LAB 2

NAME: Hajra Sarwar REG NO: 2023-BSE-022

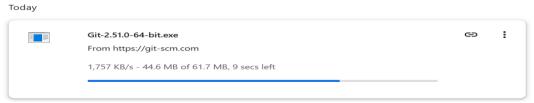
CLASS: BSE-5A SUBJECT: CC

LAB TITLE: Hands-On Git & Version Control Lab

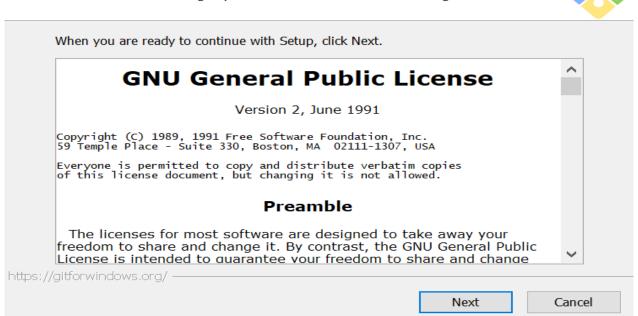
TASK:

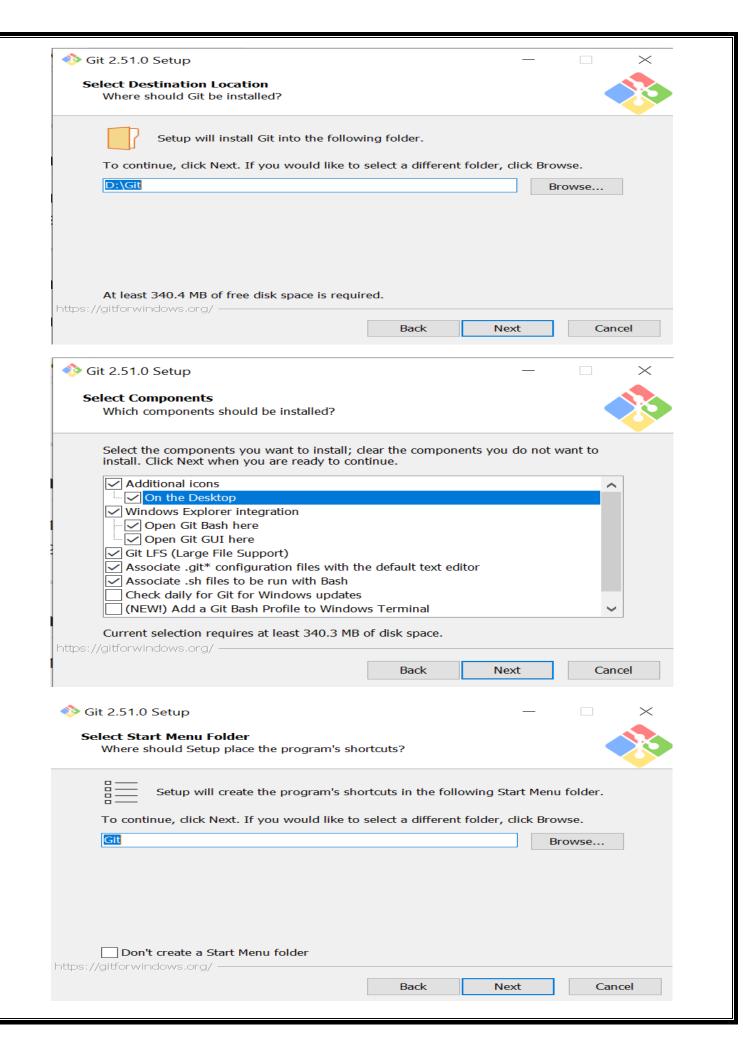
1. Install Git on your PC.

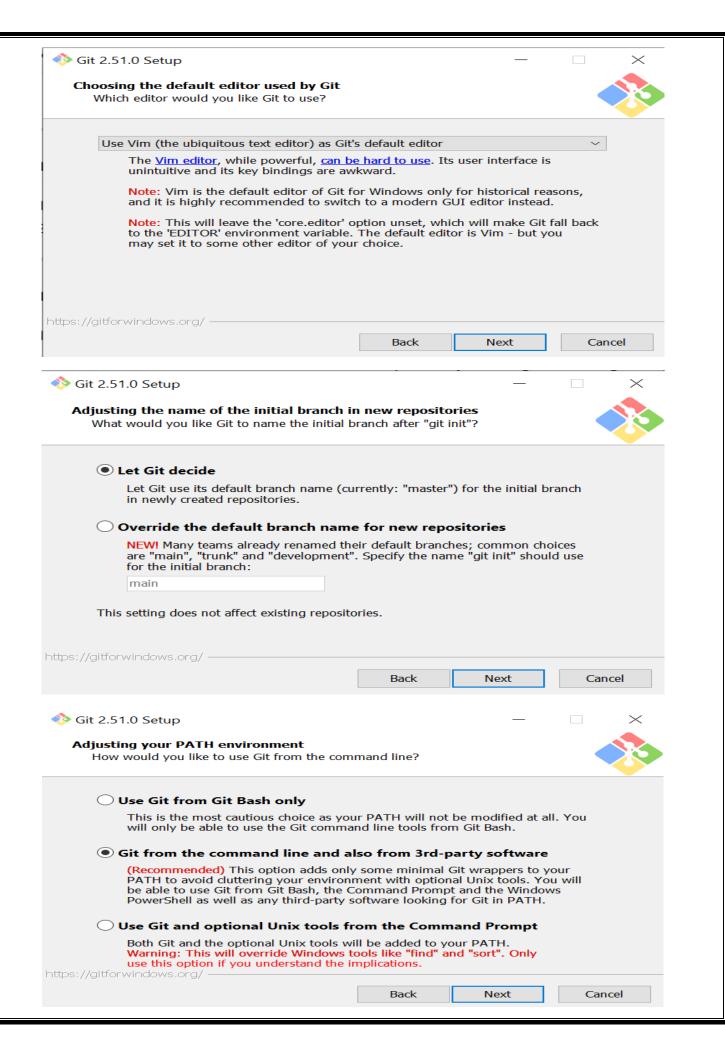
You can download this from: <u>Download Git for Windows</u>, <u>Mac</u>, <u>or Linux</u>

