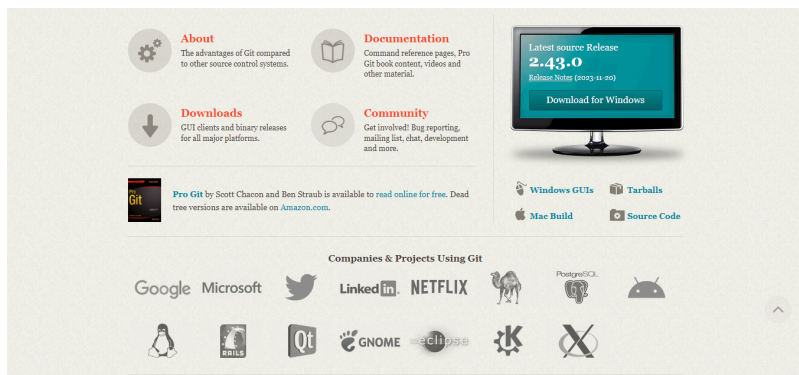


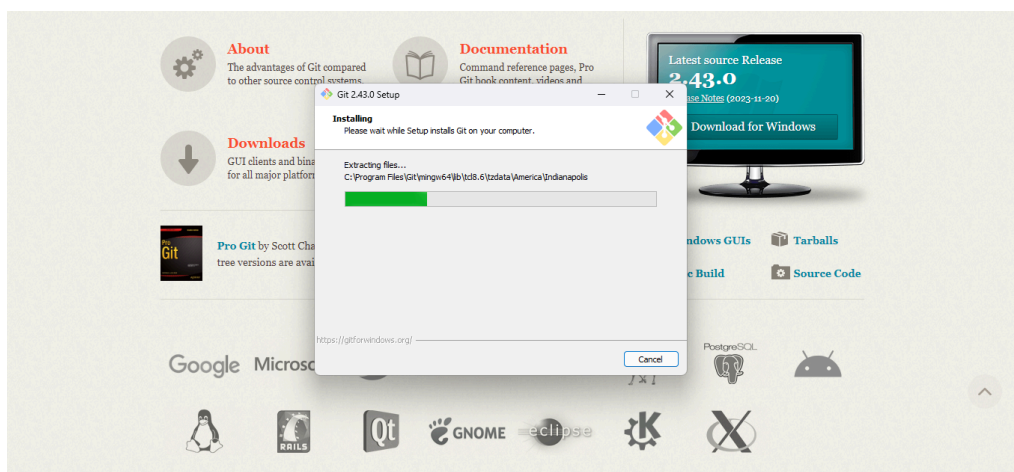
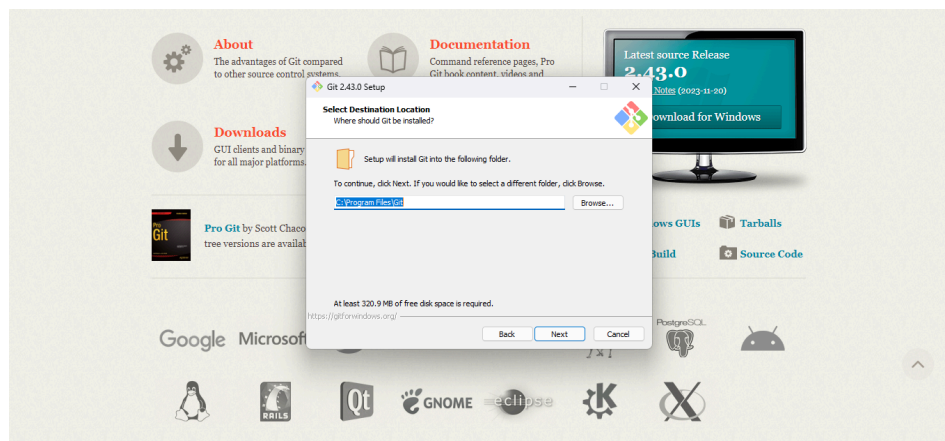
Git and Github

