DEPARTMENT OF SOFTWARE ENGINEERING

ASSIGNMENT #1

SUBMITTED BY:NEHA AMJAD

ROLL NO:2021-BSE-024

SECTION:A

SUBMITTED TO:WAQAS SALEEM

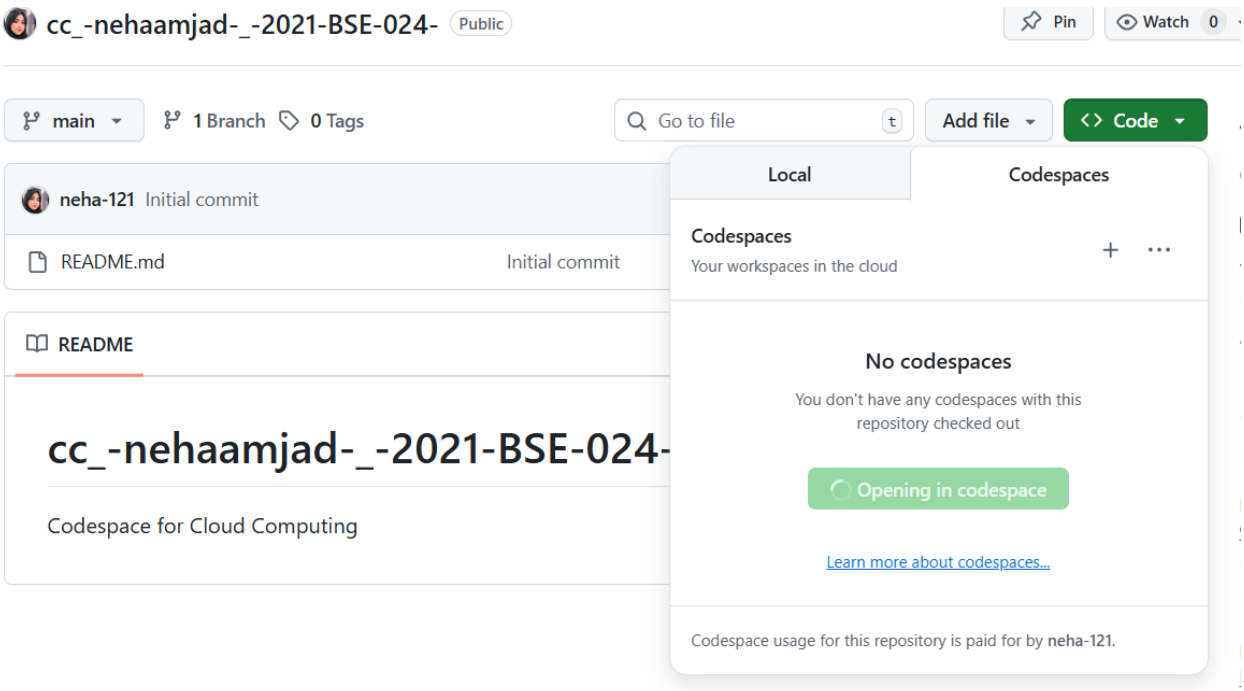
COURSE:CLOUD COMPUTING

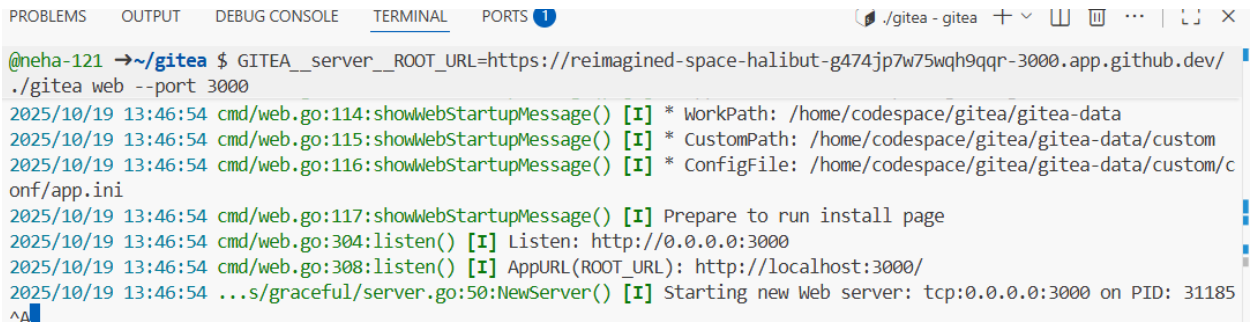
DATE:19/10/2025

Task 1: Run Gitea in Codespace and Create an Initial Repo

1. Set up Gitea:

- Run a Gitea server inside your Codespace.
- Use HTTPS for communication (SSH is not supported in Codespace).





Initial Configuration

If you run Gitea inside Docker, please read the documentation before changing any settings.

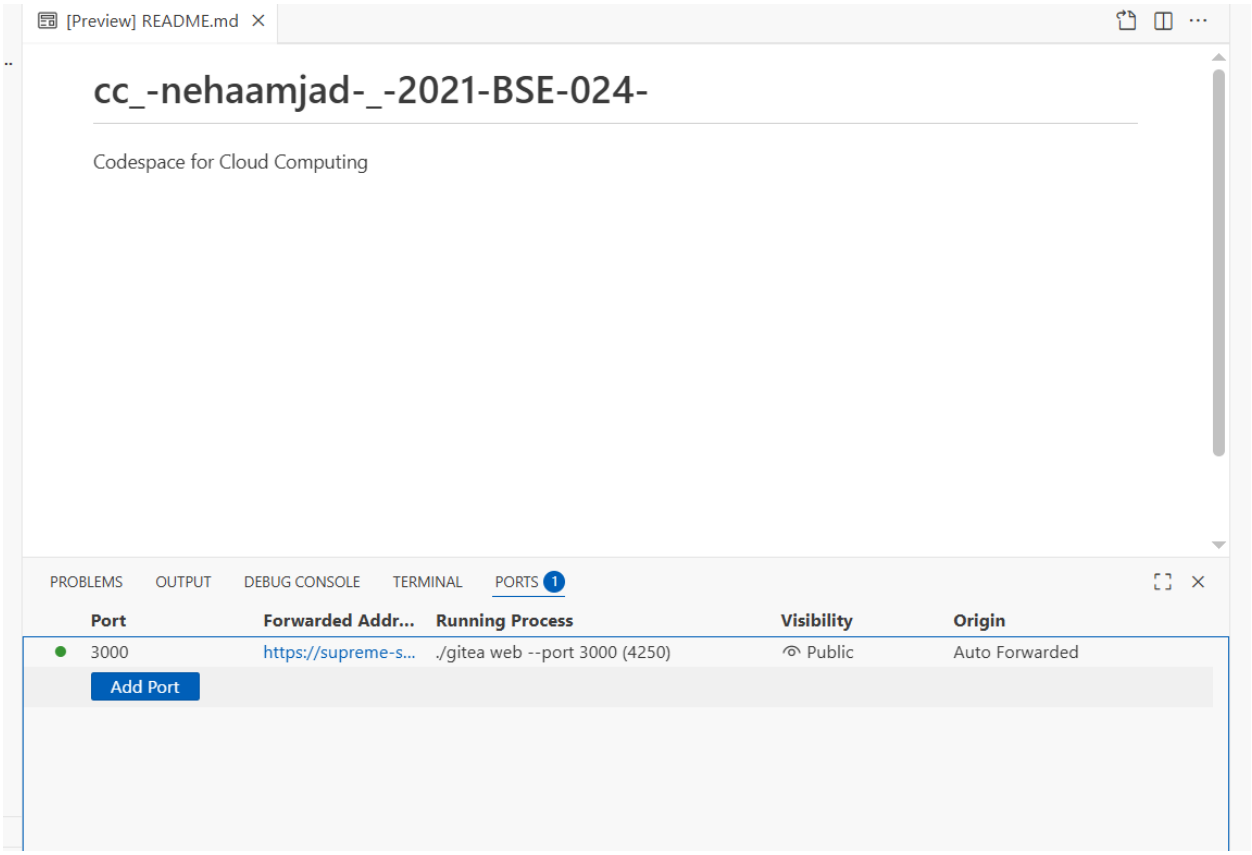
Database Settings

Gitea requires MySQL, PostgreSQL, MSSQL, SQLite3 or TiDB (MySQL protocol).

