

GITHUB ASSIGNMENT

My team members:

- 1) Zoha Surti
- 2) Akshay Vaghasiya
- 3) Aryan Satani
- 4) Darshan Patel

1) Creating and cloning of the repository

Created a separate feature branch

Create index.html and add content

```
suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop
$ git clone https://gitlab.com/roima_2025_intern/assignment.git
Cloning into 'assignment'...
remote: Enumerating objects: 15, done.
remote: Counting objects: 100% (15/15), done.
remote: Compressing objects: 100% (13/13), done.
remote: Total 15 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (15/15), done.
Resolving deltas: 100% (1/1), done.

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop
$ cd assignment

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (main)
$ git branch
* main

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (main)
$ git pull
Already up to date.

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (main)
$ git checkout -b zoha_branch
Switched to a new branch 'zoha_branch'

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (zoha_branch)
$ git add .

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (zoha_branch)
$ git commit -m "Created new branch"
On branch zoha_branch
nothing to commit, working tree clean
```

```

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (zoha_branch)
$ cat index.html
<html>
<body>
<p>Zoha Surti</p>
<p>Darshan Patel</p>
</body>
</html>

```

This is the content of my file

I committed the changes pushed it and performed following to resolve conflict

```

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (zoha_branch)
$ git pull origin main
remote: Enumerating objects: 13, done.
remote: Counting objects: 100% (13/13), done.
remote: Compressing objects: 100% (13/13), done.
remote: Total 13 (delta 2), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (13/13), 1.51 KiB | 16.00 KiB/s, done.
From https://gitlab.com/roima_2025_intern/assignment
 * branch                main          -> FETCH_HEAD
   dcf3411..9608505      main          -> origin/main
Auto-merging index.html
CONFLICT (content): Merge conflict in index.html
Automatic merge failed; fix conflicts and then commit the result.

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (zoha_branch|MERGING)
$ git add .

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (zoha_branch|MERGING)
$ git commit -m "Added two interns and resolved conflict"
[zoha_branch 0dc1b8d] Added two interns and resolved conflict
Committer: Surati <zoha.surati@dialogos.fi>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly:

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

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (zoha_branch)
$ git push
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 22 threads
Compressing objects: 100% (3/3), done.

```

Initiated a merge request

Conflict arised

8

Approve

Approval is optional ?

▼

⊖

Merge blocked: 1 check failed

▼

⊖

Merge conflicts must be resolved.

Resolve locally

Resolve conflicts

Merge details

- The source branch is [7 commits behind](#) the target branch.
- 1 commit and 1 merge commit will be added to main.
- Source branch will be deleted.

Activity

All activity ▼ ⌵

Resolved conflict in Notepad++

```
1 <html>
2
3
4 <head>
5 </head>
6 <body>
7 <<<<<<< HEAD
8 <p>Zoha Surti</p>
9 <p>Darshan Patel</p>
10 =====
11
12 <p>first second thrid fourth fifth</p>
13
14 <h1>Intern and Hobbies</h1>
15
16 <p> Aryan </p>
17 <p> Viraj </p>
18 <p> Parth </p>
19 <p> Harsh </p>
20 <p> Mayur </p>
21 >>>>>> 960850589f8d6794a215294742d220de449b93b4
22 </body>
23 </html>
```

```
1 <html>
2
3
4 <head>
5 </head>
6 <body>
7
8 <p>Zoha Surti</p>
9 <p>Darshan Patel</p>
10
11
12 <p>first second thrid fourth fifth</p>
13
14 <h1>Intern and Hobbies</h1>
15
16 <p> Aryan </p>
17 <p> Viraj </p>
18 <p> Parth </p>
19 <p> Harsh </p>
20 <p> Mayur </p>
21
22 </body>
23 </html>
```

After resolving conflict in notepad++, commit and push the code

```
suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (zoha_branch|MERGING)
$ git add .

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (zoha_branch|MERGING)
$ git commit -m "Added two interns and resolved conflic"
[zoha_branch 0dc1b8d] Added two interns and resolved conflic
Committer: Surati <zoha.surati@dialogos.fi>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly:

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

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (zoha_branch)
$ git push
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 22 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 405 bytes | 202.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: View merge request for zoha_branch:
remote:   https://gitlab.com/roima_2025_intern/assignment/-/merge_requests/5
remote:
To https://gitlab.com/roima_2025_intern/assignment.git
155cbb4..0dc1b8d  zoha_branch -> zoha_branch
```

After conflict resolve

Zoha Surti

Darshan Patel

first second thrid fourth fifth

Intern and Hobbies


Aryan

Viraj


Parth

Harsh


Mayur

 Open

Two interns added

 zoha_branch

into

 main

Overview 0

Commits 2


Pipelines 0


Changes 1

you create a pipeline configuration file.

