Name: Sadaf Riaz

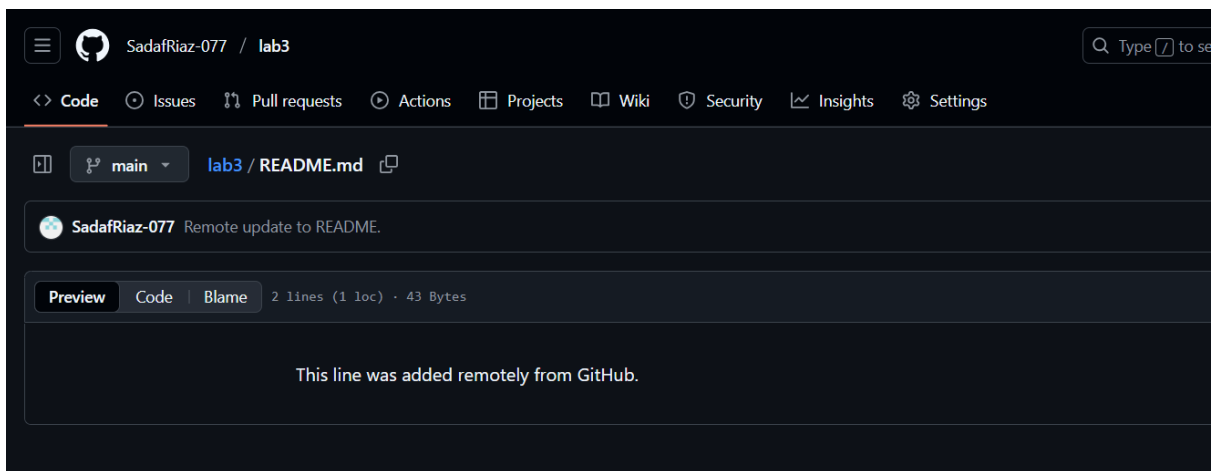# Roll No: 2023-BSE-077

Class: BSE5-B
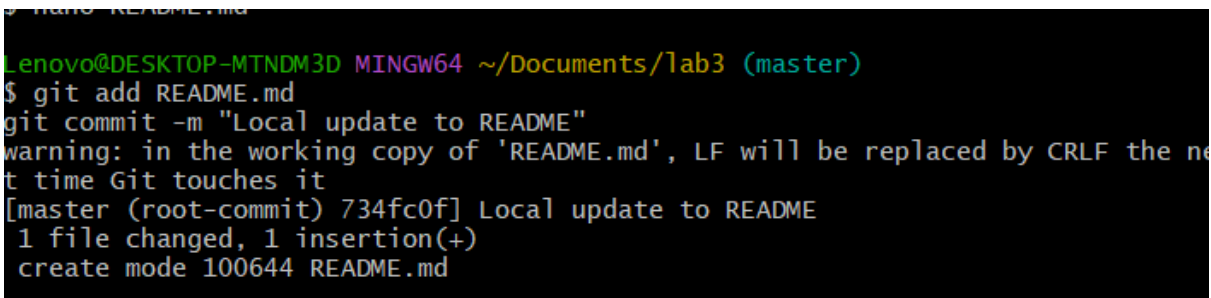
Lab 03

Task 1 – Handling Local and Remote Commit Conflicts (Pull vs Pull --rebase)
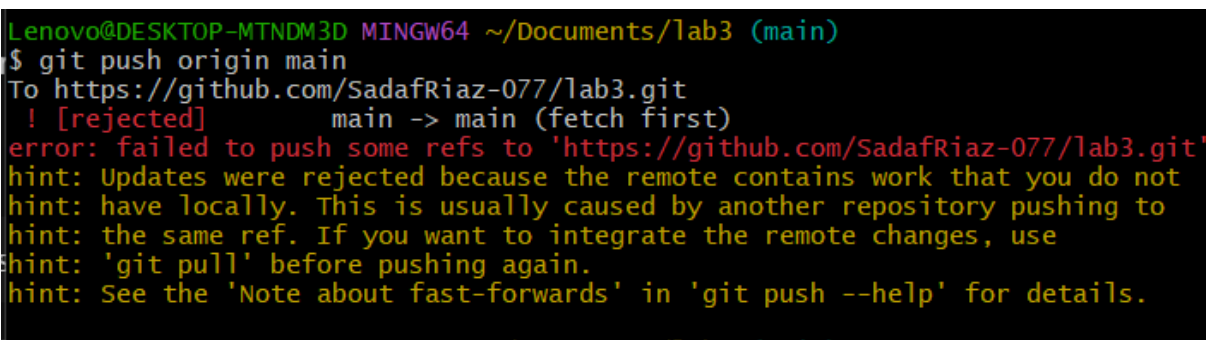
- **Remote Edit on GitHub – remote_edit.png**

- **Local Edit and Commit – local_commit.png**

- **Attempt to Push and Observe Error – push_error.pn**

- **Merge Local and Remote Changes – merge_commit.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$ git pull --no-rebase origin main
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 932 bytes | 49.00 KiB/s, done.
From https://github.com/SadafRiaz-077/lab3
 * branch            main        -> FETCH_HEAD
   c6fa6aa..fd670fa  main        -> origin/main
Updating c6fa6aa..fd670fa
Fast-forward
 README.md | 2 +-
 1 file changed, 1 insertion(+), 1 deletion(-)
```

- **Push After Merge – push_after_merge.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$ git push -u origin main
branch 'main' set up to track 'origin/main'.
Everything up-to-date
```

