

**Cloud Computing BSE-VB**

**Submitted By**

Tooba Shafique (2023-BSE-065)

**Submitted to**

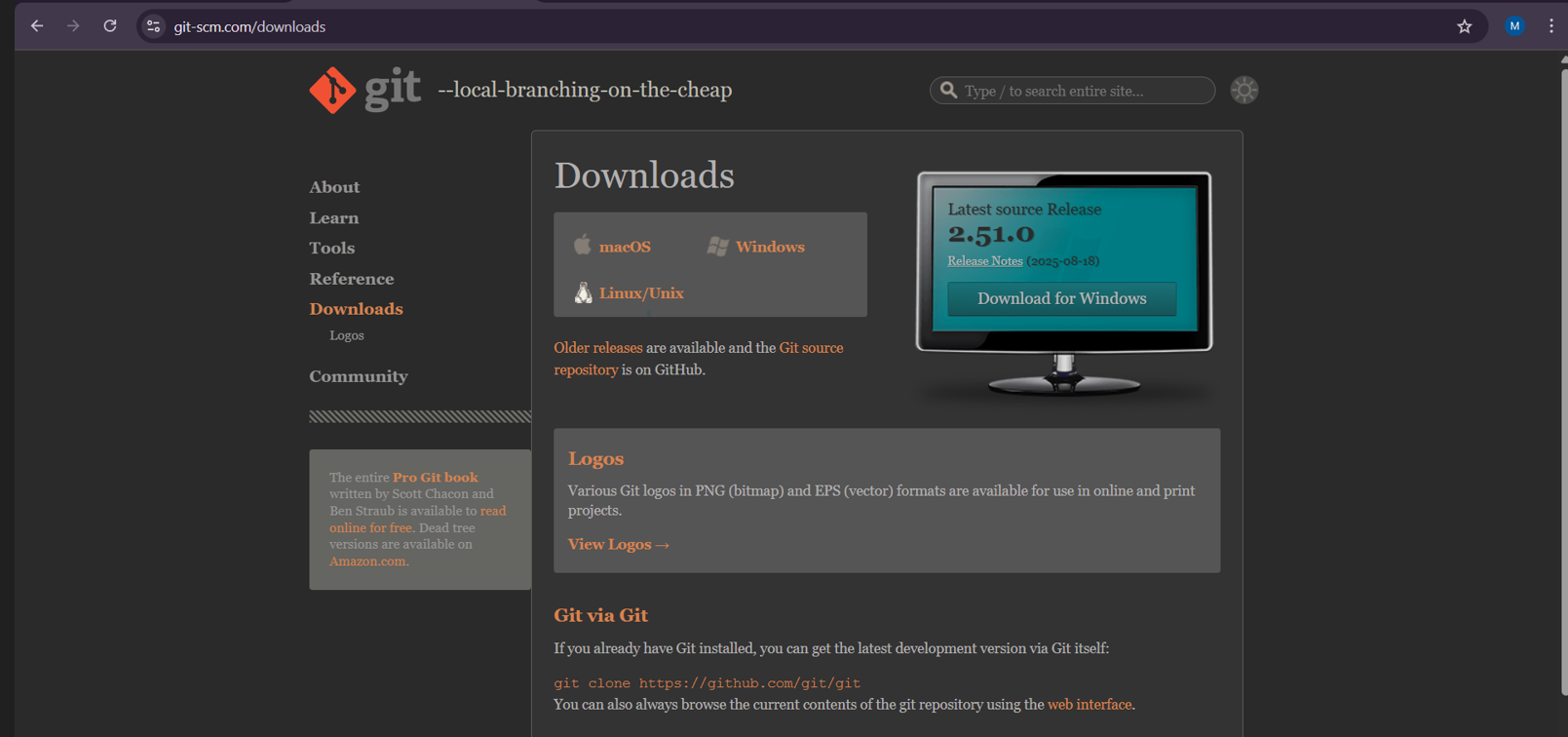
Sir Shoaib

**LAB-02**

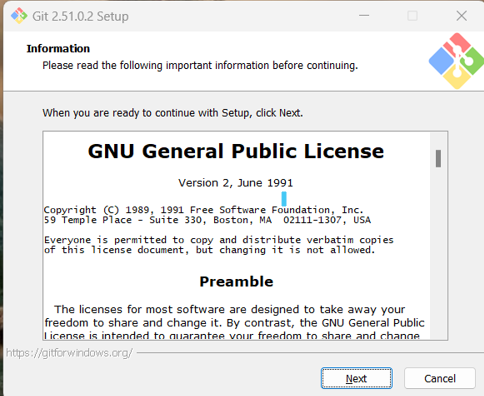
**Getting Started**

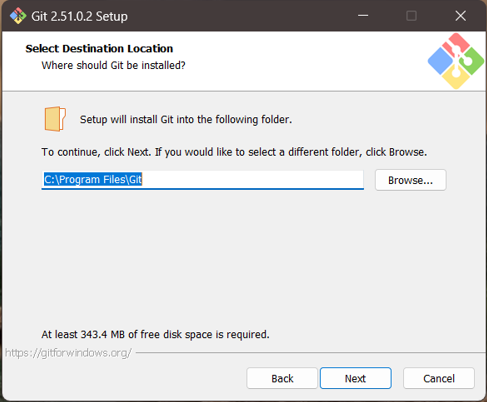
Install Git on your PC.

