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COGNIZANT WEEK1 TASK **CSE Cybersecurity**

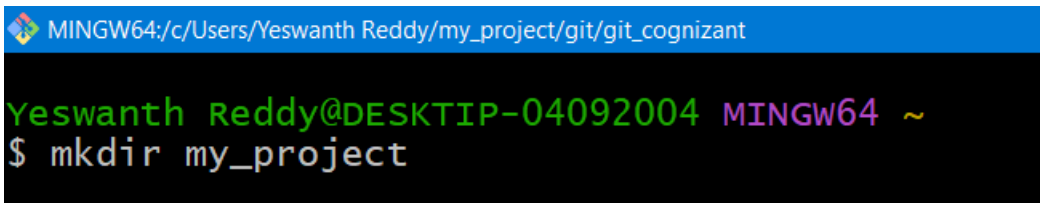
Exercise 1: Introduction to Version Control

Objective:

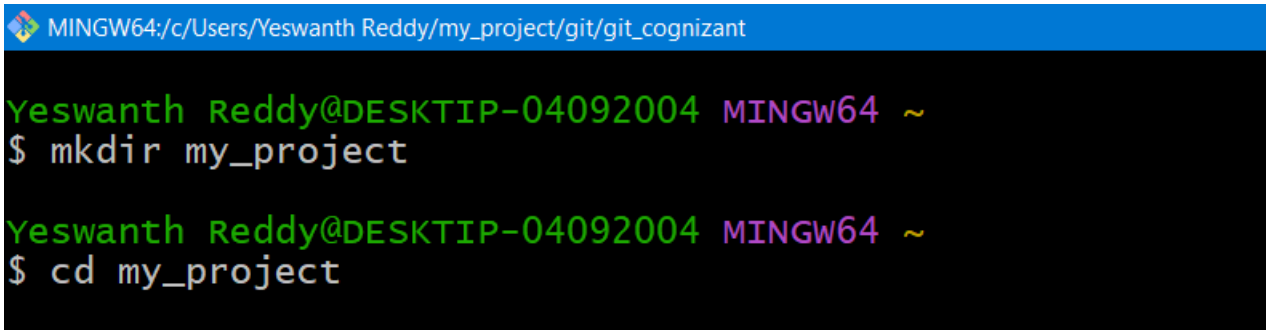
Initialize a new Git repository and commit your first file.

Instructions:

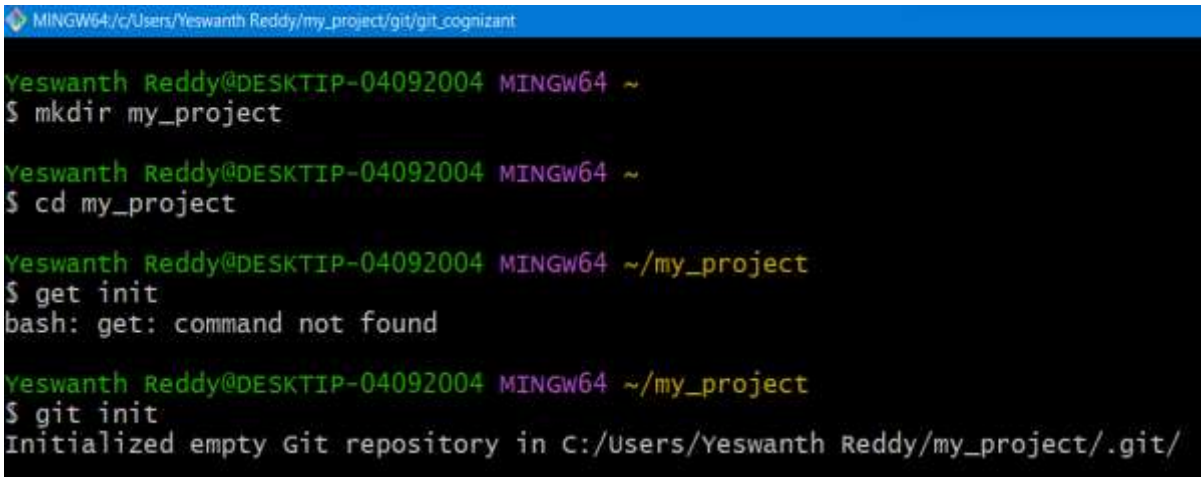
1. Create a new directory for your project.