- **Rebase Local Commits on Remote Changes – rebase_pull.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Docume
$ git pull --rebase origin main
remote: Enumerating objects: 8, done.
remote: Counting objects: 100% (8/8), d
remote: Compressing objects: 100% (4/4)
remote: Total 6 (delta 2), reused 0 (de
Unpacking objects: 100% (6/6), 1.81 KiB
From https://github.com/SadafRiaz-077/l
 * branch            main            -> FETC
   fd670fa..7d5d10f  main            -> orig
Updating fd670fa..7d5d10f
Fast-forward
 README.md | 4 ++--
 1 file changed, 2 insertions(+), 2 del

Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Docume
$
```

- **Push After Rebase – push_after_rebase.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$ git push -u origin main
branch 'main' set up to track 'origin/main'.
Everything up-to-date

Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
```

Task 2 – Creating and Resolving Merge Conflicts Manually

- **Local Conflicting Change – local_conflict_edit.png**

- **Remote Conflicting Change – remote_conflict_edit.png**
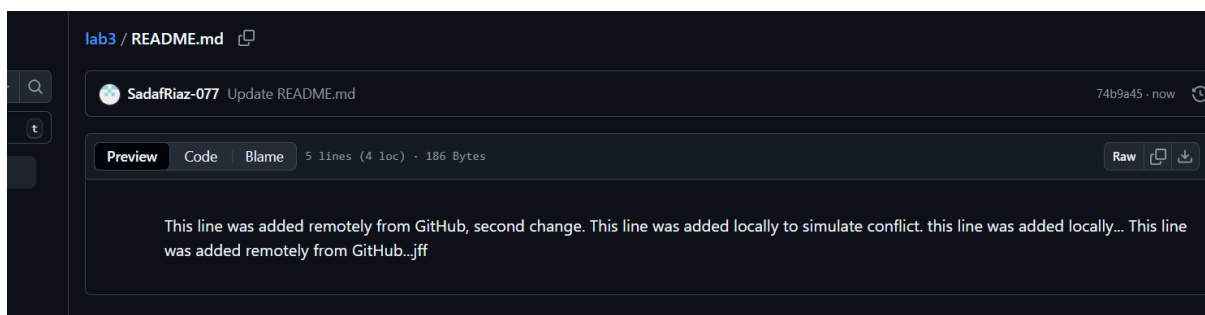
- **Local_conflict_commit png**
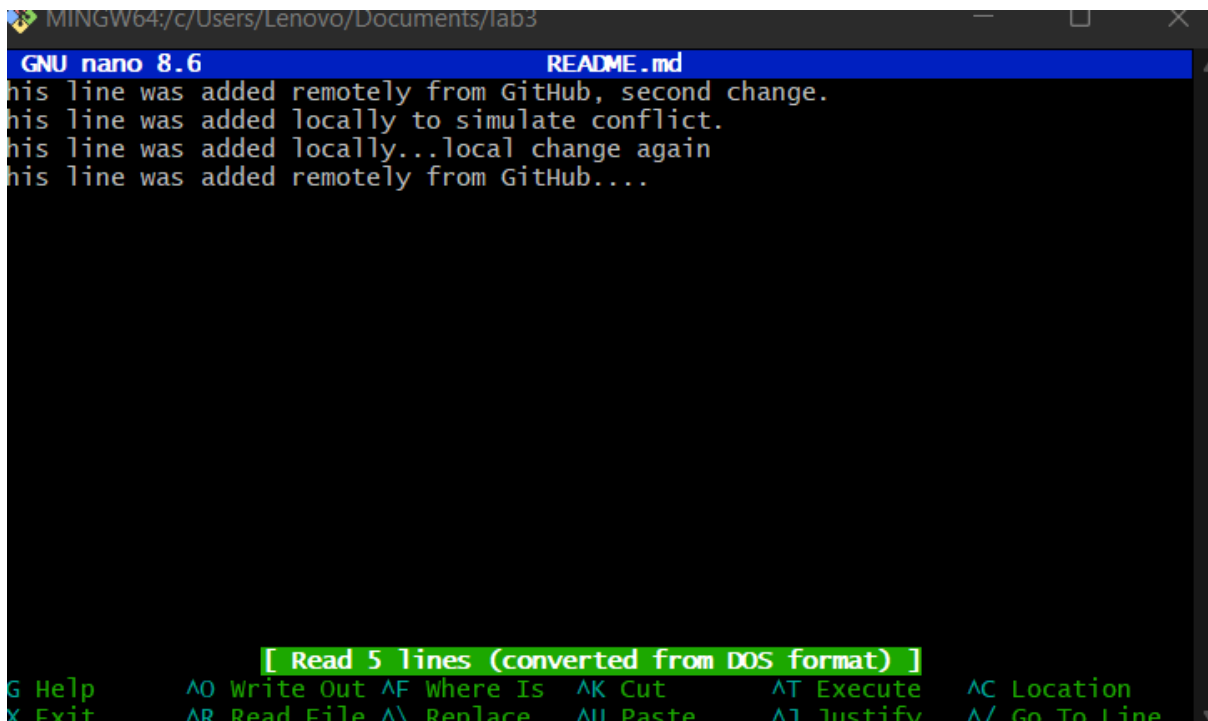
- **Pull with Rebase and Detect Conflict – conflict_message.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/Lab-3 (main)
$ git pull --rebase origin main
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 940 bytes | 37.00 KiB/s, done.
From https://github.com/SadafRiaz-077/Lab-3
 * branch            main       -> FETCH_HEAD
   cf0c091..0b2b4b1  main       -> origin/main
Updating cf0c091..0b2b4b1
Fast-forward
 README.md | 2 +-
 1 file changed, 1 insertion(+), 1 deletion(-)
```

- **Attempt to Push and Observe Error – conflict_push_error.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/Lab-3 (main)
$ git push -u origin main
To https://github.com/SadafRiaz-077/Lab-3.git
 ! [rejected]        main -> main (fetch first)
error: failed to push some refs to 'https://github.com/SadafRiaz-077/Lab-3.git'
hint: Updates were rejected because the remote contains work that you do not
hint: have locally. This is usually caused by another repository pushing to
hint: the same ref. If you want to integrate the remote changes, use
hint: 'git pull' before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/Lab-3 (main)
```