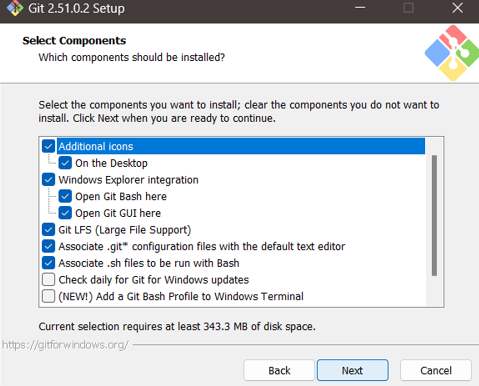
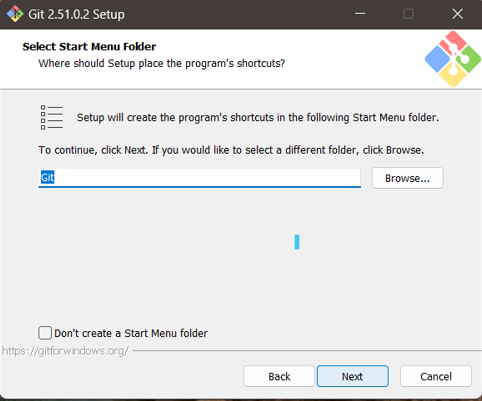
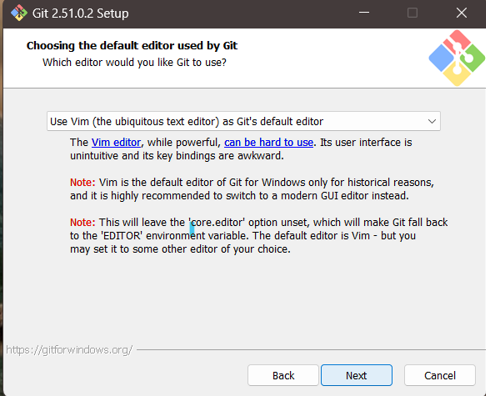
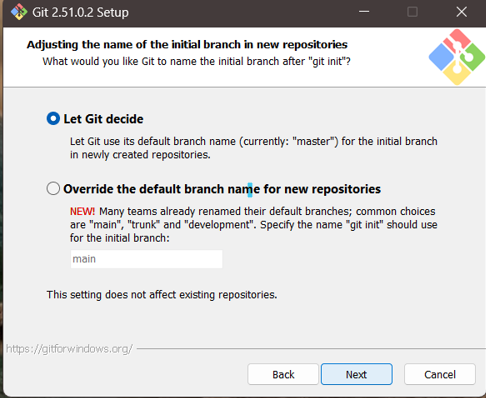
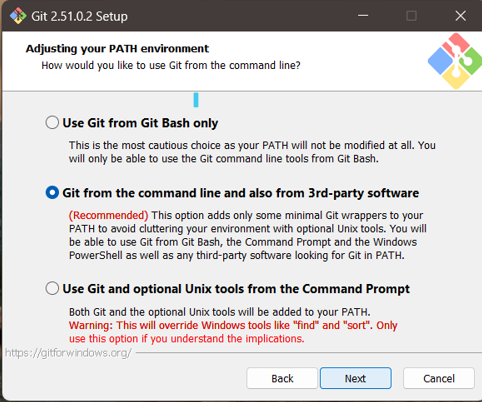
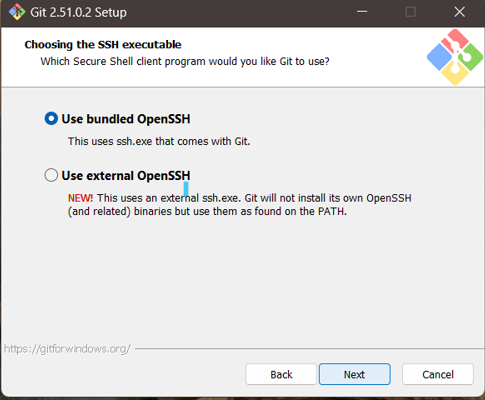
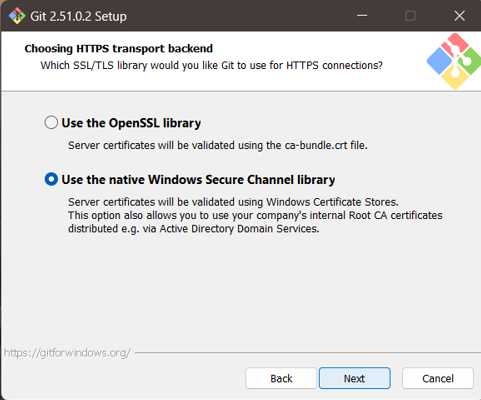
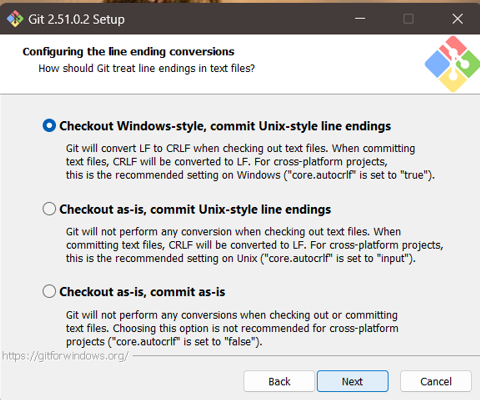
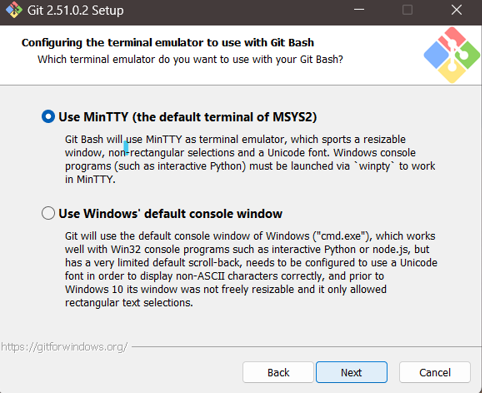
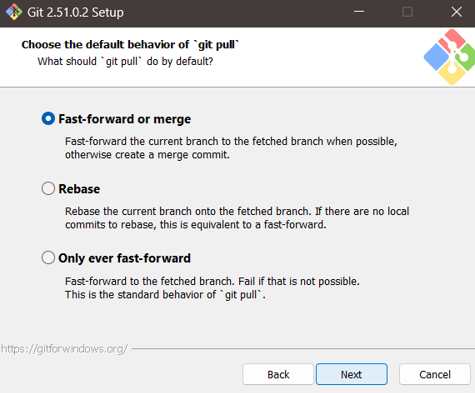
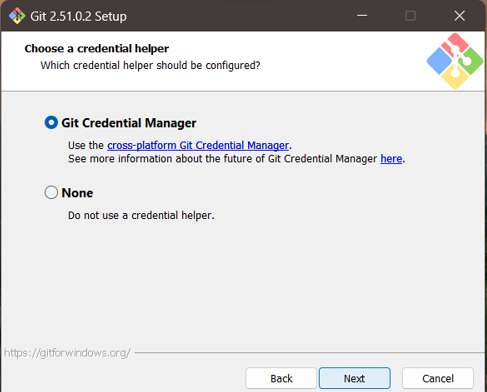
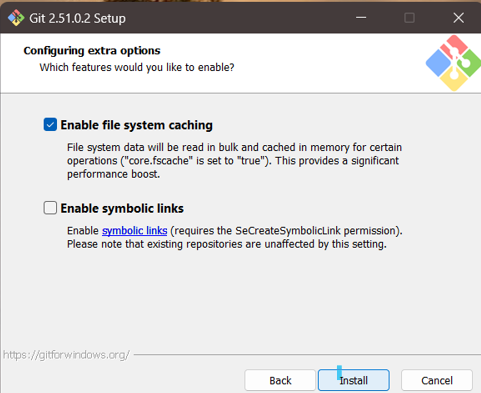
From google, download git for winndows

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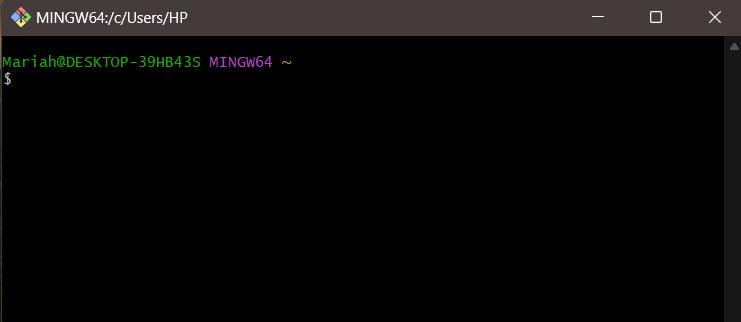
check the desired box and click on “next”

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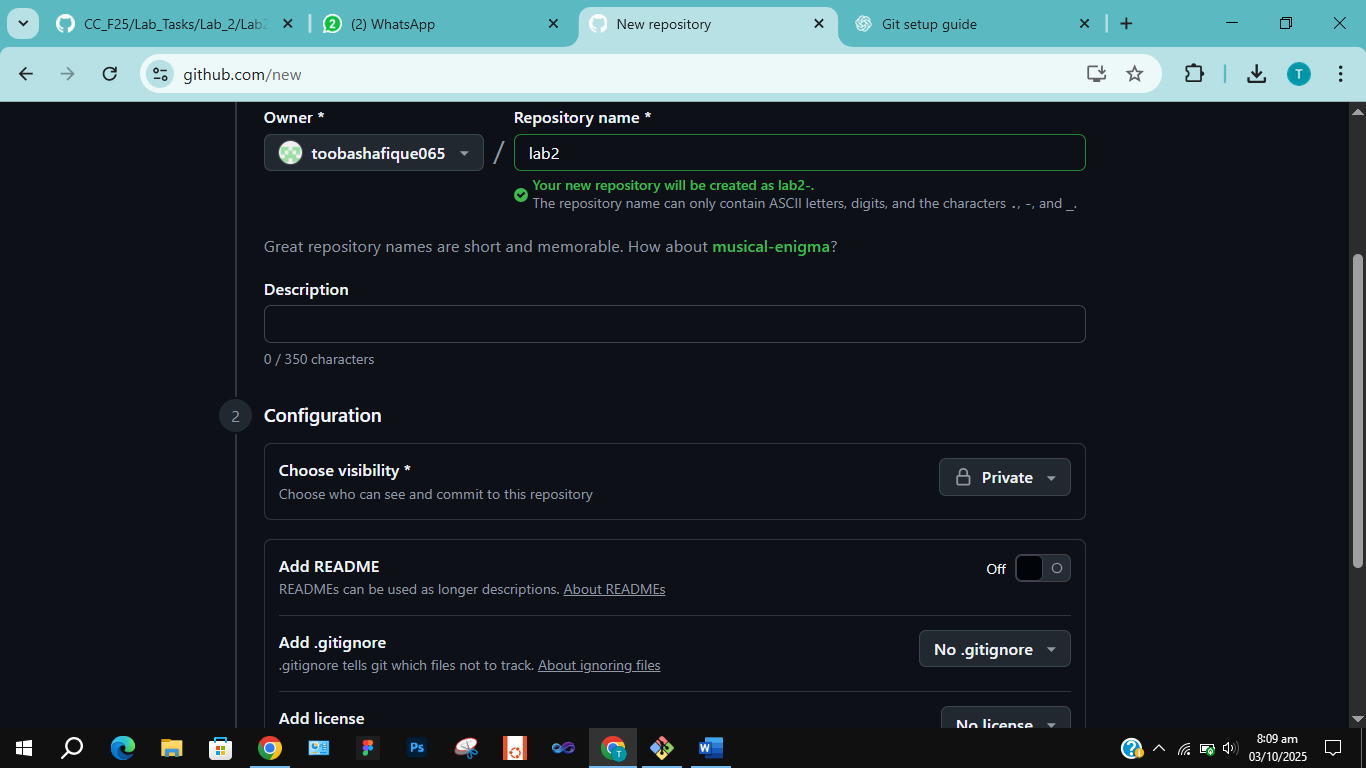
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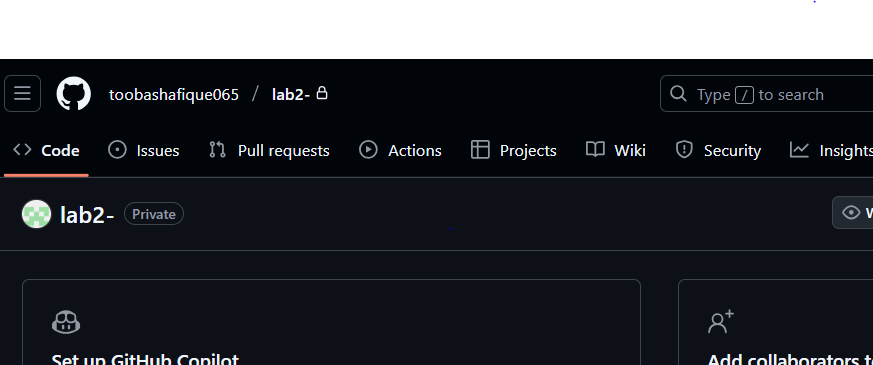
Installation Completed.