Step 1: Local Git Configuration**Install Git**

Download and install git from their official website: <https://git-scm.com/>



Official
Download page

**Configuring
Installation**

Installation on
progress

Configure git

```
Command Prompt
Microsoft Windows [Version 10.0.22621.3085]
(c) Microsoft Corporation. All rights reserved.

C:\Users\mathe>git config --global user.name "Mathew James Dagle"

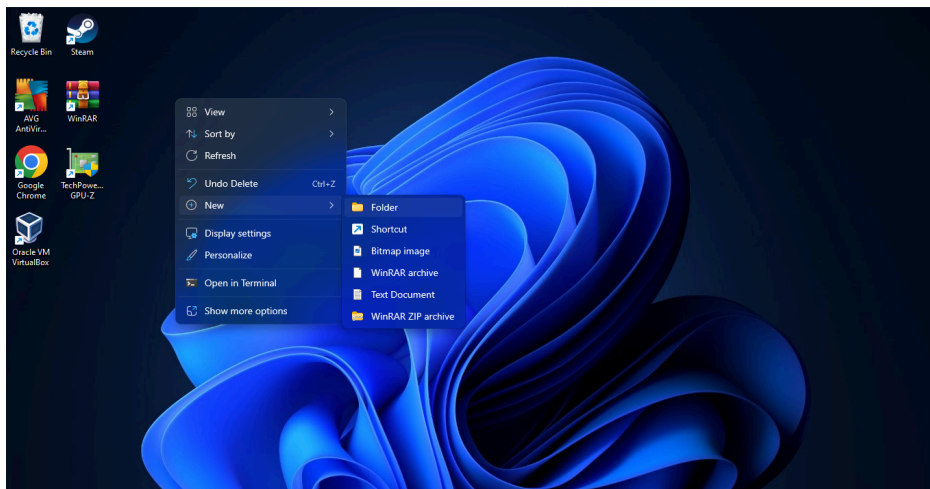
C:\Users\mathe>git config --global user.email "mathewdagle@gmail.com"

C:\Users\mathe>
```

- Open a terminal or command prompt.
- Set your username: `git config --global user.name "Your Name"`
- Set your email: `git config --global user.email "your.email@example.com"`

Step 2: Create a Local Repository

Create a Project Folder



- Create a new folder for your project on your local machine.

Initialize a Git Repository

```
Command Prompt
Microsoft Windows [Version 10.0.22621.3085]
(c) Microsoft Corporation. All rights reserved.

C:\Users\mathe>git config --global user.name "Mathew James Dagle"

C:\Users\mathe>git config --global user.email "mathewdagle@gmail.com"

C:\Users\mathe>cd "C:\Users\mathe\OneDrive\Desktop\New folder"

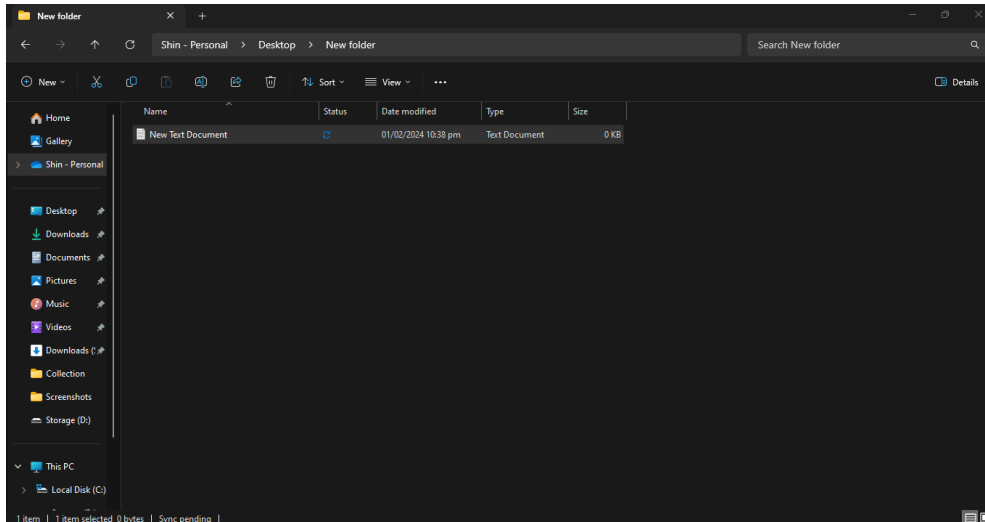
C:\Users\mathe\OneDrive\Desktop\New folder>git init
Initialized empty Git repository in C:/Users/mathe/OneDrive/Desktop/New folder/.git/

C:\Users\mathe\OneDrive\Desktop\New folder>
```

- Navigate to the project folder in the terminal.