- **Continue Rebase After Conflict Resolution – rebase_continue.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main|REBASE 1/2)
$ nano README.md

  (use "git rebase --edit-todo" to view and edit)
You are currently rebasing branch 'main' on '74b9a45'.
  (all conflicts fixed: run "git rebase --continue")

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

[detached HEAD e1af874] sol
 1 file changed, 3 insertions(+)
Auto-merging README.md
CONFLICT (content): Merge conflict in README.md
error: could not apply c6f6eb6... Local conflicting change
hint: Resolve all conflicts manually, mark them as resolved with
hint: "git add/rm <conflicted_files>", then run "git rebase --continue".
hint: You can instead skip this commit: run "git rebase --skip".
hint: To abort and get back to the state before "git rebase", run "git rebase --abort".
hint: Disable this message with "git config set advice.mergeConflict false"
Could not apply c6f6eb6... # Local conflicting change
[detached HEAD adf0a52] resolved
 1 file changed, 1 deletion(-)
Successfully rebased and updated refs/heads/main.
^C
```

- **Resolving Conflicts in Editor – resolved_readme.png**

```
MINGW64:/c/Users/Lenovo/Documents/lab3
GNU nano 8.6
This line was added remotely from GitHub, second change.
This line was added locally to simulate conflict.
this line was added locally...

This line was added remotely from GitHub...jff
```

- **Continue Rebase After Conflict Resolution – rebase_continue.png**

```
$ nano README.md

  (use "git rebase --edit-todo" to view and edit)
You are currently rebasing branch 'main' on '74b9a45'.
  (all conflicts fixed: run "git rebase --continue")

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

[detached HEAD e1af874] sol
 1 file changed, 3 insertions(+)
Auto-merging README.md
CONFLICT (content): Merge conflict in README.md
error: could not apply c6f6eb6... Local conflicting change
hint: Resolve all conflicts manually, mark them as resolved with
hint: "git add/rm <conflicted_files>", then run "git rebase --continue".
hint: You can instead skip this commit: run "git rebase --skip".
hint: To abort and get back to the state before "git rebase", run "git rebase --abort".
hint: Disable this message with "git config set advice.mergeConflict false"
Could not apply c6f6eb6... # Local conflicting change
[detached HEAD adf0a52] resolved
 1 file changed, 1 deletion(-)
Successfully rebased and updated refs/heads/main.
```

- **Push Resolved Changes – push_after_resolve.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$ git push -u origin main
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 8 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (6/6), 517 bytes | 517.00 KiB/s, done.
Total 6 (delta 2), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (2/2), completed with 1 local object.
To https://github.com/SadafRiaz-077/lab3.git
   74b9a45..adf0a52  main -> main
branch 'main' set up to track 'origin/main'.

Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$
```

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

- **Create Directory and Files – push_textfiles.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$ git add .
git push origin main
warning: in the working copy of 'textfiles/a.txt', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'textfiles/b.txt', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'textfiles/c.txt', LF will be replaced by CRLF the next time Git touches it
Everything up-to-date

Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$ git commit -m "Added textfiles directory with three files"
[main 7d3e5ed] 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
```

- **Add .gitignore File – gitignore_push.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$ echo "File C content" > textfiles/c.txt

Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$ git add .
git push origin main
warning: in the working copy of 'textfiles/a.txt', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'textfiles/b.txt', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'textfiles/c.txt', LF will be replaced by CRLF the next time Git touches it
Everything up-to-date
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), 468 bytes | 468.00 KiB/s, done.
Total 6 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/SadafRiaz-077/lab3.git
   adf0a52..7d3e5ed  main -> main
[main 25080c4] Added .gitignore to ignore textfiles directory
 1 file changed, 1 insertion(+)
 create mode 100644 .gitignore
error: unknown switch `m'
usage: git push [<options>] [<repository> [<refspec>...]]

    -v, --[no-]verbose    be more verbose
    -q, --[no-]quiet      be more quiet
    --[no-]repo <repository>
                          repository
    --[no-]all            push all branches
    --[no-]branches       alias of --all
    --[no-]mirror         mirror all refs
    -d, --[no-]delete     delete refs
    --[no-]tags           push tags (can't be used with --all or --branches or --mirror)
    -n, --[no-]dry-run    dry run
    --[no-]porcelain      machine-readable output
    -f, --[no-]force      force updates
    --[no-]force-with-lease[=<refname>:<expect>]
                          require old value of ref to be at this value
    --[no-]force-if-includes
                          require remote updates to be integrated locally
    --[no-]recurse-submodules (check|on-demand|no)
                          control recursive pushing of submodules
    --[no-]thin           use thin pack
    --[no-]receive-pack <receive-pack>
                          receive pack program
    --[no-]exec <receive-pack>
                          receive pack program
    -u, --[no-]set-upstream
                          set upstream for git pull/status
    --[no-]progress       force progress reporting
    --[no-]prune          prune locally removed refs
    --no-verify           bypass pre-push hook
    --verify              opposite of --no-verify
    --[no-]follow-tags    push missing but relevant tags
    --[no-]signed[=(yes|no|if-asked)]
                          GPG sign the push
    --[no-]atomic         request atomic transaction on remote side
    -o, --[no-]push-option <server-specific>
                          option to transmit
    -4, --ipv4            use IPv4 addresses only
    -6, --ipv6            use IPv6 addresses only

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
```