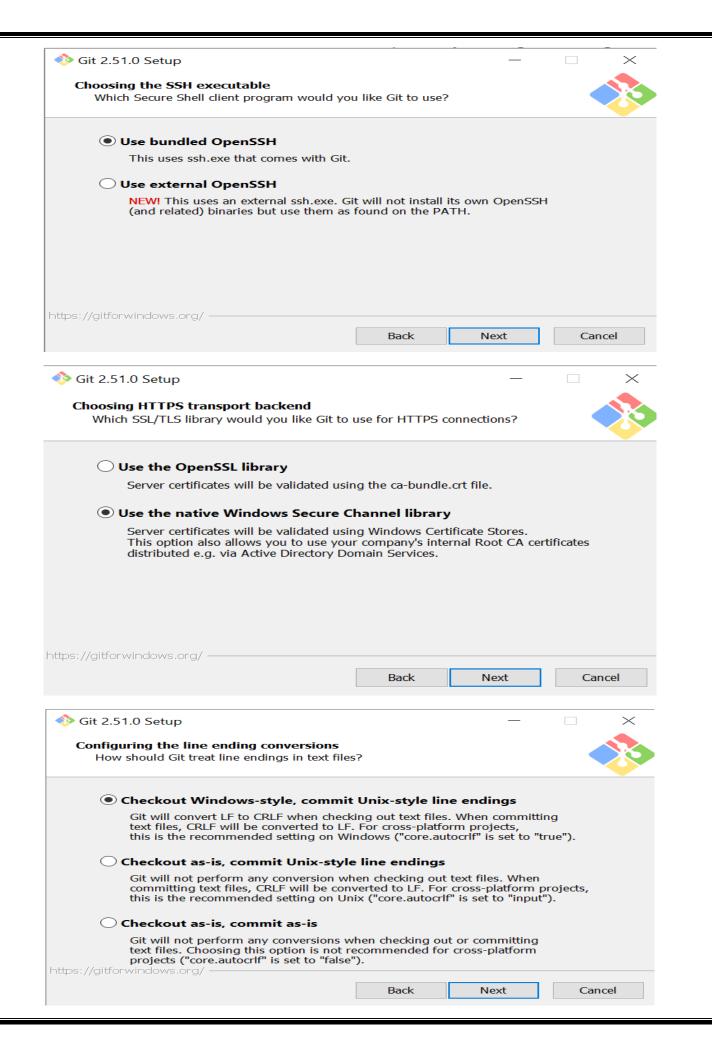












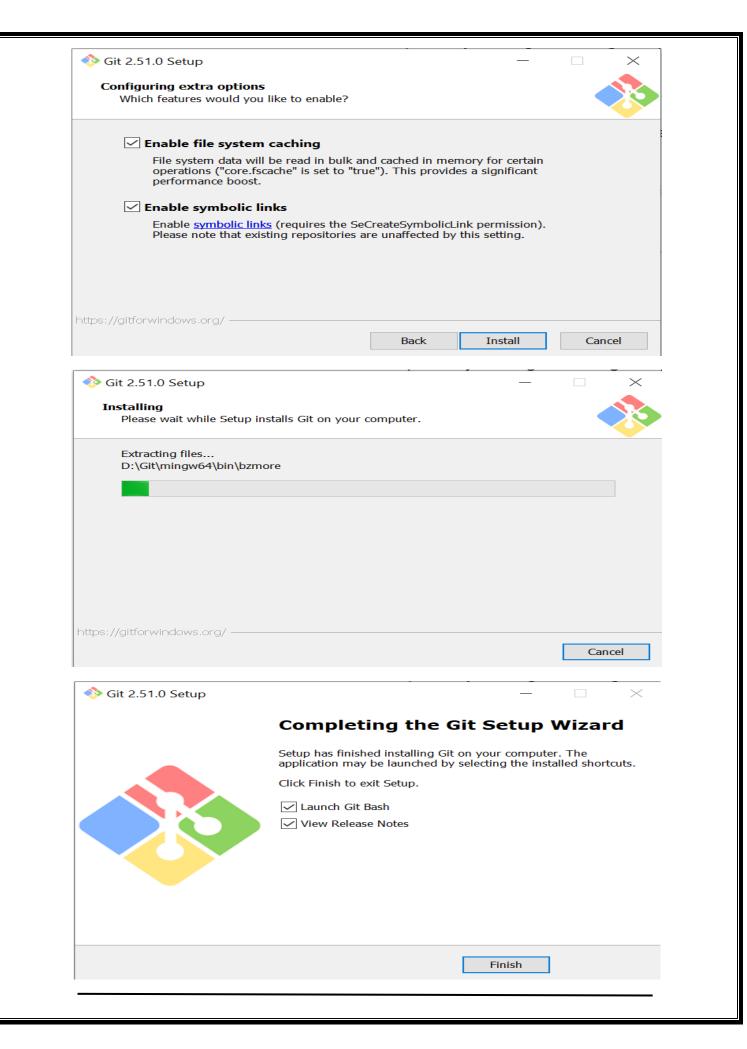
				×
Configuring the terminal emulator to use Which terminal emulator do you want to use		esh?		
Use MinTTY (the default terminal)	of MSYS2)			
Git Bash will use MinTTY as terminal emulator, which sports a resizable window, non-rectangular selections and a Unicode font. Windows console programs (such as interactive Python) must be launched via `winpty` to work in MinTTY.				
Ouse Windows' default console wir	ndow			
Git will use the default console window of Windows ("cmd.exe"), which works well with Win32 console programs such as interactive Python or node.js, but has a very limited default scroll-back, needs to be configured to use a Unicode font in order to display non-ASCII characters correctly, and prior to Windows 10 its window was not freely resizable and it only allowed rectangular text selections.				
https://gitforwindows.org/ ————————————————————————————————————				
	Back	Next	Cancel	
♦ Git 2.51.0 Setup	<u>.</u>			\times
Choose the default behavior of `git pull` What should `git pull` do by default?				
 Fast-forward or merge Fast-forward the current branch to the fetched branch when possible, otherwise create a merge commit. Rebase Rebase the current branch onto the fetched branch. If there are no local commits to rebase, this is equivalent to a fast-forward. 				
Only ever fast-forward Fast-forward to the fetched branch. Fai This is the standard behavior of `git pu		ssible.		
https://gitforwindows.org/ ————————————————————————————————————	Back	Next	Cancel	
♦ Git 2.51.0 Setup		_		×
Choose a credential helper Which credential helper should be configured	ł?			
Git Credential Manager				
Use the <u>cross-platform Git Credential N</u> See more information about the future		l Manager <u>here</u> .		
ONone				
Do not use a credential helper.				

Back

Next

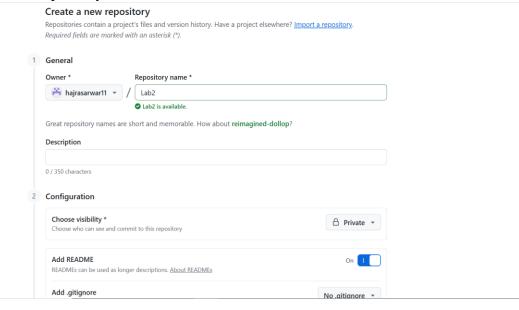
Cancel

https://gitforwindows.org/



Task 1: Create Private GitHub Repository

Create a new private repository named Lab2 on GitHub.