- Run git init to initialize a new Git repository.

Create a File



- Create a simple text file within the project folder.

Add and Commit Changes

```
Command Prompt
Microsoft Windows [Version 10.0.22621.3885]
(c) Microsoft Corporation. All rights reserved.

C:\Users\mathe>git config --global user.name "Mathew James Dagle"

C:\Users\mathe>git config --global user.email "mathewdagle@gmail.com"

C:\Users\mathe>cd "C:\Users\mathe\OneDrive\Desktop\New folder"

C:\Users\mathe\OneDrive\Desktop\New folder>git init
Initialized empty Git repository in C:/Users/mathe/OneDrive/Desktop/New folder/.git/

C:\Users\mathe\OneDrive\Desktop\New folder>git add .

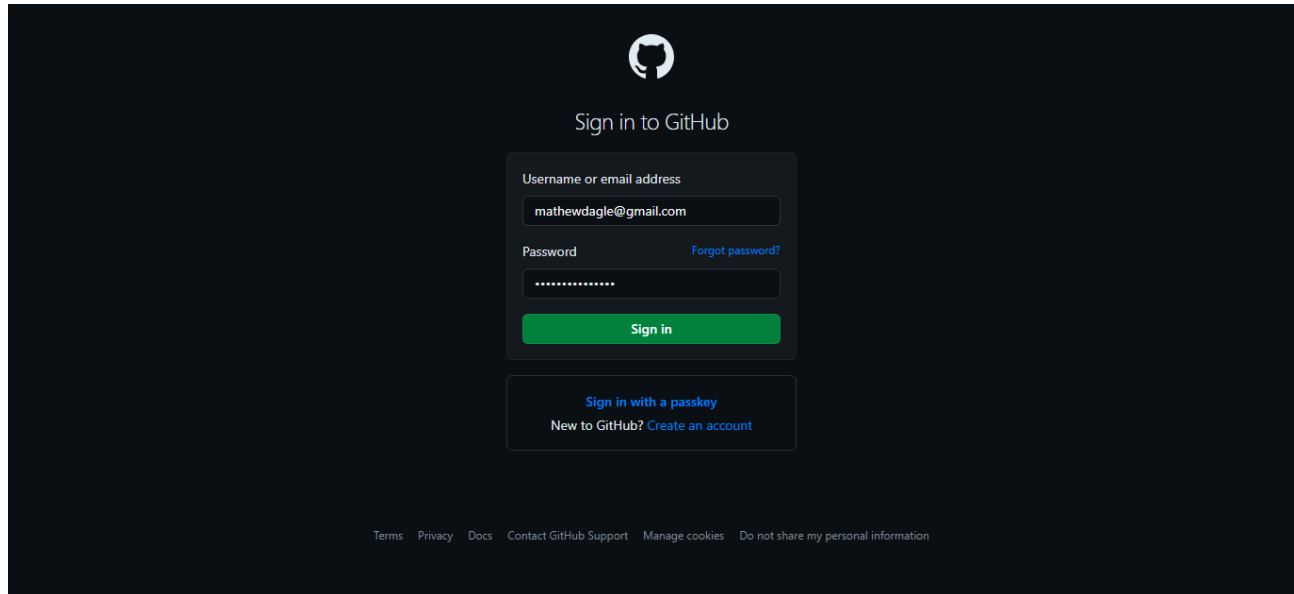
C:\Users\mathe\OneDrive\Desktop\New folder>git commit -m "Initial commit"
[master (root-commit) d5890a1] Initial commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 New Text Document.txt

C:\Users\mathe\OneDrive\Desktop\New folder>
```

- Run git add . to stage all changes.
- Run git commit -m "Initial commit" to commit changes.