- **Observe Textfiles Directory Still on Remote repo_still_has_textfiles.png**

Task 4 – Create Temporary Changes and Use git stash

- **Modify File and Commit – modified_readme.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$ git checkout -b feature-branch
Switched to a new branch 'feature-branch'

Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (feature-branch)
$ git add README.md
git commit -m "Changes the README.md file"
On branch feature-branch
nothing to commit, working tree clean
```

- **Attempt Branch Switch with Uncommitted Changes checkout_error.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$ git checkout feature-branch
echo "Line from feature branch" >> README.md
git checkout main
Switched to branch 'feature-branch'
error: Your local changes to the following files would be overwritten by checkou
t:
        README.md
Please commit your changes or stash them before you switch branches.
Aborting
```

- **Stash Changes – stash_command.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (feature-branch)
$ novo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (feature-branch)
$ git stash
warning: in the working copy of 'README.md', LF will be replaced by CRLF the nex
t time Git touches it
Saved working directory and index state WIP on feature-branch: 6ab7a5d Removed t
racked textfiles directory
bash: syntax error near unexpected token `('
bash: $: command not found
bash: warning:: command not found
bash: Saved: command not found
```

| c.txt | b.txt | Added textfiles directory with three files |
| README.md | c.txt | Added textfiles directory with three files |

- **Switch Branch Successfully – branch_switched.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (feature-branch)
$ git checkout main
Switched to branch 'main'
Your branch is ahead of 'origin/main' by 2 commits.
  (use "git push" to publish your local commits)
```

- **Return to Feature Branch – back_to_feature.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$ git checkout feature-branch
Switched to branch 'feature-branch'
```

- **Check Clean Working Directory – status_clean.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (feature-branch)
$ git status
On branch feature-branch
nothing to commit, working tree clean
```

- **Restore Stashed Changes – stash_pop.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (feature-branch)
$ git stash pop
On branch feature-branch
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   README.md

no changes added to commit (use "git add" and/or "git commit -a")
Dropped refs/stash@{0} (d56fbc8286c869f80b3366753f18cf3b0784ebae)

Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (feature-branch)
$
```

Task 5 – Checkout a Specific Commit Using git log

- **View Commit History – log_before_checkout.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (feature-branch)
$ git log --oneline
6ab7a5d (HEAD -> feature-branch, origin/main) Removed tracked textfiles director
y
25080c4 Added .gitignore to ignore textfiles directory
7d3e5ed Added textfiles directory with three files
adf0a52 resolved
e1af874 sol
74b9a45 Update README.md
5c1dad1 Update README.md
7d5d10f Update README.md
eae3d69 Update README.md
fd670fa Update README.md
c6fa6aa conflict resolved
d9fe753 Local update for conflict
a3d36e8 Remote update to README
087b7f5 local change
d7a4462 Remote update to README
37081cc Remote update for conflict
5d7f121 Local update to README
7d2747a Local update to README
7f83c0e Local update to README
c09332b Local update to README
b5520dc Local update to README
734fc0f Local update to README
:
6ab7a5d (HEAD -> feature-branch, origin/main) Removed tracked textfiles directory
25080c4 Added .gitignore to ignore textfiles directory
```

- **Checkout a Specific Commit (Detached HEAD) – detached_head.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (feature-branch)
$ git checkout 6ab7a5d
M       README.md
Note: switching to '6ab7a5d'.

You are in 'detached HEAD' state. You can look around, make experimental
changes and commit them, and you can discard any commits you make in this
state without impacting any branches by switching back to a branch.

If you want to create a new branch to retain commits you create, you may
do so (now or later) by using -c with the switch command. Example:

  git switch -c <new-branch-name>

Or undo this operation with:

  git switch -

Turn off this advice by setting config variable advice.detachedHead to false

HEAD is now at 6ab7a5d Removed tracked textfiles directory

Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 ((6ab7a5d...))
```

- **Return to Main Branch – back_to_main.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 ((6ab7a5d...))
$ git checkout main
Previous HEAD position was 6ab7a5d Removed tracked textfiles directory
Switched to branch 'main'
Your branch is ahead of 'origin/main' by 2 commits.
  (use "git push" to publish your local commits)

Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$
```

Task 6 – Resetting Commits (Soft vs Hard Reset)

- **First Commit – first_commit.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$ # Edit README.md (or any file) and add a new line
git add .
git commit -m "Added test line"
On branch main
Your branch is ahead of 'origin/main' by 2 commits.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean
```

- **Second Commit – second_commit.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$ # Edit the same file again, add another line
git add .
git commit -m "Second test commit"
On branch main
Your branch is ahead of 'origin/main' by 2 commits.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean
```

- **View Commit History Before Reset – log_before_reset.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$ git log --oneline
93275b0 (HEAD -> main) Add line on main branch to simulate conflict
fb96721 Change README on main
6ab7a5d (origin/main, feature-branch) Removed tracked textfiles directory
25080c4 Added .gitignore to ignore textfiles directory
7d3e5ed Added textfiles directory with three files
adf0a52 resolved
e1af874 sol
74b9a45 Update README.md
5c1dad1 Update README.md
7d5d10f Update README.md
eae3d69 Update README.md
fd670fa Update README.md
c6fa6aa conflict resolved
d9fe753 Local update for conflict
a3d36e8 Remote update to README
087b7f5 local change
d7a4462 Remote update to README
37081cc Remote update for conflict
5d7f121 Local update to README
7d2747a Local update to README
7f83c0e Local update to README
c09332b Local update to README
b5520dc Local update to README
734fc0f Local update to README
1ae1b73 Remote update to README
```

- **Verify File Before Reset – file_before_reset.png**

```
  GNU nano 8.6
This line was added remotely from GitHub, second change.
This line was added locally to simulate conflict.
this line was added locally...

