Section 4

PL3

Git & GitHub

T.A: Shereen El-gazzar

git download for window

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Git
https://git-scm.com › win · ترجم هذه الصفحة

Git - Downloading Package

Download for Windows. Click here to **download** the latest (2.47.0(2)) 64-bit version of **Git** for **Windows**. This is the most recent maintained build.

Git
https://git-scm.com › downloads · ترجم هذه الصفحة

Downloads

Downloads. macOS · **Windows** · Linux/Unix · Older releases are available and the **Git** source repository is on GitHub. Latest source Release. 2.47.0 Release Notes (...

GUI Clients · Linux and Unix · Install Git in Mac · Windows

gitforwindows.org
https://gitforwindows.org · ترجم هذه الصفحة

Git for Windows

The **Git** for **Windows** SDK is a build environment that includes all the tools necessary for developers who want to contribute by writing code for **Git** for **Windows**.

git --distributed-is-the-new-centralized

Type / to search entire site...

About

Documentation

Downloads

GUI Clients

Logos

Community

The entire **Pro Git book** written by Scott Chacon and Ben Straub is available to read online for free. Dead tree versions are available on Amazon.com.

Download for Windows

Click here to download the latest (**2.47.0(2)**) **64-bit** version of **Git for Windows**. This is the most recent maintained build. It was released **10 days ago**, on 2024-10-22.

Other Git for Windows downloads

Standalone Installer

32-bit Git for Windows Setup.

64-bit Git for Windows Setup.

Portable ("thumbdrive edition")

32-bit Git for Windows Portable.

64-bit Git for Windows Portable.

Using winget tool

Install winget tool if you don't already have it, then type this command in command prompt or Powershell.

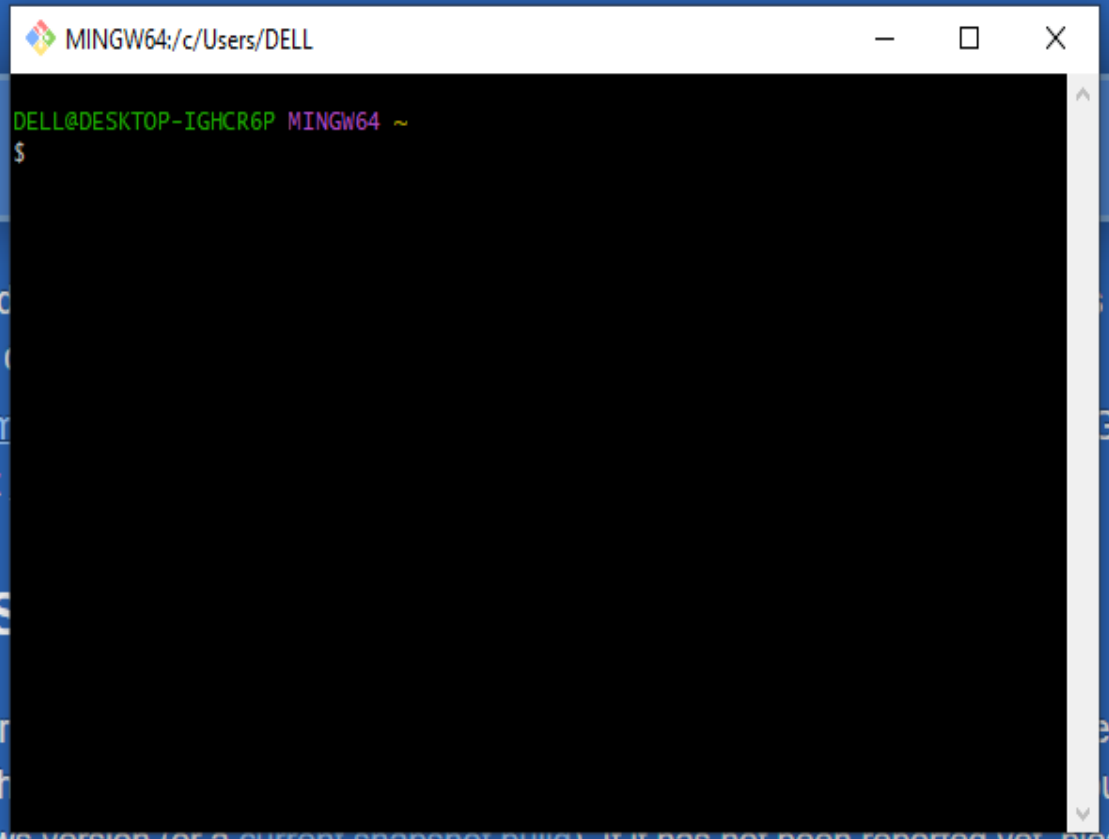
```
winget install --id Git.Git -e --source winget
```

The current source code release is version **2.47.0**. If you want the newer version, you can build it from the source code.

HOMEPAGE
FAQ
CONTRIBUTE
BUGS
QUESTIONS

Git for Windows v2.47.0(2) Release Notes

Latest update: October 22nd 2024



These release notes c covering the history of the core git

See http://git-scm.com Git for Windows is hosted at

Known iss

Should you encounter ed issues) and the mailing list, ch u use an up to date Git for Windows version (or a current snapshot build). If it has not been reported yet, please follow our bug reporting guidelines and report the bug.

Licenses

HOMEPAGE
FAQ
CONTRIBUTE
BUGS
QUESTIONS

Git for Windows v2.47.0(2) Release Notes

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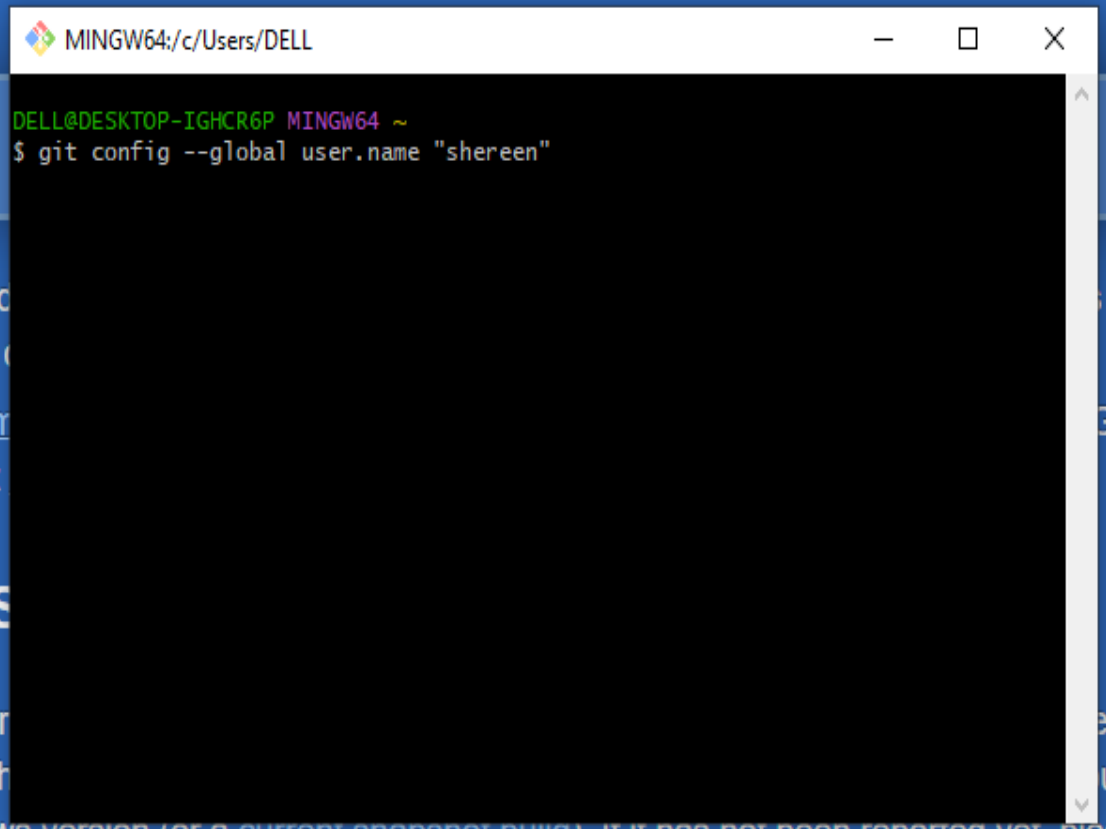

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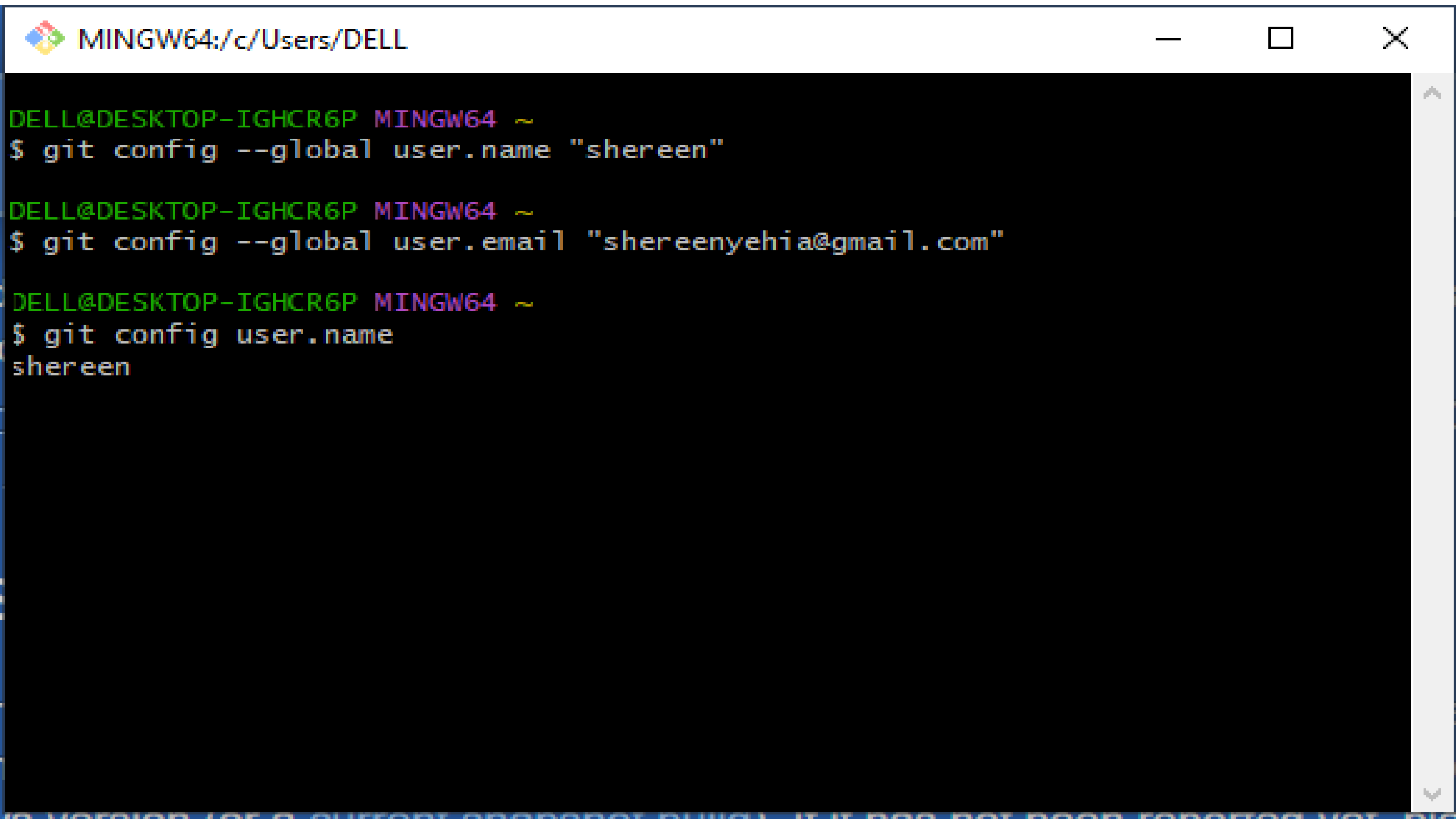
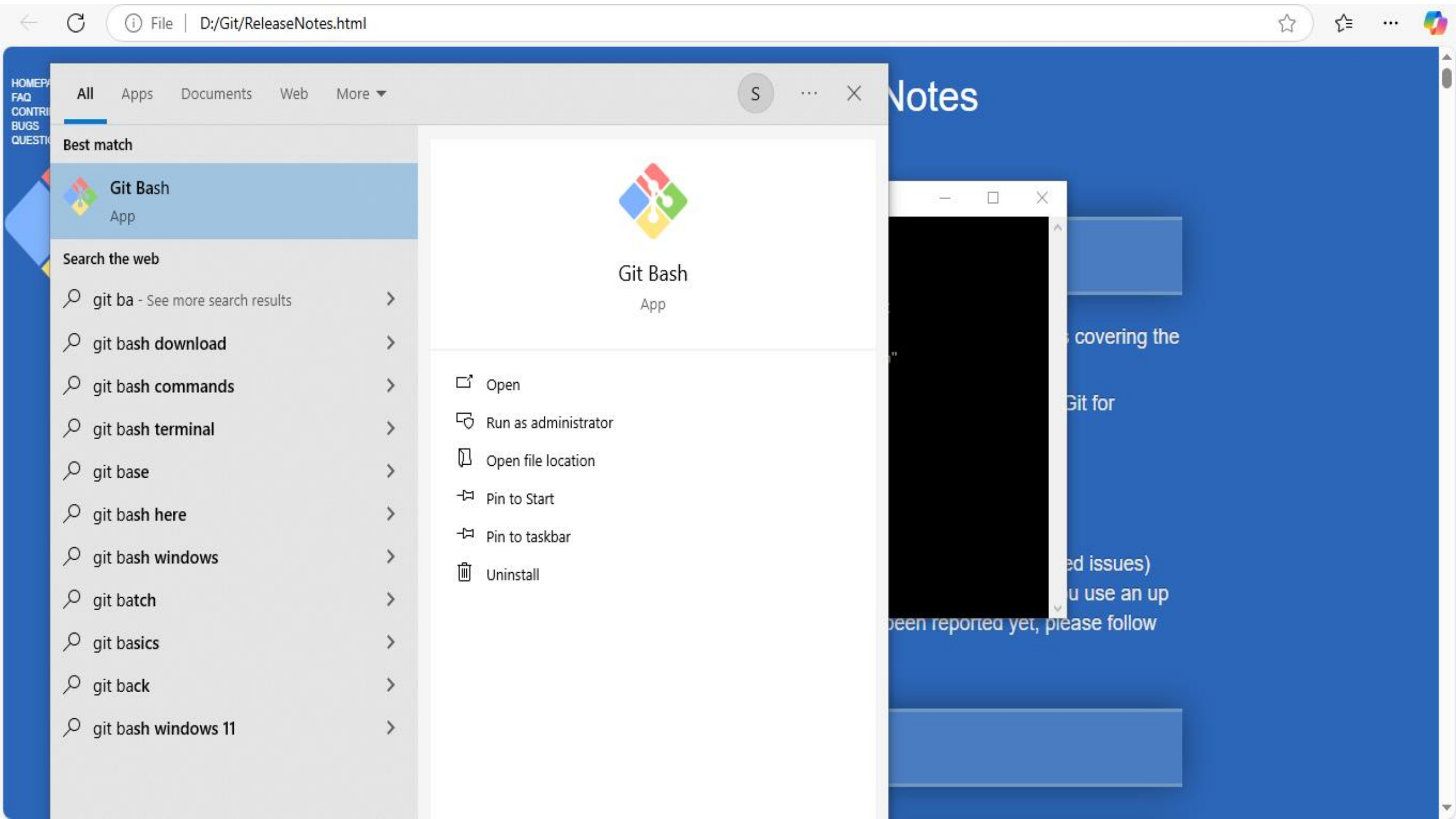
Licenses