Try out GitLab Pipelines

8  [Approve](#) Approval is optional 

 Ready to merge!

☒ Delete source branch ☐ Squash commits  ☐ Edit commit message

2 commits and 1 merge commit will be added to main.

Merge

Activity

All activity 

- Zoha Surti added 8 commits just now
 - [155cbb4c...96085058](#) - 7 commits from branch `main`
 - [0dc1b8dd](#) - Added two interns and resolved conflic
- [Compare with previous version](#)

Merge request to main

8✓ Approval is optional



Merged by [Zoha Surti](#) just now

[Revert](#)

[Cherry-pick](#)

Merge details

- Changes merged into main with [34129e69](#).
- Deleted the source branch.

Activity

All activity ▾



Made changes in the branch

```
change.log  index.html
1  <html>
2
3  <head>
4  </head>
5
6  <body style="background-color:powderblue;">
7
8      <p style="color:red;">manav || hobbies:playing</p>
9      <p style="color:red;">raghu || hobbies:basketball</p>
10 </body>
11 </html>
```

```

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (zoha_branch2)
$ git add .

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (zoha_branch2)
$ git commit -m "Added styles"
[zoha_branch2 5a01139] Added styles
Committer: Surati <zoha.surati@dialogos.fi>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly:

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

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

1 file changed, 8 insertions(+), 2 deletions(-)

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (zoha_branch2)
$ git push -u origin zoha_branch2
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 22 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (6/6), 684 bytes | 136.00 KiB/s, done.
Total 6 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: To create a merge request for zoha_branch2, visit:
remote:   https://gitlab.com/roima_2025_intern/assignment/-/merge_requests/new?merge_request%5Bsource_branch%5D=zoha_branch2
remote:
To https://gitlab.com/roima_2025_intern/assignment.git
 * [new branch]      zoha_branch2 -> zoha_branch2
branch 'zoha_branch2' set up to track 'origin/zoha_branch2'.

```

Conflict occurs because the changes are made in the same file in main. Hence if we try to push the changes may override which will not be allowed. Hence conflict occurs

```

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (zoha_branch2)
$ git pull origin main
remote: Enumerating objects: 7, done.
remote: Counting objects: 100% (7/7), done.
remote: Compressing objects: 100% (7/7), done.
remote: Total 7 (delta 2), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (7/7), 939 bytes | 24.00 KiB/s, done.
From https://gitlab.com/roima_2025_intern/assignment
 * branch      main      -> FETCH_HEAD
   20ac3c6..54dc68b main  -> origin/main
Auto-merging index.html
CONFLICT (content): Merge conflict in index.html
Automatic merge failed; fix conflicts and then commit the result.

```

<html>

>>>>>> 5a01139b: Added styles (our changes)

<head>

</head>

<body style="background-color:powderblue;">

<p style="color:red;">manav || hobbies:playing</p>

<p style="color:red;">raghu || hobbies:basketball</p>

<head>

</head>

<body>

<p>harsh</p>

<p>shiv</p>

<p>Zoha Surti</p>

<p>Darshan Patel</p>

<p>first second thrid fourth fifth</p>

<h1>Intern and Hobbies</h1>

<p> Aryan </p>

Changed the UI design

0

0

8

Approve

Approval is optional ?

▼

Merge blocked: 1 check failed

▼

Merge conflicts must be resolved.

[Resolve locally](#)

[Resolve conflicts](#)

Merge details

- The source branch is [12 commits behind](#) the target branch.
- 2 commits and 1 merge commit will be added to main.
- Source branch will be deleted.

Activity

All activity ▼

↑


```

</head>
</head>
<body style="background-color:powderblue;">

  <p style="color:red;">manav || hobbies:playing</p>
  <p style="color:red;">raghu || hobbies:basketball</p>
  =====

</head>
</head>
<body>

  <p>harsh</p>
  <p>shiv</p>

  <p>Zoha Surti</p>
  <p>Darshan Patel</p>

  <p>first second thrid fourth fifth</p>

  <h1>Intern and Hobbies</h1>

  <p> Aryan || Hobbies:chess</p>
  <p> Viraj || Hobbies:gaming</p>
  <p> Parth || Hobbies:reading</p>
  <p> Harsh || Hobbies:singing</p>
  <p> Mayur || Hobbies:reading</p>

  >>>>>> 54dc68b8fc57888a01d2a1dd55be9d599ee183ca
</body>
</html>

```

○

```

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (zoha_branch2|MERGING)
$ git add .

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (zoha_branch2|MERGING)
$ git commit -m "UI changes"
[zoha_branch2 131ded] UI changes
Committer: Surati <zoha.surati@dialogos.fi>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly:

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

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (zoha_branch2)
$ git push -u origin zoha_branch2
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 22 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 460 bytes | 153.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: View merge request for zoha_branch2:
remote:  https://gitlab.com/roima_2025_intern/assignment/-/merge_requests/11
remote:
To https://gitlab.com/roima_2025_intern/assignment.git
  5a01139..131ded  zoha_branch2 -> zoha_branch2
branch 'zoha_branch2' set up to track 'origin/zoha_branch2'.

