stars, 0 forks, 0 watching, 7 Branches, 0 Tags, and Activity. A note indicates it is a Private repository.

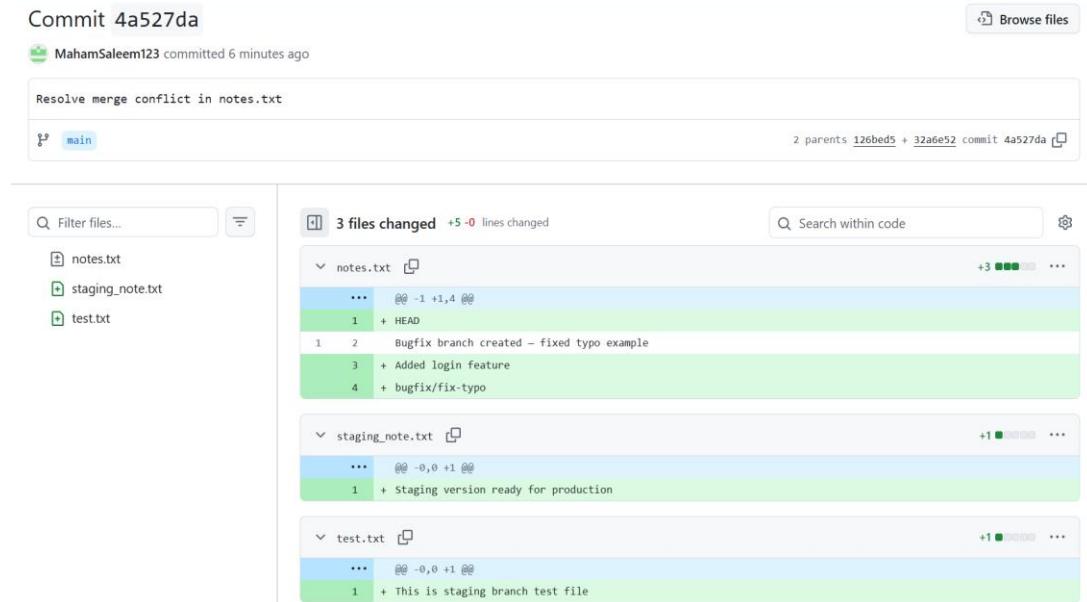
Two recent merge notifications are displayed in yellow boxes:

- "bugfix/fix-typo had recent pushes 1 minute ago" with a "Compare & pull request" button.
- "develop had recent pushes 39 seconds ago" with a "Compare & pull request" button.

The main content area shows a list of commits:

Author	Commit Message	Time Ago
MahamSaleem123	Delete	81c155f · 2 hours ago
	README.md	Initial commit
	branch_create.png	Create and switch to branch feat...
	branch_delete.png	Delete
	bugfix_branch_gui.png	Create a branch on GUI

Final_merge.png



Bonus Task: Simulated Team Collaboration

Collab_commit.png

```
User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (collab)
$ git push origin collab
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/MahamSaleem123/Lab-2.git
  4a527da..8dd215d  collab -> collab

User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (collab)
$ git status
On branch collab
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    notes new.txt

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

User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (collab)
$ mv "notes new.txt" notes.txt

User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (collab)
$ git add notes.txt

User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (collab)
$ git commit -m "Added Maham Saleem and fun fact in collab branch"
On branch collab
nothing to commit, working tree clean
```

```
User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (collab)
$ git push origin collab
Everything up-to-date

User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (collab)
$ git status
On branch collab
nothing to commit, working tree clean

User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (collab)
$ git log --oneline -3
8dd215d (HEAD -> collab, origin/main, origin/collab) Merge Confirmation
2b171a1 Pull requests showing merged branches
b9710b4 Branches on GitHub
```

Collab_merge.png

```
User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (collab)
$ git checkout main
Switched to branch 'main'
Your branch is behind 'origin/main' by 3 commits, and can be fast-forwarded.
(use "git pull" to update your local branch)

User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (main)
$ git merge collab
Updating 4a527da..8dd215d
Fast-forward
 branch_merges.png | Bin 0 -> 97934 bytes
 branch_strategy.png | Bin 0 -> 69742 bytes
 final_merge.png | Bin 0 -> 94897 bytes
 3 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 branch_merges.png
 create mode 100644 branch_strategy.png
 create mode 100644 final_merge.png

User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (main)
$ git push origin main
Everything up-to-date
```

Task 11: Detailed Branch Strategy (Develop/Staging)

Branch_strategy.png

Branch	Updated	Check status	Behind	Ahead	Pull req
main	7 minutes ago				

Your branches

Branch	Updated	Check status	Behind
staging	1 minute ago		0 1
develop	1 minute ago		0 1
feature-1	15 hours ago		22 1
bugfix/user-auth-error	yesterday		16 1