Task 2: Connect Repository via SSH

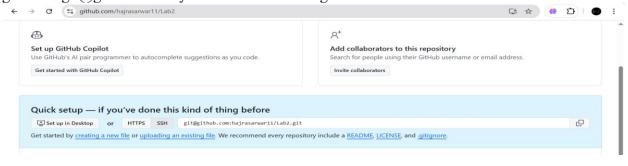
1. Generate a new SSH key using PowerShell:

ssh-keygen -t ed25519 -C <u>your email@example.com</u>



2. Add your SSH public key to GitHub (Settings > SSH and GPG keys). × | ① CC_F25/Lab_Tasks/Lab_2/ × | ③ Lab 2 Git setup guide × ② SSH and GPG keys ✓ 💍 Software Construction an 🗶 🔼 Lab 02 ← → C % github.com/settings/keys **■** Settings Q Type // to search 8 - | + - O II 🖂 ∺ Hajra Sarwar (hajrasarwar11) Go to your personal profile A Public profile SSH keys New SSH key There are no SSH keys associated with your account. $Check \ out \ our \ guide \ to \ \underline{connecting} \ to \ \underline{GitHub} \ using \ \underline{SSH} \ keys \ or \ troubleshoot \ \underline{common} \ \underline{SSH} \ problems \ \underline{Common} \ SSH \ problems \ \underline{Common} \ \underline{$ 升 Accessibility Notifications GPG keys There are no GPG keys associated with your account. Billing and licensing Learn how to generate a GPG key and add it to your account T Password and authentication Vigilant mode SSH and GPG keys ☐ Flag unsigned commits as unverified Organizations This will include any commit attributed to your account be Note that this will include your existing unsigned commits count but not signed with your GPG or S/MIME key Enterprises Software Construction an X Lab 02 × CC_F25/Lab_Tasks/Lab_2/ × 🕲 Lab 2 Git setup guide × 🕠 Add new SSH key \rightarrow **C** % github.com/settings/ssh/new Hajra Sarwar (hajrasarwar11) Go to your personal profile A Public profile Add new SSH Key & Appearance My Laptop SSH A Accessibility Notifications Key type Authentication Key \$ Billing and licensing ssh-ed25519 AAAAC3NzaC1lZD11NTE5AAAAIGSd4rFe00u3nYr4HyRZRBiQMgkZTf1QD3c29j+7rSFV 23-22411-022@se.fjwu.edu.pk 1 Password and authentication SSH and GPG keys Organizations 2 Enterprises Moderation Code, planning, and automation △ Software Construction an × 🔼 Lab 02 × C CC_F25/Lab_Tasks/Lab_2 × S Lab 2 Git setup guide × SSH and GPG keys → C 25 github.com/settings/keys □ ☆ ♦ 8 - + - O 11 A **≡** Settings Q Type // to search × You have successfully added the key 'My Laptop SSH'. Hajra Sarwar (hajrasarwar11) Go to your personal profile A Public profile SSH keys & Account This is a list of SSH keys associated with your account. Remove any keys that you do not recognize. & Appearance Authentication keys # Accessibility Notifications My Laptop SSH SHA256:uUKQ9QtM6xQpW15f5LqdTW+d474myThszeScN7gSWi8 Delete Added on Oct 3, 2025 Never used — Read/write Billing and licensing Check out our guide to connecting to GitHub using SSH keys or troubleshoot common SSH problems. 1 Password and authentication (1) Sessions GPG keys SSH and GPG keys

3. Clone your Lab2 repo using SSH. git clone git@github.com:<yourusername>/Lab2.git



```
HP@DESKTOP-JFEH5TK MINGW64 ~

$ git clone git@github.com:hajrasarwar11/Lab2.git
Cloning into 'Lab2'...
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.
warning: You appear to have cloned an empty repository.
```

Task 3: Explore the .git Folder

1. Navigate into your cloned repository folder.

```
HP@DESKTOP-JFEH5TK MINGW64 ~
$ cd Lab2
```

2. Show hidden files and locate the .git directory.

```
HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (main)
$ pwd
/c/Users/HP/Lab2

HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (main)
$ 1s -1a
total 20
drwxr-xr-x 1 HP 197609 0 Oct 3 12:09 ./
drwxr-xr-x 1 HP 197609 0 Oct 3 12:09 ../
drwxr-xr-x 1 HP 197609 0 Oct 3 12:09 ../
```

3. Explore what's inside using: ls -a .git

```
HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (main)
 ls -la .git
total 11
drwxr-xr-x 1 HP 197609
                          0 Oct
                                 3 12:09
drwxr-xr-x 1 HP 197609
                          0 Oct
                                 3 12:09
-rw-r--r-- 1 HP 197609
                         21 Oct
                                 3 12:09 HEAD
 rw-r--r-- 1 HP 197609 296 Oct
                                 3 12:09 config
                         73 Oct
 rw-r--r-- 1 HP
                197609
                                 3 12:09 description
drwxr-xr-x 1 HP 197609
                          0 Oct
                                 3 12:09 hooks/
                                 3 12:09 info/
drwxr-xr-x 1 HP 197609
                          0 Oct
drwxr-xr-x 1 HP 197609
                          0 Oct
                                 3 12:09 objects/
drwxr-xr-x 1 HP 197609
                                 3 12:09 refs/
                          0 Oct
```

Note: This folder contains history, logs, and config for your repository. Do **not** modify these files manually.

Task 4: Configure Git Username and Email

1. Set up your Git identity (this ensures all commits are linked to you):

```
git config --global user.name "Your Name"
git config --global user.email "your_email@example.com"
```

```
HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (main)
$ git config --global user.name "hajrasarwar11"

HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (main)
$ git config --global user.email "23-22411-022@se.fjwu.edu.pk"
```