```

After resolving conflict

manav || hobbies:playing

raghu || hobbies:basketball

harsh

shiv

Zoha Surti

Darshan Patel

first second thrid fourth fifth

Intern and Hobbies


Aryan || Hobbies:chess

Viraj || Hobbies:gaming

Parth || Hobbies:reading


Harsh || Hobbies:singing

Mayur || Hobbies:reading

 Open


Zoha branch2

zoha_branch2


 into

main

Overview 0 Commits 2 Pipelines 0 Changes 1



Looks like there's no pipeline here.





GitLab CI/CD can automatically build, test, and deploy your application. It only takes a few minutes to get started, and we can help you create a pipeline configuration file.


Try out GitLab Pipelines

8


Approve

Approval is optional 






Ready to merge!



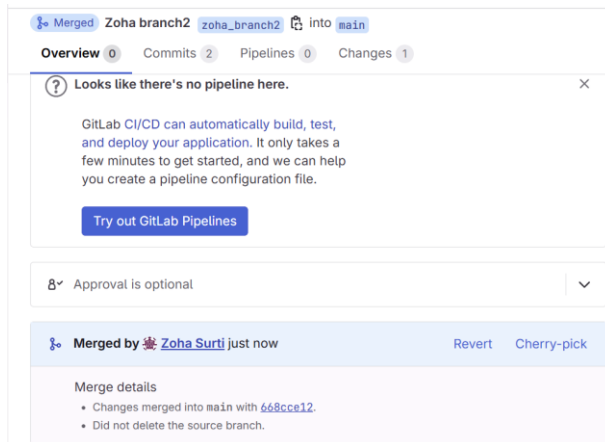
☒ Delete source branch

☐ Squash commits 

☐ Edit commit message

3 commits and 1 merge commit will be added to main.

Merge



How to resolve conflicts

git status -> check the status

create a pull, edit the file/merge changes and push the code.

- How to delete a branch?

git branch -d branch_name

```
suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/gitlab_assignment (main)
$ git branch -d zoha_branch
warning: deleting branch 'zoha_branch' that has been merged to
'refs/remotes/origin/zoha_branch', but not yet merged to HEAD
Deleted branch zoha_branch (was b1dcd0e).

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/gitlab_assignment (main)
$ |
```

- What needs to be done when the remote repository declines a push?

git pull origin branch-name
modify the changes and then
git push origin branch-name

- What is Git stash and why is it needed?

git stash -u //For untracked changes
git stash push -m "Work in progress on feature X"

```
</body>
</html>
suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (zoha_branch)
$ git stash push -m "working on index.html"
Saved working directory and index state On zoha_branch: working on index.html
```

- What is .gitignore?

`touch .gitignore`

```
suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/gitlab_assignment (zoha_branch2)
$ touch .gitignore
```

- Why do we need .gitignore?

To ignore files that we don't want to push to git, such as node-modules

- Git alias what, why is it need?
- `$ git config --global alias.co checkout`

```
suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (zoha_branch)
$ git config --global alias.co checkout

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (zoha_branch)
$ git co main
Switched to branch 'main'
Your branch is behind 'origin/main' by 24 commits, and can be fast-forwarded.
(use "git pull" to update your local branch)

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop/assignment (main)
$ !
```

Used for shorter forms of commands

- What is the difference between a git merge and a git rebase?
- `git checkout zoha_branch`
- `git merge main`
- `git checkout feature`
- `git rebase main`
- What is the difference between clone with SSH and HTTP/S. What are ssh keys?

An *SSH key* is an access credential in the [SSH protocol](#).