Active branches

Branch merges.png

0 stars 0 forks 0 watching 7 Branches 0 Tags Activity
Private repository

bugfix/fix-typo had recent pushes 1 minute ago [Compare & pull request](#)

develop had recent pushes 39 seconds ago [Compare & pull request](#)

main [Go to file](#) [+](#) [Code](#)

Author	Commit Message	Date
MahamSaleem123 Delete		81c155f · 2 hours ago
README.md	Initial commit	2 days ago
branch_create.png	Create and switch to branch feat...	16 hours ago
branch_delete.png	Delete	2 hours ago
bugfix_branch_gui.png	Create a branch on GUI	yesterday

final_merge.png

Commit 4a527da

MahamSaleem123 committed 6 minutes ago

Resolve merge conflict in notes.txt

main

2 parents 126bed5 + 32a6e52 commit 4a527da

Filter files... notes.txt staging_note.txt test.txt

3 files changed +5 -0 lines changed

notes.txt

...	@@ -1 +1,4 @@
1	+ HEAD
2	+ Bugfix branch created - fixed typo example
3	+ Added login feature
4	+ bugfix/fix-typo

staging_note.txt

...	@@ -0,0 +1 @@
1	+ Staging version ready for production

test.txt

...	@@ -0,0 +1 @@
1	+ This is staging branch test file

Search within code

Task 12: Code Review Workflow

Pr_create_details.png

Open a pull request

Create a new pull request by comparing changes across two branches. If you need to, you can also [compare across forks](#). [Learn more about diff comparisons here](#).

The screenshot shows the GitHub interface for creating a pull request. At the top, there are dropdown menus for 'base: main' and 'compare: feature/code-review'. A green checkmark indicates that the branches are 'Able to merge'. Below this, there are sections for 'Add a title' (containing 'Added code review demo file') and 'Add a description' (containing 'Added a demo file to test pull request workflow.'), both with rich text editors.

Pr_assigned_reviewer.png

The screenshot shows a GitHub pull request page for a pull request titled 'Added code review demo file #2'. The pull request has 1 commit from 'main' to 'feature/code-review'. It is currently 'Still in progress'. The 'Review requested' section is highlighted, indicating that a review has been requested from 'ainunnoorrr'. Other details shown include 'Follow' button, 'Changes' section, 'Reviewers' section (with 'ainunnoorrr' assigned), 'Assignees' section ('No one—assign yourself'), 'Labels' section ('None yet'), 'Projects' section ('None yet'), and 'Milestone' section ('None').

Pr_approved.png

A screenshot of a GitHub pull request interface. At the top, a green button says "Open" and the title "Code review: feature/readme-note → main #5" is shown. Below this, a comment from "MahamSaleem123" is displayed: "Code looks good and ready to merge." with a smiley face emoji. To the right, there are sections for "Milestone" (No milestone), "Development" (Successfully merging this pull request may close these issues.), and "None yet". Below these are "Notifications" (Customize, Unsubscribe) and "2 participants" (two user icons). At the bottom left is a "Add a comment" section with a "Write" button and a text area containing "Add your comment here...".

Pr_request_changes.png

A screenshot of a GitHub pull request review interface. At the top, a green button says "Open" and the title "Code review: feature/readme-note → main #5" is shown. Below this, there are buttons for "Review in codespace" and "Review changes". A modal window titled "Finish your review" is open. It contains a text area with "Please improve variable names or add comments." and a note that "Markdown is supported". Below this is a file upload area with "Paste, drop, or click to add files". There are three radio button options: "Comment" (Submit general feedback without explicit approval), "Approve" (Submit feedback and approve merging these changes), and "Request changes" (Submit feedback that must be addressed before merging). The "Request changes" option is selected. At the bottom right of the modal is a green "Submit review" button. In the bottom right corner of the main window, there is a terminal-like interface showing a git log:

```
git checkout -b staging
git push -u origin staging
git branch -a
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
Switched to a new branch 'develop'
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote;
```

Pr_updated_with_commits.png

A screenshot of a GitHub pull request interface. At the top, a green button says "Open" and the title is "Added code review demo file #2". Below it, a message from "MahamSaleem123" says they want to merge 3 commits into the "main" branch from the "feature/code-review" branch. The commit history shows two commits from "MahamSaleem123" and one commit from "Fixed issues after review feedback". On the right, there are "2 participants" and a "Lock conversation" button. A sidebar on the left contains sections for "Changes reviewed" (1 change requested), "No conflicts with base branch" (Merging can be performed automatically), and a "Merge pull request" button. At the bottom, there's a comment section with a "Write" button and a rich text editor toolbar.