2. Verify your configuration:

```
git config --list
```

```
HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (main)

$ git config --list
diff.astextplain.textconv=astextplain
filter.lfs.clean=git-lfs clean -- %f
filter.lfs.snudge=git-lfs smudge -- %f
filter.lfs.process=git-lfs filter-process
filter.lfs.required=true
http.sslbackend=schannel
core.autocrlf=true
core.symlinks=true
pull.rebase=false
credential.helper=manager
credential.helper=manager
credential.htps://dev.azure.com.usehttppath=true
init.defaultbranch=master
user.name=hajrasarwar11
user.email=23-22411-022@se.fjwu.edu.pk
core.repositoryformatversion=0
core.filemode=false
core.logallrefupdates=true
core.symlinks=false
core.logallrefupdates=true
core.symlinks=false
core.origin.url=git@github.com:hajrasarwar11/Lab2.git
remote.origin.fetch=+refs/heads/*:refs/remotes/origin/*
branch.main.remote=origin
branch.main.merge=refs/heads/main
HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (main)
$
```

```
HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (main)
$ ls_-la .git | sed -n '1,200p'
total 11
drwxr-xr-x 1 HP 197609
drwxr-xr-x 1 HP 197609
-rw-r--r-- 1 HP 197609
                                              0 Oct
                                                           3 12:09 ./
                                                           3 12:09 ./
3 12:09 ../
3 12:09 HEAD
3 12:09 config
3 12:09 description
3 12:09 hooks/
3 12:09 info/
                                              0 Oct
                                           21 Oct
 -rw-r--r-- 1 HP 197609 296 Oct
-rw-r--r-- 1 HP 197609
drwxr-xr-x 1 HP 197609
                                           73 Oct
                                              0 Oct
drwxr-xr-x 1 HP 197609
drwxr-xr-x 1 HP 197609
drwxr-xr-x 1 HP 197609
drwxr-xr-x 1 HP 197609
                                             0 Oct
                                                           3 12:09 objects/
                                              0 Oct
                                              0 Oct
                                                           3 12:09 refs/
 HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (main)
```

Task 5: Local Repository Management

1. Delete the existing .git folder from your cloned repo using Git Bash:

```
rm -rf .git
```

```
HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (main)
$ rm -rf .git
```

2. Re-initialize the local git repository:

git init

```
HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (master)
$ git branch -M main
```

3. Add a file named README.md and commit it:

echo "# Lab2 Git Practice" > README.md

```
HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (main)
$ echo "# Lab2 — hajrasarwar11 — 23-22411-022" > README.md
```

git add README.md

```
HP@DESKTOP-JFEH5TK MINGW64 <mark>~/Lab2 (main)</mark>
$ git add README.md
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it
```

git commit -m "Initial commit"

```
HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (main)
$ git commit -m "Initial commit: add README"
[main (root-commit) 8550574] Initial commit: add README
1 file changed, 1 insertion(+)
create mode 100644 README.md
```

4. Connect your local repo to GitHub and push:

git remote add origin git@github.com:<yourusername>/Lab2.git

```
HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (main)
$ git remote add origin git@github.com:hajrasarwar11/Lab2.git
```

git push -u origin main

```
HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (main)
$ git push -u origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 275 bytes | 55.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To github.com:hajrasarwar11/Lab2.git
* [new branch] main -> main
branch 'main' set up to track 'origin/main'.

HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (main)
$ echo "My name: hajrasarwar11
Roll: 23-BSE(5A)-022
This is my Lab2 practice notes." > notes.txt
```

Task 6: File Status & Staging

- 1. Create a new file notes.txt and write a note.
- 2. Check status:

git status

3. Stage and commit:

```
git add notes.txt
```

```
HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (main)

$ git add notes.txt
warning: in the working copy of 'notes.txt', LF will be replaced by CRLF the next time Git touches it

git commit -m "Add notes.txt"

HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (main)

$ git commit -m "Add notes.txt"

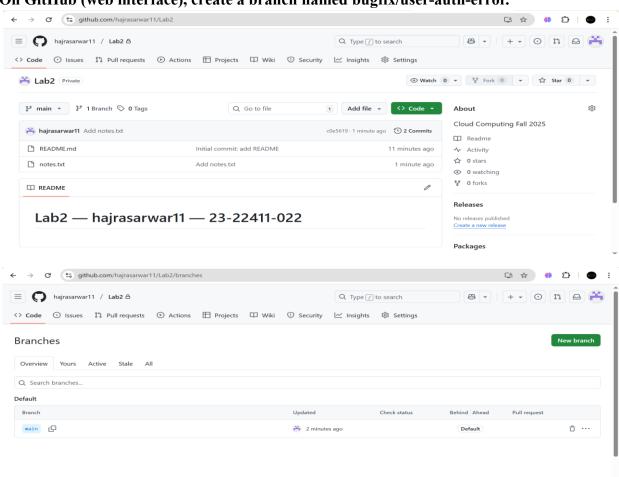
[main c0e5619] Add notes.txt

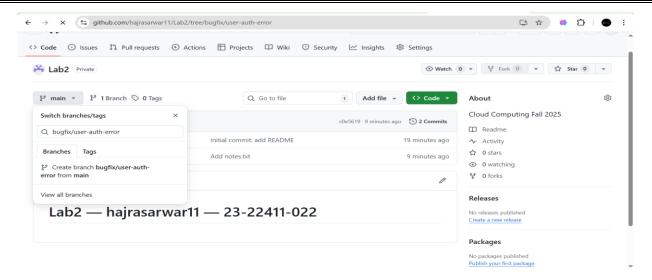
1 file changed, 3 insertions(+)
create mode 100644 notes.txt
```

4. Edit notes.txt and repeat status/commit steps.

Task 7: Branch Creation Using GitHub GUI

1. On GitHub (web interface), create a branch named bugfix/user-auth-error.





2. Pull the branch to your local repository to sync.

git pull origin bugfix/user-auth-error

```
HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (main)
$ git fetch origin bugfix/user-auth-error
From github.com:hajrasarwar11/Lab2
* branch bugfix/user-auth-error -> FETCH_HEAD
* [new branch] bugfix/user-auth-error -> origin/bugfix/user-auth-error
```

Task 8: Branch Creation and Push Using Git Bash

1. Create a branch named feature/db-connection using Git Bash:

git checkout -b feature/db-connection

```
HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (main)
$ git checkout bugfix/user-auth-error
branch 'bugfix/user-auth-error' set up to track 'origin/bugfix/user-auth-error'.

HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (bugfix/user-auth-error)
$ git branch -a
* bugfix/user-auth-error
main
remotes/origin/bugfix/user-auth-error
remotes/origin/main

HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (bugfix/user-auth-error)
$ git checkout -b feature/db-connection
Switched to a new branch 'feature/db-connection'
```

2. Push the branch to the remote repository:

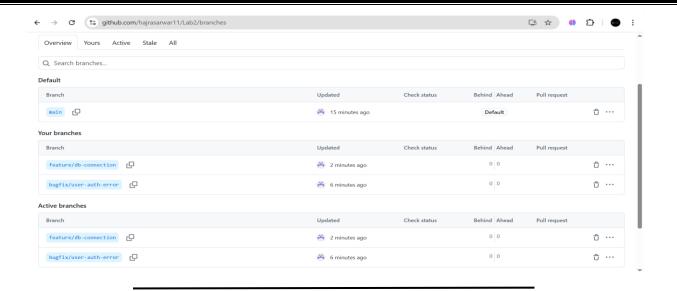
git push origin feature/db-connection

```
HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (feature/db-connection)

$ git push -u origin feature/db-connection
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'feature/db-connection' on GitHub by visiting:
remote: https://github.com/hajrasarwar11/Lab2/pull/new/feature/db-connection
remote:
To github.com:hajrasarwar11/Lab2.git

* [new branch] feature/db-connection -> feature/db-connection
branch 'feature/db-connection' set up to track 'origin/feature/db-connection'.

HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (feature/db-connection)
$ git branch -a bugfix/user-auth-error
remotes/origin/bugfix/user-auth-error
remotes/origin/feature/db-connection
remotes/origin/feature/db-connection
remotes/origin/feature/db-connection
```