MINGW64:/c/Users/DELL
DELL@DESKTOP-IGHCR6P MINGW64 ~
$ git config --global user.name "shereen"
DELL@DESKTOP-IGHCR6P MINGW64 ~
$ git config --global user.email "shereenyehia@gmail.com"
DELL@DESKTOP-IGHCR6P MINGW64 ~
$ git config user.name
shereen

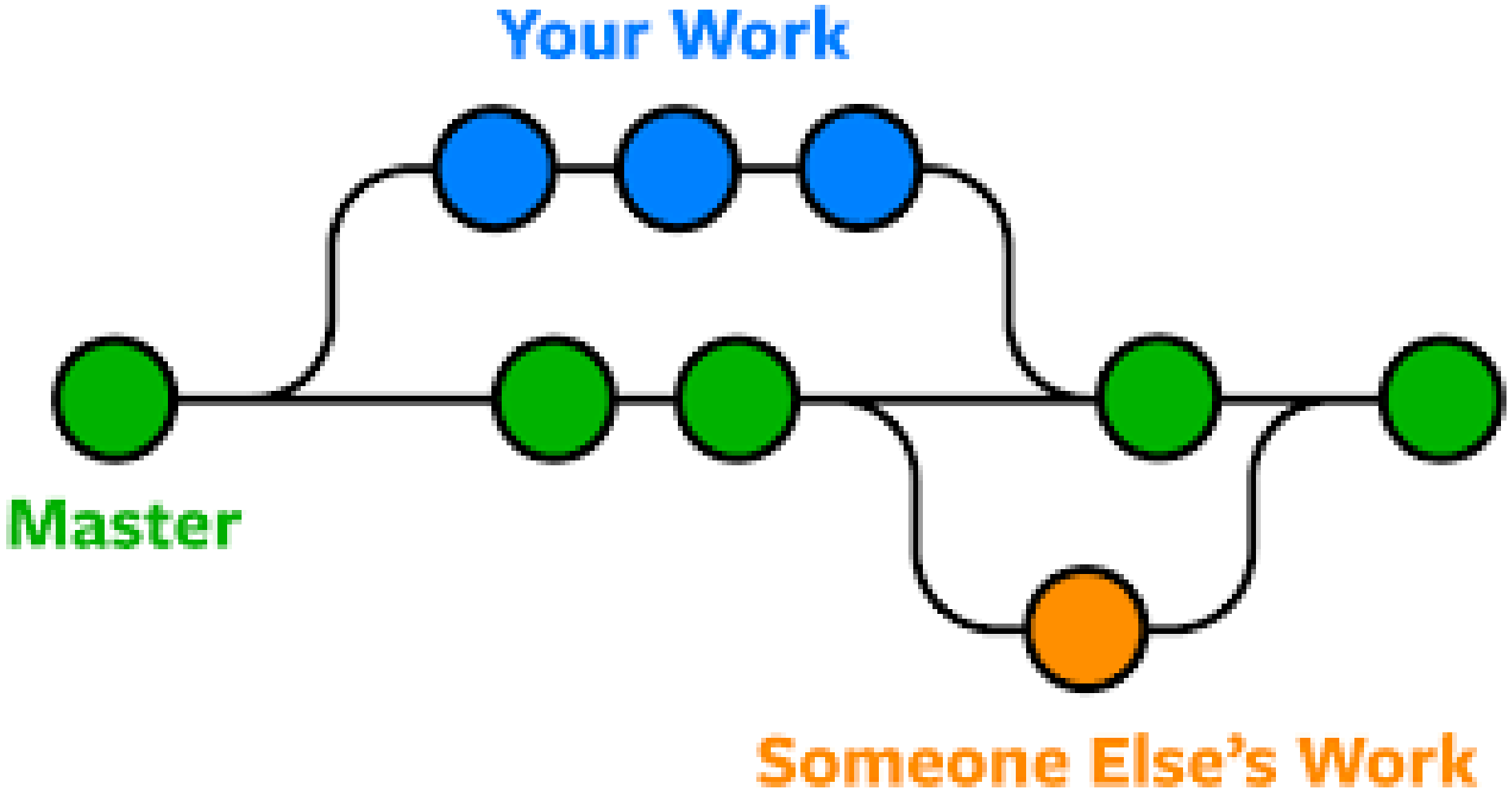

File | D:/Git/ReleaseNotes.html
All
Apps
Documents
Web
More
S
Best match
Git Bash
App
Search the web
git ba - See more search results
git bash download
git bash commands
git bash terminal
git base
git bash here
git bash windows
git batch
git basics
git back
git bash windows 11
Git Bash
App
Open
Run as administrator
Open file location
Pin to Start
Pin to taskbar
Uninstall
Notes
covering the
Git for
ed issues)
u use an up
been reported yet, please follow

Terms to know:

- A **repository** is a storage location where all files of a project are kept, including code and changes made over time.

- Git helps track every modification, allowing developers to revert to previous versions if needed.

- In **GitHub**, the repository is hosted ***online***, enabling developers to collaborate on the same project from different locations.


Your Work
Master
Someone Else's Work

Types of Repositories in Git and GitHub

1. Local Repository:

- Stored on your personal device.
- Changes are made directly and don’t require an internet connection.
- You can use Git commands like add and commit to manage changes locally.

2. Remote Repository:

- Hosted on a server like GitHub, GitLab, or Bitbucket.
- Enables collaboration between developers remotely, as they can push their changes to the remote repository.
- Uses commands like push and pull to update changes between the local and remote repositories.

❑ Public Repository:

•Open to the public, allowing anyone to view the code (but not edit it unless they have access).

•Ideal for open-source projects where developers from around the world can view and contribute

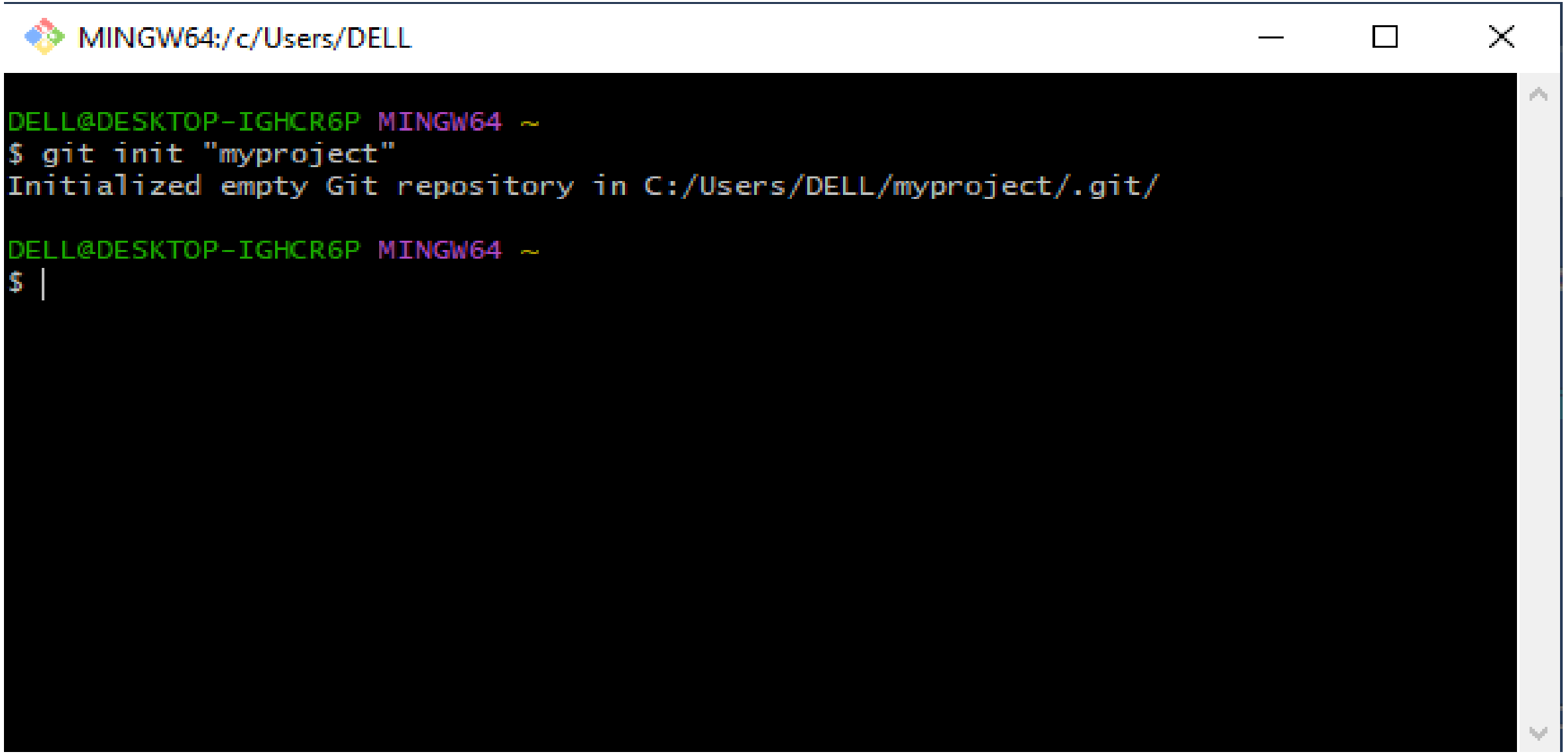
.

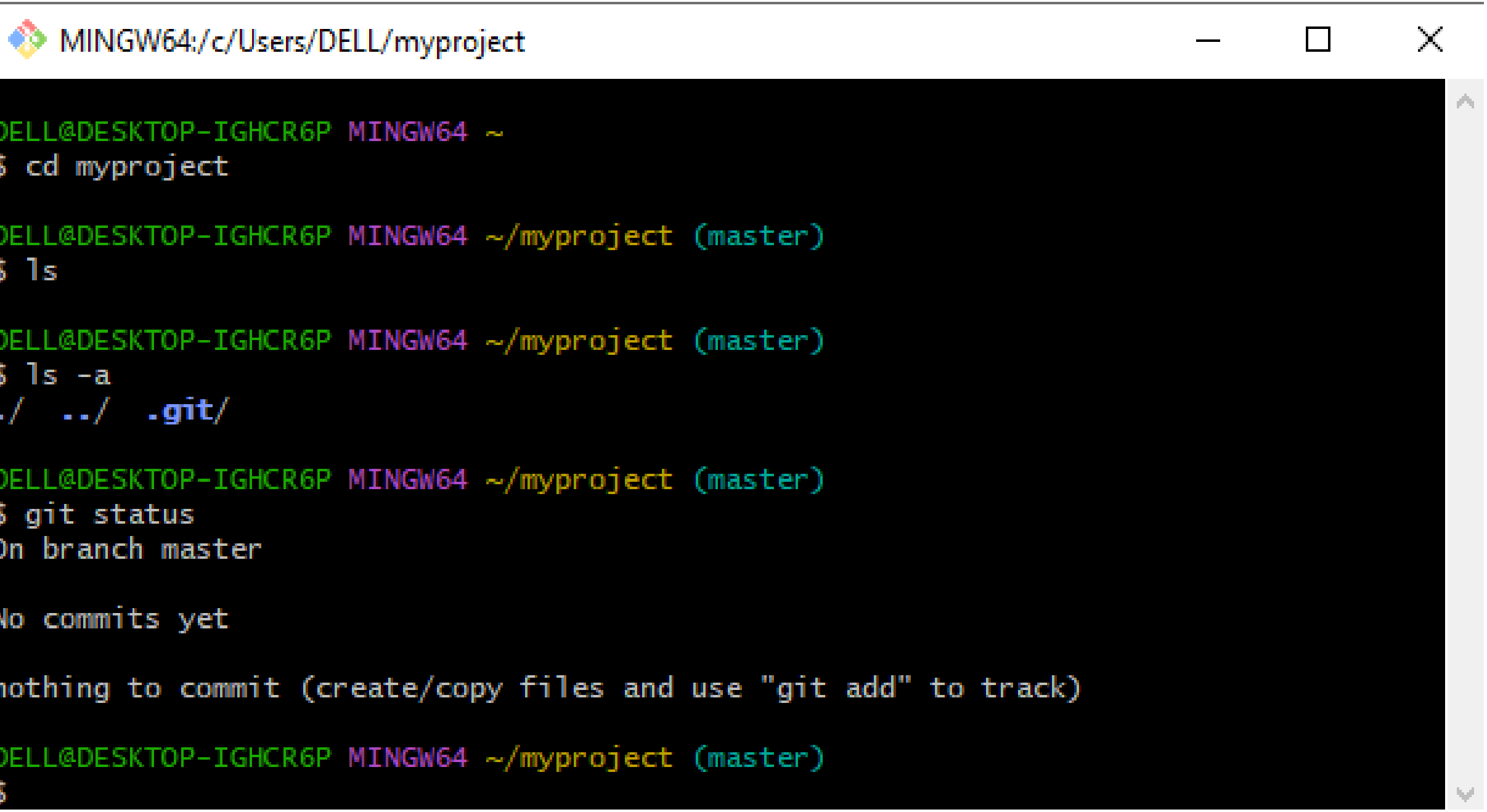
❑ Private Repository:

•Only accessible to users with permission.