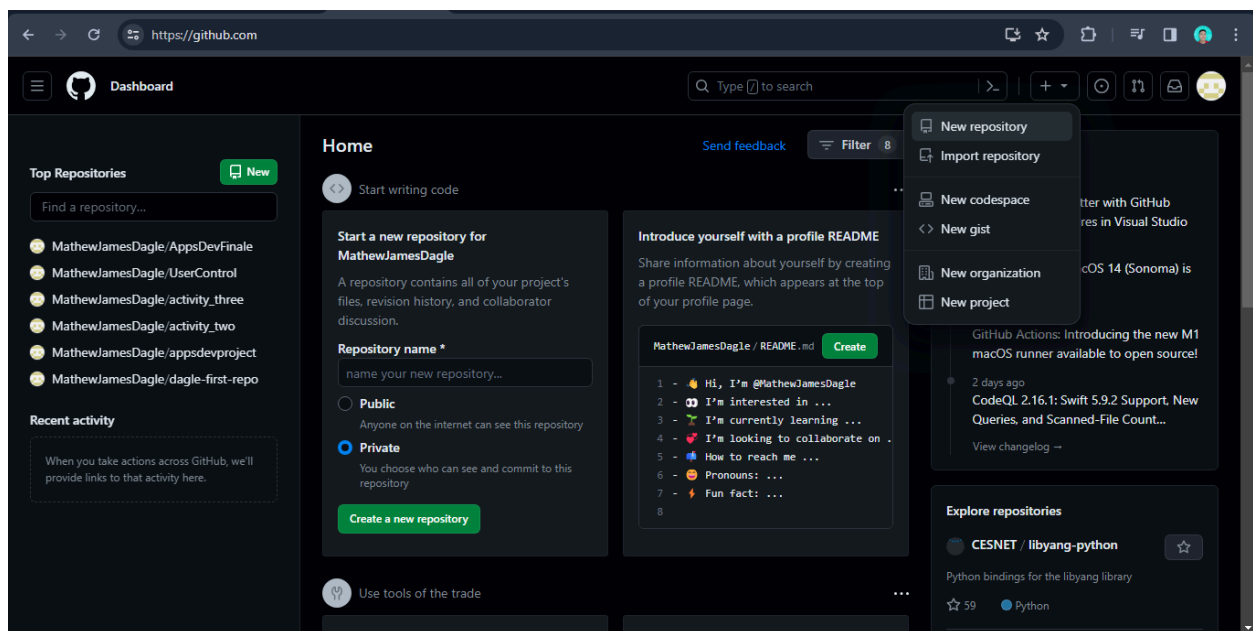
Step 3: Create a GitHub Repository

Sign Up on GitHub



- If you don't have a GitHub account, sign up at <https://github.com>

Create a New Repository



Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository.](#)

Required fields are marked with an asterisk ().*

Owner * MathewJamesDagle **Repository name *** dagle-first-repo
 dagle-first-repo is available.

Great repository names are short and memorable. Need inspiration? How about [congenial-system](#) ?

Description (optional)

☐ **Public**
 Anyone on the internet can see this repository. You choose who can commit.

☐ **Private**
 You choose who can see and commit to this repository.

Initialize this repository with:

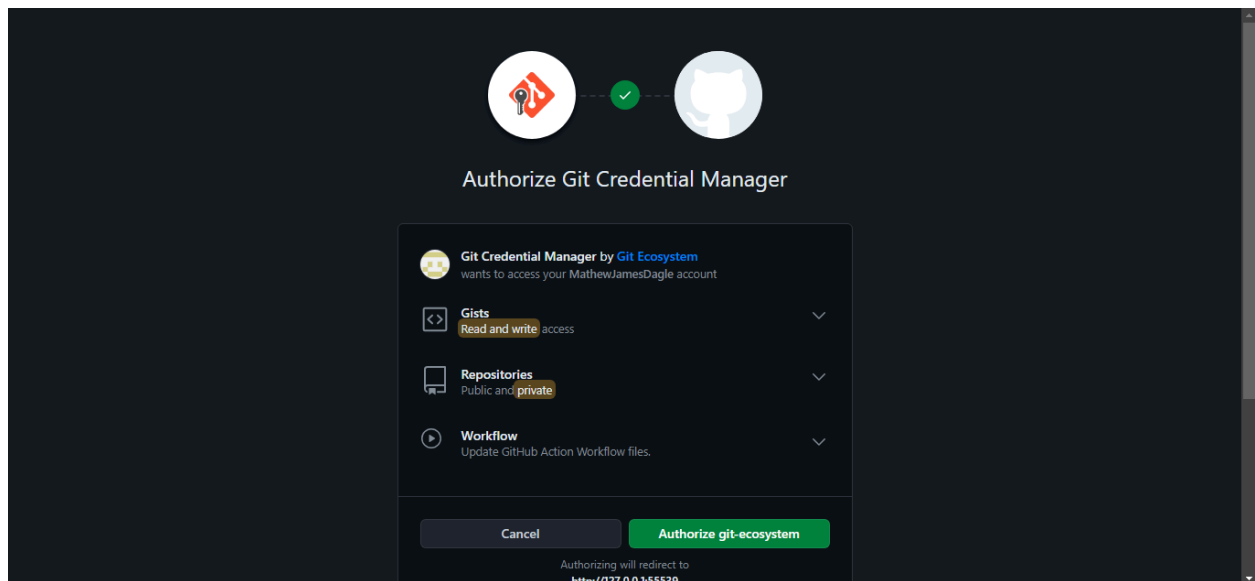
☒ **Add a README file**
 This is where you can write a long description for your project. [Learn more about READMEs.](#)

- Click on the "+" sign in the top right corner and select "New repository."
- Name your repository "lastname-first-repo" and follow the instructions to create it.

Link Local Repository on GitHub

```
C:\Users\mathe\OneDrive\Desktop\New folder>git remote add origin https://github.com/MathewJamesDagle/dagle-first-repo.git
C:\Users\mathe\OneDrive\Desktop\New folder>git branch -M main
C:\Users\mathe\OneDrive\Desktop\New folder>git push -u origin main
info: please complete authentication in your browser...
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 232 bytes | 116.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/MathewJamesDagle/dagle-first-repo.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
```

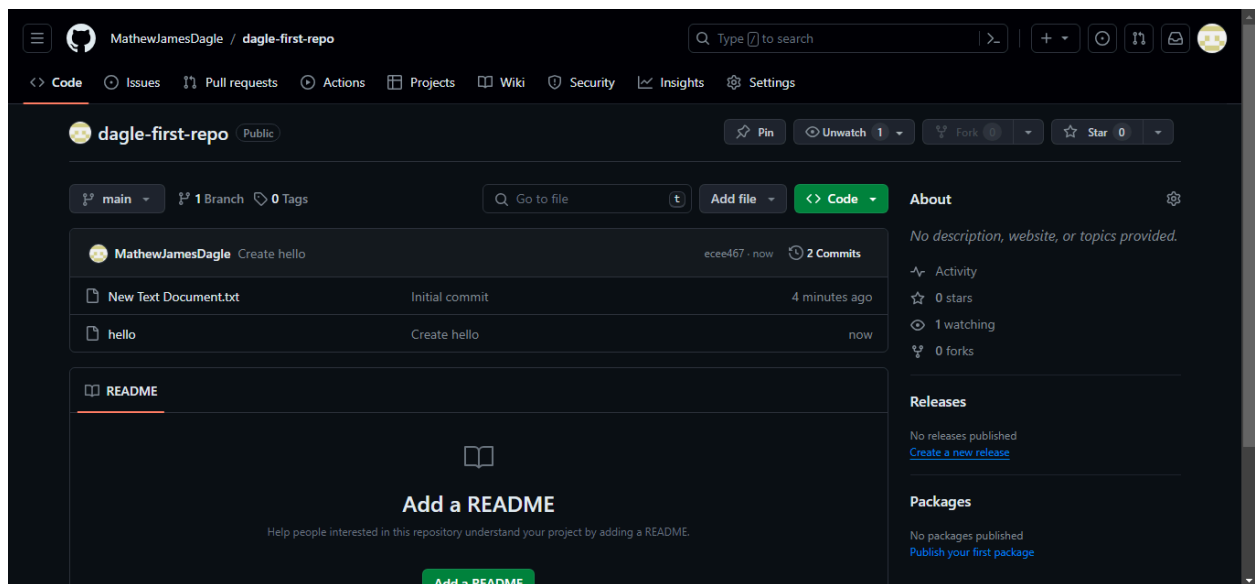
- Follow the instructions on GitHub to add a remote origin to your local repository:
 - git remote add origin <https://github.com/your-username/lastname-first-repo.git>
 - git branch -M main
 - git push -u origin main