Database Type *	MySQL
Host *	127.0.0.1:3306
Username *	gitea
Password *	
Database Name *	gitea

General Settings

Site Title *	Gitea: Git with a cup of tea
	You can enter your company name here.
Repository Root Path *	/home/codespace/gitea/data/gitea-repositories
	Remote Git repositories will be saved to this directory.
Git LFS Root Path	/home/codespace/gitea/data/lfs
	Files tracked by Git LFS will be stored in this directory. Leave empty to disable.


[Preview] README.md
cc_-nehaamjad-_-2021-BSE-024-
Codespace for Cloud Computing
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS 1
Port
Forwarded Addr...
Running Process
Visibility
Origin
3000
https://supreme-s...
./gitea web --port 3000 (4250)
Public
Auto Forwarded
Add Port

You are about to access a development port served by someone's codespace

⚠ Only continue to visit the website if you trust whoever sent you the link

Personal information you disclose such as credit card numbers or passwords may be available to the developer of this site

⚠ Note that this warning will only be shown once per codespace session.

Report unsafe page

Continue

Next: You'll be redirected to: supreme-space-guacamole-q7p7jxpg9w772xw6j-3000.app.github.dev

Initial Configuration

If you run Gitea inside Docker, please read the documentation before changing any settings.

Database Settings

Gitea requires MySQL, PostgreSQL, MSSQL, SQLite3 or TiDB (MySQL protocol).

Database Type * SQLite3

Path * /home/codespace/gitea/data/gitea.db

File path for the SQLite3 database.
Enter an absolute path if you run Gitea as a service.

General Settings

Site Title * Neha's Gitea

You can enter your company name here.

Repository Root Path * /home/codespace/gitea/data/gitea-repositories

Remote Git repositories will be saved to this directory.

Git LFS Root Path /home/codespace/gitea/data/lfs

Files tracked by Git LFS will be stored in this directory. Leave empty to disable.

Run As Username * codespace

The operating system username that Gitea runs as. Note that this user must have access to th
repository root path.

Optional Settings

▶ Email Settings

▶ Server and Third-Party Service Settings

▼ Administrator Account Settings

Creating an administrator account is optional. The first registered user will automatically become an administrator.

Administrator Username	Neha
Email Address	nehaamjad20gmail.com
Password	•••••••
Confirm Password	•••••••

Environment Configuration

The following environment variables will also be applied to your configuration file:

`GITEA__server__ROOT_URL`

These configuration options will be written into:

/home/codespace/gitea/custom/conf/app.ini

Loading...

New Repository

A repository contains all project files, including revision history. Already hosting one elsewhere? Migrate repository.

Owner * Neha

Some organizations may not show up in the dropdown due to a maximum repository count limit.

Repository Name * assignment-1-gitea

Good repository names use short, memorable and unique keywords.

Visibility ☐ Make repository private

Only the owner or the organization members if they have rights, will be able to see it.

Description Cloud Computing Assignment 1 — Neha Amjad (2021-BSE-024)

Template Select a template.

Issue Labels Select an issue label set.

.gitignore Select .gitignore templates.

Choose which files not to track from a list of templates for common languages.

Neha / **assignment-1-gitea**

Code | Issues | Pull Requests | Actions | Packages | Projects | Releases | Wiki | Ac

assignment-1-gitea / README.md or Cancel

Edit File | Preview | Preview Changes

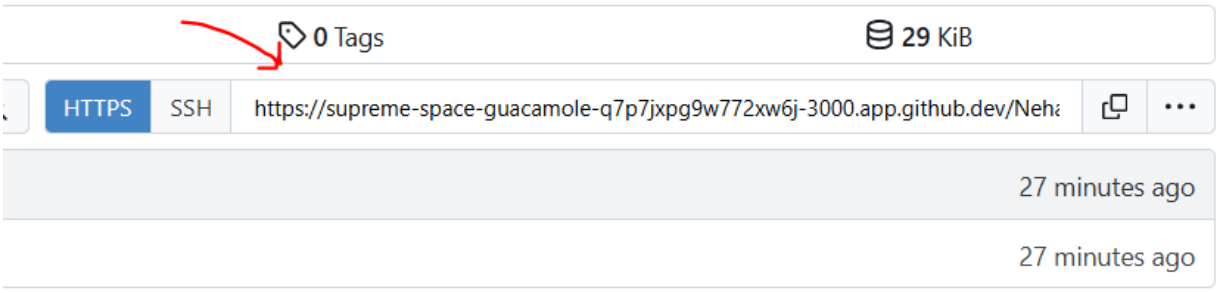
```
1
2  # Cloud Computing Assignment 1
3
4  **Student Name:** Neha Amjad
5  **Roll Number:** 2021-BSE-024
6  **Course:** Cloud Computing (BSE-410)
7  **Department:** Software Engineering, Fatima Jinnah Women University
8  **Repository:** assignment-1-gitea
```