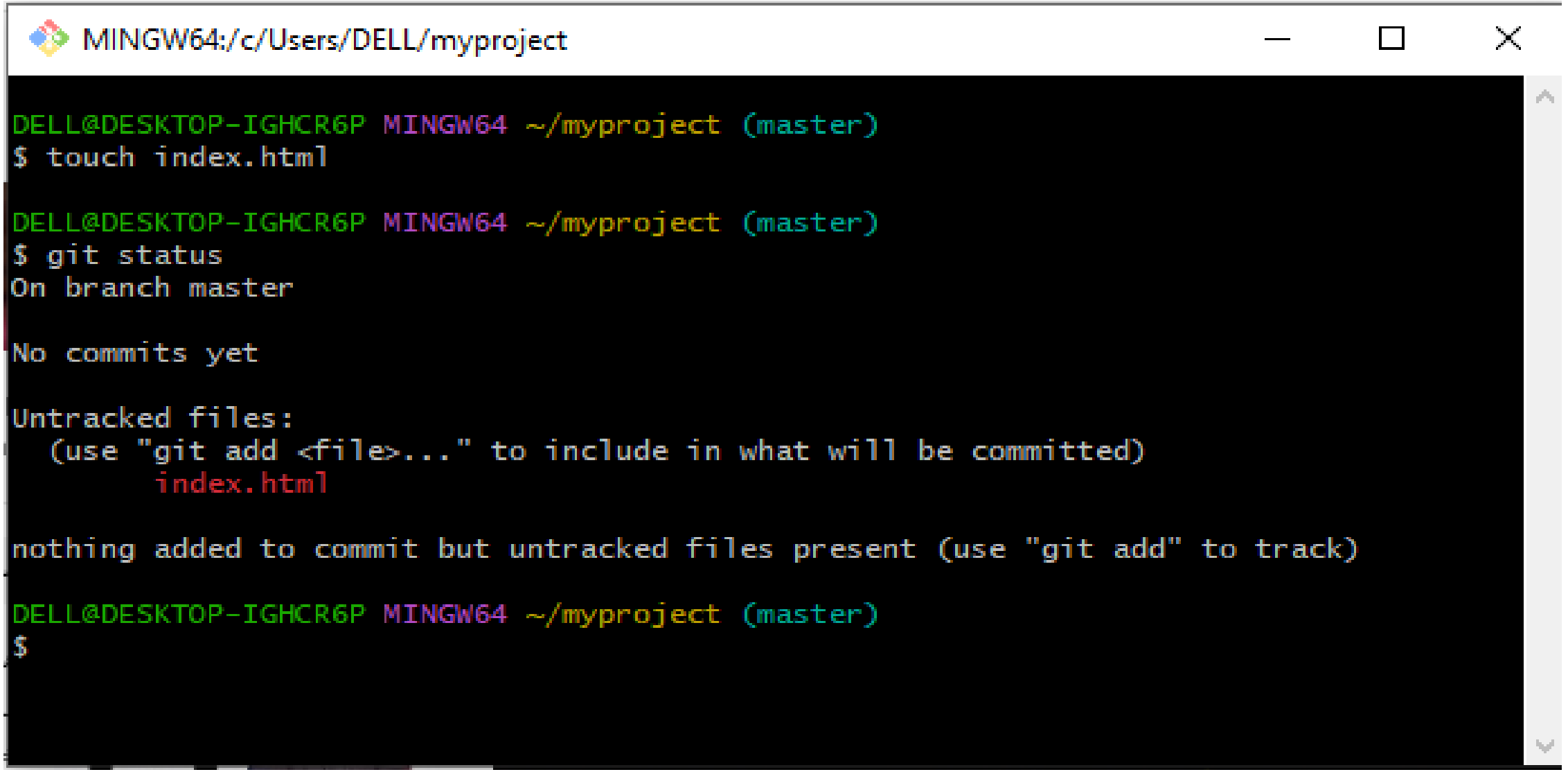
•Useful for projects that require privacy, such as commercial or closed-source projects.

Create new repo. with name “myproject”



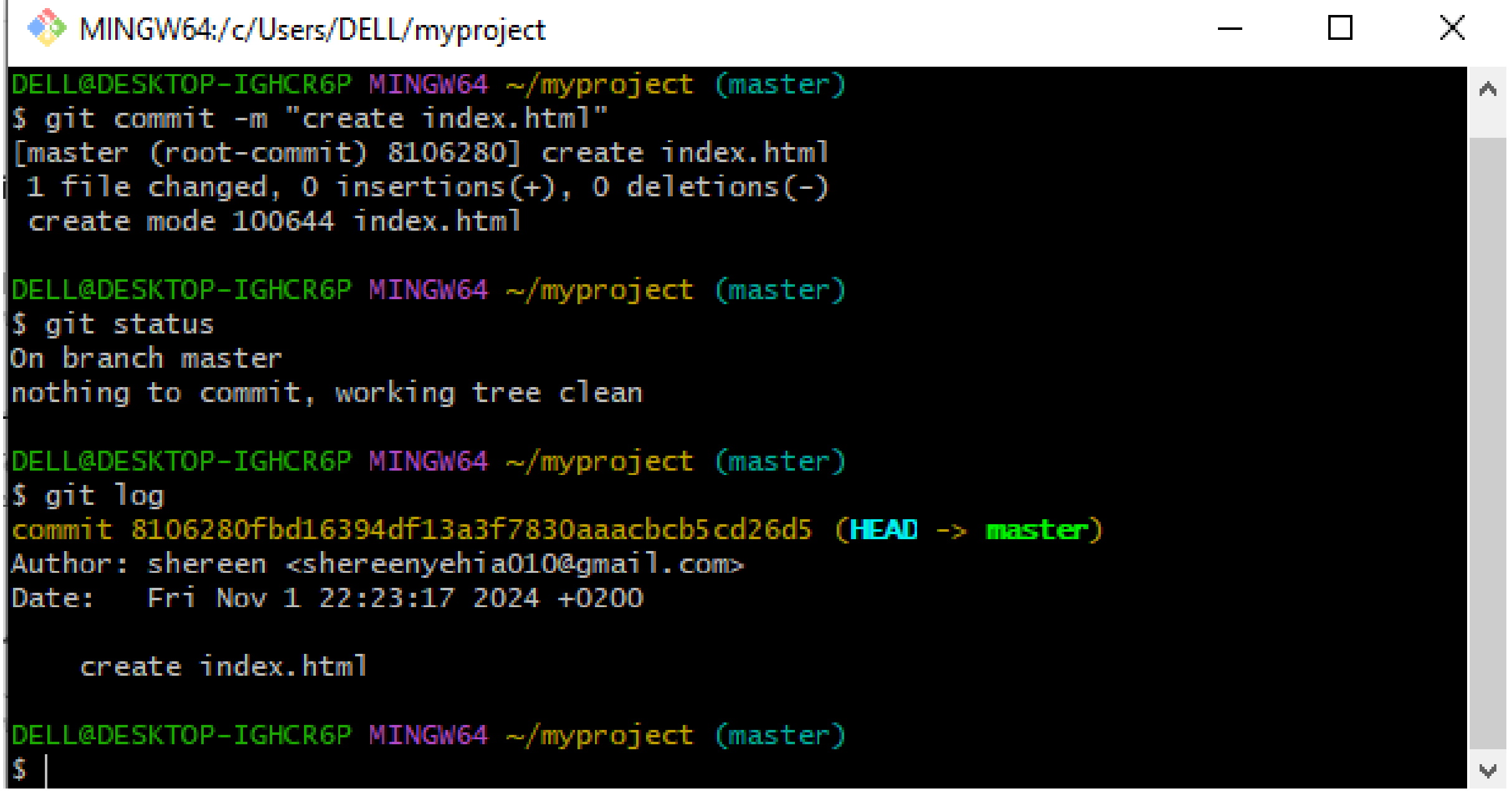

MINGW64:/c/Users/DELL/myproject
DELL@DESKTOP-IGHCR6P MINGW64 ~
$ cd myproject
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ ls
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ ls -a
./ ../ .git/
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ git status
On branch master
No commits yet
nothing to commit (create/copy files and use "git add" to track)
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$

Create file inside the repo.

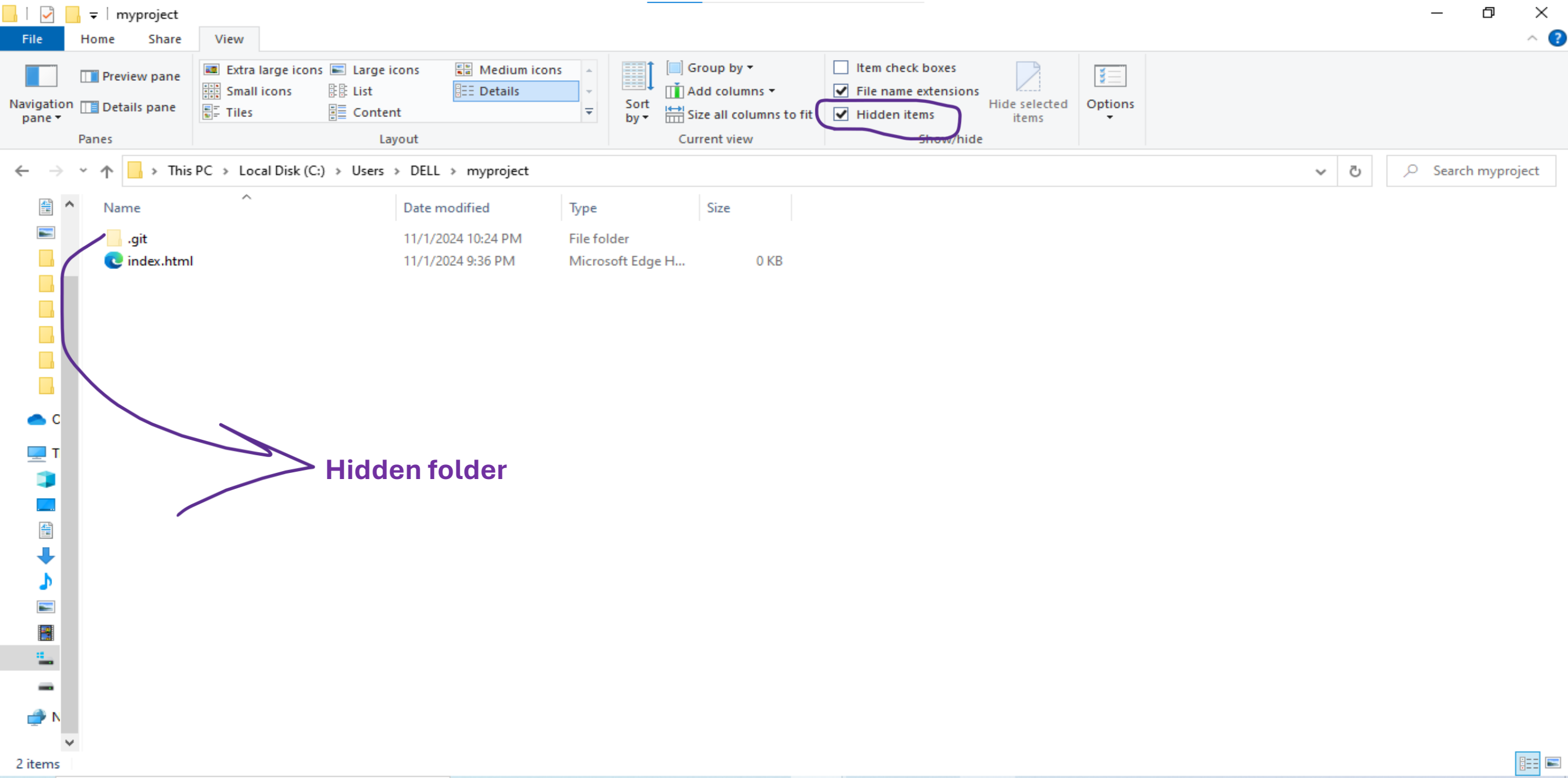


Staging area :