This line was added remotely from GitHub...jff
task 4 line added

Line from main
Line from main branch



Added test line
Second test line
```

- **Perform Soft Reset – soft_reset.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$ git reset --soft HEAD~1

Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$
```

- **View Commit History After Soft Reset – log_after_soft_reset.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$ git log --oneline
93275b0 (HEAD -> main) Add line on main branch to simulate conflict
fb96721 Change README on main
6ab7a5d (origin/main, feature-branch) Removed tracked textfiles directory
25080c4 Added .gitignore to ignore textfiles directory
7d3e5ed Added textfiles directory with three files
adf0a52 resolved
e1af874 sol
74b9a45 Update README.md
5c1dad1 Update README.md
7d5d10f Update README.md
eae3d69 Update README.md
fd670fa Update README.md
c6fa6aa conflict resolved
d9fe753 Local update for conflict
a3d36e8 Remote update to README
087b7f5 local change
d7a4462 Remote update to README
37081cc Remote update for conflict
5d7f121 Local update to README
7d2747a Local update to README
7f83c0e Local update to README
c09332b Local update to README
b5520dc Local update to README
734fc0f Local update to README
1ae1b73 Remote update to README
```

- **Verify File After Soft Reset – file_after_soft_reset.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$ git reset --hard HEAD~1
HEAD is now at 93275b0 Add line on main branch to simulate conflict
```

- **Perform Hard Reset – hard_reset.png**

```
GNU nano 8.6
This line was added remotely from GitHub, second change.
This line was added locally to simulate conflict.
this line was added locally...

This line was added remotely from GitHub...jff
task 4 line added

Line from main
Line from main branch



Added test line
Second test line
```

- **View Commit History After Hard Reset – log_after_hard_reset.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$ git log --oneline
93275b0 (HEAD -> main) Add line on main branch to simulate conflict
fb96721 Change README on main
6ab7a5d (origin/main, feature-branch) Removed tracked textfiles directory
25080c4 Added .gitignore to ignore textfiles directory
7d3e5ed Added textfiles directory with three files
adf0a52 resolved
e1af874 sol
74b9a45 Update README.md
5c1dad1 Update README.md
7d5d10f Update README.md
eae3d69 Update README.md
fd670fa Update README.md
c6fa6aa conflict resolved
d9fe753 Local update for conflict
a3d36e8 Remote update to README
087b7f5 local change
d7a4462 Remote update to README
37081cc Remote update for conflict
5d7f121 Local update to README
7d2747a Local update to README
7f83c0e Local update to README
c09332b Local update to README
b5520dc Local update to README
734fc0f Local update to README
1ae1b73 Remote update to README
```

- **Check File After Hard Reset – file_after_hard_reset.png**

```
MINGW64:/c/Users/Lenovo/Documents/lab3
  GNU nano 8.6
This line was added remotely from GitHub, second change.
This line was added locally to simulate conflict.
this line was added locally...

This line was added remotely from GitHub...jff
task 4 line added

Line from main
Line from main branch
```

Task 7 – Amending the Last Commit

- **Initial Commit – first_amend_commit.png**

- **Amend Last Commit – amend_commit.png**

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

- **Create Temporary Commit – commit_temp_file.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$ echo "temporary text" >> temp.txt
git add .
git commit -m "Added temporary text file"
git push origin main
warning: in the working copy of 'temp.txt', LF will be replaced by CRLF the next
 time Git touches it
[main ae34b98] Added temporary text file
 1 file changed, 1 insertion(+)
 create mode 100644 temp.txt
Enumerating objects: 14, done.
Counting objects: 100% (14/14), done.
Delta compression using up to 8 threads
Compressing objects: 100% (11/11), done.
Writing objects: 100% (12/12), 1.18 KiB | 1.18 MiB/s, done.
Total 12 (delta 4), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (4/4), completed with 1 local object.
To https://github.com/SadafRiaz-077/lab3.git
   6ab7a5d..ae34b98  main -> main
```

- **Revert Commit – revert_commit.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$ git revert ae34b98
hint: Waiting for your editor to close the file... unix2dos: converting file C:/Users/Lenovo/Documents/Lab3/.git/COMMIT_EDITMSG to DOS format.
dos2unix: converting file C:/Users/Lenovo/Documents/Lab3/.git/COMMIT_EDITMSG to Unix format...
[main 1f7b3d7] Revert "Added temporary text file"
 1 file changed, 1 deletion(-)
 delete mode 100644 temp.txt
```

- **Push Revert Commit – revert_push.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (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), 264 bytes | 264.00 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/SadafRiaz-077/lab3.git
   ae34b98..1f7b3d7  main -> main

Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$
```

Task 9 – Force Push (With Caution)

- **Create New Branch – new_branch.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (main)
$ git checkout -b test-force
Switched to a new branch 'test-force'

Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (test-force)
$
```

- **Make and Commit Changes – force_commit.png**

```
MINGW64:/c/Users/Lenovo/Documents/lab3
GNU nano 8.6
This line was added remotely from GitHub, second change.
This line was added locally to simulate conflict.
this line was added locally...