- Authorize Git Credential Manager via browser

Step 4: Git Pull

Simulate Changes on GitHub



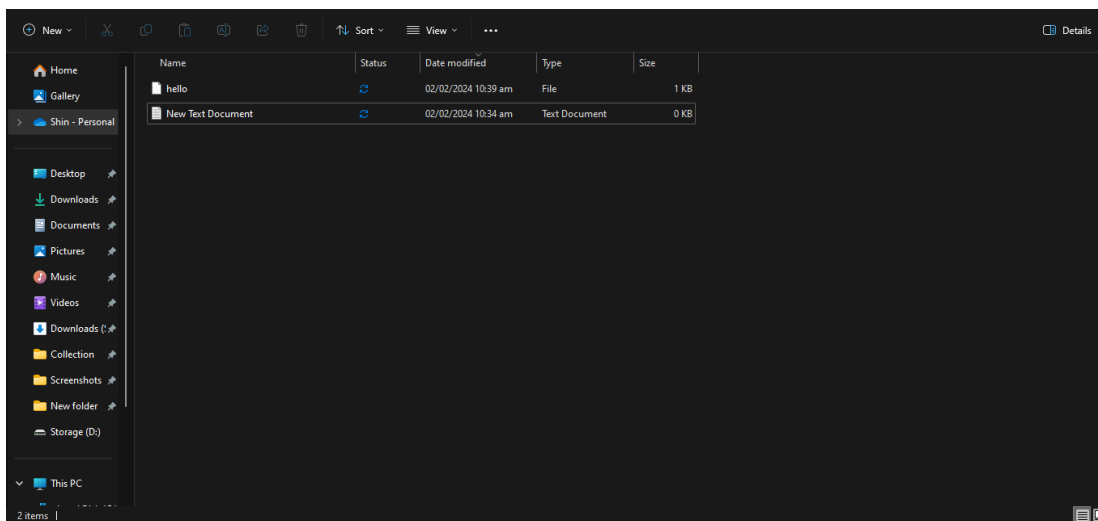
- Add a new file or make changes directly on the GitHub repository
- This time I added a simple file called hello

Pull Changes Locally

```
C:\Users\mathe\OneDrive\Desktop\New folder>git pull origin main
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 933 bytes | 84.00 KiB/s, done.
From https://github.com/MathewJamesDagle/dagle-first-repo
* branch      main       -> FETCH_HEAD
   ddd091c..ecee467  main   -> origin/main
Updating ddd091c..ecee467
Fast-forward
 hello | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 hello

C:\Users\mathe\OneDrive\Desktop\New folder>
```