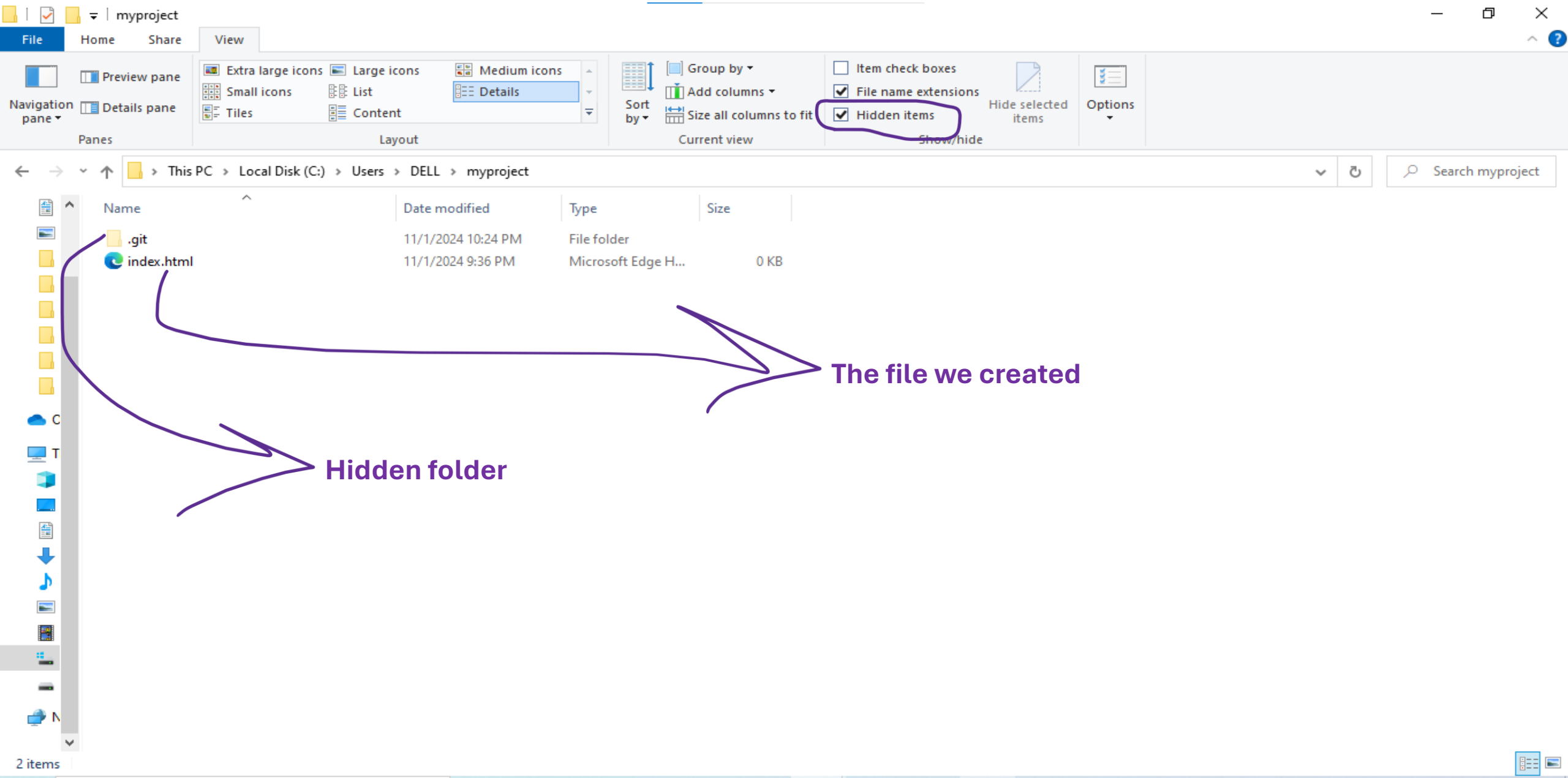
```
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ git add index.html

DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   index.html
```

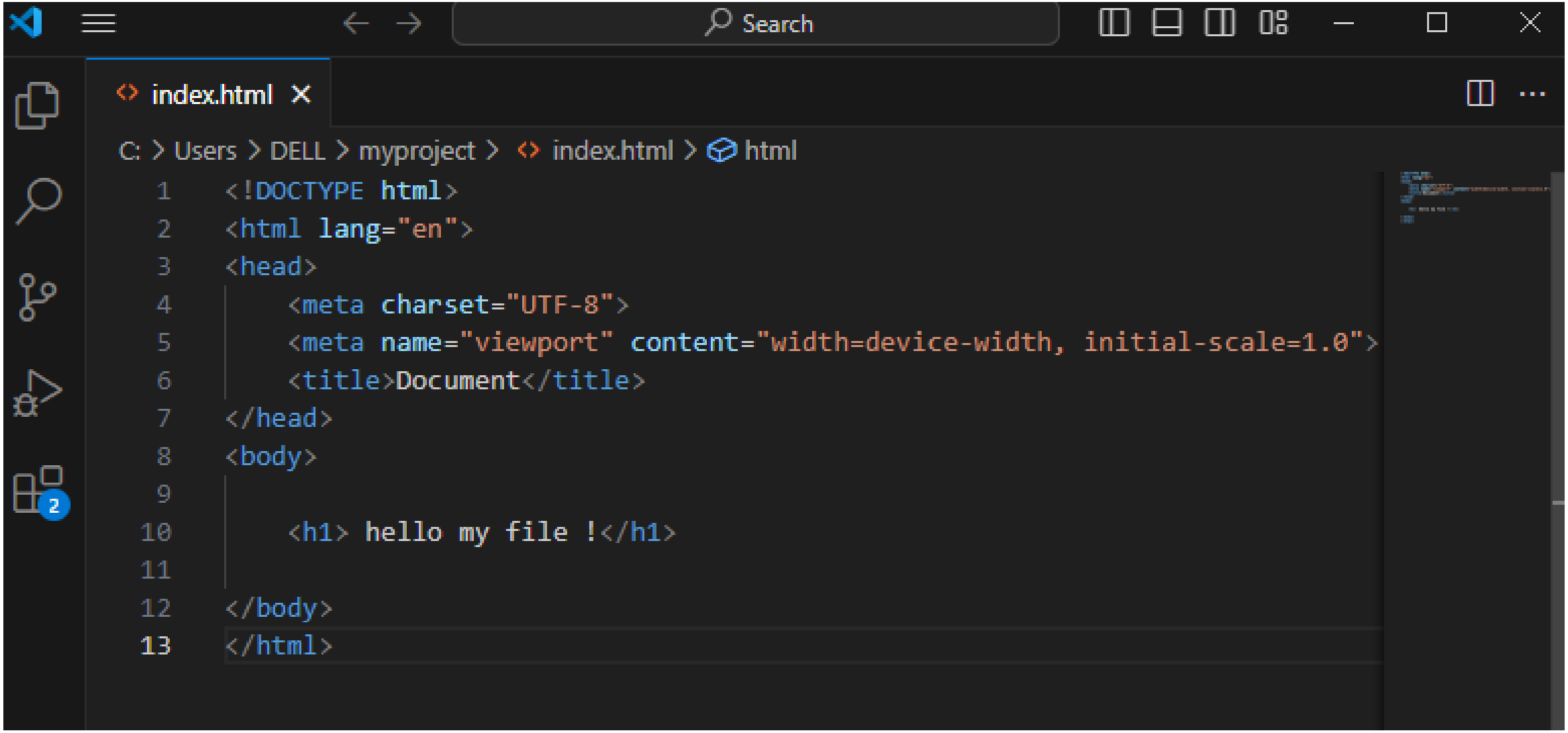

MINGW64:/c/Users/DELL/myproject
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ git commit -m "create index.html"
[master (root-commit) 8106280] create index.html
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 index.html
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ git status
On branch master
nothing to commit, working tree clean
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ git log
commit 8106280fbd16394df13a3f7830aaacbcb5cd26d5 (HEAD -> master)
Author: shereen <shereenyehia010@gmail.com>
Date: Fri Nov 1 22:23:17 2024 +0200
create index.html
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$

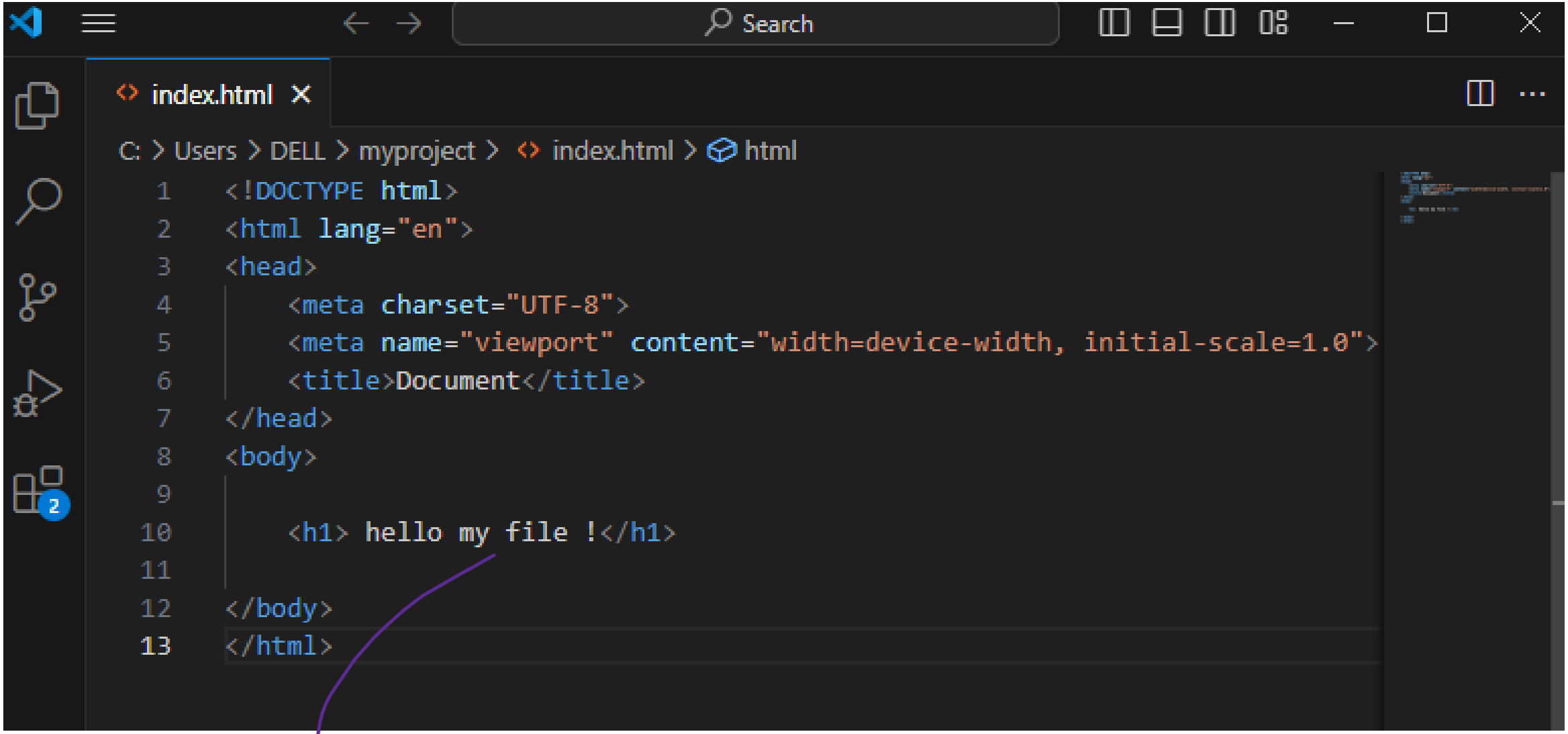
Open this file with vs code :



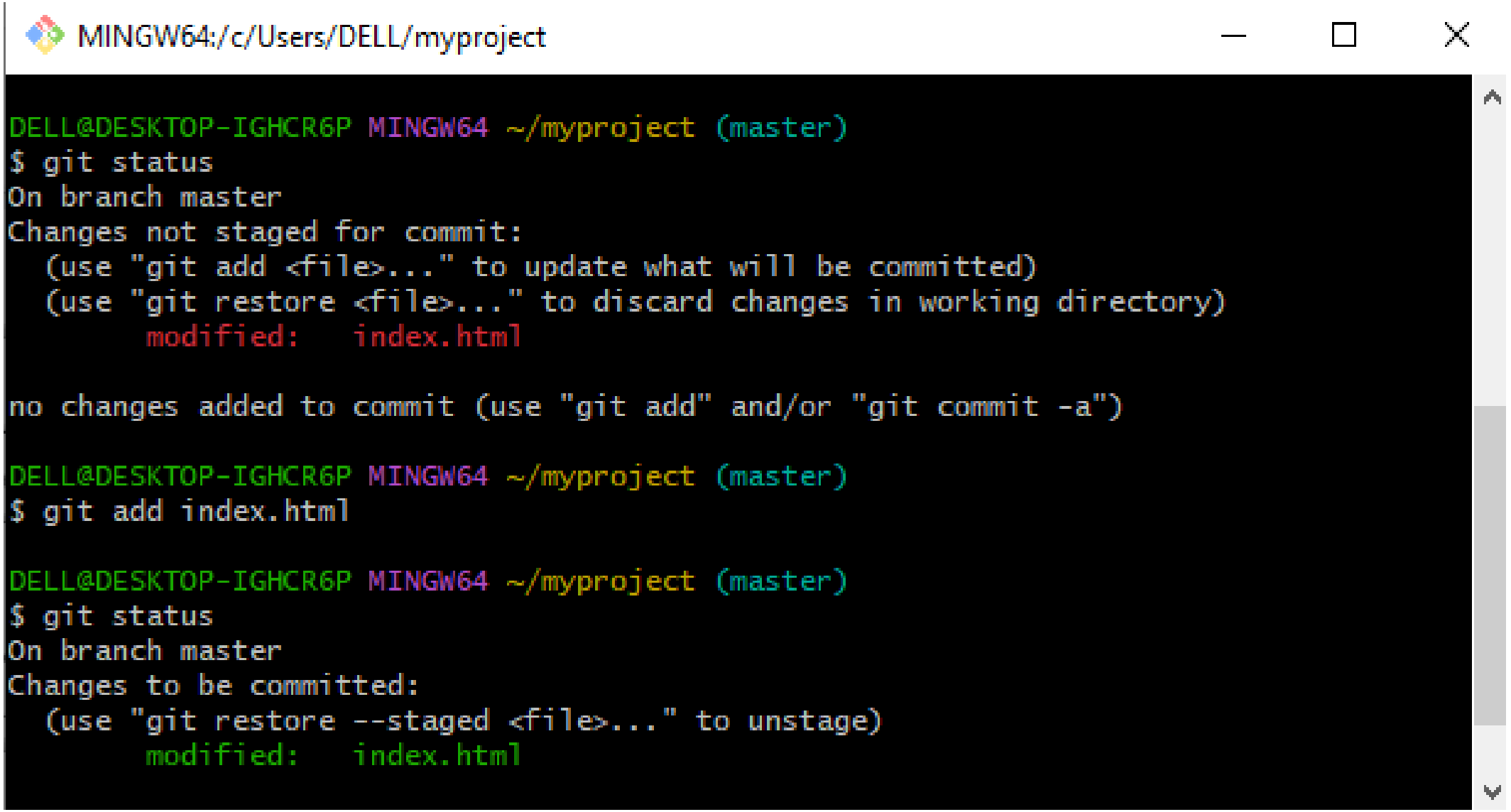
Open this file with vs code :