This line was added remotely from GitHub...jff
task 4 line added

Line from main
Line from main branch
# Minor update
# Added another minor fix
git add README.md
git commit -m "Added temporary change for force push"
```

- **Push Branch Normally – push_force_branch.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (test-force)
$ git push origin test-force
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'test-force' on GitHub by visiting:
remote:      https://github.com/SadafRiaz-077/lab3/pull/new/test-force
remote:
To https://github.com/SadafRiaz-077/lab3.git
 * [new branch]      test-force -> test-force

Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (test-force)
```

- **Perform Hard Reset – hard_reset_force.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (test-force)
$ git reset --hard HEAD~1
HEAD is now at ae34b98 Added temporary text file
```

- **Normal Push After Reset (Rejected) – normal_push.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (test-force)
$ git push origin test-force
To https://github.com/SadafRiaz-077/lab3.git
 ! [rejected]        test-force -> test-force (non-fast-forward)
error: failed to push some refs to 'https://github.com/SadafRiaz-077/lab3.git'
hint: Updates were rejected because the tip of your current branch is behind
hint: its remote counterpart. If you want to integrate the remote changes,
hint: use 'git pull' before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (test-force)
```

- **Force Push Changes – force_push.png**

```
Lenovo@DESKTOP-MTNDM3D MINGW64 ~/Documents/lab3 (test-force)
$ git push origin test-force --force
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/SadafRiaz-077/lab3.git
 + 1f7b3d7...ae34b98 test-force -> test-force (forced update)
```

Task 10 – Running Gitea in GitHub Codespaces via Docker ComposeFork Gitea Repository – forked_gitea.png