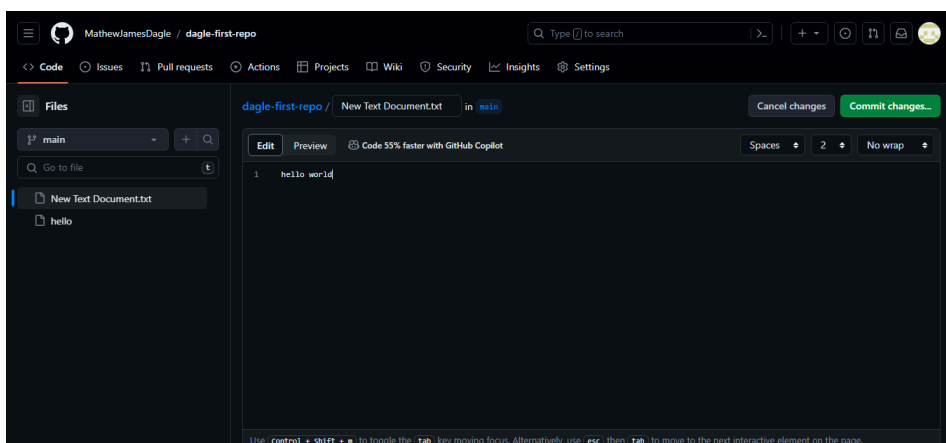
- In your local terminal, run `git pull origin main` to fetch and merge changes from GitHub.



- File is present at local repository after initiating a pull from GitHub

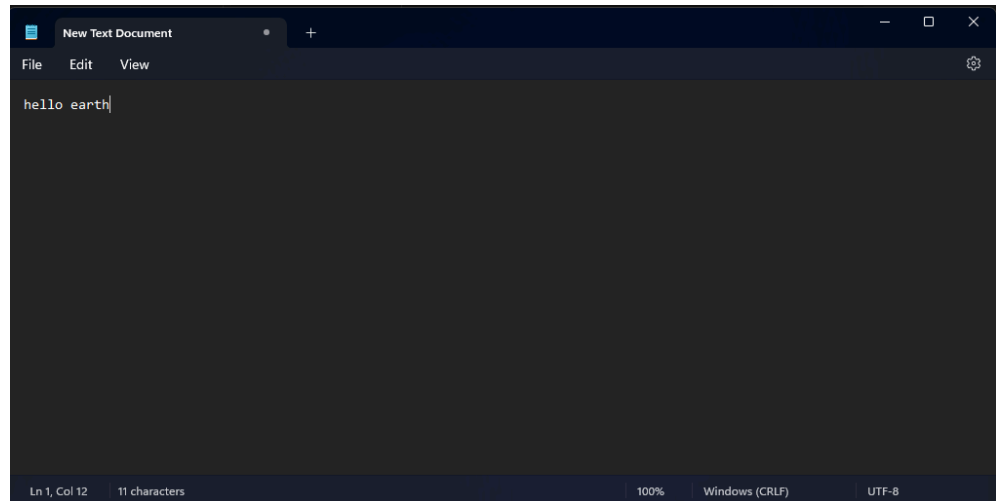
Step 5: Merge Conflict

Simulate Conflict



Edited the text file “New Text Document” in GitHub repository and committed to save.

Edited the text file
“New Text
Document” in
local repository



```
C:\Users\mathe\OneDrive\Desktop\New folder>git add .
C:\Users\mathe\OneDrive\Desktop\New folder>git commit -m "Conflicting merge"
[main 471427c] Conflicting merge
1 file changed, 1 insertion(+)
```

Then committing the edited file.

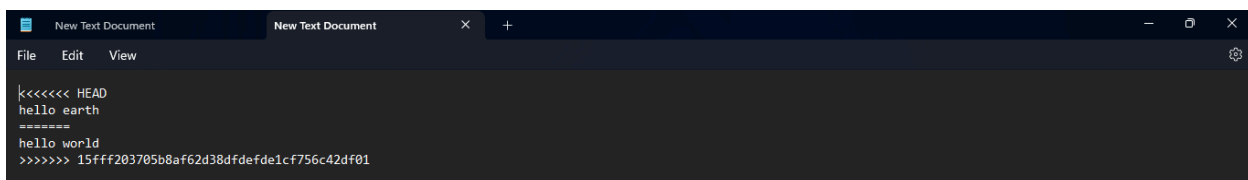
Attempt to Pull

```
C:\Users\mathe\OneDrive\Desktop\New folder>git pull 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 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 961 bytes | 96.00 KiB/s, done.
From https://github.com/MathewJamesDagle/dagle-first-repo
* branch      main       -> FETCH_HEAD
   ecee467..15ffff20  main   -> origin/main
Auto-merging New Text Document.txt
CONFLICT (content): Merge conflict in New Text Document.txt
Automatic merge failed; fix conflicts and then commit the result.

C:\Users\mathe\OneDrive\Desktop\New folder>
```

- In your local terminal, run git pull origin main.
- Git will notify you of a conflict. Manually resolve the conflict in the file.