Neha 253fb14893 Update README.md now

241 B Raw Permalink Blame History

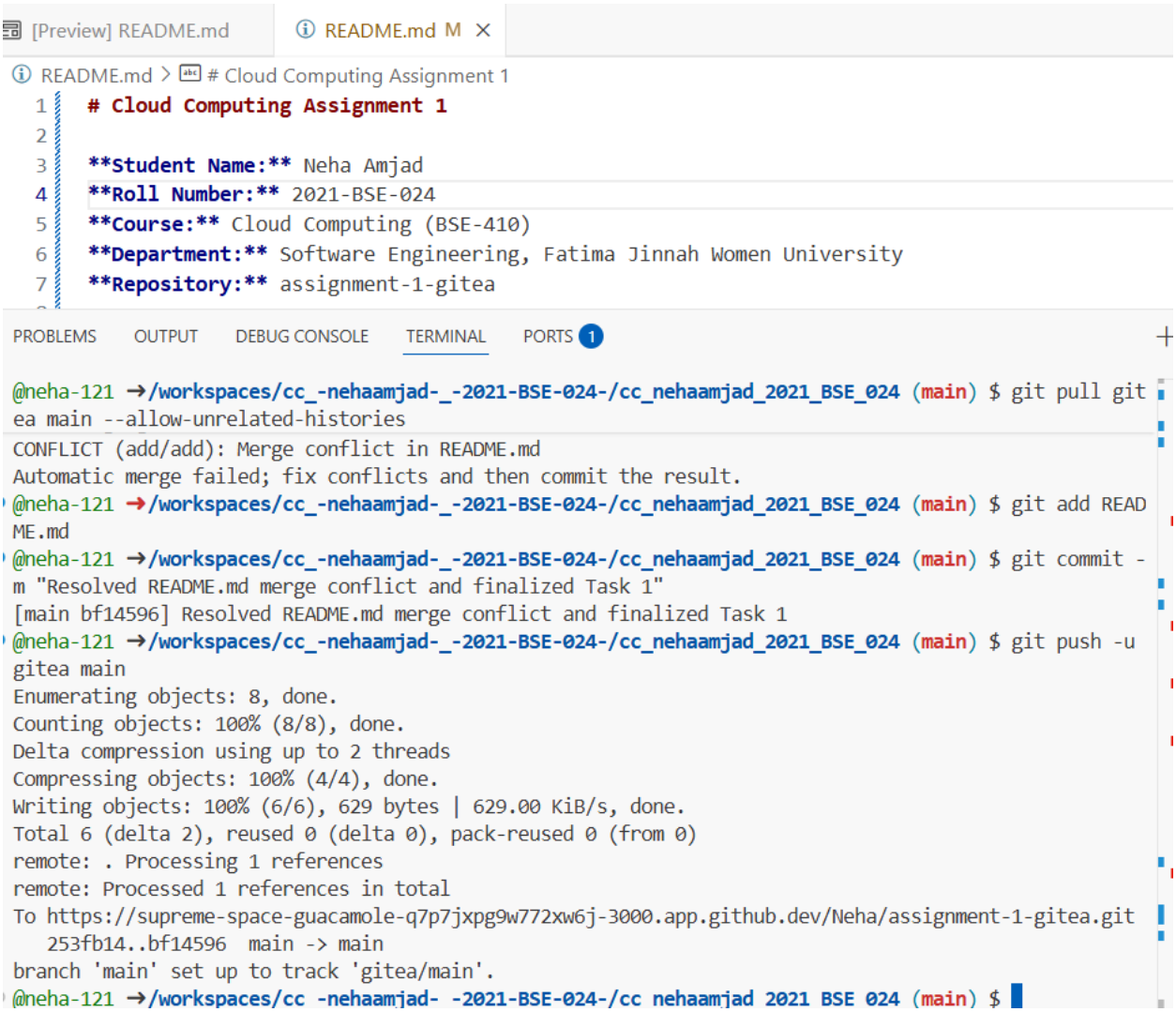
Cloud Computing Assignment 1

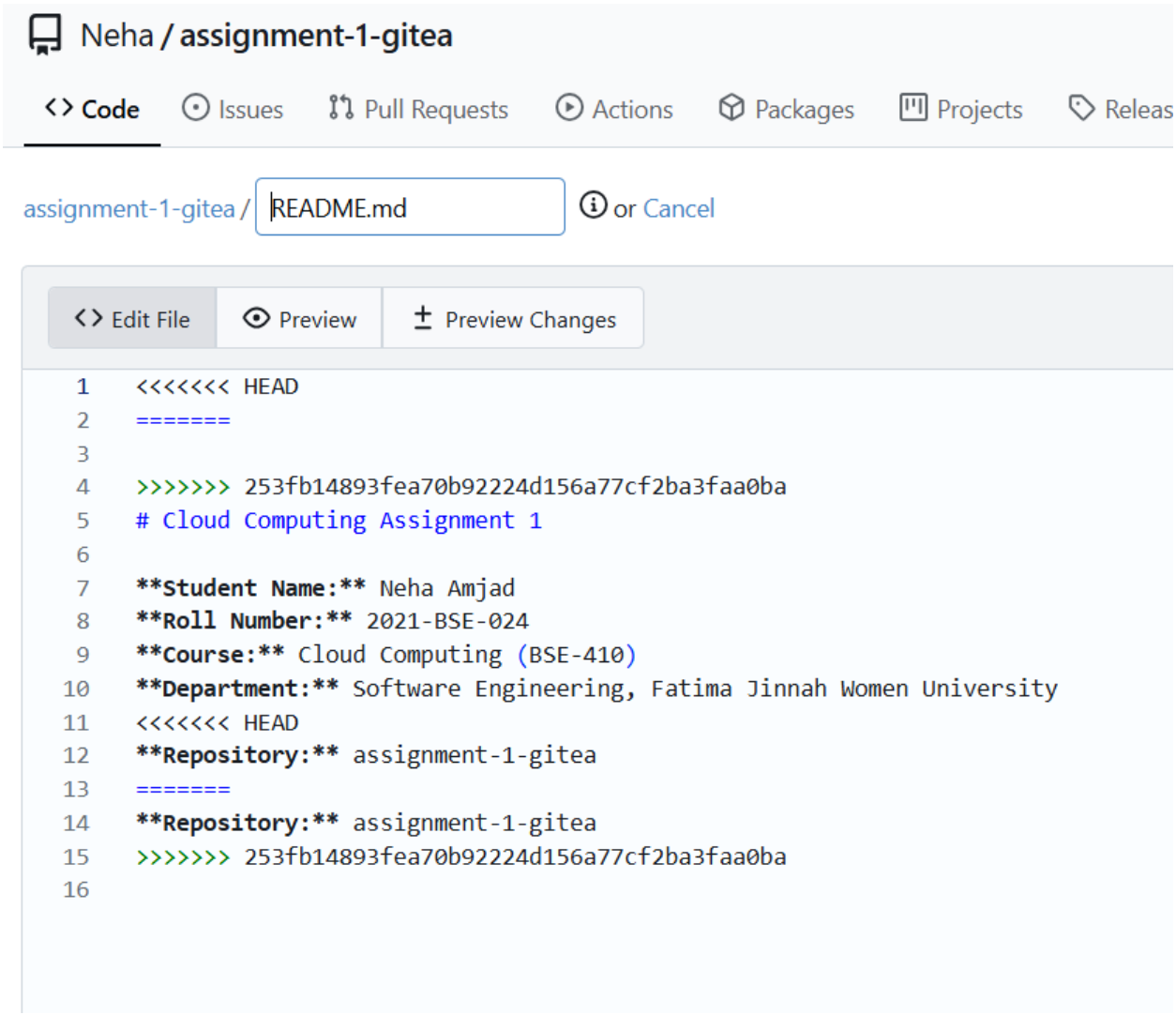
Student Name: Neha Amjad
Roll Number: 2021-BSE-024
Course: Cloud Computing (BSE-410)
Department: Software Engineering, Fatima Jinnah Women University
Repository: assignment-1-gitea



PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS 1

```
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024- (main) $ cd ~/workspace
mkdir -p cc_nehaamjad_2021_BSE_024 && cd cc_nehaamjad_2021_BSE_024
git init
bash: cd: /home/codespace/workspace: No such file or directory
Initialized empty Git repository in /workspaces/cc_-nehaamjad-_-2021-BSE-024-/cc_nehaamjad_2021_BSE_0
24/.git/
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024-/cc_nehaamjad_2021_BSE_024 (main) $ git init
Reinitialized existing Git repository in /workspaces/cc_-nehaamjad-_-2021-BSE-024-/cc_nehaamjad_2021_
BSE_024/.git/
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024-/cc_nehaamjad_2021_BSE_024 (main) $ cat > README
.md <<'EOF'
# Cloud Computing Assignment 1

**Student Name:** Neha Amjad
**Roll Number:** 2021-BSE-024
**Course:** Cloud Computing (BSE-410)
**Department:** Software Engineering, Fatima Jinnah Women University
**Repository:** assignment-1-gitea
EOF

git commit -m "Initial commit: add README"
[main (root-commit) 0b710e0] Initial commit: add README
 1 file changed, 7 insertions(+)
 create mode 100644 README.md
```