**TASK NO 01:**

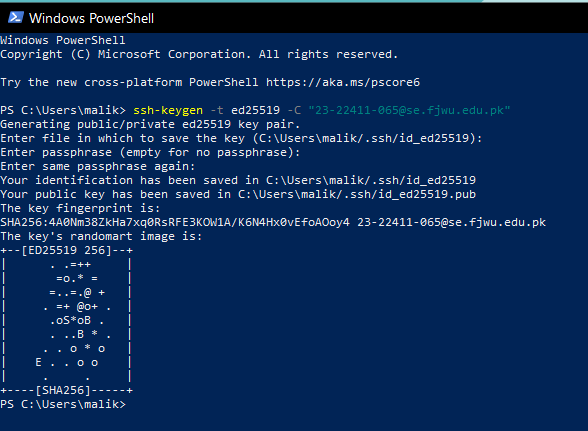
Create Private GitHub Repository

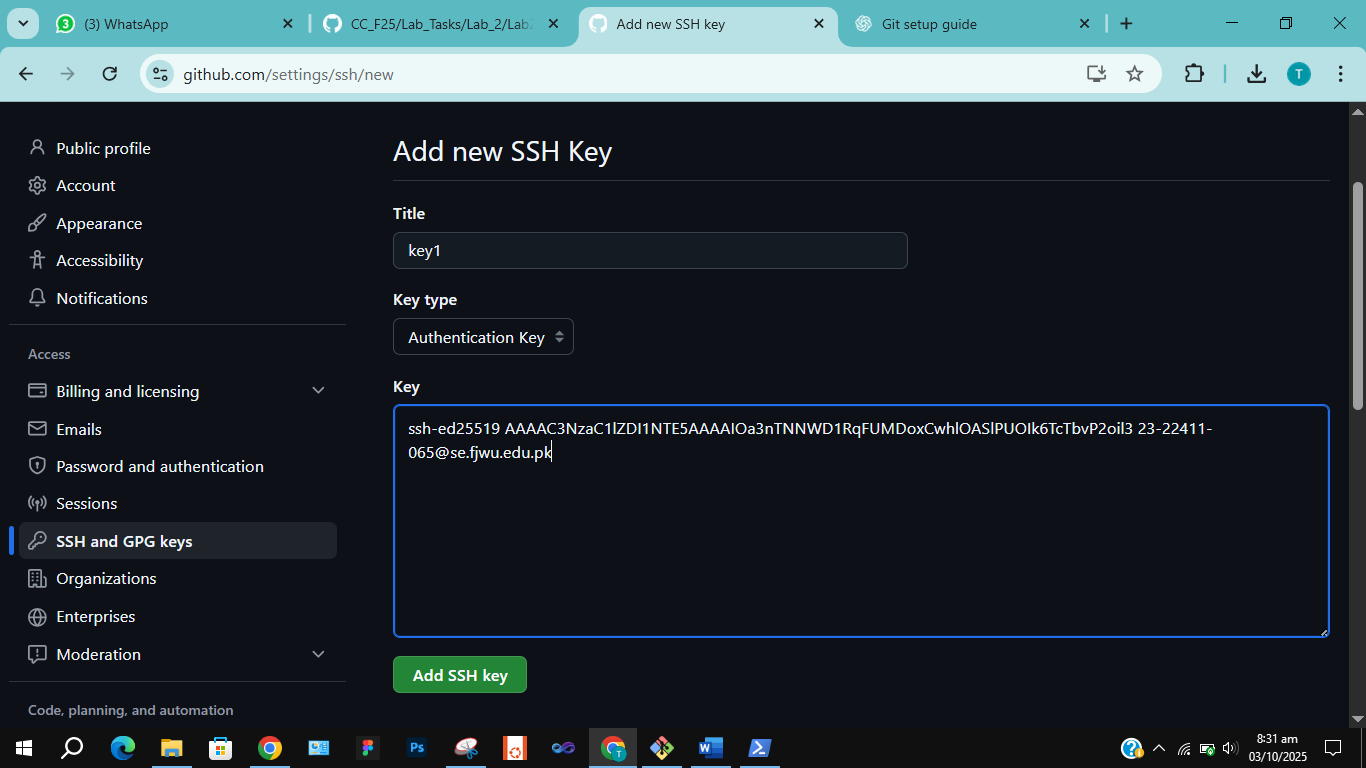


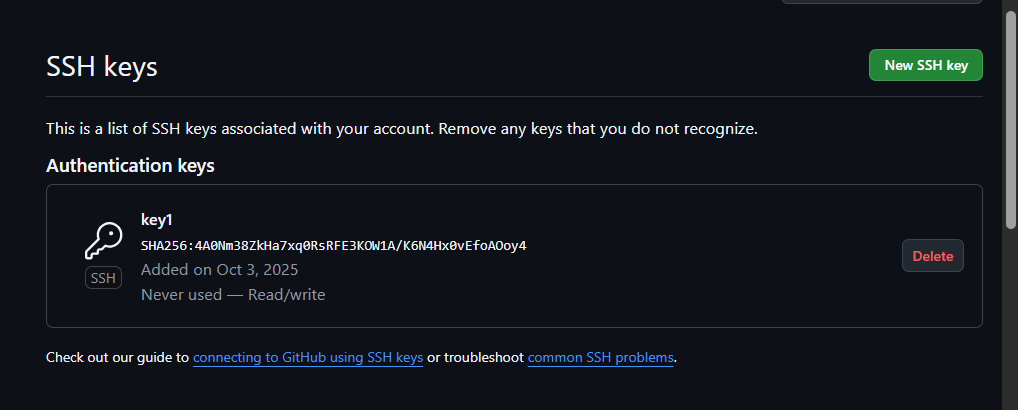


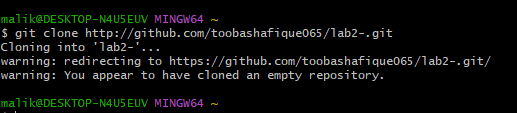
**TASK NO 02:**

Connect Repository via SSH



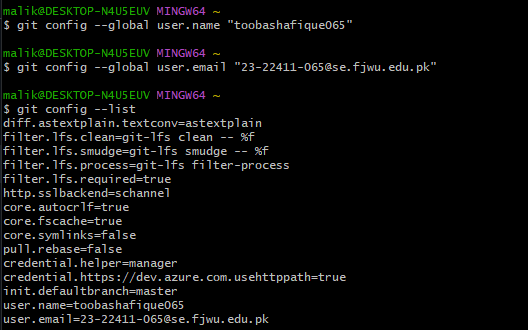






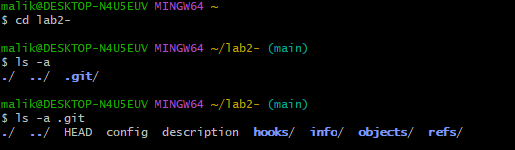
**TASK NO 03:**

Configure Git Username and Email



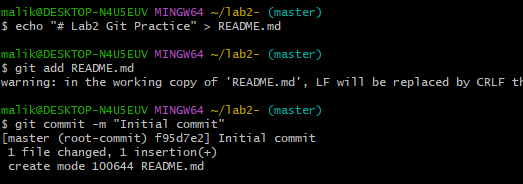
**TASK NO 04:**

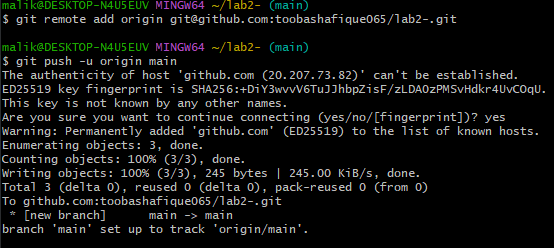
Explore the .git Folder



**TASK NO 05:**

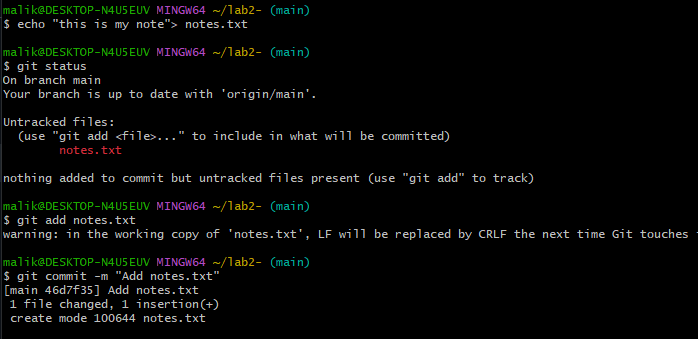