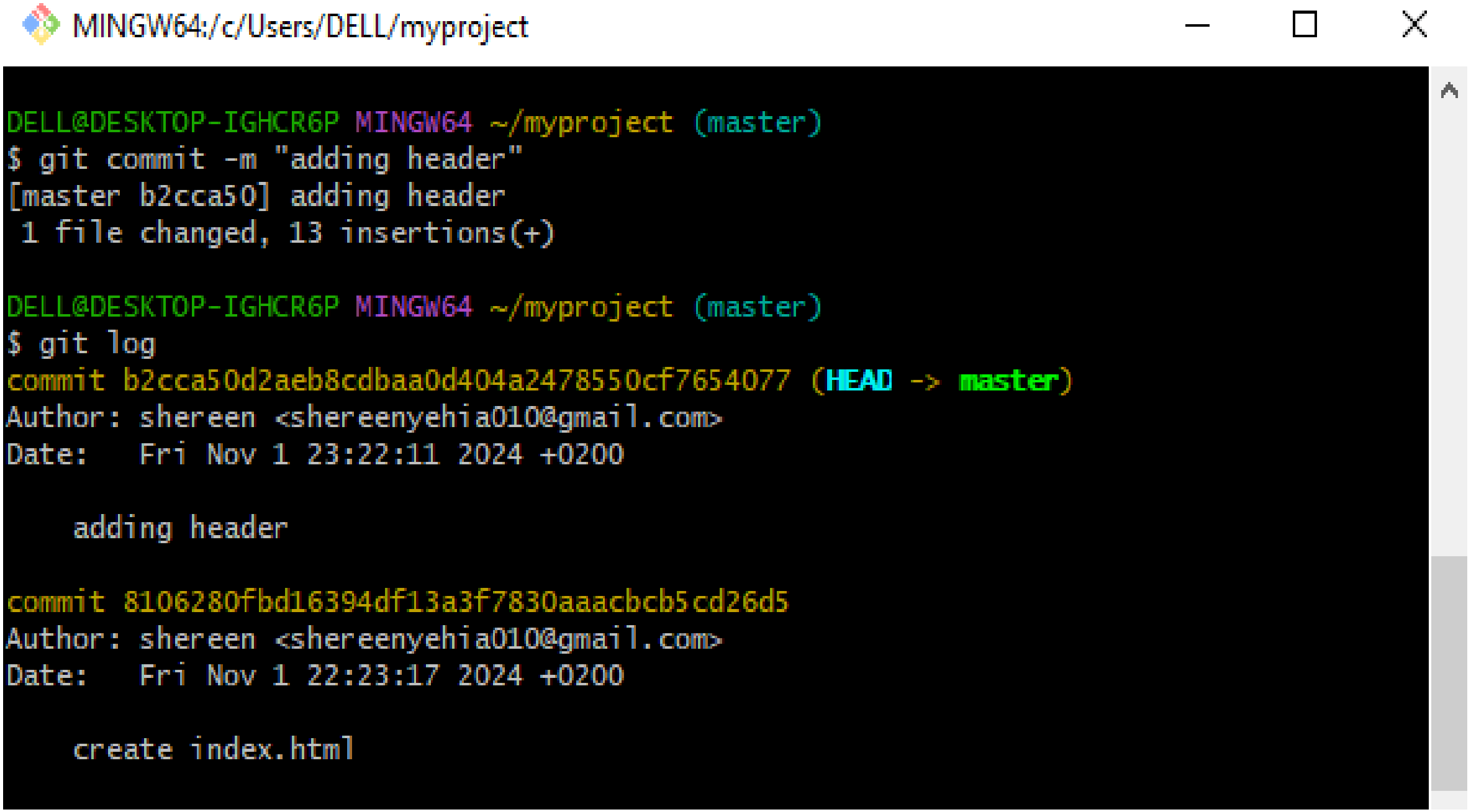


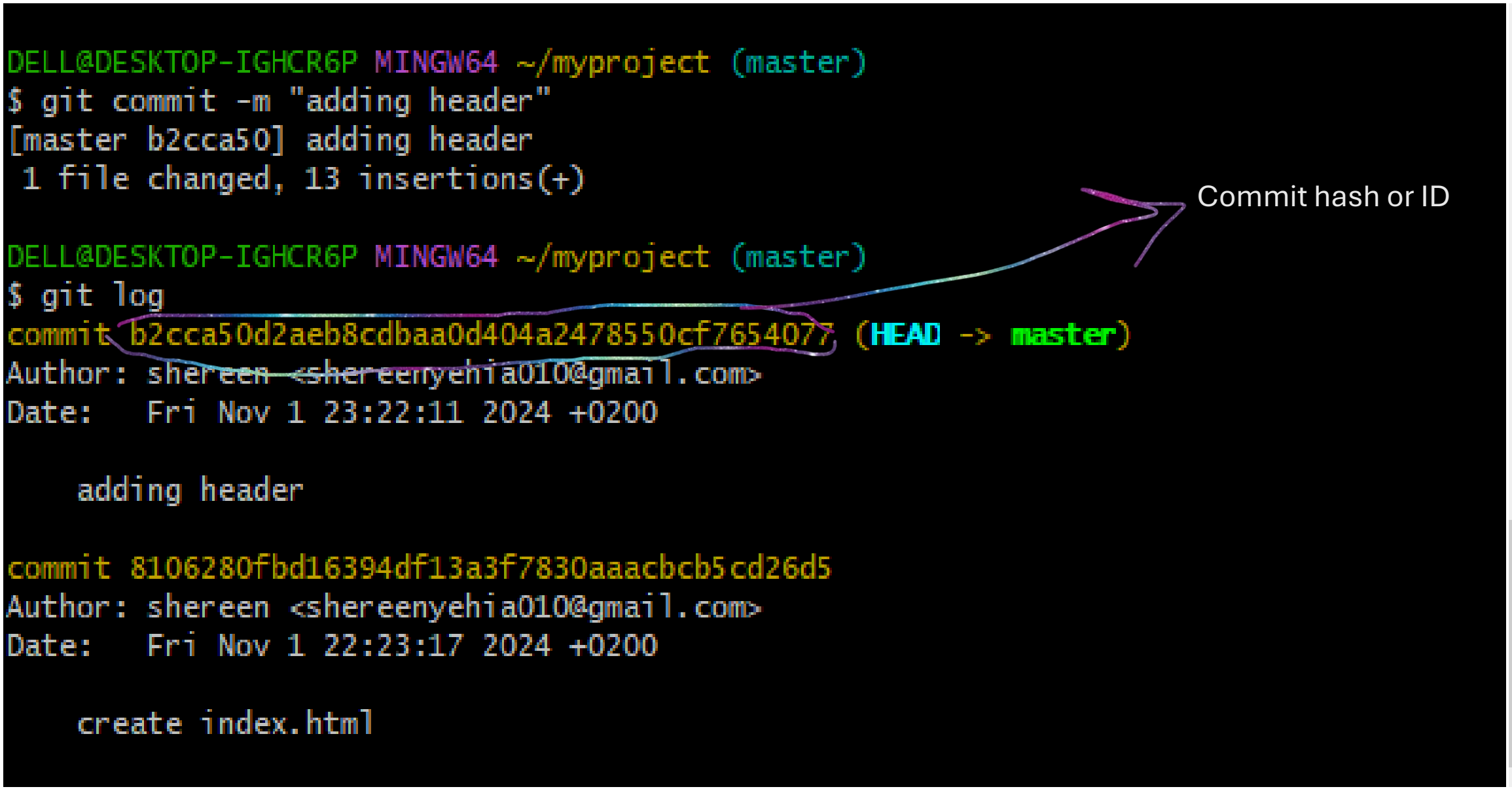

Search
index.html
C: > Users > DELL > myproject > index.html > html
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 <meta charset="UTF-8">
5 <meta name="viewport" content="width=device-width, initial-scale=1.0">
6 <title>Document</title>
7 </head>
8 <body>
9
10 <h1> hello my file !</h1>
11
12 </body>
13 </html>


Search
index.html
C: > Users > DELL > myproject > index.html > html
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 <meta charset="UTF-8">
5 <meta name="viewport" content="width=device-width, initial-scale=1.0">
6 <title>Document</title>
7 </head>
8 <body>
9
10 <h1> hello my file !</h1>
11
12 </body>
13 </html>
We added this header to our file

After Making changes on the file “index.html” :

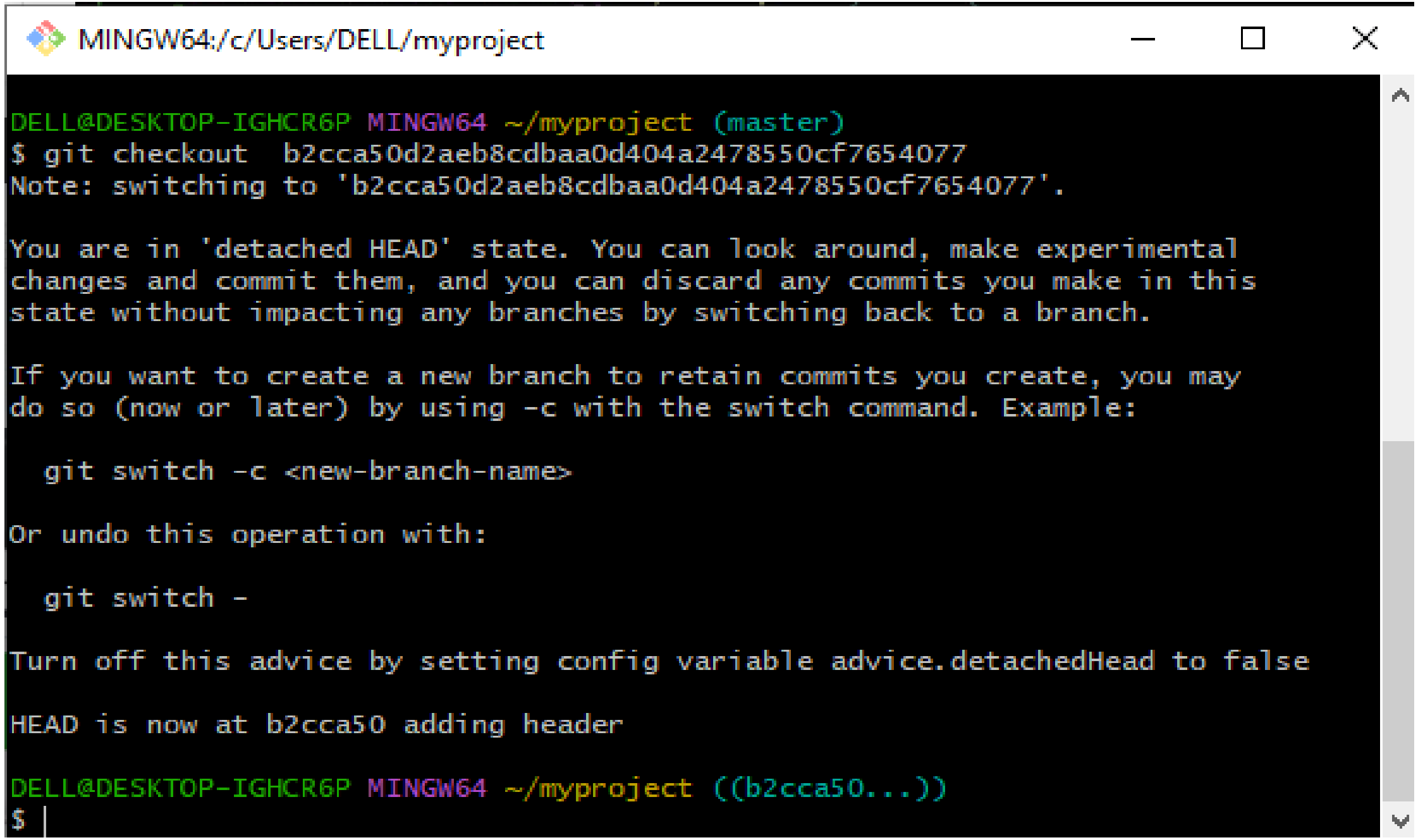



MINGW64:/c/Users/DELL/myproject
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ git commit -m "adding header"
[master b2cca50] adding header
1 file changed, 13 insertions(+)
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ git log
commit b2cca50d2aeb8cdbaa0d404a2478550cf7654077 (HEAD -> master)
Author: shereen <shereenyehia010@gmail.com>
Date: Fri Nov 1 23:22:11 2024 +0200
adding header
commit 8106280fbd16394df13a3f7830aaacbcb5cd26d5
Author: shereen <shereenyehia010@gmail.com>
Date: Fri Nov 1 22:23:17 2024 +0200
create index.html


MINGW64:/c/Users/DELL/myproject
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ git commit -m "adding header"
[master b2cca50] adding header
1 file changed, 13 insertions(+)
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ git log
commit b2cca50d2aeb8cdbaa0d404a2478550cf7654077 (HEAD -> master)
Author: shereen <shereenyehia010@gmail.com>
Date: Fri Nov 1 23:22:11 2024 +0200
adding header
commit 8106280fbd16394df13a3f7830aaacbcb5cd26d5
Author: shereen <shereenyehia010@gmail.com>
Date: Fri Nov 1 22:23:17 2024 +0200
create index.html
Commit hash or ID

```
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ git checkout b2cca50d2aeb8cdbaa0d404a2478550cf7654077
```

- You are now viewing the project as it was at this specific commit.
- Any changes you make won’t be saved to a branch unless you create a new branch or switch back to one.