[Preview] README.md
README.md M
README.md > # Cloud Computing Assignment 1
Cloud Computing Assignment 1
Student Name: Neha Amjad
Roll Number: 2021-BSE-024
Course: Cloud Computing (BSE-410)
Department: Software Engineering, Fatima Jinnah Women University
Repository: assignment-1-gitea
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS 1
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024-/cc_nehaamjad_2021_BSE_024 (main) $ git pull git ea main --allow-unrelated-histories
CONFLICT (add/add): Merge conflict in README.md
Automatic merge failed; fix conflicts and then commit the result.
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024-/cc_nehaamjad_2021_BSE_024 (main) $ git add README.md
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024-/cc_nehaamjad_2021_BSE_024 (main) $ git commit -m "Resolved README.md merge conflict and finalized Task 1"
[main bf14596] Resolved README.md merge conflict and finalized Task 1
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024-/cc_nehaamjad_2021_BSE_024 (main) $ git push -u gitea main
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 2 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (6/6), 629 bytes | 629.00 KiB/s, done.
Total 6 (delta 2), reused 0 (delta 0), pack-reused 0 (from 0)
remote: . Processing 1 references
remote: Processed 1 references in total
To https://supreme-space-guacamole-q7p7jxpg9w772xw6j-3000.app.github.dev/Neha/assignment-1-gitea.git
253fb14..bf14596 main -> main
branch 'main' set up to track 'gitea/main'.
@neha-121 →/workspaces/cc -nehaamjad- -2021-BSE-024-/cc nehaamjad 2021 BSE 024 (main) $



Task 1 – Run Gitea in Codespace and Create an Initial Repository

In this task, I set up and configured a **Gitea server** inside my GitHub Codespace using HTTPS for secure communication. After launching the Gitea web interface on port 3000, I created a new **public repository** named assignment-1-gitea.

I then initialized the repository with a **README.md** file containing my name and roll number: **Neha Amjad (2021-BSE-024)**.

Next, I created a **local Git repository** inside the Codespace terminal, connected it to the Gitea remote using the HTTPS URL, and pushed my initial commit. A small merge conflict occurred because both the local and remote repositories contained a README file, which I resolved successfully.

Finally, I verified that my repository was accessible on the Gitea web interface and confirmed that the README file displayed my details correctly.

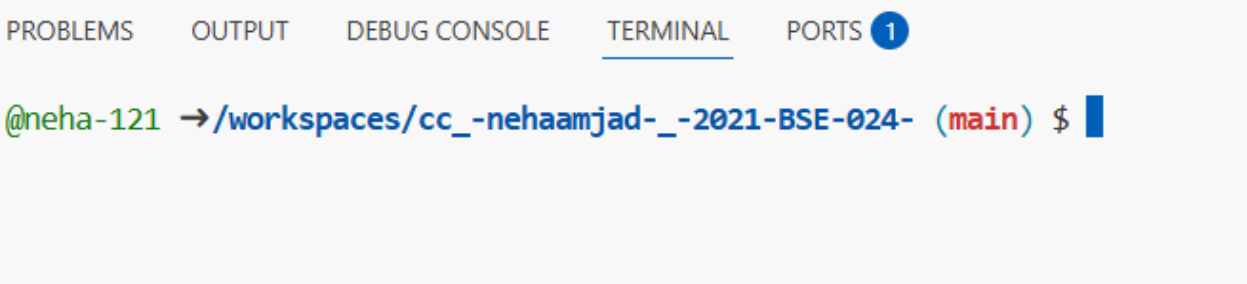
Outcome: Task 1 completed successfully — Gitea is running inside Codespace, and the initial repository (assignment-1-gitea) has been created and synchronized with my local Git project.

https://supreme-space-guacamole-q7p7jxpg9w772xw6j-3000.app.github.dev/Neha/assignment-1-gitea

Task 2: Mirror README.md from Gitea to GitHub

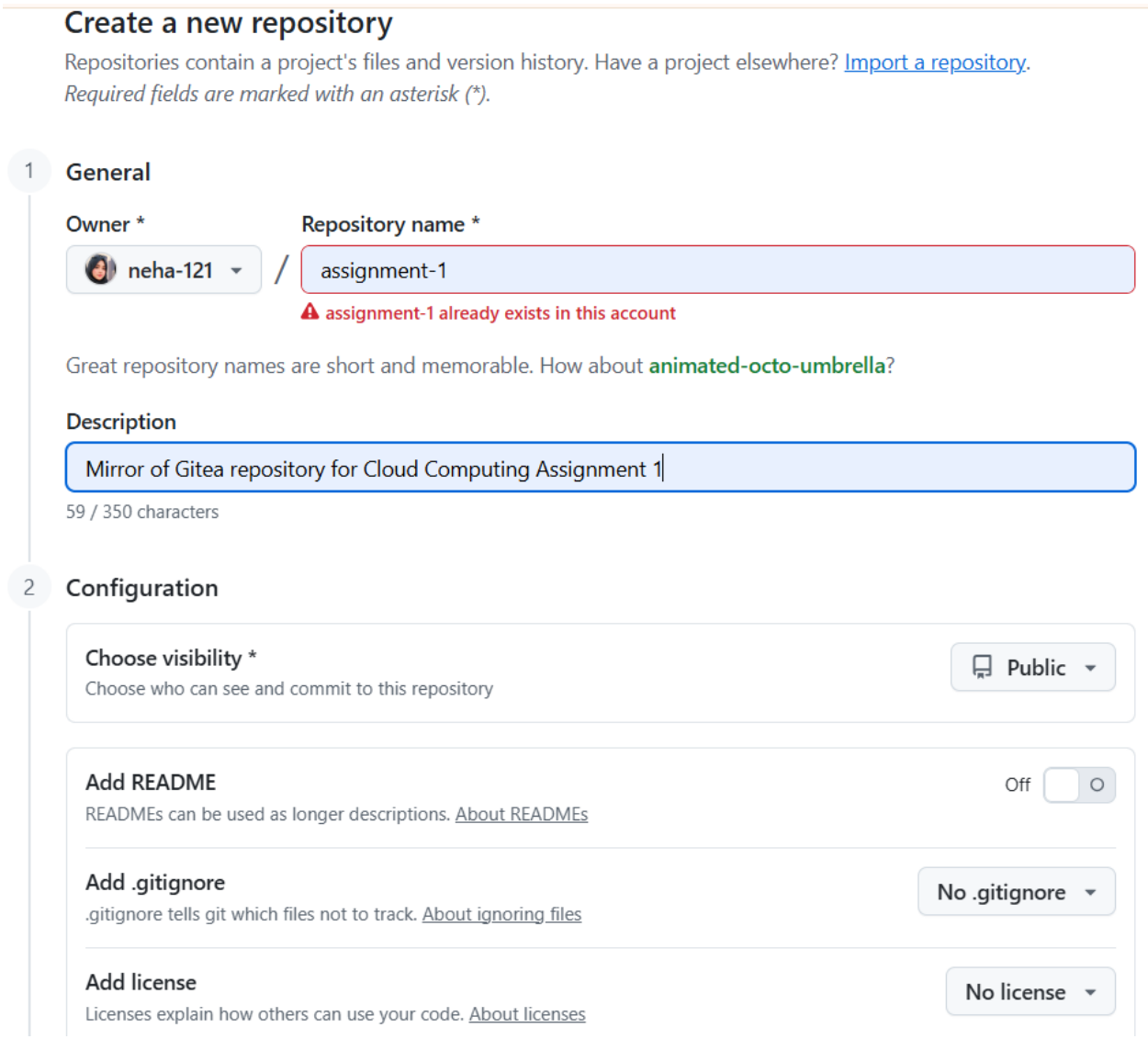
1. Continue Working with Your Existing Repository:

- **You will use the same repository that you created and pushed to your Gitea server in Task 1.**



2. Create GitHub Repository:

- **Create a new GitHub repository named assignment 1.**



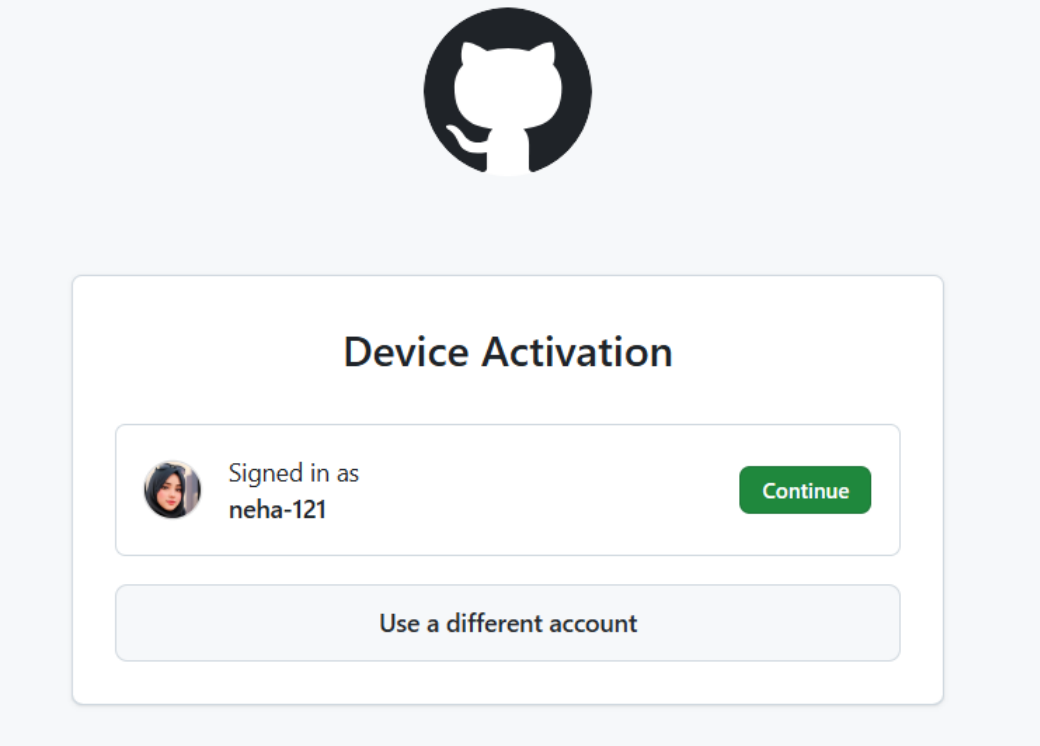
3. Add GitHub as a Second Remote:

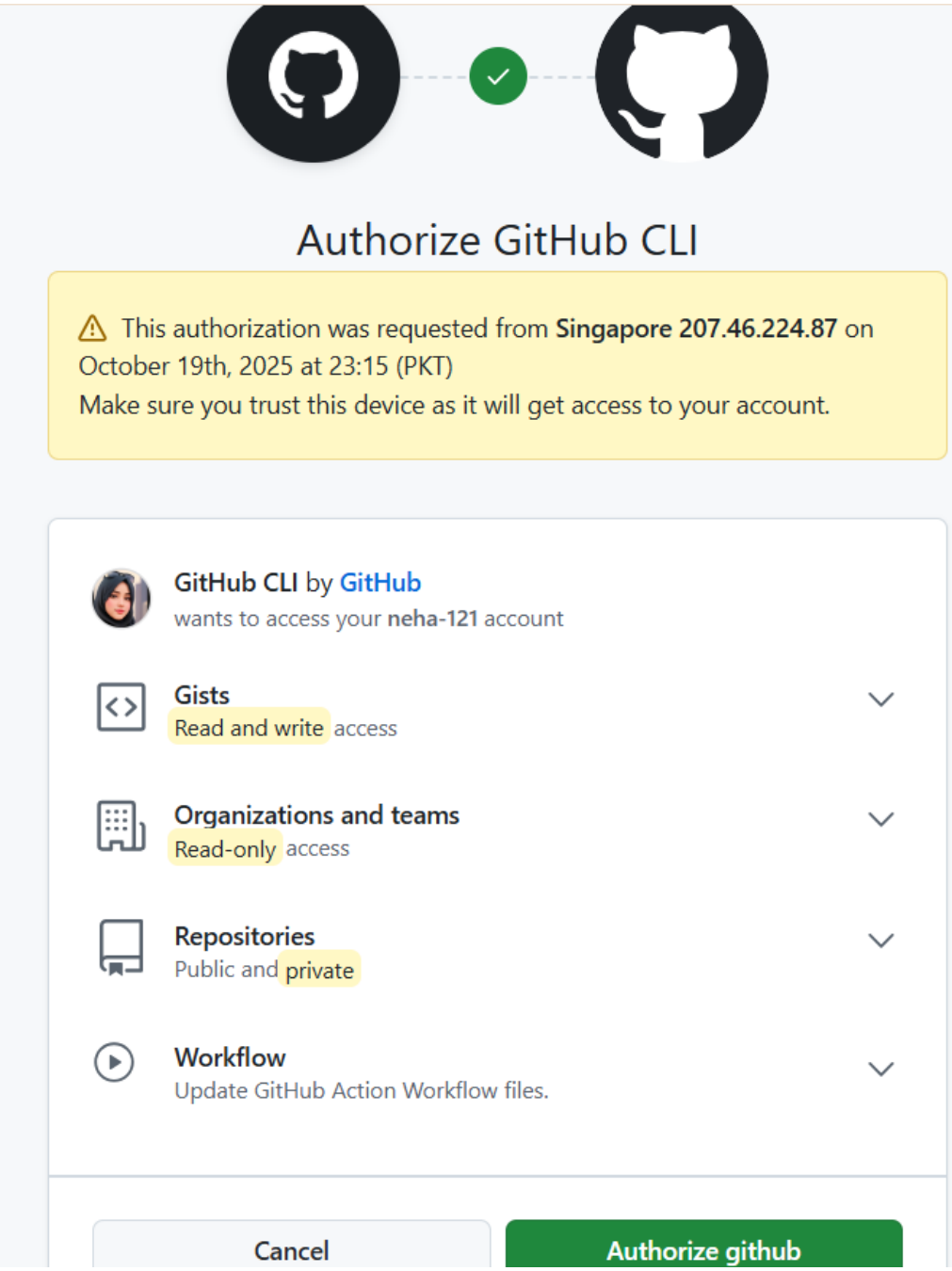
- **Add your GitHub repository as a remote to your local repository:**
  git remote add github <your_github_repo_https_url>

```
2
3   **Student Name:** Neha Amjad
4   **Roll Number:** 2021-BSE-024
5   **Course:** Cloud Computing (BSE-410)
6   **Department:** Software Engineering, Fatima Jinnah Women University
7   **Repository:** assignment-1-gitea
```