Local Repository Management

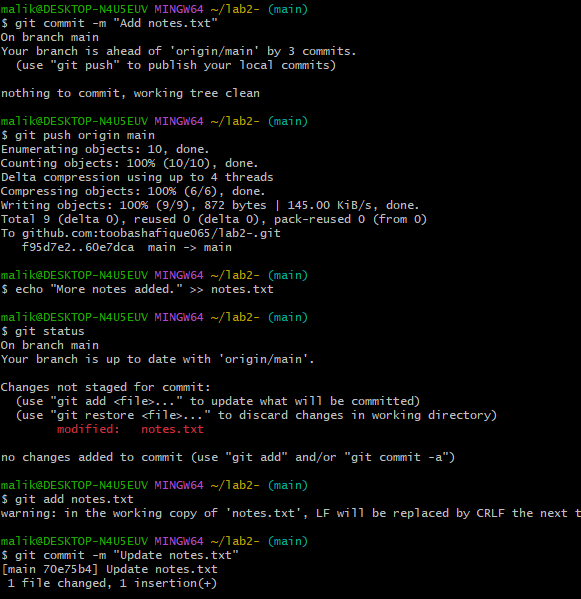




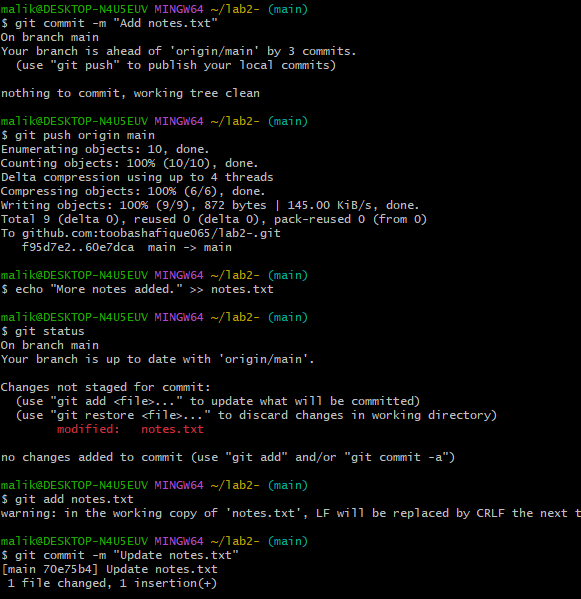
**TASK NO 06:**

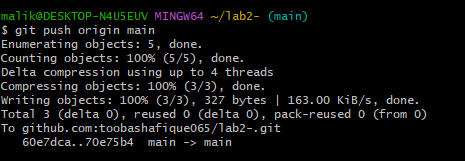
File Status & Staging

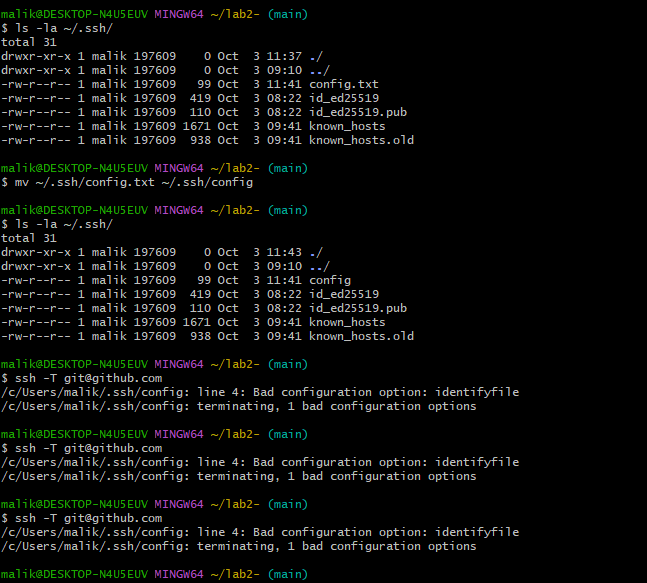


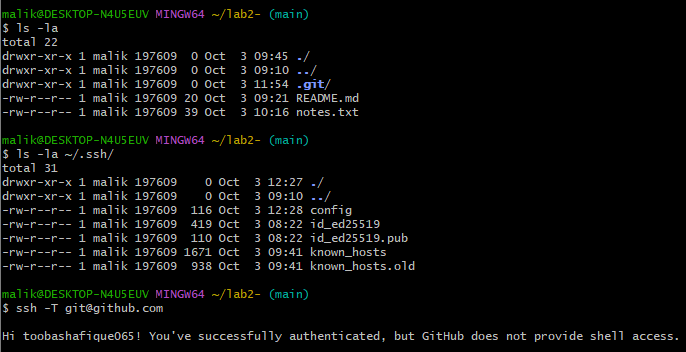


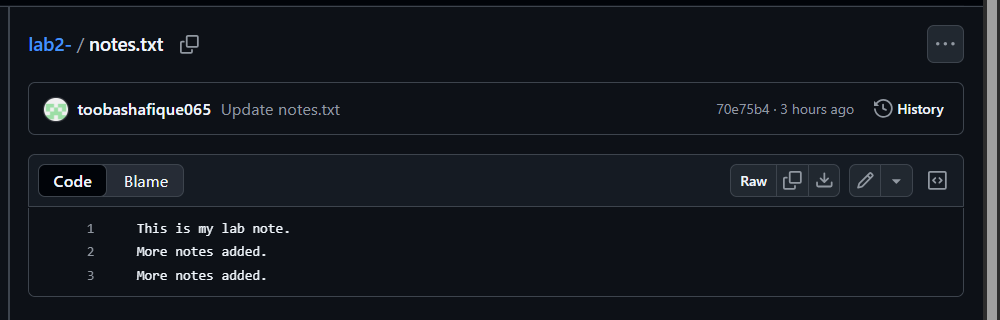
**Updated:**





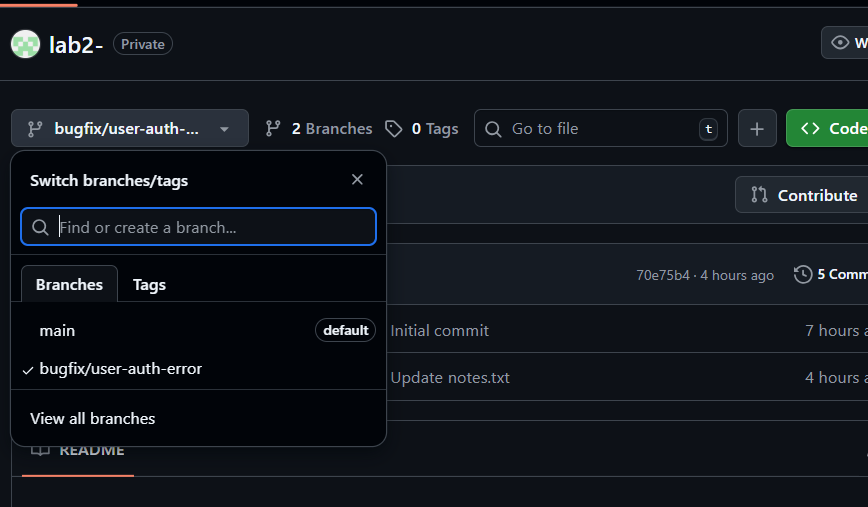


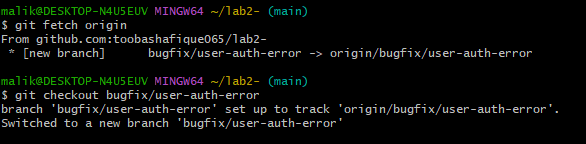




**TASK NO 07:**

Branch Creation Using GitHub GUI





**TASK NO 08:**

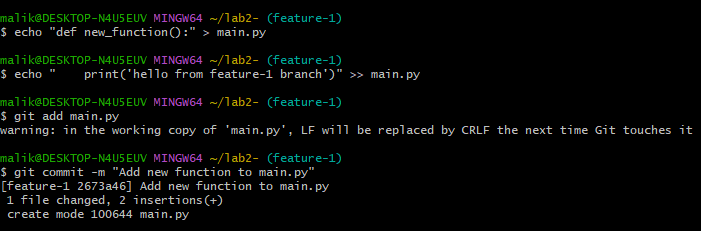
 Branch Creation and Push Using Git Bash