Task 9: Branching & Merging

1. Create and switch to a branch feature-1: git checkout -b feature-1

```
HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (feature/db-connection)
$ git checkout -b feature-1
Switched to a new branch 'feature-1'

HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (feature-1)
$ cat > main.py <<'EOF'
def greet(name):
    return f"Hello, {name}!"

if __name__ == "__main__":
    print(greet("Student"))
EOF</pre>
```

Modify main.py (add a function) and commit. git add main.py

git commit -m "Add new function to main.py"

```
HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (feature-1)
$ git add main.py
git commit -m "Add greet function to main.py"
warning: in the working copy of 'main.py', LF will be replaced by CRLF the next time Git touches it
[feature-1 4e68ee0] Add greet function to main.py
1 file changed, 5 insertions(+)
create mode 100644 main.py
```

3. Switch back to main and merge:

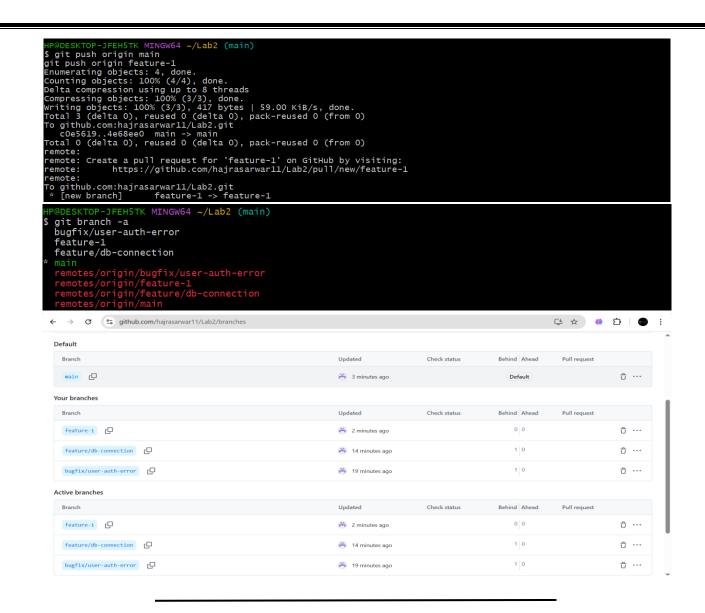
git checkout main

```
HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (feature-1)
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.

git merge feature-1

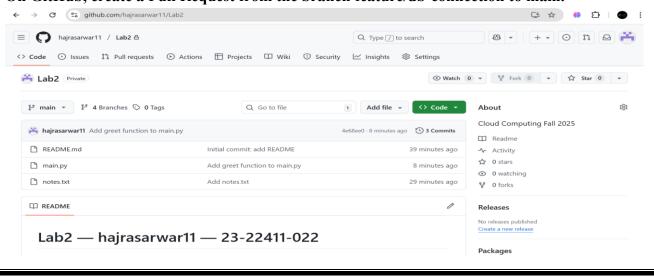
HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (main)
$ git merge feature-1
Updating c0e5619..4e68ee0
Fast-forward
main.py | 5 +++++
1 file changed, 5 insertions(+)
create mode 100644 main.py
```

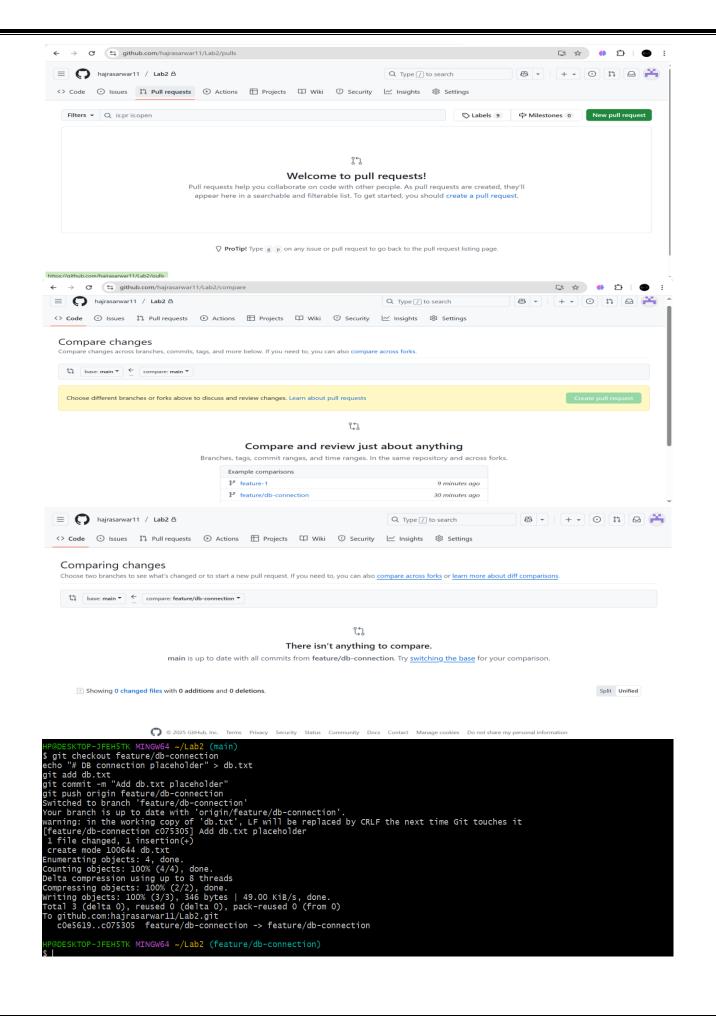
4. Push all branches: git push origin main git push origin feature-1