Resolve Conflict



- Resolved the conflict by manually editing the file to combine the desired content, removing the conflict markers.

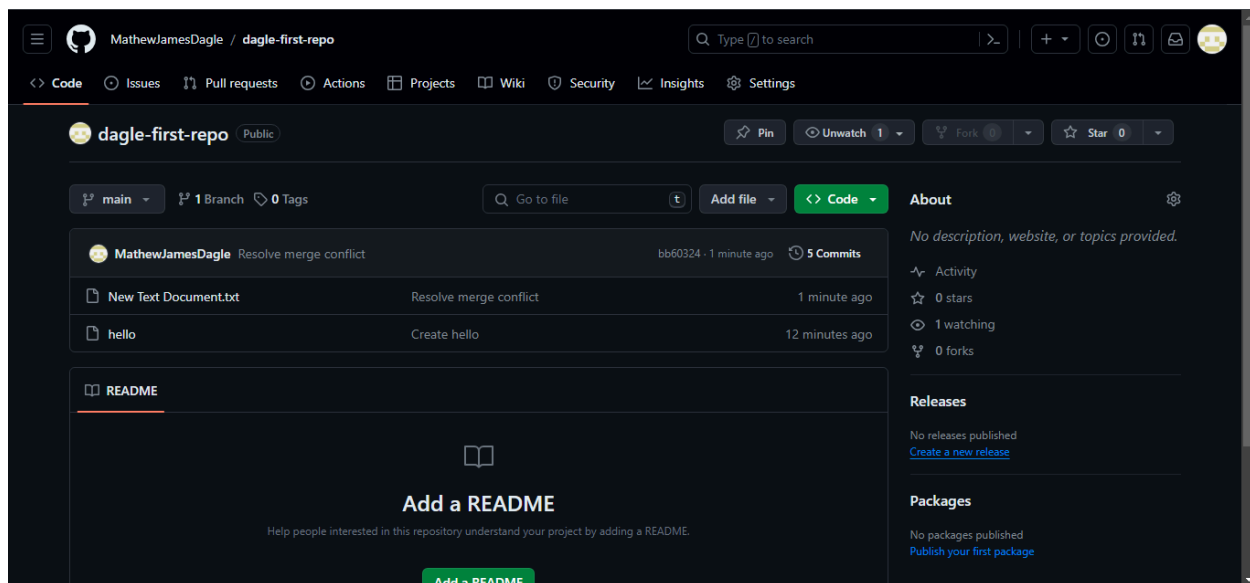

```
C:\Users\mathe\OneDrive\Desktop\New folder>git add .  
C:\Users\mathe\OneDrive\Desktop\New folder>git commit -m "Resolve merge conflict"  
[main bb60324] Resolve merge conflict
```

- After resolving, run `git add .` and then `git commit -m "Resolve merge conflict"`.

Push Changes

```
C:\Users\mathe\OneDrive\Desktop\New folder>git add .  
C:\Users\mathe\OneDrive\Desktop\New folder>git commit -m "Resolve merge conflict"  
[main bb60324] Resolve merge conflict  
  
C:\Users\mathe\OneDrive\Desktop\New folder>git push origin main  
Enumerating objects: 10, done.  
Counting objects: 100% (10/10), done.  
Delta compression using up to 16 threads  
Compressing objects: 100% (4/4), done.  
Writing objects: 100% (6/6), 619 bytes | 206.00 KiB/s, done.  
Total 6 (delta 0), reused 0 (delta 0), pack-reused 0  
To https://github.com/MathewJamesDagle/dagle-first-repo.git  
15fff20..bb60324 main -> main  
  
C:\Users\mathe\OneDrive\Desktop\New folder>
```

- Run `git push origin main` to update the changes on GitHub.



- Changes reflected on GitHub after the push.