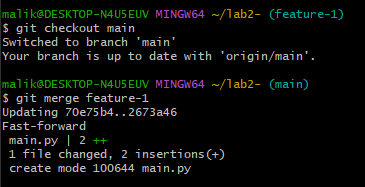


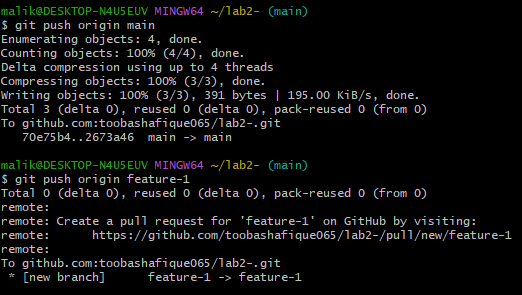
**TASK NO 09:**

Branching & Merging



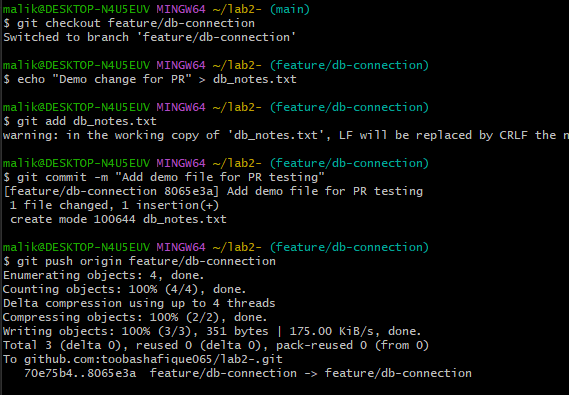




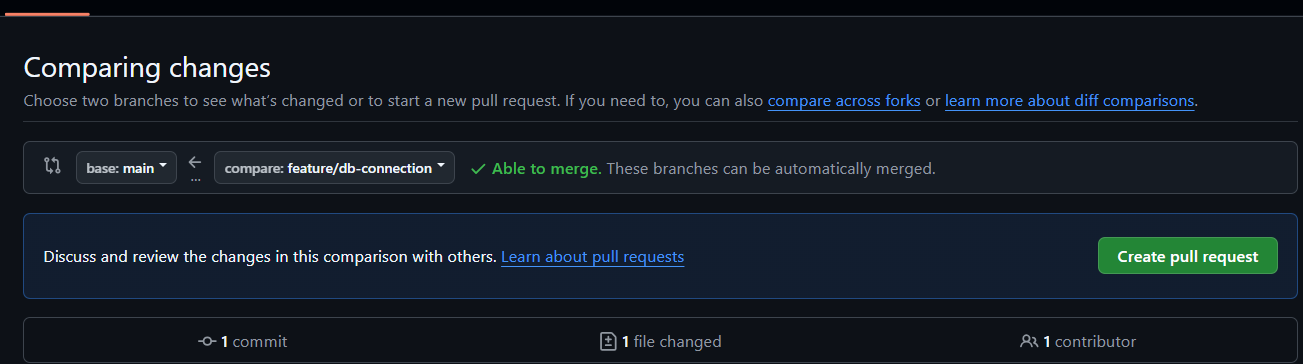


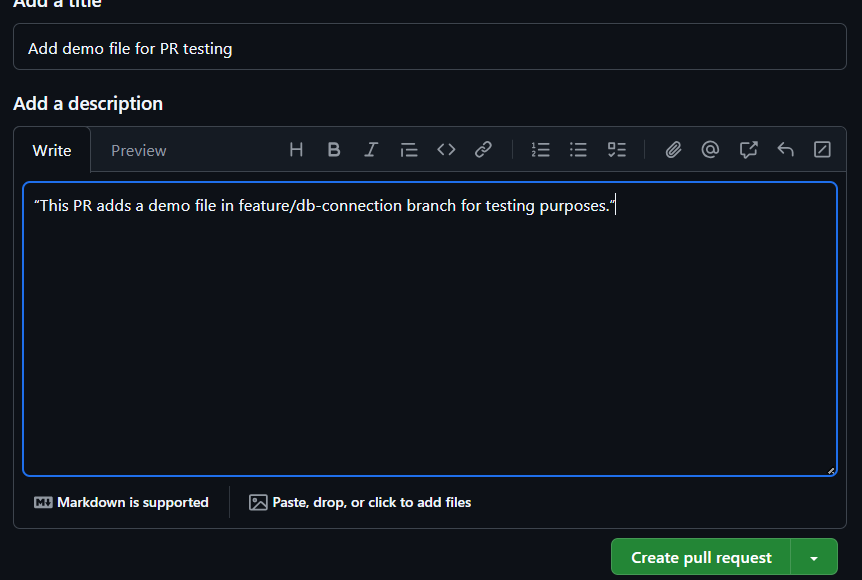
**TASK NO 10:**

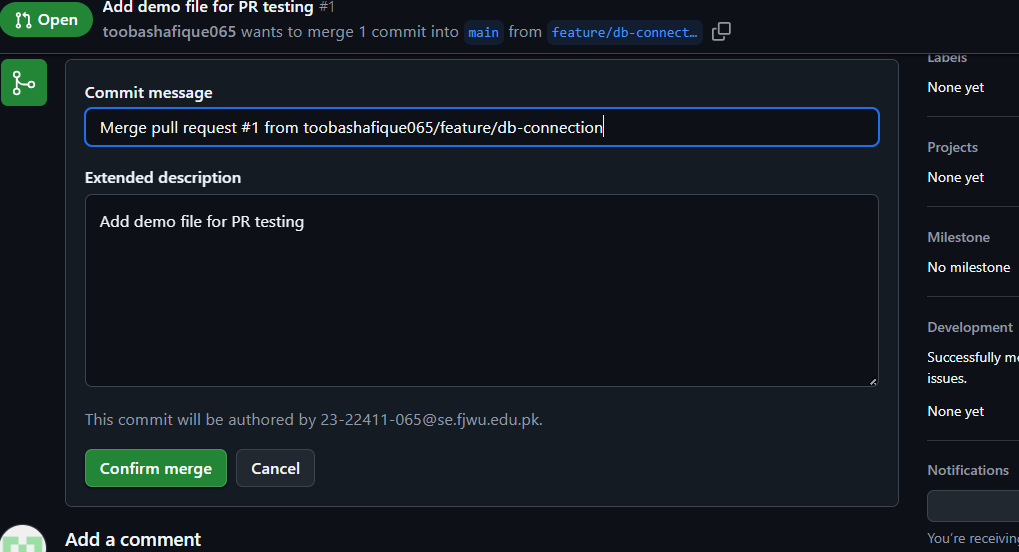
I made changes in origin feature/db-connection to create pull request.

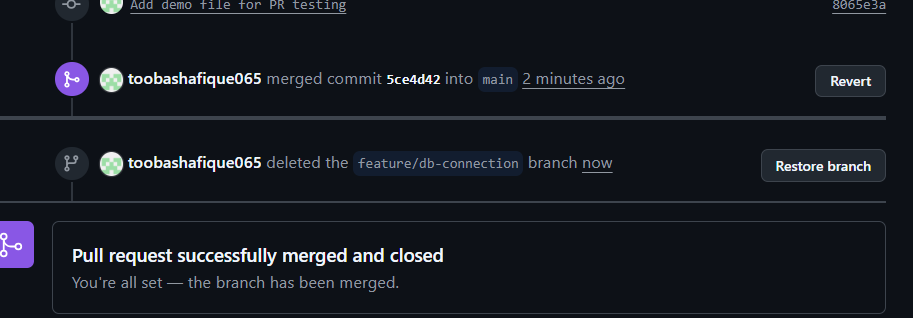


Pull Request and Branch Review (GitHub GUI)





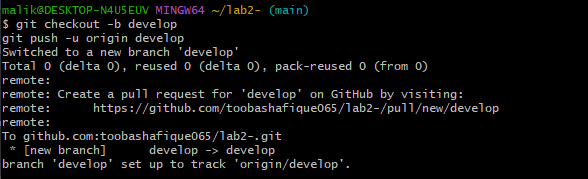


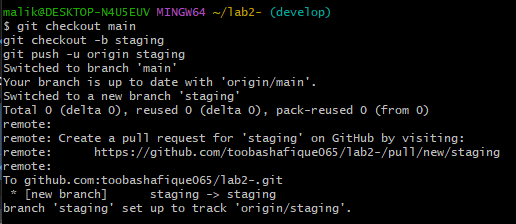


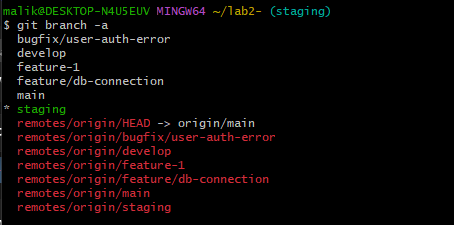
**TASK NO 11:**

Detailed Branch Strategy (Develop/Staging)