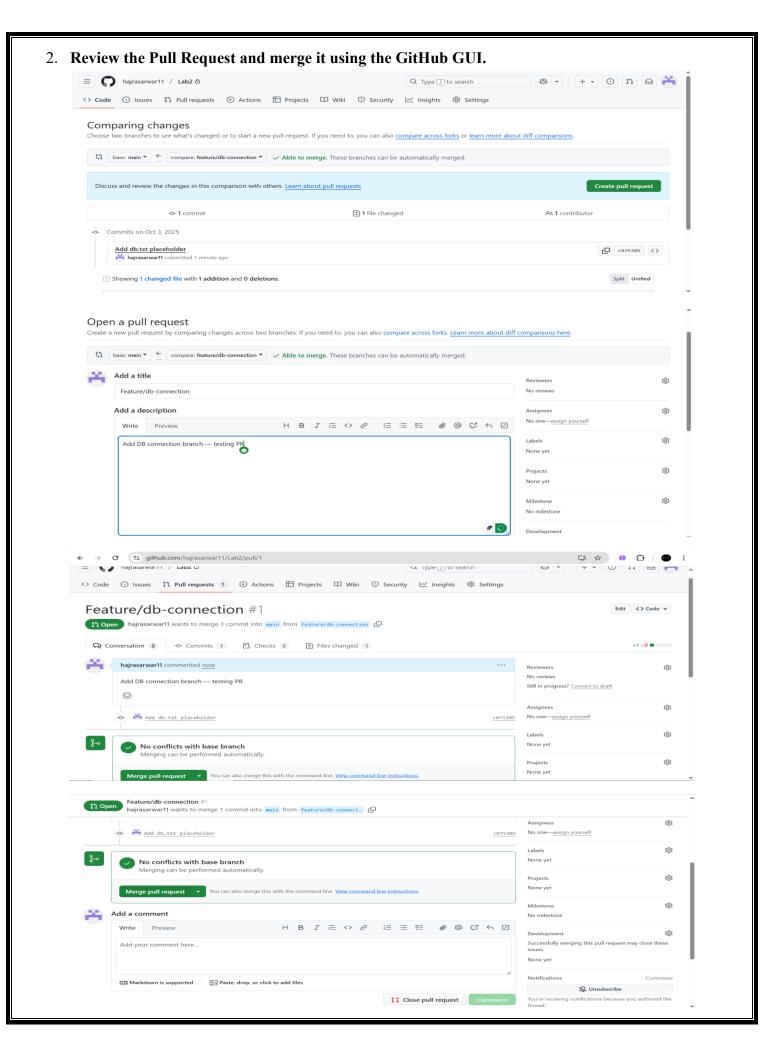


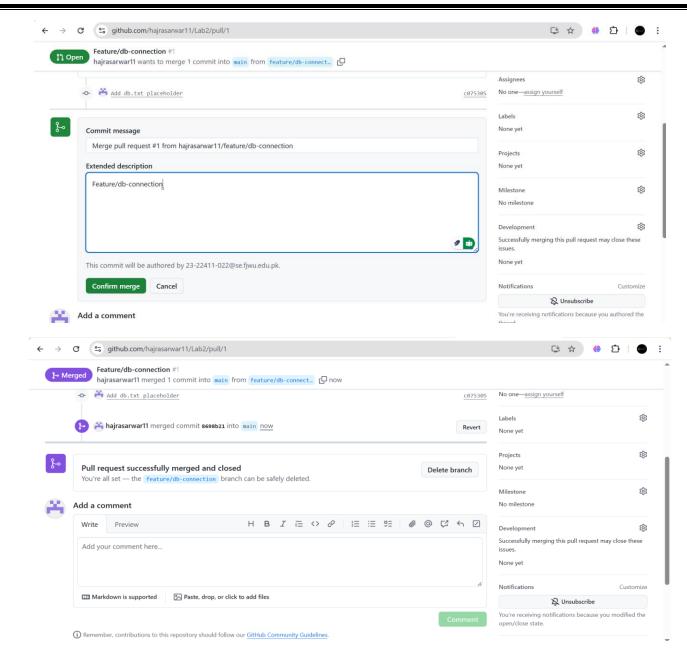
Task 10: Pull Request and Branch Review (GitHub GUI)

1. On GitHub, create a Pull Request from the branch feature/db-connection to main.

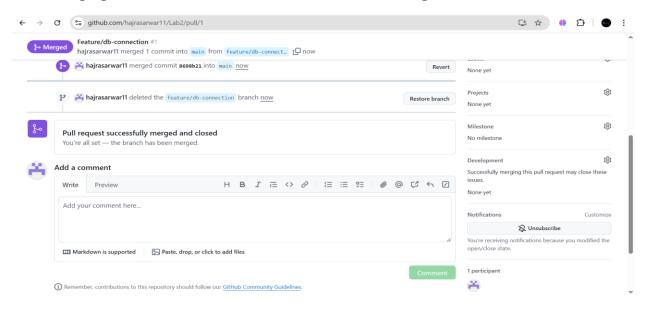








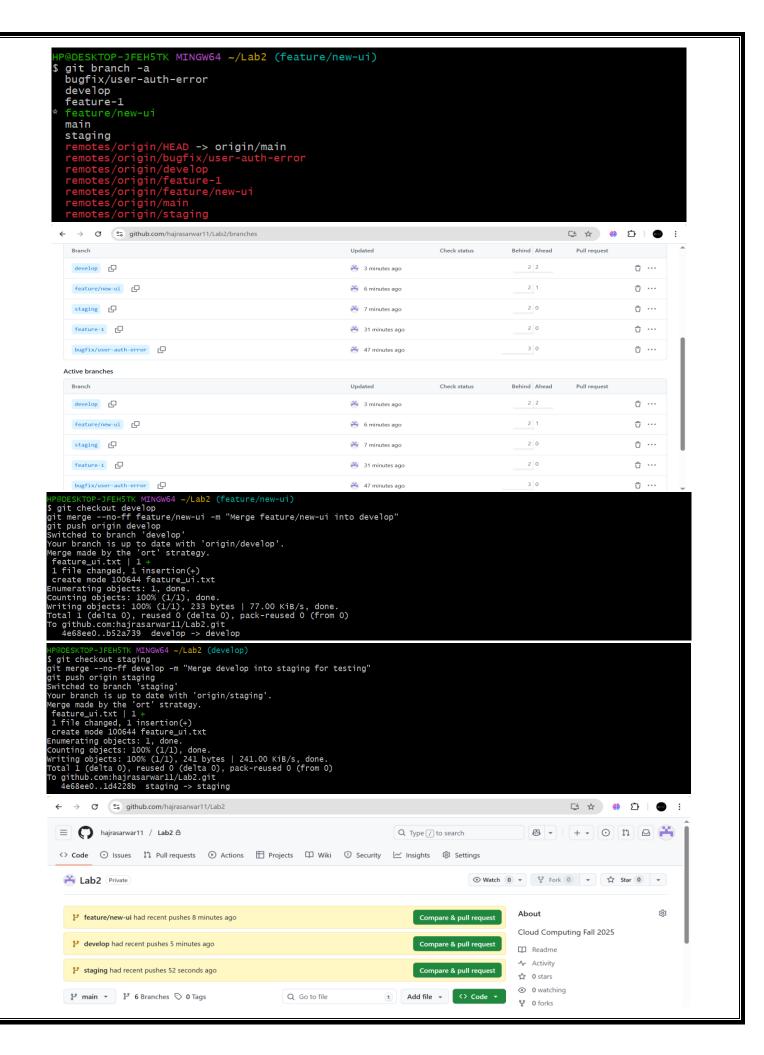
3. After merging, delete the feature/db-connection branch using the GitHub GUI.