How to configure ssh keys in git account.

```
suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop
$ ssh-keygen -t rsa -b 4096 -C "zohasurati@roimaint.com"
Generating public/private rsa key pair.
Enter file in which to save the key (/c/Users/suratzoh/.ssh/id_rsa):
Created directory '/c/Users/suratzoh/.ssh'.
Enter passphrase for "/c/Users/suratzoh/.ssh/id_rsa" (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /c/Users/suratzoh/.ssh/id_rsa
Your public key has been saved in /c/Users/suratzoh/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:Xx54wWG4V+F7L6DxSqX87xiagtWueQVuwTS37ewWUj0 zohasurati@roimaint.com
The key's randomart image is:
+---[RSA 4096]-----+
|
|  .o  .
| +o.o.
| o +o+..
| =.o.+Eo|
| Soo+*o.=o|
| .o+Xooo.o
| o o*.+. .
| . .oo= o .
| o++ ooo
+---[SHA256]-----+

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop
$ ^[[200~eval "$(ssh-agent -s)"
bash: $'\E[200~eval': command not found

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop
$ eval "$(ssh-agent -s)"
Agent pid 2117

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop
$ ssh-add ~/.ssh/id_rsa
Identity added: /c/Users/suratzoh/.ssh/id_rsa (zohasurati@roimaint.com)

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop
$ cat ~/.ssh/id_rsa.pub
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQCAQC2GE1I6Q7DDJaBK9xR45ssFsOE9KiPMK55PNTI/qVVkAR+J9rJxshcQVVK0Eh/tFrFs7f
fAKqIHBCJI1Yefak4o/RPVxIOhdeDWGr8CKLBMoA0EaXxRjzow9I7SL5G1hZ3A1AoFOIzBRsvxrH6Y2UPodxcUy8xuR590/xJzRBP6UGTfk
LoszJqqf7uxcHV6QJBBgHw2ZqbVeyR44pkkzm/EFuv6y0PHHu/GeT/PvJb+u92dHxi4m7ATpT2aaVmwvWkxG+kL7Pap+jag9W68YwQoEw
PdmxNPZRFLkKuAzRdFFGN5EJKjXC1eKLkOrju1guA/u06vIsNvQriw2zYtDRHj19BJAxz389iXXG4WfYvfhd5SaqV771fMQovAK4AUBByR
StqywJXIG6vD/UtFeYeutytbZeIwH9hB6Q== zohasurati@roimaint.com
```

SSH Key: zohasurati@roimaint.com

[Delete](#)

Key details

Usage type	Created	Last used	Expires
Authentication & Signing	Jan 27, 2025 10:45am	Never	Jan 27, 2026 12:00am

SSH Key

ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQCAQC2GE1I6Q7DDJaBK9xR45ssFsOE9KiPMK55PNTI/qVVkAR+J9rJxshcQVVK0Eh/tFrFs

Fingerprints

MD5	6a:6f:0b:d2:3f:a5:4c:69:64:1e:cb:08:09:44:d5:66
SHA256	Xx54wWG4V+F7L6DxSqX87xiagtWueQVuwTS37eWwUj0

```

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop
$ git@gitlab.com:zohasurti/versioncontrolassignment.git
bash: git@gitlab.com:zohasurti/versioncontrolassignment.git: No such file or directory

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop
$ git clone git@gitlab.com:zohasurti/versioncontrolassignment.git
Cloning into 'versioncontrolassignment'...
The authenticity of host 'gitlab.com (172.65.251.78)' can't be established.
ED25519 key fingerprint is SHA256:eUXGGm1YGsMAS7vkcx6JOJdOGHPem5gQp4taic
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? y
Please type 'yes', 'no' or the fingerprint: y
Please type 'yes', 'no' or the fingerprint: yes
Warning: Permanently added 'gitlab.com' (ED25519) to the list of known hosts.
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (3/3), done.

suratzoh@L10-SURATZOH-1 MINGW64 ~/Desktop

```

What is forking? Demonstrate by creating a fork.

roima_2025_intern / gitlab_assignment / Fork project



Fork project

A fork is a copy of a project. Forking a repository allows you to make changes without affecting the original project.

Project name

Must start with a lowercase or uppercase letter, digit, emoji, or underscore. Can also contain dots, plus dashes, or spaces.

Project URL

Project slug

Want to organize several dependent projects under the same namespace? [Create a group](#)

Project description (optional)

Branches to include

- ☒ All branches
☐ Only the default branch

Visibility level [?](#)

- ☒ Private
 Project access must be granted explicitly to each user. If this project is part of a group, access will be granted to members of the group.



Forked from [roima_2025_intern / gitlab_assignment](#)

Up to date with the upstream repository.

- Also, demonstrate the use of different remotes.

`git remote add company https://github.com/company/repo.git`

`git remote add client https://github.com/client/repo.git`

`git push company main`

`git push client main`

//It is similar to

`git remote add origin main`

- What is a force push, when should it be used and why would you need to?
- You only force a push when you need to **replace the remote history with your local history**
- `git push --force origin zoha_branch`