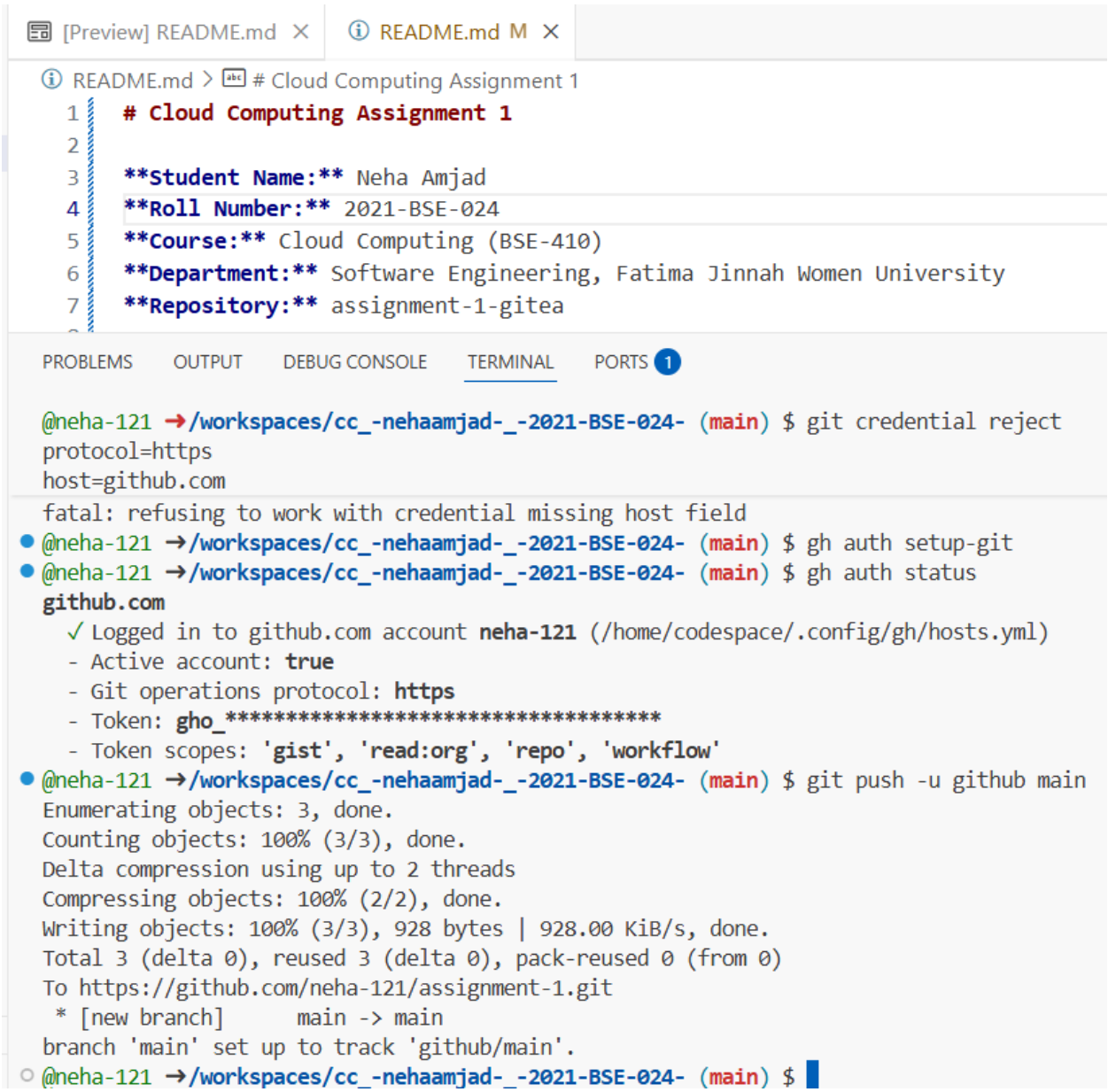
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS 1

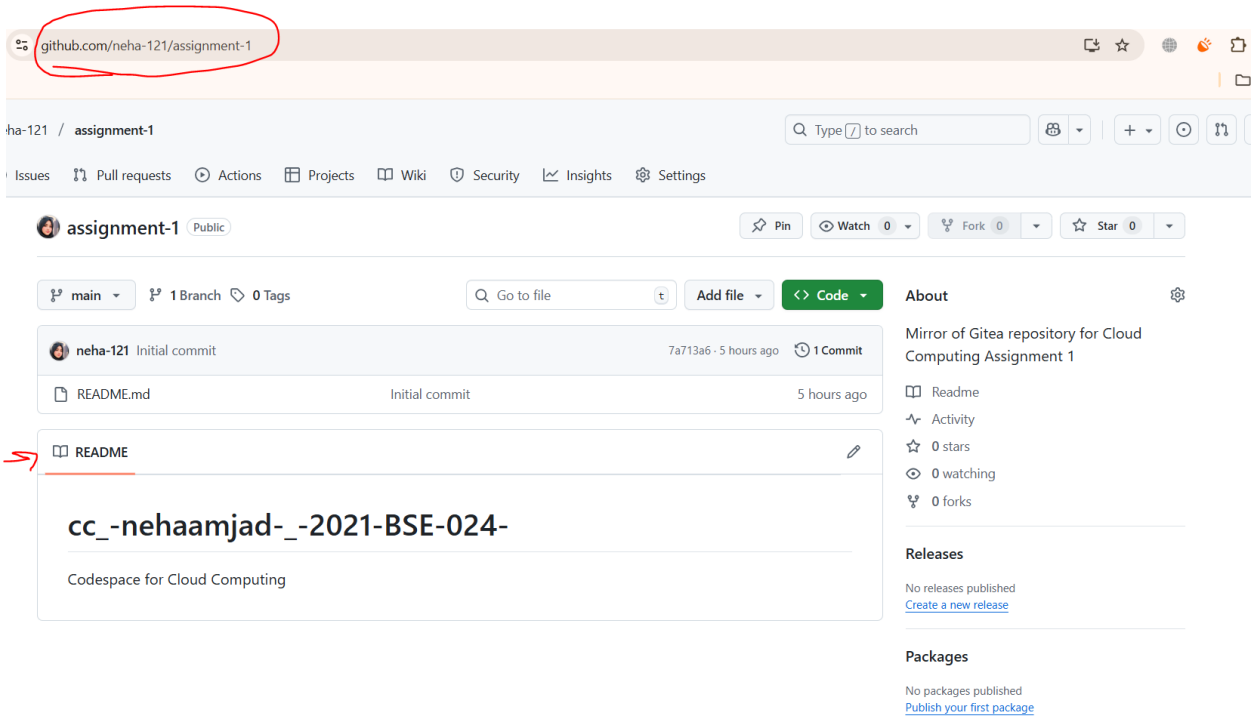
```
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024- (main) $ git remote add github https
om/neha-121/assignment-1.git
error: remote github already exists.
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024- (main) $ git remote -v
github  https://github.com/neha-121/assignment-1.git (fetch)
github  https://github.com/neha-121/assignment-1.git (push)
origin  https://github.com/neha-121/cc_-nehaamjad-_-2021-BSE-024- (fetch)
origin  https://github.com/neha-121/cc_-nehaamjad-_-2021-BSE-024- (push)
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024- (main) $ git push -u github main
remote: Permission to neha-121/assignment-1.git denied to neha-121.
fatal: unable to access 'https://github.com/neha-121/assignment-1.git/': The requested URL
rror: 403
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024- (main) $ unset GITHUB_TOKEN
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024- (main) $ gh auth login
? Where do you use GitHub? GitHub.com
? What is your preferred protocol for Git operations on this host? HTTPS
? Authenticate Git with your GitHub credentials? Yes
? How would you like to authenticate GitHub CLI? Login with a web browser

! First copy your one-time code: AA11-FBCD
Press Enter to open https://github.com/login/device in your browser...
```