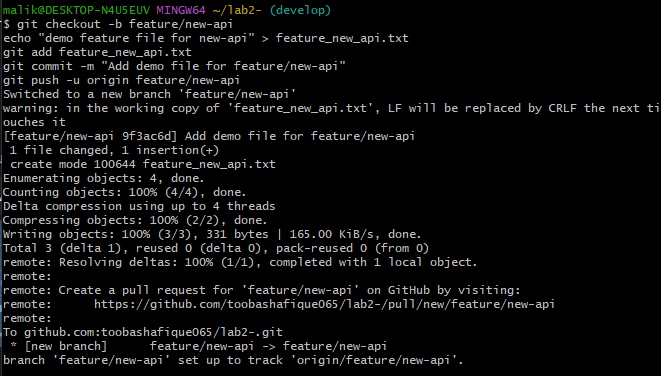
* Create long-lived branches develop and staging (and push them)

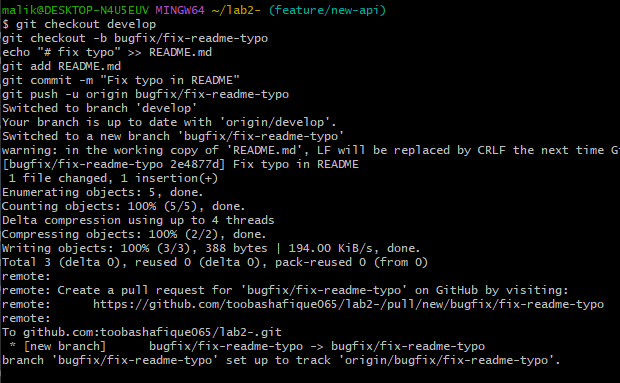


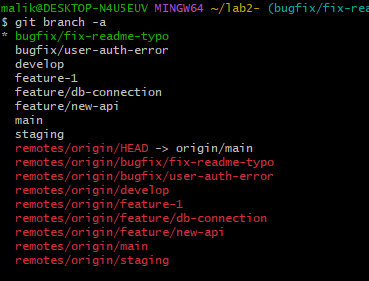




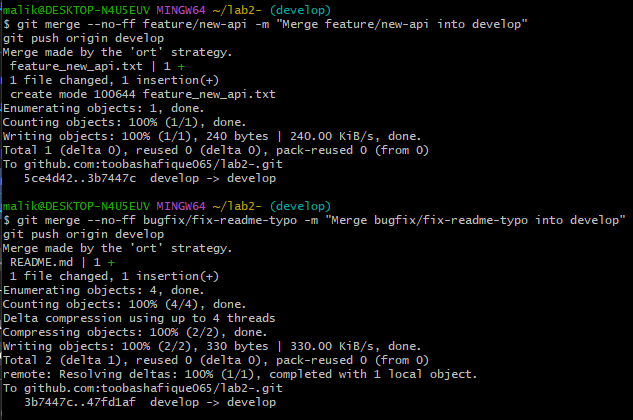
* Create example feature and bugfix branches (off develop) and push them



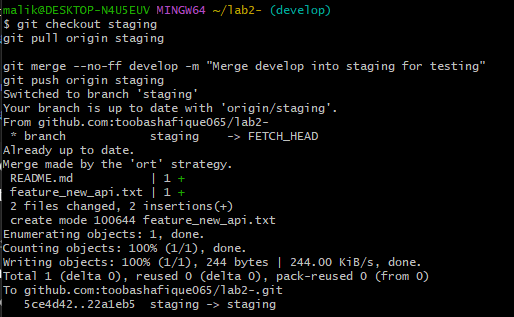




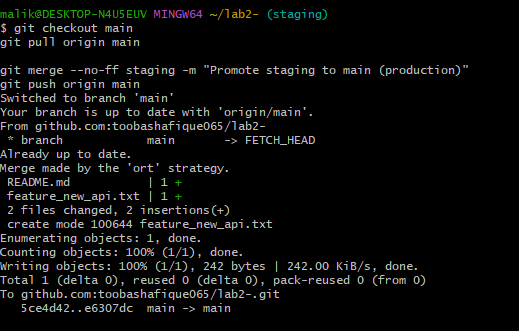
* Merge feature/bugfix into develop



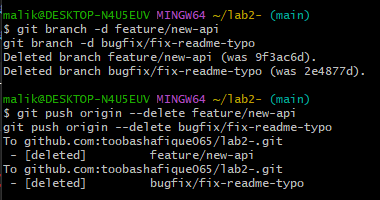
* Merge develop into staging (testing



* Final: merge staging into main (production)



* Clean-up



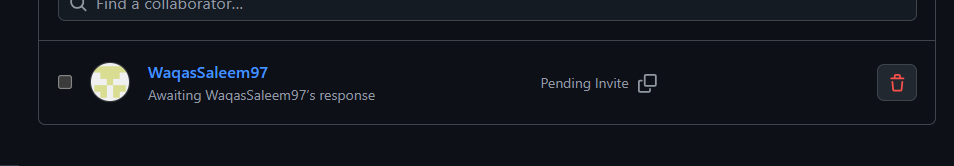
**Bonus Task:**

Simulated Team Collaboration

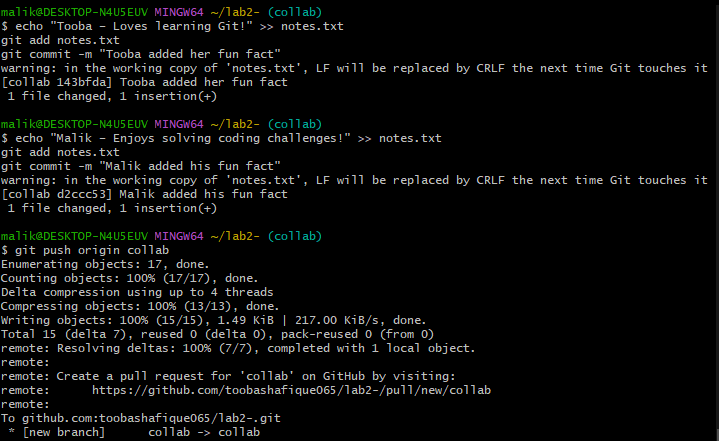
Step 1 — Create and switch to collab branch



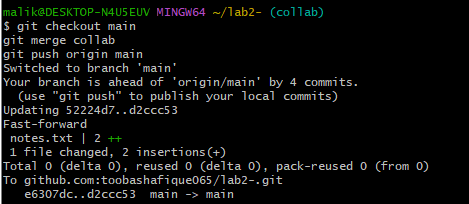
Step 2 – (Add collaborator)