MINGW64:/c/Users/DELL/myproject
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ git checkout b2cca50d2aeb8cdbaa0d404a2478550cf7654077
Note: switching to 'b2cca50d2aeb8cdbaa0d404a2478550cf7654077'.
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 b2cca50 adding header
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject ((b2cca50...))
$

Git Detached HEAD State:

Detached HEAD: You are currently on a specific commit (b2cca50) rather than on an active branch like master.

```
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject ((b2cca50...))
$ git branch
* (HEAD detached at b2cca50)
  master
```

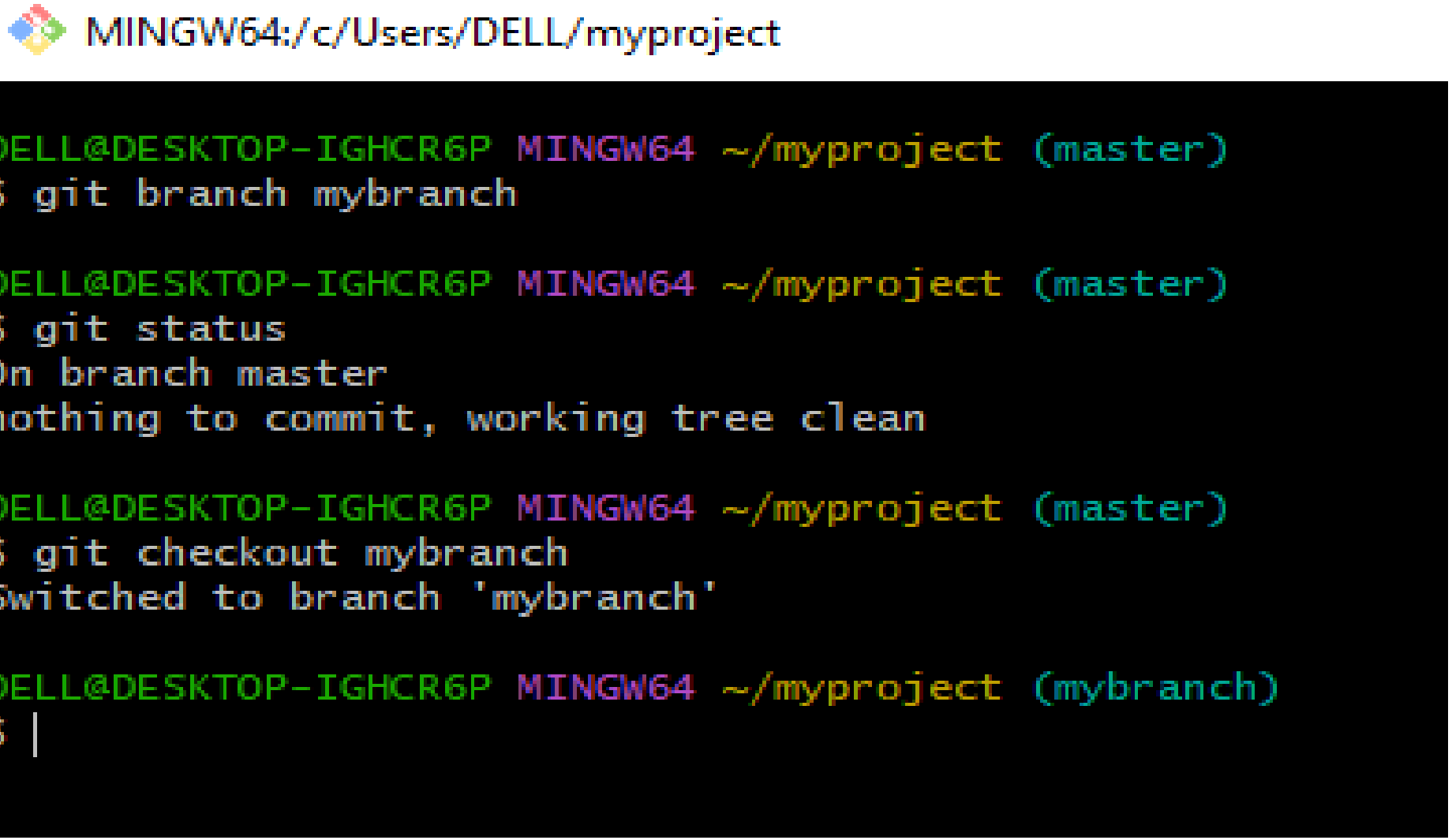
- Git is referencing a single commit instead of a branch.
- Any changes you make now will not be saved to a branch unless you switch or create one.

- **Useful** for **testing** or **exploring without affecting active branches.**

Return to an existing branch (or master):

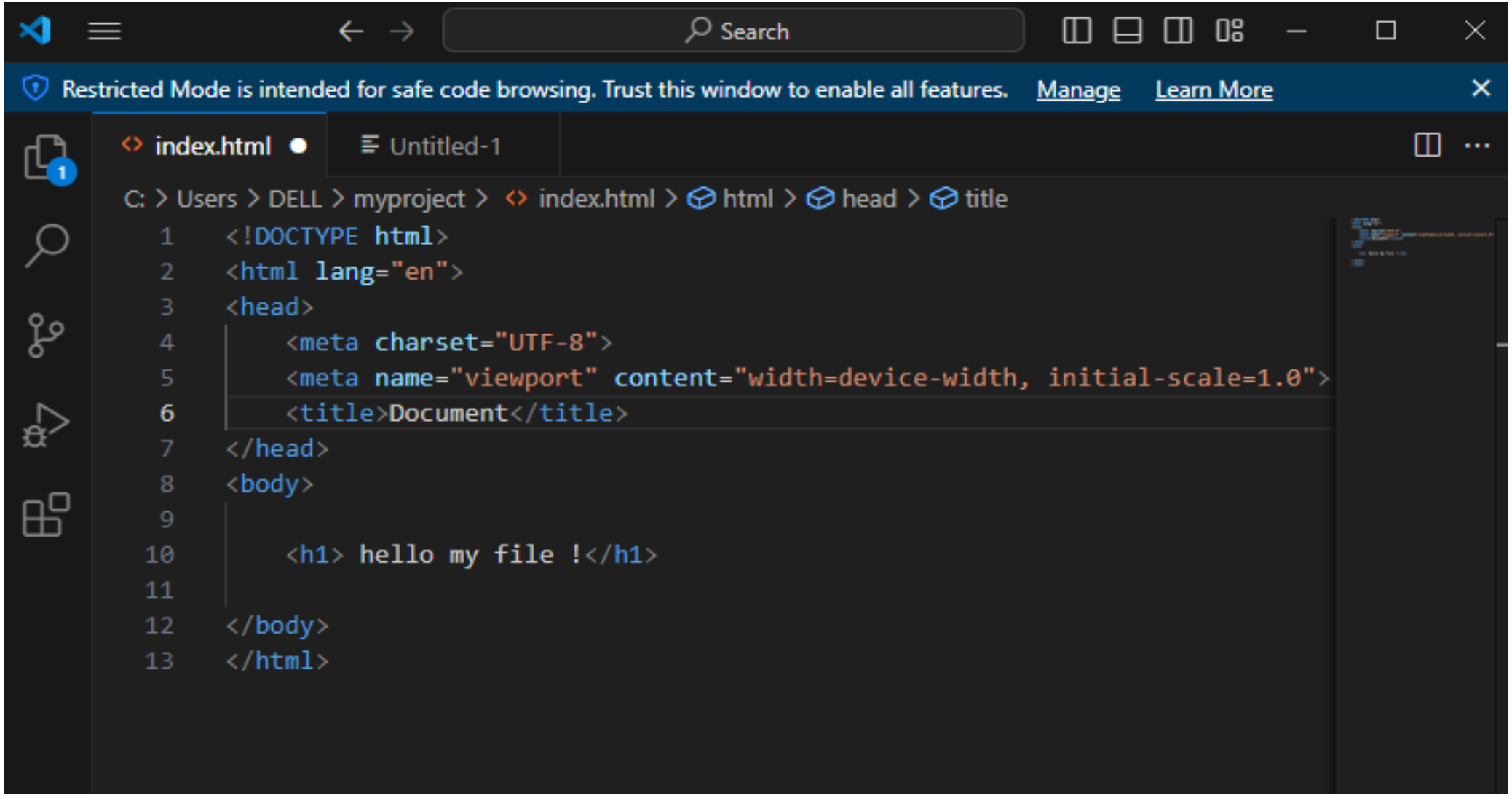
```
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject ((b2cca50...))
$ git checkout master
Switched to branch 'master'

DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$
```

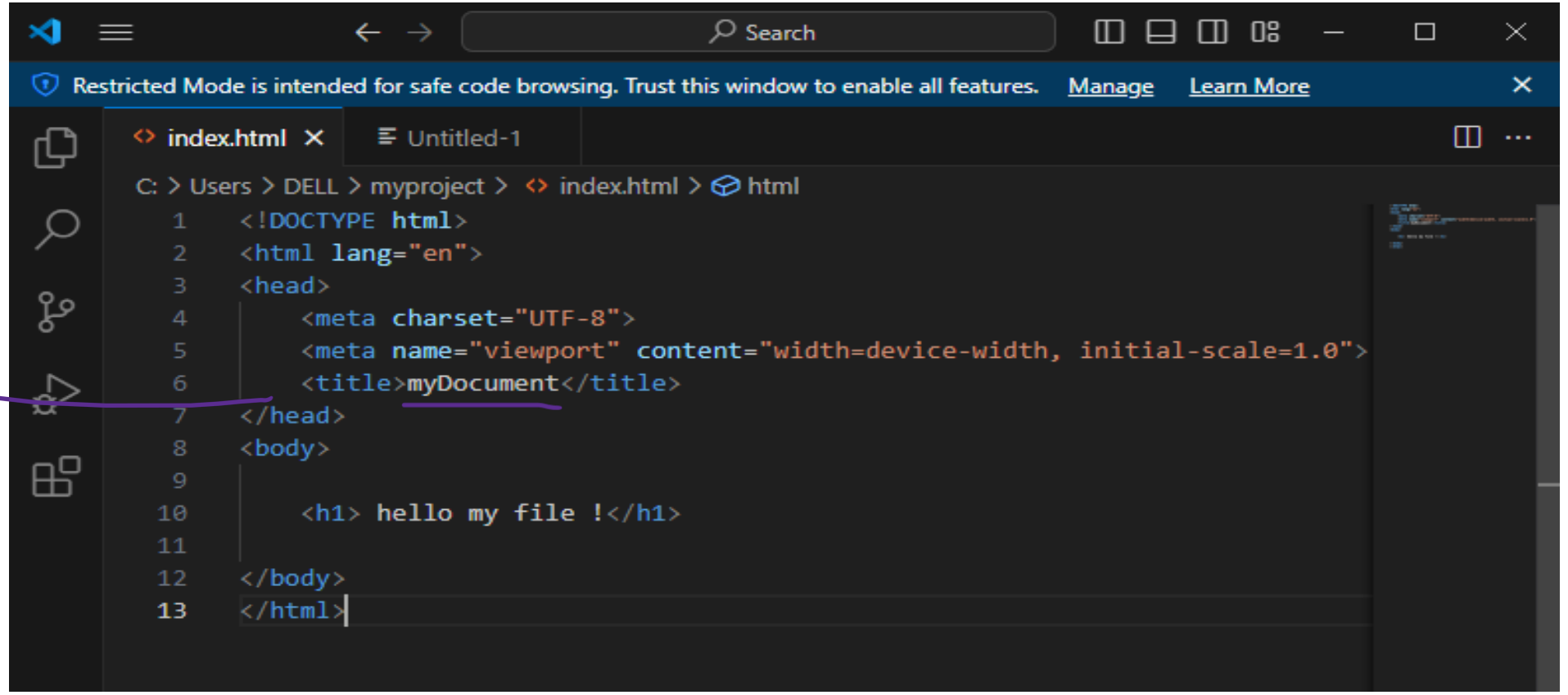
Create Branch :



```
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (mybranch)
$ git log
commit b2cca50d2aeb8cdbaa0d404a2478550cf7654077 (HEAD -> mybranch, master)
Author: shereen <shereenyehia010@gmail.com>
Date:   Fri Nov 1 23:22:11 2024 +0200

    adding header

commit 8106280fbd16394df13a3f7830aaacbcb5cd26d5
Author: shereen <shereenyehia010@gmail.com>
Date:   Fri Nov 1 22:23:17 2024 +0200

    create index.html
```

```
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (mybranch)
$ git status
On branch mybranch
nothing to commit, working tree clean
```






```
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (mybranch)
$ git status
On branch mybranch
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:   index.html

no changes added to commit (use "git add" and/or "git commit -a")

DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (mybranch)
$
```

Add to stage and commit :

```
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (mybranch)
$ git add index.html

DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (mybranch)
$ git commit -m "changing in title"
[mybranch d0ff64e] changing in title
 1 file changed, 1 insertion(+), 1 deletion(-)
```

```
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (mybranch)
$ git log
commit d0ff64e05411494c5eaada94da4649c5b3d534fd (HEAD -> mybranch)
Author: shereen <shereenyehia010@gmail.com>
Date:   Sat Nov 2 12:11:08 2024 +0200

    changing in title

commit b2cca50d2aeb8cdbaa0d404a2478550cf7654077 (master)
Author: shereen <shereenyehia010@gmail.com>
Date:   Fri Nov 1 23:22:11 2024 +0200

    adding header

commit 8106280fbd16394df13a3f7830aaacbcb5cd26d5
Author: shereen <shereenyehia010@gmail.com>
Date:   Fri Nov 1 22:23:17 2024 +0200

    create index.html

DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (mybranch)
$
```