Device Activation
Signed in as
neha-121
Continue
Use a different account



4. Push the README.md File to GitHub:

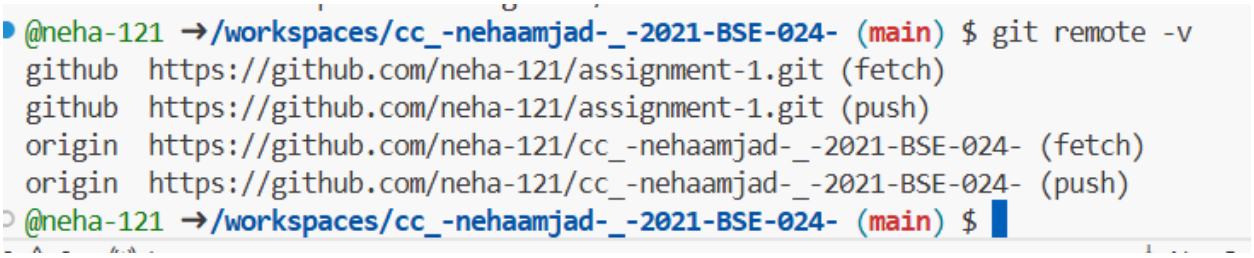

[Preview] README.md
README.md M
README.md > # Cloud Computing Assignment 1
1 # Cloud Computing Assignment 1
2
3 **Student Name:** Neha Amjad
4 **Roll Number:** 2021-BSE-024
5 **Course:** Cloud Computing (BSE-410)
6 **Department:** Software Engineering, Fatima Jinnah Women University
7 **Repository:** assignment-1-gitea
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS 1
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024- (main) $ git credential reject
protocol=https
host=github.com
fatal: refusing to work with credential missing host field
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024- (main) $ gh auth setup-git
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024- (main) $ gh auth status
github.com
✓ Logged in to github.com account neha-121 (/home/codespace/.config/gh/hosts.yml)
- Active account: true
- Git operations protocol: https
- Token: gho_************************************
- Token scopes: 'gist', 'read:org', 'repo', 'workflow'
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024- (main) $ git push -u github main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 2 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 928 bytes | 928.00 KiB/s, done.
Total 3 (delta 0), reused 3 (delta 0), pack-reused 0 (from 0)
To https://github.com/neha-121/assignment-1.git
* [new branch] main -> main
branch 'main' set up to track 'github/main'.
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024- (main) $



- **Push the contents (including the README.md) from your local repository to GitHub.**

5. Verify Remotes:

- **Run git remote -v and ensure both remotes (gitea and github) are listed.**



Task 2 – Mirror README.md from Gitea to GitHub

In this task, I connected my local Codespace repository to a new GitHub repository named assignment-1 to mirror the contents from Gitea. I began by adding GitHub as a second remote using the command git remote add github <github_repo_https_url> and confirmed both remotes (Gitea and GitHub) with git remote -v. After authenticating through the GitHub CLI, I pushed

the local repository contents—including the README.md file containing my personal details—to the GitHub repository. I then verified the successful synchronization by checking that the README file appeared correctly on GitHub and matched the version hosted on my Gitea server.

Outcome: The repository was successfully mirrored between Gitea and GitHub, and both remotes were verified to be correctly configured and functional.

https://github.com/neha-121/assignment-1

Task 3: Use Git LFS for Large Files

1. Install Git LFS:

- **Set up Git LFS in your local repository.**

```
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024- (main) $ git lfs install
Updated Git hooks.
Git LFS initialized.
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024- (main) $ fallocate -l 120M largefile1.zip
fallocate -l 120M largefile2.zip
fallocate -l 120M largefile3.zip
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024- (main) $ git lfs track "*.zip"
Tracking "*.zip"
```

2. Add Large Files:

- **Add three files larger than 100 MB each to your repository.**

```
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024- (main) $ git commit -m "Add large files tracked
 by Git LFS"
[main 3982684] Add large files tracked by Git LFS
 4 files changed, 10 insertions(+)
 create mode 100644 .gitattributes
 create mode 100644 largefile1.zip
 create mode 100644 largefile2.zip
 create mode 100644 largefile3.zip
```

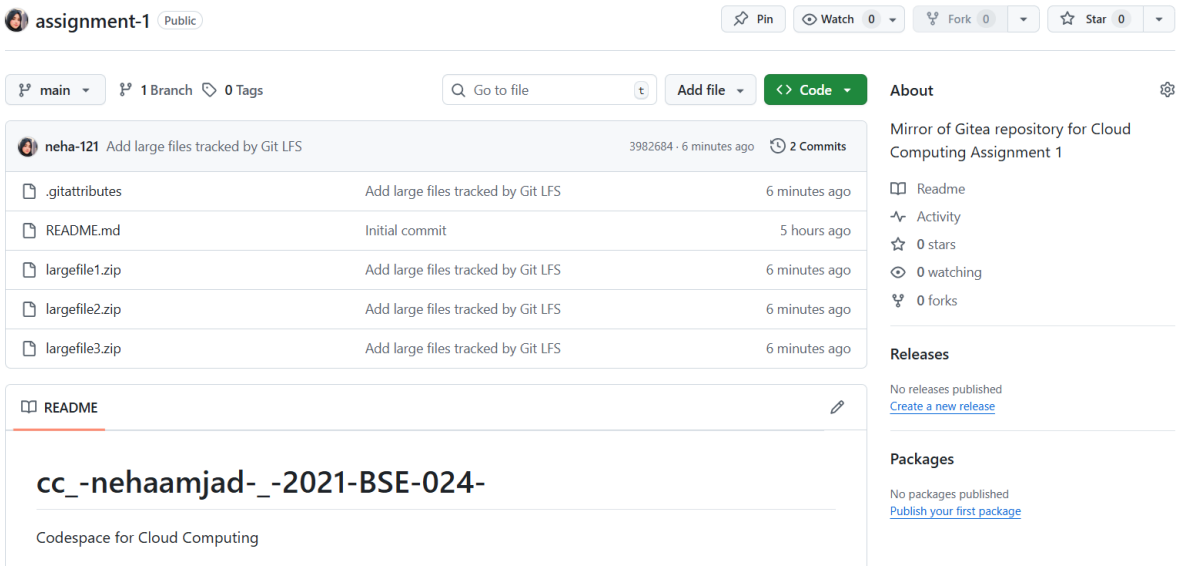
- **Track them using Git LFS:**
  git lfs track "*.ext"

- **Replace .ext with the appropriate file extension.**

3. Reference in Assignment Repo:

```
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024- (main) $ git push -u github main
Uploading LFS objects: 100% (1/1), 126 MB | 9.7 MB/s, done.
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 2 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 504 bytes | 504.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/neha-121/assignment-1.git
   7a713a6..3982684  main -> main
branch 'main' set up to track 'github/main'.
```

- **Commit and push these large files to your GitHub assignment 1 repo.**
- **Ensure the files are referenced correctly in your repository history.**



Task 3 – Use Git LFS for Large Files

In this task, I installed and configured Git LFS (Large File Storage) to handle files larger than 100 MB. I initialized Git LFS in my Codespace using git lfs install, then created three large placeholder files (largefile1.zip, largefile2.zip, and largefile3.zip) each around 120 MB in size. I tracked all .zip files with the command git lfs track "*.zip", which generated a .gitattributes file specifying that such files should be managed through LFS. After staging and committing both the .gitattributes file and the large files, I pushed the changes to my GitHub repository. On GitHub, the files appeared as lightweight pointer files, confirming that LFS was functioning correctly.