- **Open Codespace – codespace_loading.png**
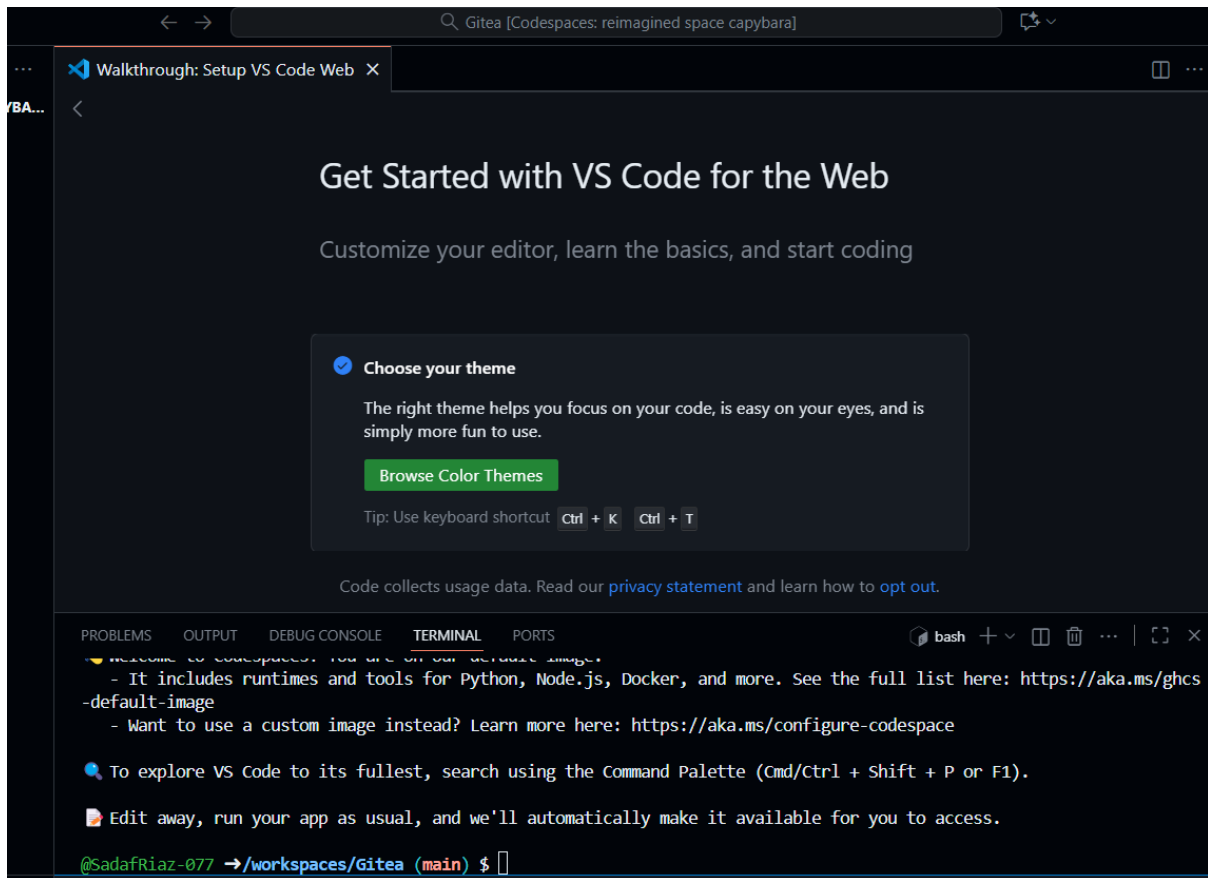
- **Start Gitea Using Docker Compose – docker_up.png**
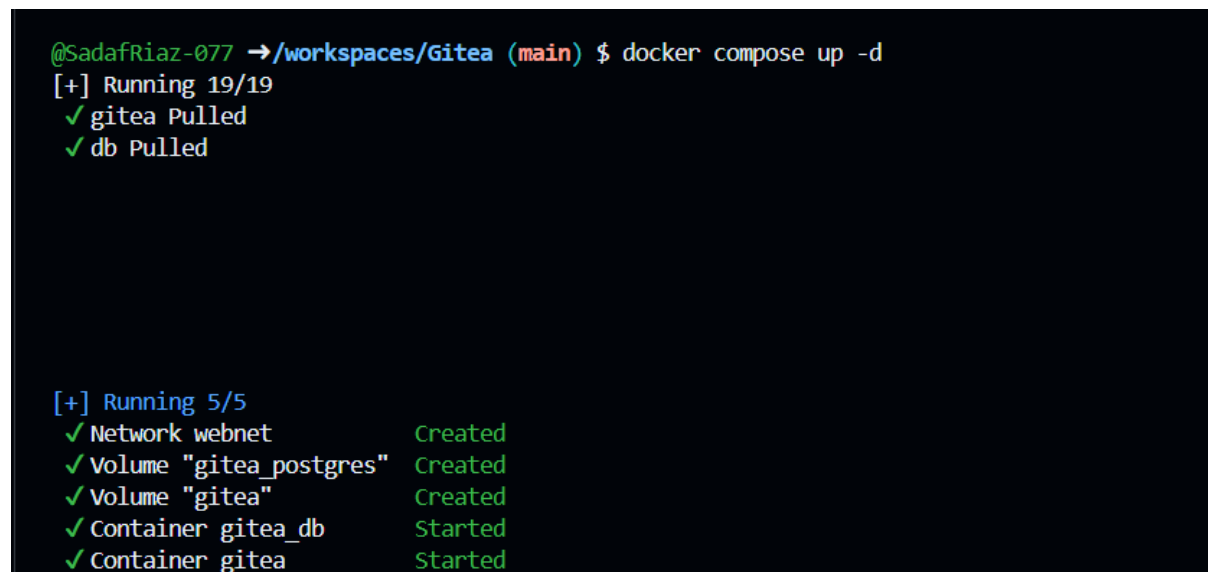
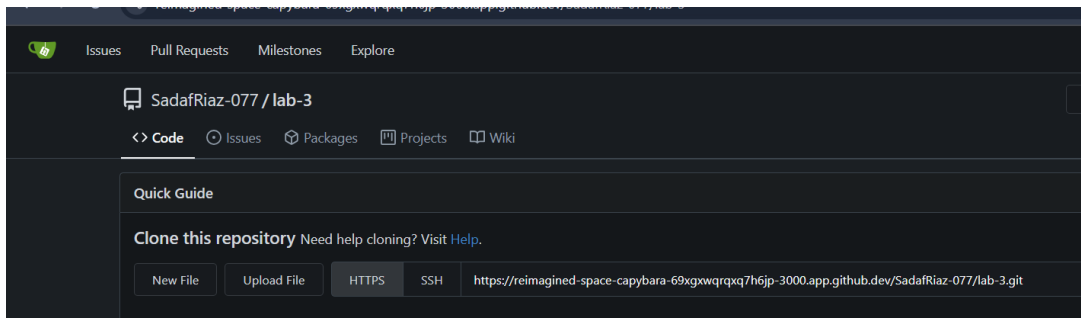- **Access Gitea Install Page – gitea_install_page.png**
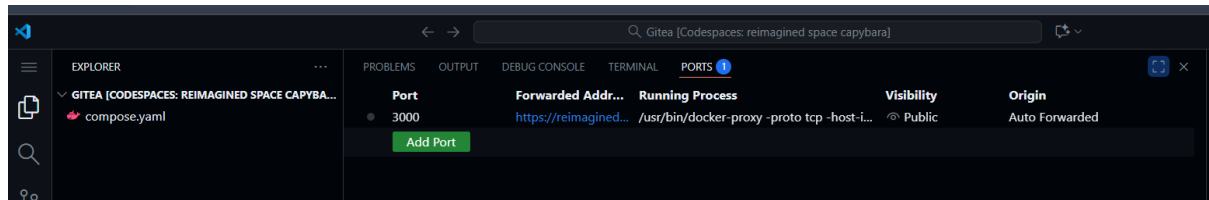
- **Admin Setup – admin_setup.png**
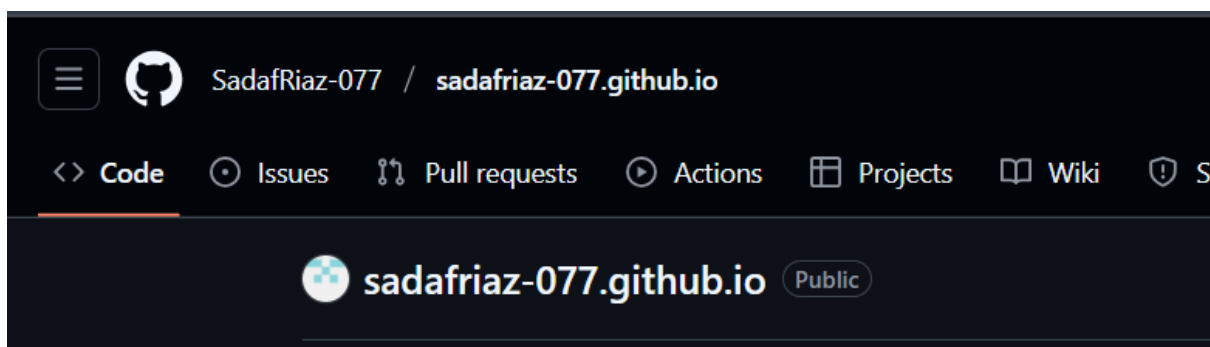