Step 3 – Simulate “both users” editing the file

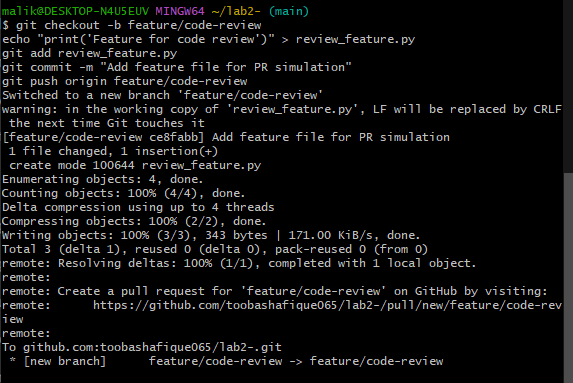


Step 4 – Merge collab → main

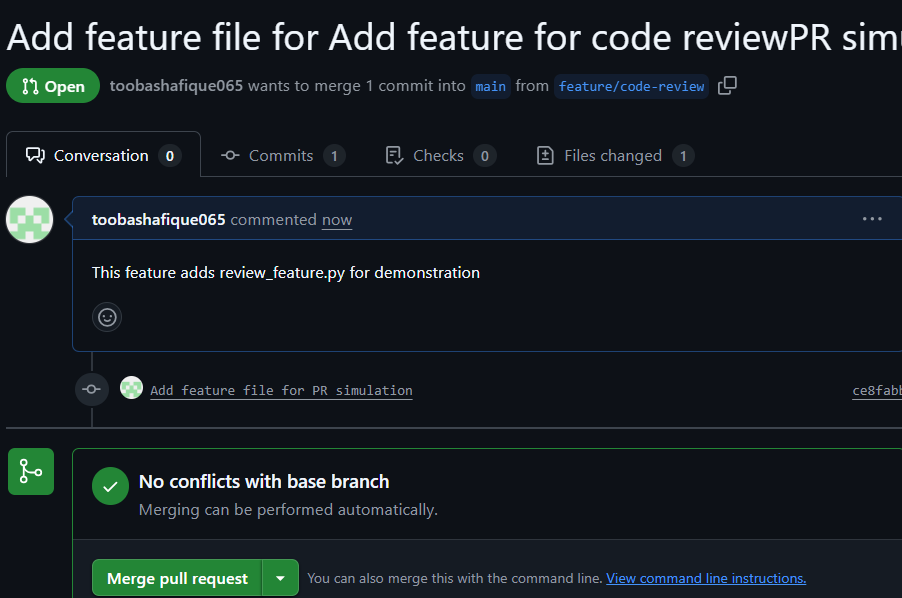


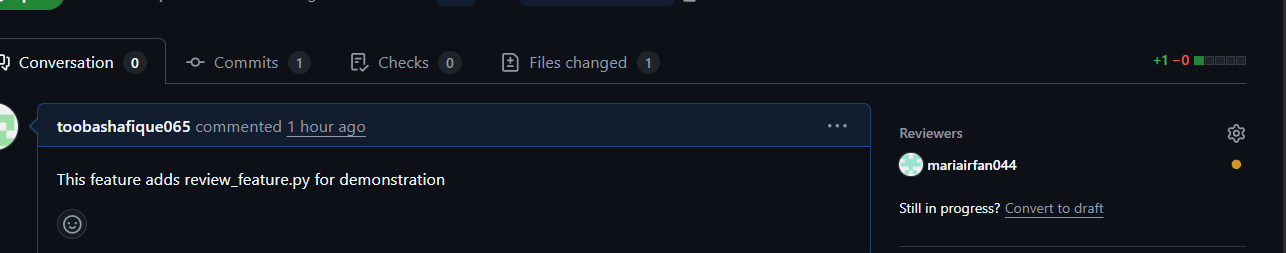
**TASK NO 12:**

Step 1 – Create a feature branch locally

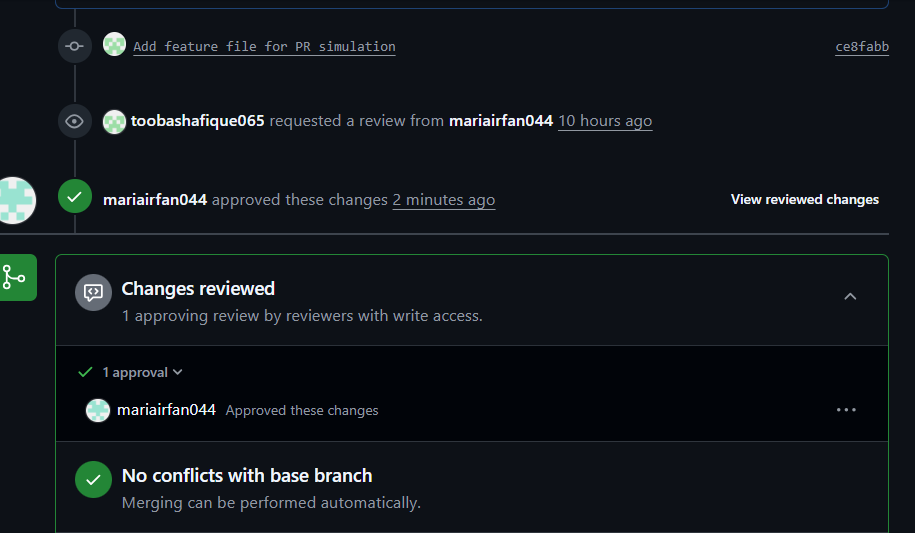


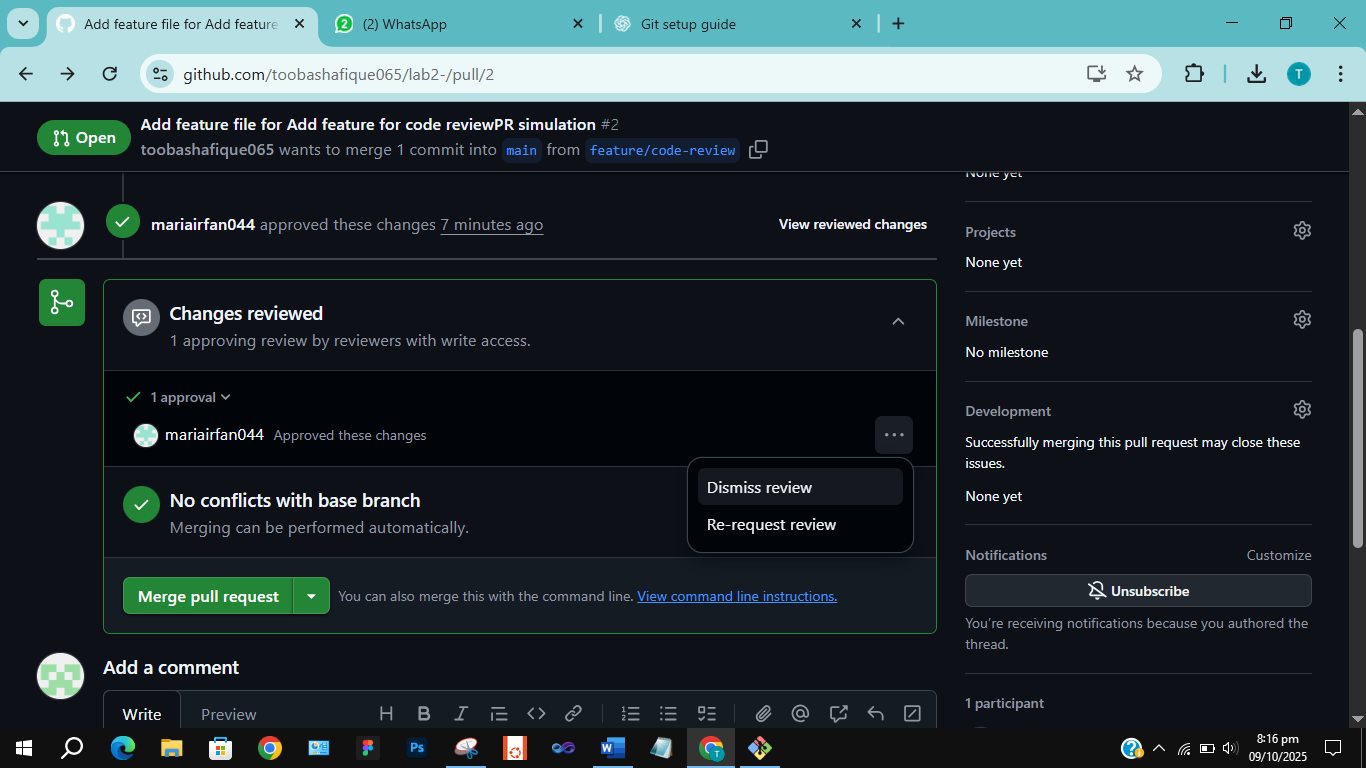
Step 2 – Create the Pull Request (GitHub UI)