Task 11: Detailed Branch Strategy (Develop/Staging)

1. Create the following branches to simulate a professional branching strategy:

. Develop, Staging, feature/*, bugfix/*



```
S git checkout main
git pull origin main
git pull origin main
git merge --no-ff staging -m "Merge staging into main (production release)"
git push origin main
Switched to branch 'main'
     Wour branch is behind 'origin/main' by 2 commits, and can be fast-forwarded.
(use "git pull" to update your local branch)
From github.com:hajrasarwaar1/Lab2
* branch main -> FETCH_HEAD
    Updating 4e68ee0..8698b21
Fast-forward
  oputing 4-esceen.sosoir
Fast-forward
db.txt | 1 +
1 file changed, 1 insertion(+)
create mode 100644 db.txt
Merge made by the 'ort' strategy.
feature_ui.txt | 1 +
1 file changed, 1 insertion(+)
create mode 100644 feature_ui.txt
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (2/2), 322 bytes | 107.00 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:hajrasarwar11/Lab2.git
8698b21..2ab9eae main -> main
      git log --oneline --graph --decorate --all -20
2ab9eae (HEAD -> main, origin/main, origin/HEAD) Merge staging into main (production release)
                 1d4228b (origin/staging, staging) Merge develop into staging for testing
             * b52a739 (origin/develop, develop) Merge feature/new-ui into develop
             * 9bee4a3 (origin/feature/new-ui, feature/new-ui) Add UI feature placeholder
                 8698b21 Merge pull request #1 from hajrasarwar11/feature/db-connection
           c075305 Add db.txt placeholder
4e68ee0 (origin/feature-1, feature-1) Add greet function to main.py
      c0e5619 (origin/bugfix/user-auth-error, bugfix/user-auth-error) Add notes.txt 8550574 Initial commit: add README
HP@DESKTOP-JFEH5TK MINGW64 -/Lab2 (main)

$ git branch -d feature/new-ui
git push origin --delete feature/new-ui
git fetch --prune
git branch -a # verify it's gone
Deleted branch feature/new-ui (was 9bee4a3).

To github.com:hajrasarwar11/Lab2.git
- [deleted] feature/new-ui
bugfix/user-auth-error
develop
feature-1
      staging
                           rigin/HEAD -> origin/main
```

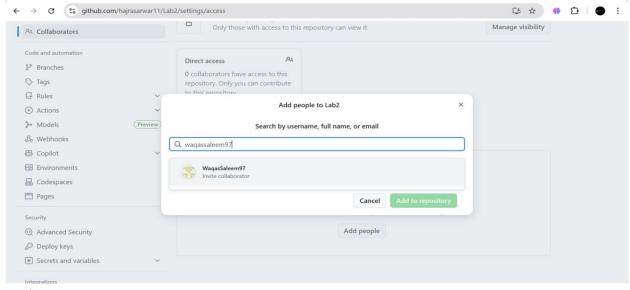
Bonus Task: Simulated Team Collaboration

1. Create a branch collab.

```
HP@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (main)

$ git checkout -b collab
git push -u origin collab
Switched to a new branch 'collab'
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'collab' on GitHub by visiting:
remote: https://github.com/hajrasarwar11/Lab2/pull/new/collab
remote:
To github.com:hajrasarwar11/Lab2.git
* [new branch] collab -> collab
branch 'collab' set up to track 'origin/collab'.
```

2. Add a collaborator on your GitHub repo.



3. Both users:

- Pull latest changes.
- Add their name and fun fact to notes.txt.
- Commit and push to the collab branch.

```
HP@DESKTOP-JFEH5TK MINGWOF,
$ git fetch origin
git checkout collab
git pull origin collab
Already on 'collab'
Your branch is up to date with 'origin/collab'.
From github.com:hajrasarwar11/Lab2
* branch collab -> FETCH_HEAD
         P@DESKTOP-JFEH5TK MINGW64 ~/Lab2 (collab)
echo "Name: Hajra Sarwar - Fun fact: I love CC" >> notes.txt
 HP@DESKTOP-JFEHSTK MINGW64 -/Lab2 (collab)

$ git add notes.txt
git commit -m "Add name & fun fact to notes.txt - Hajra Sarwar"
git push origin collab
warning: in the working copy of 'notes.txt', LF will be replaced by CRLF the next time Git touches it
[collab 0540d64] Add name & fun fact to notes.txt - Hajra Sarwar
1 file changed, 1 insertion(+)
Enumerating objects: 100% (5/5), done.
Counting objects: 100% (5/5), done.
Counting objects: 100% (5/5), done.
Writing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 404 bytes | 134.00 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:hajrasarwar11/Lab2.git
2ab9eae..0540d64 collab -> collab
```

4. Merge collab into main and push.

git checkout main git merge collab

git push origin main

```
From github.com:hajrasarwarl1/Lab2

* branch main -> FETCH_HEAD
Already up to date.

Merge made by the 'ort' strategy.
notes.txt | 1 +
1 file changed, 1 insertion(+)
Enumerating objects: 1, done.
Counting objects: 100% (1/1), done.
Writing objects: 100% (1/1), 238 bytes | 119.00 KiB/s, done.
Total 1 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To github.com:hajrasarwarl1/Lab2.git
2ab9eae..8d17b2f main -> main
```