Note:

changing in title can’t be found in master log

```
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (mybranch)
$ git checkout master
Switched to branch 'master'

DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ git log
commit b2cca50d2aeb8cdbaa0d404a2478550cf7654077 (HEAD -> master)
Author: shereen <shereenyehia010@gmail.com>
Date:   Fri Nov 1 23:22:11 2024 +0200

    adding header

commit 8106280fbd16394df13a3f7830aaacbcb5cd26d5
Author: shereen <shereenyehia010@gmail.com>
Date:   Fri Nov 1 22:23:17 2024 +0200

    create index.html
```

Merge updates mybranch with master:

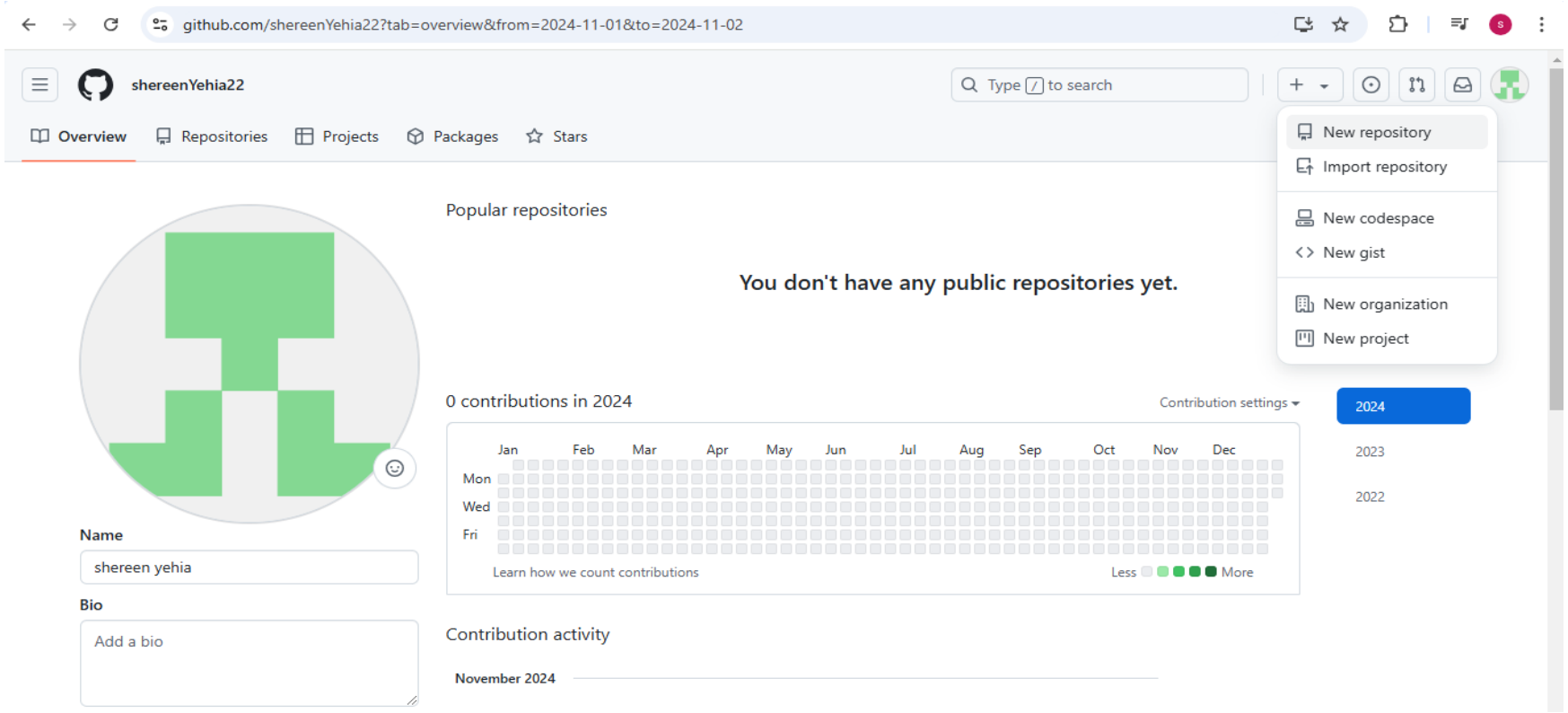
```
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ git branch
* master
  mybranch

DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ git merge mybranch
Updating b2cca50..d0ff64e
Fast-forward
 index.html | 2 +-
 1 file changed, 1 insertion(+), 1 deletion(-)
```

```
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ git log
commit d0ff64e05411494c5eaada94da4649c5b3d534fd (HEAD -> master, mybranch)
Author: shereen <shereenyehia010@gmail.com>
Date:   Sat Nov 2 12:11:08 2024 +0200

    changing in title

commit b2cca50d2aeb8cdbaa0d404a2478550cf7654077
Author: shereen <shereenyehia010@gmail.com>
Date:   Fri Nov 1 23:22:11 2024 +0200

    adding header

commit 8106280fbd16394df13a3f7830aaacbcb5cd26d5
Author: shereen <shereenyehia010@gmail.com>
Date:   Fri Nov 1 22:23:17 2024 +0200

    create index.html
```

Git Hub

Git Hub

- Version control system (on cloud).



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 *

shereenYehia22 /

Repository name *

myproject

myproject is available.

Great repository names are short and memorable. Need inspiration? How about refactored-octo-fortnight ?

Description (optional)

test repo

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.

Add .gitignore

.gitignore template: None

Choose which files not to track from a list of templates. Learn more about ignoring files.

Choose a license

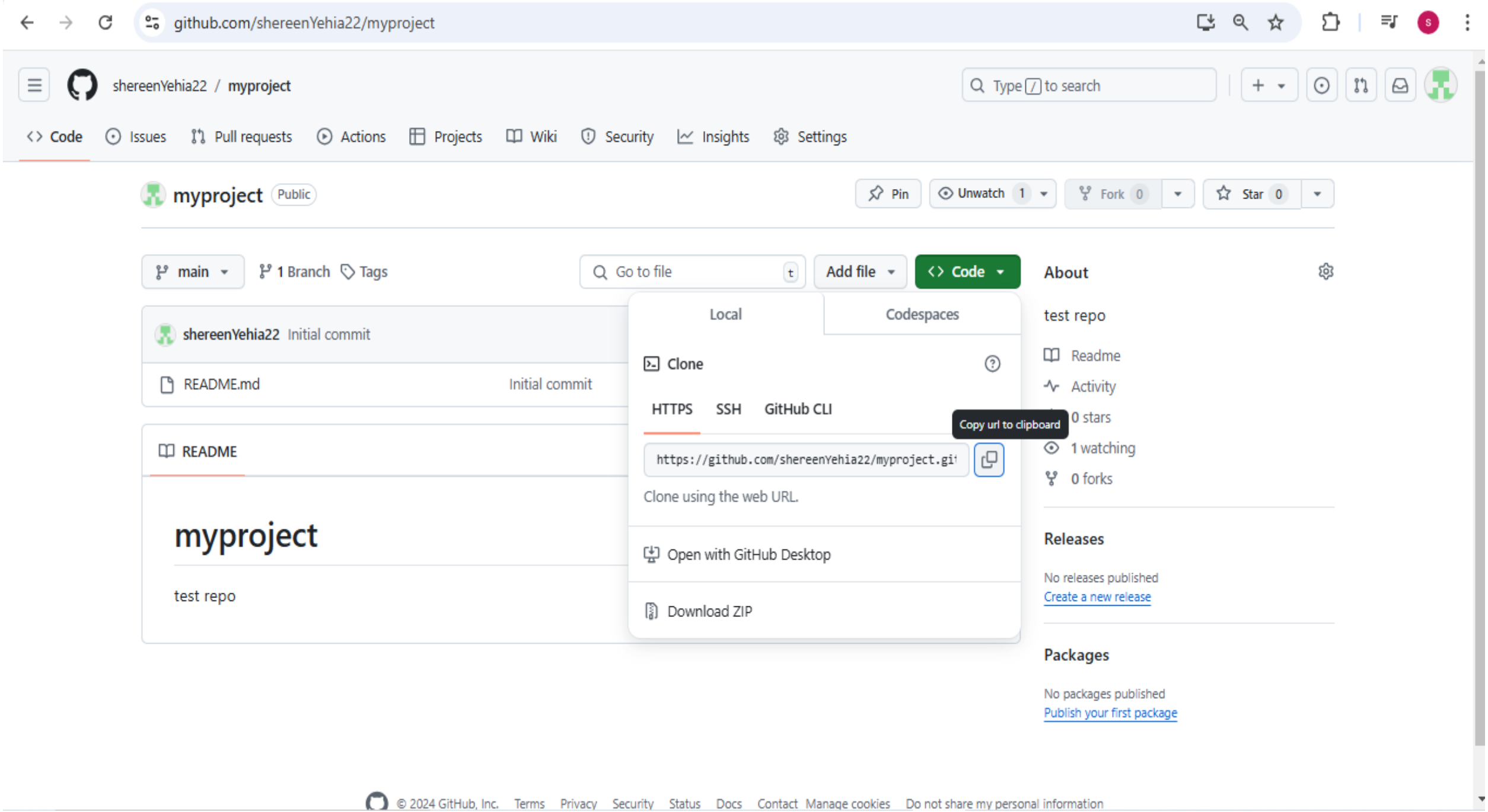
License: None

A license tells others what they can and can't do with your code. Learn more about licenses.

This will set main as the default branch. Change the default name in your settings.

You are creating a public repository in your personal account.

Create repository


github.com/shereenYehia22/myproject
shereenYehia22 / myproject
Type / to search
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
myproject
Public
Pin
Unwatch 1
Fork 0
Star 0
main
1 Branch
Tags
Go to file
t
Add file
Code
shereenYehia22 Initial commit
README.md
Initial commit
README
myproject
test repo
Local
Codespaces
Clone
HTTPS
SSH
GitHub CLI
Copy url to clipboard
https://github.com/shereenYehia22/myproject.gi
Clone using the web URL.
Open with GitHub Desktop
Download ZIP
About
test repo
Readme
Activity
0 stars
1 watching
0 forks
Releases
No releases published
Create a new release
Packages
No packages published
Publish your first package
© 2024 GitHub, Inc.
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Security
Status
Docs
Contact
Manage cookies
Do not share my personal information

To connect Git with Git Hub:

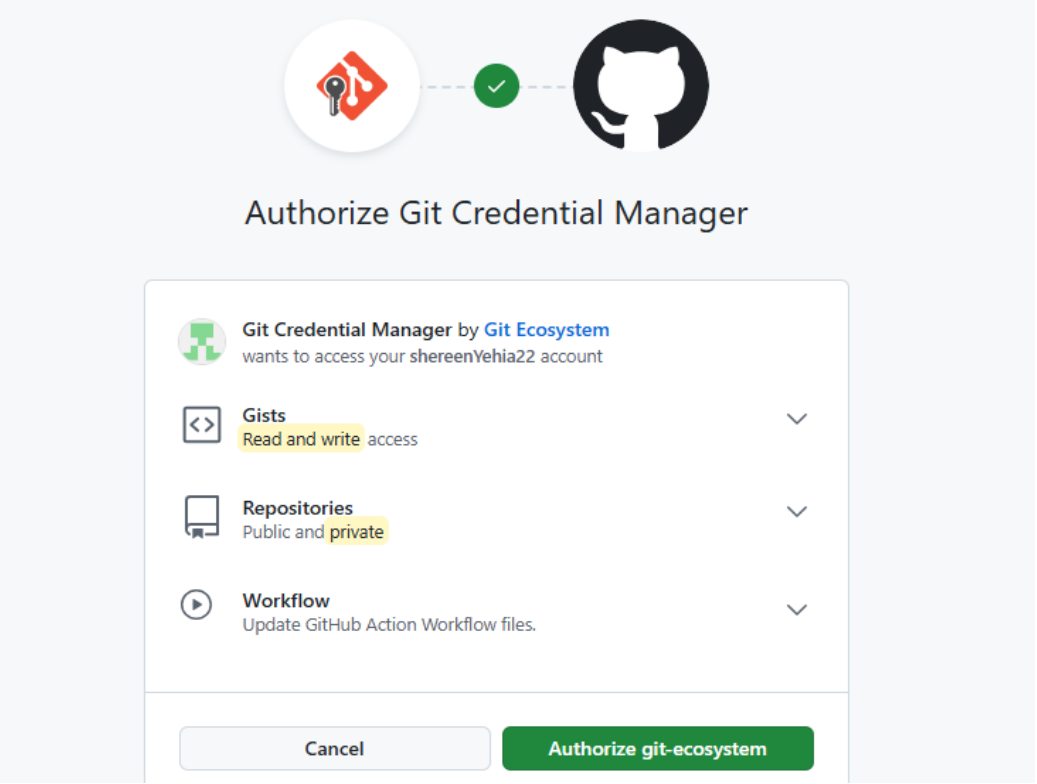
```
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ git remote -v

DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ git remote add origin https://github.com/shereenYehia22/myproject.git

DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ git remote -v
origin  https://github.com/shereenYehia22/myproject.git (fetch)
origin  https://github.com/shereenYehia22/myproject.git (push)
```

```
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ git push -u origin master
```

It pushes the local master branch to the remote repository (often on GitHub or another Git hosting service), setting it as the upstream branch.

push :

Uploads your local commits to the remote repository.



Here's a breakdown of `git push -u origin master` with examples:

Explanation:

- **Push**: Sends your local branch (`master`) to the remote repository (`origin`).
- **-u (upstream)**: Links your local branch to the remote branch for future synchronization.