Step 3 – Assign a Reviewer

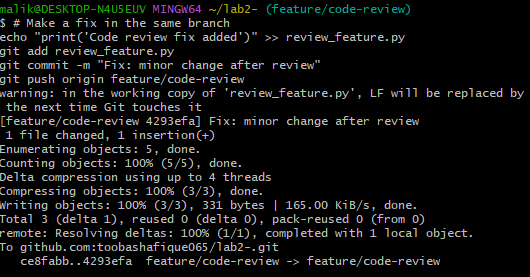
Step 4 – Reviewer Actions



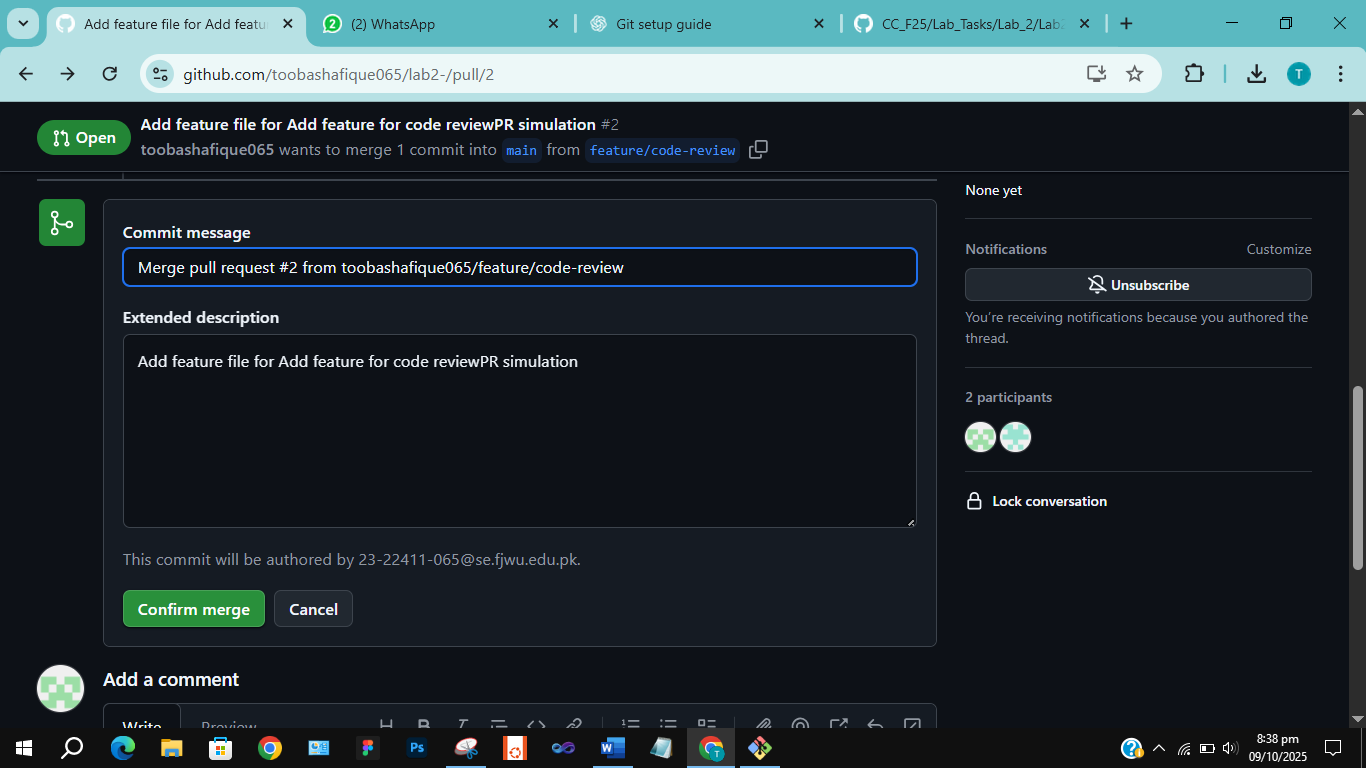


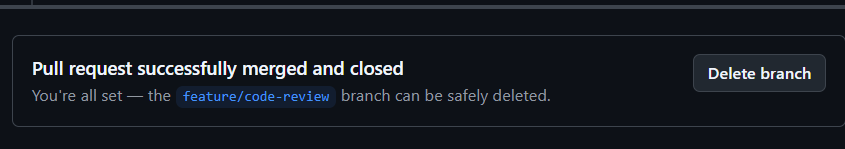


Step 5 – Author fixes issues

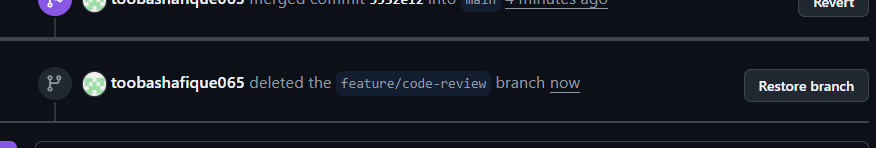


Step 6 – Merge PR



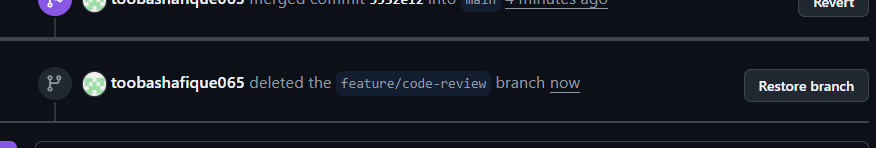


Step 7 – Branch handling after merge

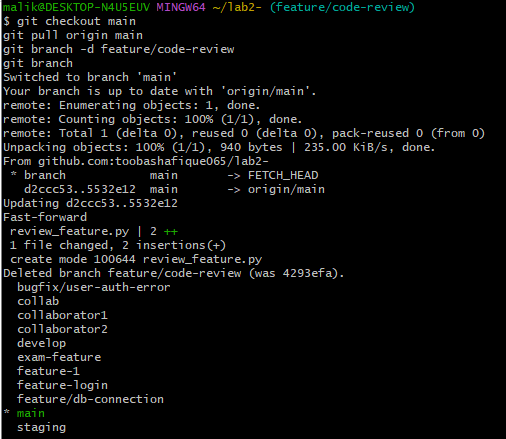


**TASK NO 13:**

Step 1 – Delete Remote Branch After Merg



Step 2 – Update Local Repository



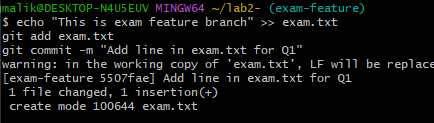
**Exam evaluation questions:**

**Q1: Advanced Branching & Merge Verification**

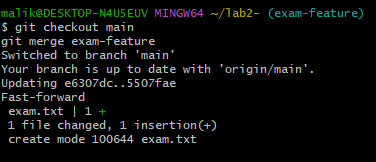
Step 1 — Create a new branch



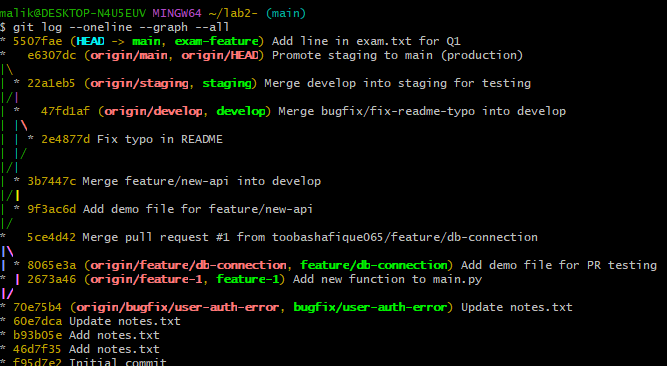
Step 2 — Make a small change & commit



Step 3 — Merge into main

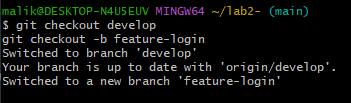


Step 4 — Show history verifying merge

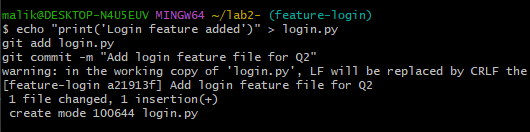


**Q2: Multi-Stage Workflow Simulation**

Step 1 — Switch to develop and create a new feature branch



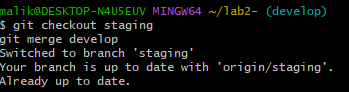
Step 2 — Add a small change and commit it



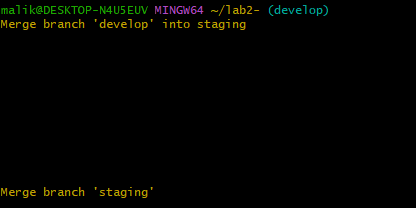
Step 3 — Merge feature-login → develop

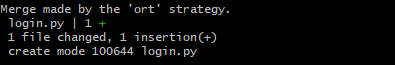


Step 4 — Merge develop → staging

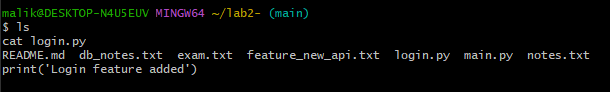


Step 5 — Merge staging → main



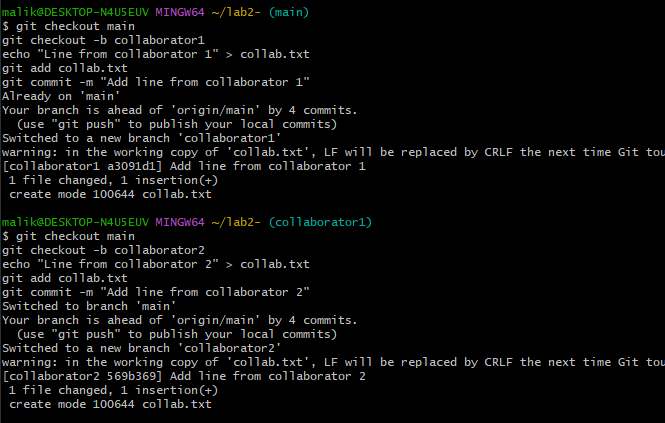


Step 6 — Verify the change reached all branches

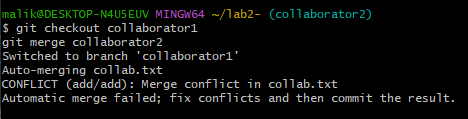


**Q3: Collaboration & Conflict Resolution**

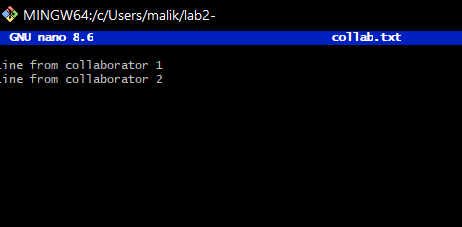
* Step 1: Work with a collaborator (create separate branches and edits)

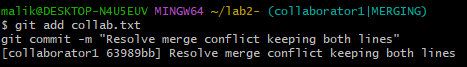


* Step 2: Attempt to Merge (create conflict)



* Step 3: Resolve the Conflict (keep both contributors’ lines)





* Step 4: Verify final file (both lines preserved)