- **Login and Dashboard – gitea_dashboard.png**
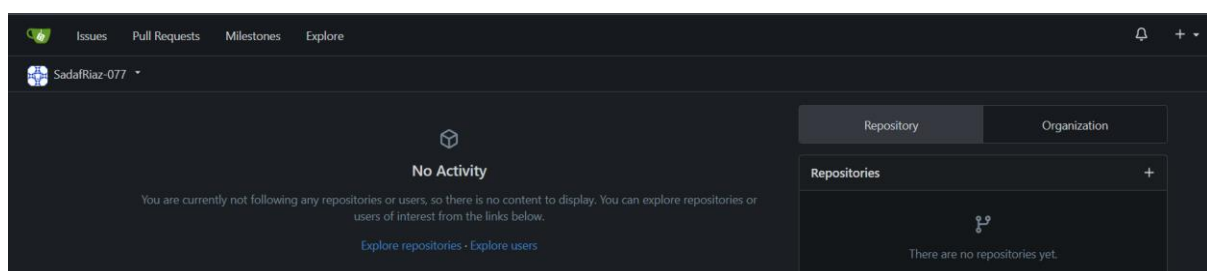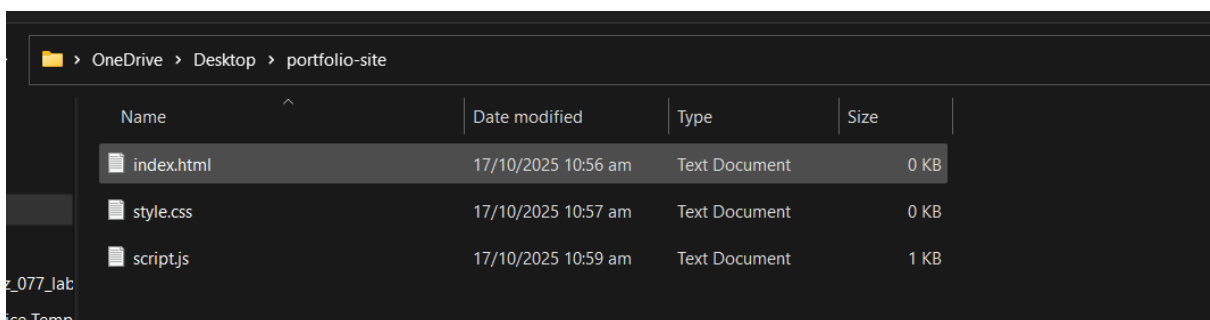

- **Create New Repository – gitea_new_repo.png**

Task 11 – Creating a GitHub Pages Portfolio Site
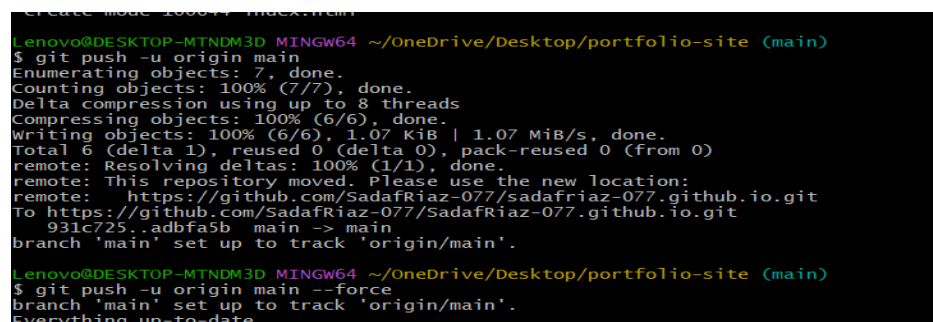
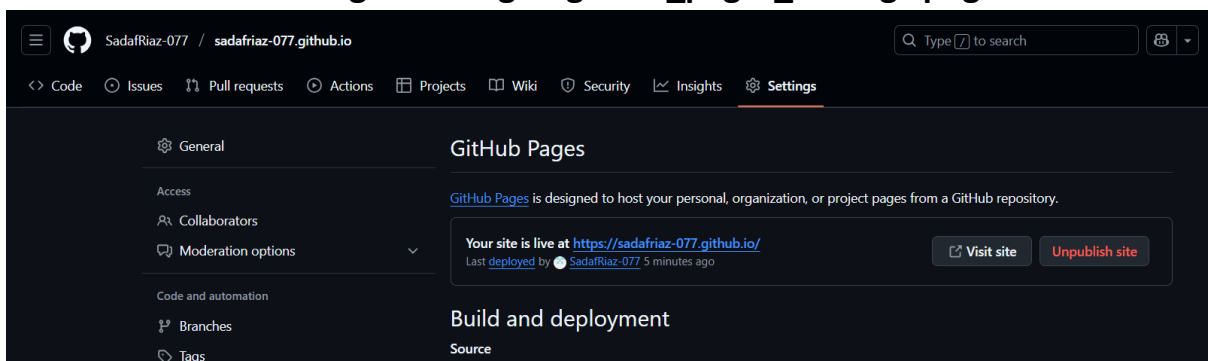- **Create GitHub Pages Repository – github_pages_repo.png**

- **Add Local Static Site Files – local_static_site.png**

- **Push Files to GitHub – push_static_site.png**

- **Check GitHub Pages Settings – github_pages_settings.png**

- **Visit Live Site – live_site.png**

Sadaf Riaz

Student | Web Developer

About Me

i am software engineering student.

Projects

- Project 1 – Hotel management system
- Project 2 – Database front end

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