Without -u :

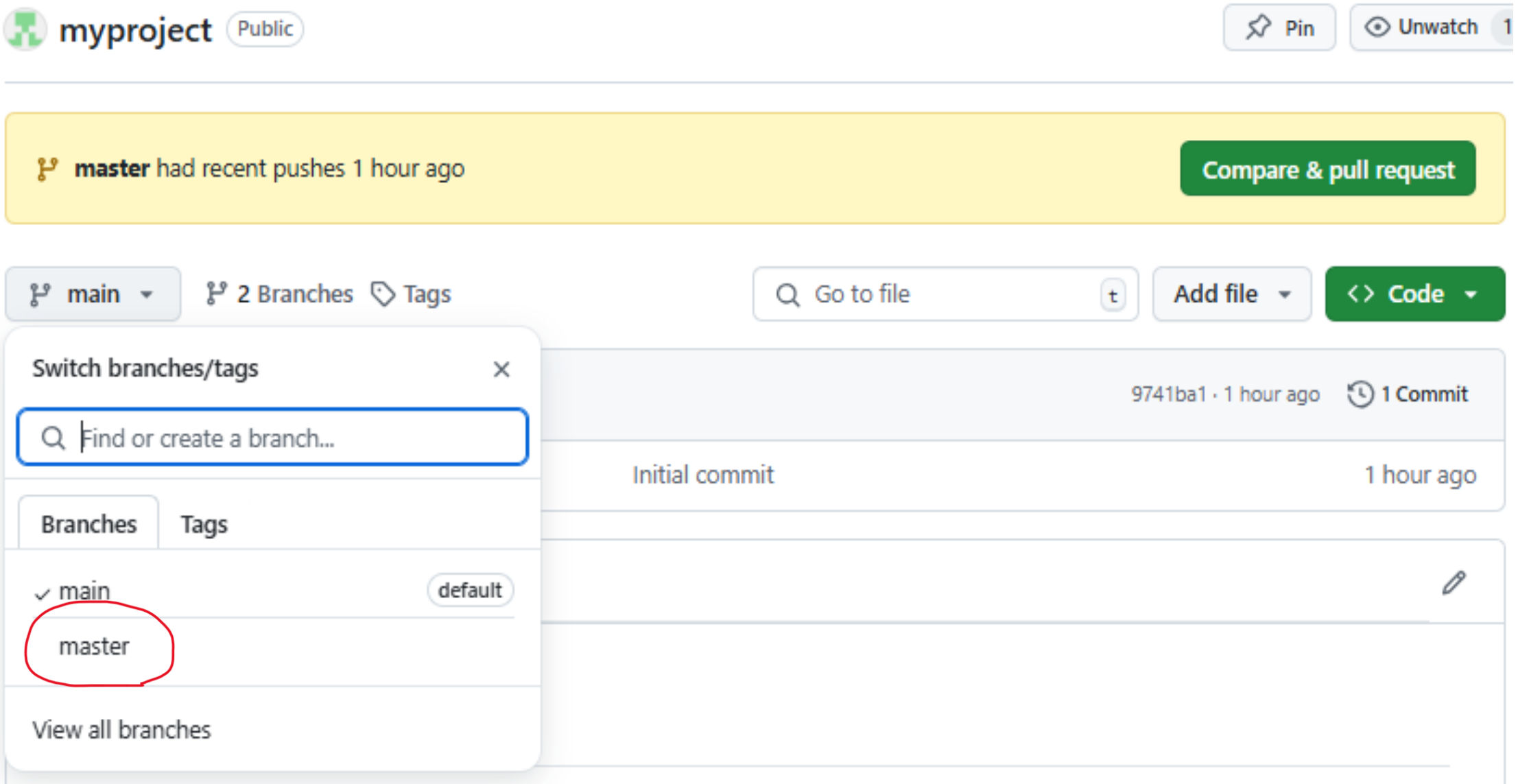
```
git push origin master
git pull origin master
```

After using -u :

```
git push
git pull
```

```
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ git push -u origin master
info: please complete authentication in your browser...
Enumerating objects: 9, done.
Counting objects: 100% (9/9), done.
Delta compression using up to 8 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (9/9), 821 bytes | 48.00 KiB/s, done.
Total 9 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), done.
remote:
remote: Create a pull request for 'master' on GitHub by visiting:
remote:      https://github.com/shereenYehia22/myproject/pull/new/master
remote:
To https://github.com/shereenYehia22/myproject.git
 * [new branch]      master -> master
branch 'master' set up to track 'origin/master'.
```

Git Hub:


myproject
Public
Pin
Unwatch 1
master had recent pushes 1 hour ago
Compare & pull request
main
2 Branches
Tags
Go to file
t
Add file
Code
Switch branches/tags
Find or create a branch...
Branches
Tags
main
default
master
View all branches
9741ba1 · 1 hour ago
1 Commit
Initial commit
1 hour ago

myproject Public

Pin | Unwatch 1

master had recent pushes 1 hour ago

Compare & pull request

master | 2 Branches | Tags | Go to file t | Add file | Code

This branch is 3 commits ahead of, 1 commit behind `main`.

Contribute

shereenYehia22 changing in title

d0ff64e · 11 hours ago | 3 Commits

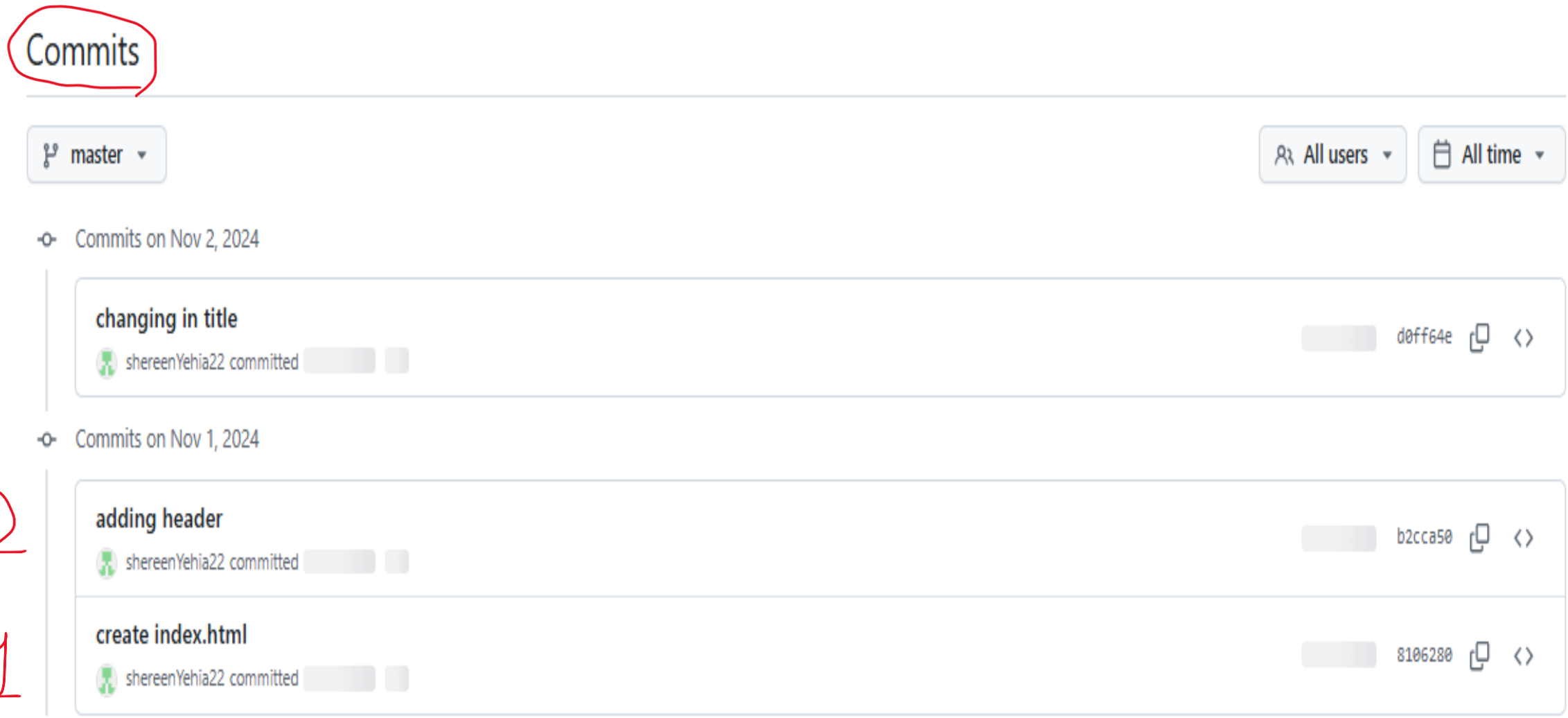
index.html	changing in title	11 hours ago

README

Add a README

Help people interested in this repository understand your project by adding a README.

My Commits:


Commits
master
All users
All time
Commits on Nov 2, 2024
changing in title
shereenYehia22 committed
d0ff64e
Commits on Nov 1, 2024
adding header
shereenYehia22 committed
b2cca50
create index.html
shereenYehia22 committed
8106280
3
2
1

Commit d0ff64e

Beta Give feedback Browse files

shereenYehia22 committed 11 hours ago

changing in title

master

1 parent b2cca50 commit d0ff64e

Filter files...

index.html

1 file changed +1 -1 lines changed

index.html

```
@@ -3,7 +3,7 @@
3  3   <head>
4  4       <meta charset="UTF-8">
5  5       <meta name="viewport" content="width=device-width, initial-scale=1.0">
6     -     <title>Document</title>
      6 +   <title>myDocument</title>
7  7   </head>
8  8   <body>
9  9
```

Customizable line height

The default line height has been increased for improved accessibility. You can choose to enable a more compact line height from the view settings menu.

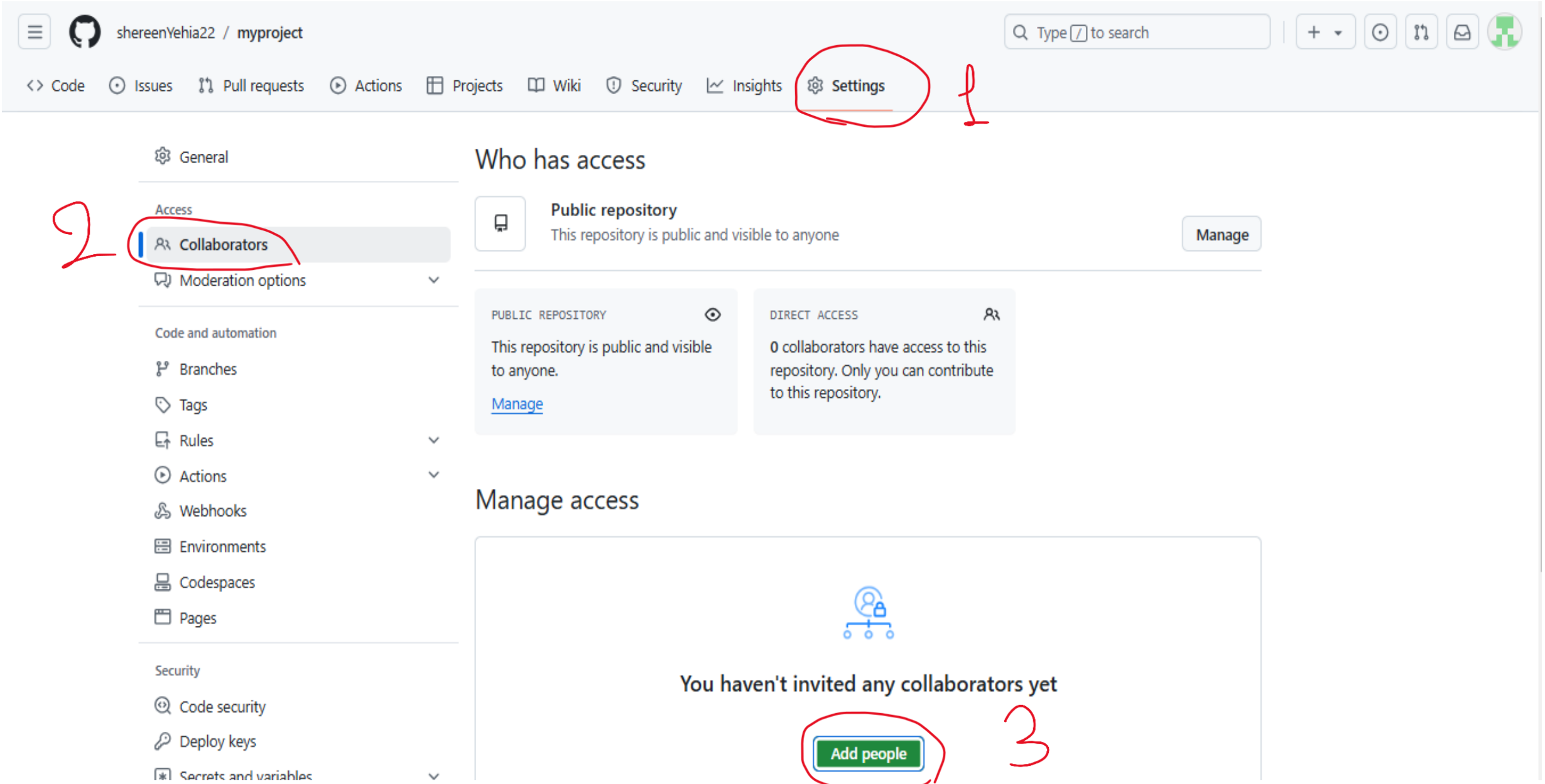
Enable compact line height Dismiss

Comments 0

Lock conversation

Comment

To add collaborators:



- If want to fetch and merge updates from the master branch of the remote repository (origin) into your local master branch.

```
DELL@DESKTOP-IGHCR6P MINGW64 ~/myproject (master)
$ git pull origin master
From https://github.com/shereenYehia22/myproject
 * branch            master     -> FETCH_HEAD
Already up to date.
```

Take Care:

every student in the project team must use Git and Git Hub.

and it has a high mark on the project score.

Resources you must study:

- https://www.youtube.com/watch?v=ACOiGZoqC8w&list=PLDoPjvoNmBAw4eOj58MZPakHjaO3frVMF&index=1&t=0s

- https://youtu.be/fDkR0TDR9dI?si=WEuoOTBspnqDUNGP

?
Any Question?!

Thank You!