Pr_merge_confirm.png

A screenshot of a GitHub merge confirmation dialog. At the top, a green button says "Open" and the title is "Restore 'Added code review demo file' #3". Below it, a message from "MahamSaleem123" says they commented 1 minute ago: "Reverting the revert to restore previous changes". This comment has a smiley face emoji. Below the comment, a commit from "MahamSaleem123" is shown with the message "Revert 'Added code review demo file'" and a "Verified" badge. The commit hash is "eb711f3". A large modal window at the bottom contains a "Commit message" field with the text "Merge pull request #3 from MahamSaleem123/revert-2-feature/code-review", an "Extended description" field with the text "Restore 'Added code review demo file'", and a note stating "This commit will be authored by 23-22411-035@se.fjwu.edu.pk.". At the bottom of the modal are "Confirm merge" and "Cancel" buttons.

Pr_merged.png

Merged Added code review demo file #2
MahamSaleem123 merged 3 commits into [main](#) from [feature/code-review](#)  now

Pull request successfully merged and closed [Delete branch](#)
You're all set — the [feature/code-revi](#)
[ew](#) branch can be safely deleted.

 Add a comment
Pr_branch_deleted.png

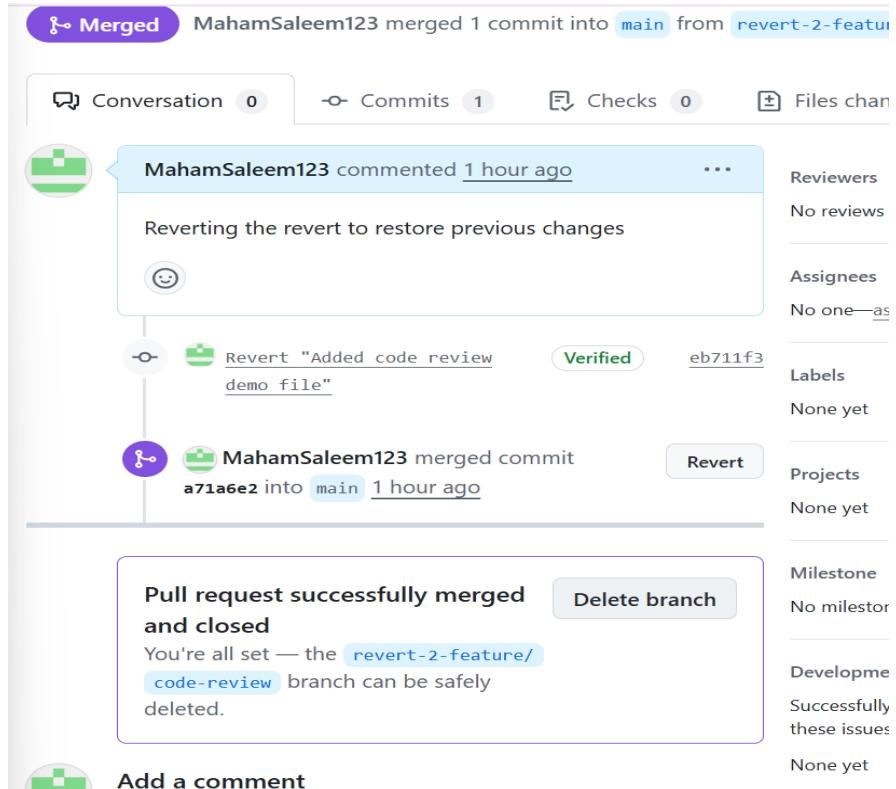
 **Lab-2** [Private](#)  Watch 0

[main](#)  10 Branches  0 Tags [Go to file](#)     [Code](#) 

Author	Commit Message	Date	Commits
MahamSaleem123	Merge branch 'feature/code-review'	bd40557 - 31 minutes ago	 47 Commits
	README.md	Initial commit	3 days ago
	REVIEW_NOTES.md	Added review notes	33 minutes ago
	branch_create.png	Create and switch to branch feature-1	2 days ago
	branch_delete.png	Delete	yesterday
	branch_merges.png	Pull requests showing merged branches	yesterday
	branch_strategy.png	Branches on GitHub	yesterday
	bugfix_branch_gui.png	Create a branch on GUI	2 days ago
	bugfix_branch_local.png	Pull the new branch into local repo	2 days ago
	collab_commit.png	Collab Commit	6 hours ago

Task 13: Branch Cleanup Best Practices

Remote_branch_deleted.png



Remote_branch_delete_cmd.png

```
User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (main)
$ git checkout main
Already on 'main'
Your branch is up to date with 'origin/main'.

User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (main)
$ git pull origin main
From https://github.com/MahamSaleem123/Lab-2
 * branch      main        -> FETCH_HEAD
Already up to date.

User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (main)
$ git branch -d feature/code-review
Deleted branch feature/code-review (was d34a57a).

User@LAPTOP-UGUQFEBV MINGW64 /c/Users/User/Desktop/Lab-2 (main)
$ git branch
  bugfix/fix-typo
  collab
  develop
  feature-1
  feature/add-login
  feature/db-connection
* main
  staging
```