Outcome: Git LFS was successfully implemented to manage large files efficiently, ensuring smooth version control without exceeding GitHub's file size limits.

https://github.com/neha-121/assignment-1

Task 4: Create a Portfolio/CV with GitHub Pages

2. Design Your Portfolio/CV:

- Create your portfolio or CV in HTML/CSS (or use a static site generator).

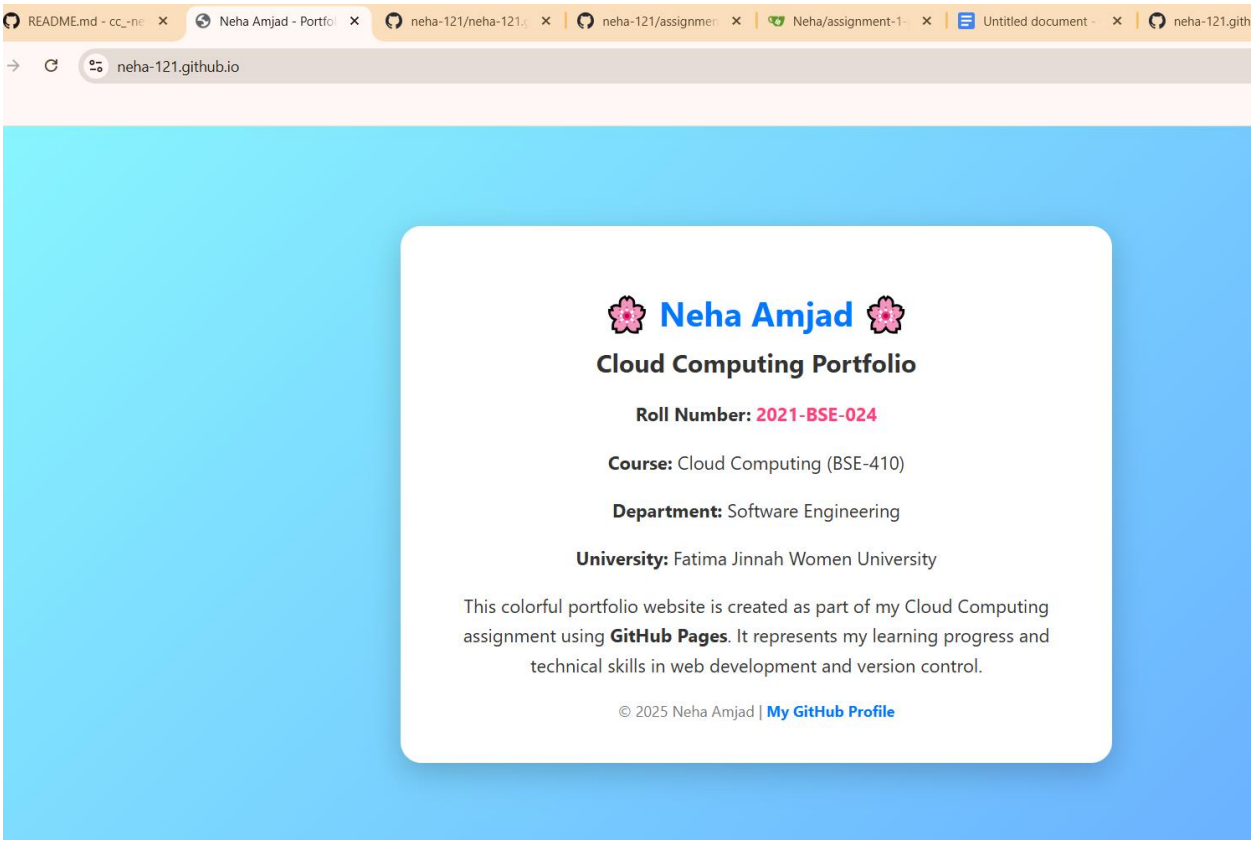
3. Publish with GitHub Pages:

- Push your portfolio/CV files to the <your-username>.github.io repository.
- Enable GitHub Pages in your repository settings if not automatically enabled.

```
@neha-121 →/workspaces/cc_-nehaamjad-_-2021-BSE-024- (main) $ cd ~
git clone https://github.com/neha-121/neha-121.github.io.git
cd neha-121.github.io
Cloning into 'neha-121.github.io'...
warning: You appear to have cloned an empty repository.
@neha-121 →~/neha-121.github.io (main) $ echo "<!DOCTYPE html>
<html>
<head>
<title>Neha Amjad - Portfolio</title>
</head>
<body>
<h1>Neha Amjad</h1>
<p><strong>Roll Number:</strong> 2021-BSE-024</p>
<p><strong>Course:</strong> Cloud Computing (BSE-410)</p>
<p><strong>Department:</strong> Software Engineering, Fatima Jinnah Women University</p>
<p>This is my portfolio website created using GitHub Pages as part of my Cloud Computing assignment.<
/p>
</body>
</html>" > index.html
```

```
@neha-121 ➜~/neha-121.github.io (main) $ cat index.html
<!DOCTYPE html>
<html>
<head>
<title>Neha Amjad - Portfolio</title>
</head>
<body>
<h1>Neha Amjad</h1>
<p><strong>Roll Number:</strong> 2021-BSE-024</p>
<p><strong>Course:</strong> Cloud Computing (BSE-410)</p>
<p><strong>Department:</strong> Software Engineering, Fatima Jinnah Women University</p>
<p>This is my portfolio website created using GitHub Pages as part of my Cloud Computing assignment.
/p>
</body>
</html>
@neha-121 ➜~/neha-121.github.io (main) $ git add index.html
git commit -m "Add portfolio page for GitHub Pages"
git push origin main
```

```
<h1>Neha Amjad</h1>
<p><strong>Roll Number:</strong> 2021-BSE-024</p>
<p><strong>Course:</strong> Cloud Computing (BSE-410)</p>
<p><strong>Department:</strong> Software Engineering, Fatima Jinnah Women University</p>
<p>This is my portfolio website created using GitHub Pages as part of my Cloud Computing assignment.<
/p>
</body>
</html>
@neha-121 ➜~/neha-121.github.io (main) $ git add index.html
git commit -m "Add portfolio page for GitHub Pages"
git push origin main
[main (root-commit) cd7d828] Add portfolio page for GitHub Pages
 1 file changed, 13 insertions(+)
 create mode 100644 index.html
remote: Permission to neha-121/neha-121.github.io.git denied to neha-121.
fatal: unable to access 'https://github.com/neha-121/neha-121.github.io.git/': The requested URL retu
rned error: 403
@neha-121 ➜~/neha-121.github.io (main) $
```



- Publish your site and share the link.

  https://neha-121.github.io/

Task 4 – Create a Portfolio/CV with GitHub Pages

In this task, I created and published a personal portfolio website using **GitHub Pages**. I began by creating a new public repository named **neha-121.github.io**, following GitHub Pages naming conventions. Inside my Codespace, I designed a colorful and responsive portfolio webpage (`index.html`) using **HTML and CSS** that included my name, roll number, course, department, and university details. The design featured gradients, animations, and styled text to make it visually appealing.

After completing the page, I committed and pushed the file to the `main` branch of my repository. Then, I enabled **GitHub Pages** from the repository settings under the "Pages" section. Within a few minutes, my portfolio website was successfully published and became accessible at **https://neha-121.github.io**. The live site represents my Cloud Computing coursework and showcases my ability to use GitHub Pages for web deployment.

Outcome: Task 4 completed successfully — a fully functional, colorful portfolio/CV website was created, deployed, and is publicly accessible via GitHub Pages.