Submission: 88 - | + - 0 11 2 2 ≡ hajrasarwar11 / Lab2 △ Q Type // to search <> Code ⊙ Issues ↑↑ Pull requests ⊙ Actions ⊞ Projects □ Wiki ① Security ☑ Insights ፡ Settings ● Watch 0 → 👺 Fork 0 → 🛣 Star 0 → Hab2 Private t Add file → <> Code → (g) Q Go to file Cloud Computing Fall 2025 + Create new file A hajrasarwar11 Merge collab contributions into main ♣ Upload files Readme **-**∕- Activity P README.md Initial commit: add README vesterday √ 0 stars db.txt Add db.txt placeholder yesterday 0 watching yesterday Add greet function to main.py main.py yesterday Releases notes.txt Add name & fun fact to notes.txt — Haira Sarwar yesterday No releases published Create a new release ☐ README Packages https://github.com/hajrasarwar11/Lab2/upload/main DESKTOP-JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab2 git init Initialized empty Git repository in D:/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab2/.git/ HP@DESKTOP-JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab2 (master) \$ git remote add origin https://github.com/hajrasarwar11/Lab2.git @DESKTOP-JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab2/Images <mark>(master)</mark> \$ git remote -v origin https://github.com/hajrasarwar11/Lab2.git (fetch) origin https://github.com/hajrasarwar11/Lab2.git (push) IP@DESKTOP-JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab2/Images <mark>(master)</mark> IP@DESKTOP-JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab2 Hajra-BSE(5A)-022 CC-Lab-2.docx' Images/ '~\$jra-BSE(5A)-022 CC-Lab-2.docx' JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab2 (master) \$ git add Images/ git commit -m "Add Images folder for Lab2 (converted from inner repo)" git branch -M main git and images; git commit - m "Add Images folder for Lab2 (converted from inner repo)" git branch - M main git push -u origin main [master (root-commit) 1516c4f] Add Images folder for Lab2 (converted from inner repo) 60 files changed, 0 insertions(+), 0 deletions(-) create mode 100644 Images/1-git_version.png create mode 100644 Images/1-git_version.png create mode 100644 Images/10-delete_git.PNG create mode 100644 Images/11.1-first_commit.PNG create mode 100644 Images/11.2-first_commit.PNG create mode 100644 Images/12.0-first_push.PNG create mode 100644 Images/12.1-first_push.PNG create mode 100644 Images/13-statusl.PNG create mode 100644 Images/13-bitnes.PNG create mode 100644 Images/14.0-commit_notes.PNG create mode 100644 Images/15-git_push.PNG create mode 100644 Images/15-git_push.PNG create mode 100644 Images/16-bugfix_branch_gui.PNG create mode 100644 Images/16-bugfix_branch_gui.PNG create mode 100644 Images/19-piranch_create.PNG create mode 100644 Images/19-piranch_create.PNG create mode 100644 Images/2.0-git_installation.PNG create mode 100644 Images/2.1-git_installation.PNG create mode 100644 Images/2.3-git_installation.PNG create mode 100644 Images/2.3-git_installation.PNG create mode 100644 Images/2.5-git_installation.PNG create mode 100644 Images/2.5-git_installation.PNG create mode 100644 Images/2.5-git_installation.PNG create mode 100644 Images/2.5-git_installation.PNG create mode 100644 Images/2.9-git_installation.PNG create mode 100644 Images/2.5-git_installation.PNG create mode 100644 Images/2.9-git_installation.PNG create mode 100644 Images/2.9-git_installation.PNG create mode 100644 Images/2.9-git_installation.PNG create mode 100644 Images/2

```
K MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab2 (main)
   git fetch origin
git pull --rebase origin main
remote: Enumerating objects: 25, done.
remote: Counting objects: 100% (25/25), done.
remote: Compressing objects: 100% (20/20), done.
remote: Total 25 (delta 10), reused 15 (delta 1), pack-reused Unpacking objects: 100% (25/25), 3.10 KiB | 13.00 KiB/s, done.
                                                                               pack-reused 0 (from 0)
From https://github.com/hajrasarwar11/Lab2
                                 bugfix/user-auth-error -> origin/bugfix/user-auth-error
collab -> origin/collab
      [new branch]
      [new branch]
                                                                      -> origin/develop
-> origin/feature-1
-> origin/main
      [new branch]
                                  develop
      [new branch]
                                  feature-1
      [new branch]
                                  main
     [new branch]
                                                                      -> origin/staging
                                  staging
From https://github.com/hajrasarwar11/Lab2
  * branch
                                 main
                                                  -> FETCH_HEAD
Successfully rebased and updated refs/heads/main.
               ?-JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib/Lab2 (main)
$ git push -u origin main
Enumerating objects: 64, done.
Counting objects: 100% (64/64), done.
Delta compression using up to 8 threads
Compressing objects: 100% (63/63), done.
Writing objects: 100% (63/63), 4.48 MiB | 897.00 KiB/s, done.
Total 63 (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/hajrasarwar11/Lab2.git
    8d17b2f..7111f00 main -> main
branch 'main' set up to track 'origin/main'.
$ git push -u origin main
      → C github.com/hajrasarwar11/Lab2/tree/main/Images
                                                                                                                                             hajrasarwar11 / Lab2 △
                                                                                                  Q Type // to search
                                                                                                                                                          \odot
                                                                                                                                                               ľ٦
   <> Code 🕙 Issues 🐧 Pull requests 🕑 Actions 🖽 Projects 🕮 Wiki 🛈 Security 🗠 Insights 🕸 Settings
   Files
                                               Lab2 / Images / 📮
                                                                                                                                                              Add file ▼
    ူ main
                                   + Q
                                                 Add Images folder for Lab2 (converted from inner repo)
                                                                                                                                                Q Go to file
                                                  Name
                                                                                                     Last commit message
                                                                                                                                                               Last commit date
 v 盲 Images
                                                  ..
       1-git_version.png
       10-delete_git.PNG
                                                  1-git_version.png
                                                                                                     Add Images folder for Lab2 (converted from inner repo)
                                                                                                                                                                2 minutes ago
       11.0-first_commit.PNG
                                                  10-delete_git.PNG
                                                                                                     Add Images folder for Lab2 (converted from inner repo)
                                                                                                                                                                2 minutes ago
       11.1-first commit.PNG
                                                  11.0-first_commit.PNG
                                                                                                     Add Images folder for Lab2 (converted from inner repo)
                                                                                                                                                                2 minutes ago
       11.2-first_commit.PNG
                                                  11.1-first_commit.PNG
                                                                                                     Add Images folder for Lab2 (converted from inner repo)
                                                                                                                                                                2 minutes ago
       12.0-first_push.PNG
       12.1-first push.PNG
                                                  11.2-first_commit.PNG
                                                                                                     Add Images folder for Lab2 (converted from inner repo)
                                                                                                                                                                2 minutes ago
       13-status1.PNG
                                                  12.0-first_push.PNG
                                                                                                     Add Images folder for Lab2 (converted from inner repo)
                                                                                                                                                                2 minutes ago
       14.0-commit notes.PNG
                                                  12.1-first_push.PNG
                                                                                                     Add Images folder for Lab2 (converted from inner repo)
                                                                                                                                                                2 minutes ago
       14.1-commit_notes.PNG
  IP@DESKTOP-JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr
                                                                                                                              Shoaib/Lab2 (main)
                                                # go to parent folder (you'll see the Lab2 folder there)
$ cd ..
git clone https://github.com/hajrasarwar11/CC-HajraSarwar-022.git
Cloning into 'CC-HajraSarwar-022'...
remote: Enumerating objects: 54, done.
remote: Counting objects: 100% (54/54), done.
remote: Compressing objects: 100% (41/41), done.
remote: Total 54 (delta 8), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (54/54), 2.77 MiB | 157.00 KiB/s, done.
Resolving deltas: 100% (8/8), done.
  IP@DESKTOP-JFEH5TK MINGW64 /d/FJWU/Semester 5/Cloud Computing/CC Lab-Engr. Shoaib
$ 1s
  CC-HajraSarwar-022/
                                                                   'Ubuntu Server CLI cheat sheet 02.04.2025.pdf'
                                         Lab1/
                                                       Lab2/
```