2. Navigate into the directory.



3. Initialize a new Git repository in the directory.



4. Create a new file named file1.txt and add some content to it.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project
$ git init
Initialized empty Git repository in C:/Users/Yeswanth Reddy/my_project/.git/

Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project (master)
$ echo "This is my first file" > file1.txt
```

4. Add the file to the staging area.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project (master)
$ git add file1.txt
warning: in the working copy of 'file1.txt', LF will be replaced by CRLF the next time Git touches it
```

5. Commit the file with a commit message.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project (master)
$ git commit -m "Initial commit: Add file1.txt"
[master (root-commit) 78adffc] Initial commit: Add file1.txt
 1 file changed, 1 insertion(+)
 create mode 100644 file1.txt
```

Exercise:1 picture

```
MINGW64:/c/Users/Yeswanth Reddy/my_project/git/git_cognizant

Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~
$ mkdir my_project

Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~
$ cd my_project

Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project
$ get init
bash: get: command not found

Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project
$ git init
Initialized empty Git repository in C:/Users/Yeswanth Reddy/my_project/.git/

Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project (master)
$ echo "This is my first file" > file1.txt

Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project (master)
$ git add file1.txt
warning: in the working copy of 'file1.txt', LF will be replaced by CRLF the next time Git touches it

Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project (master)
$ git commit -m "Initial commit: Add file1.txt"
[master (root-commit) 78adffc] Initial commit: Add file1.txt
 1 file changed, 1 insertion(+)
 create mode 100644 file1.txt
```

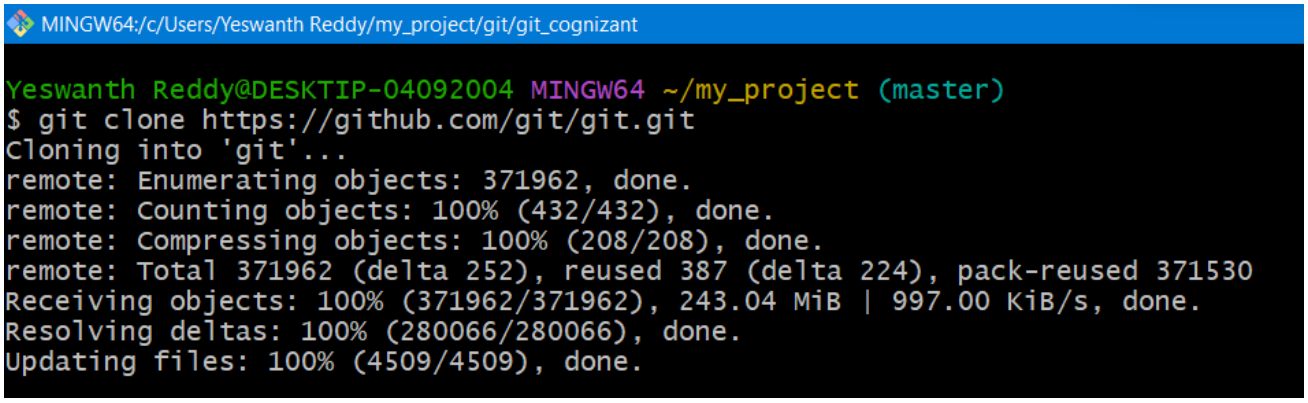
Exercise 2: Understanding Git

Objective:

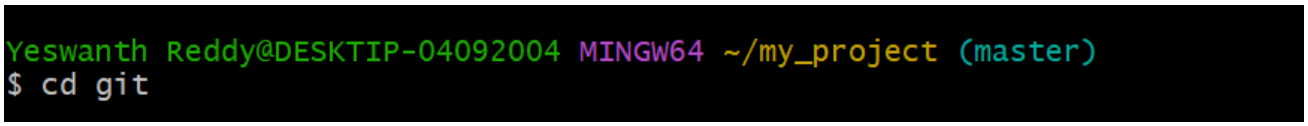
Clone an existing repository and explore its history.

Instructions:

1. Clone a public repository from a platform like GitHub.

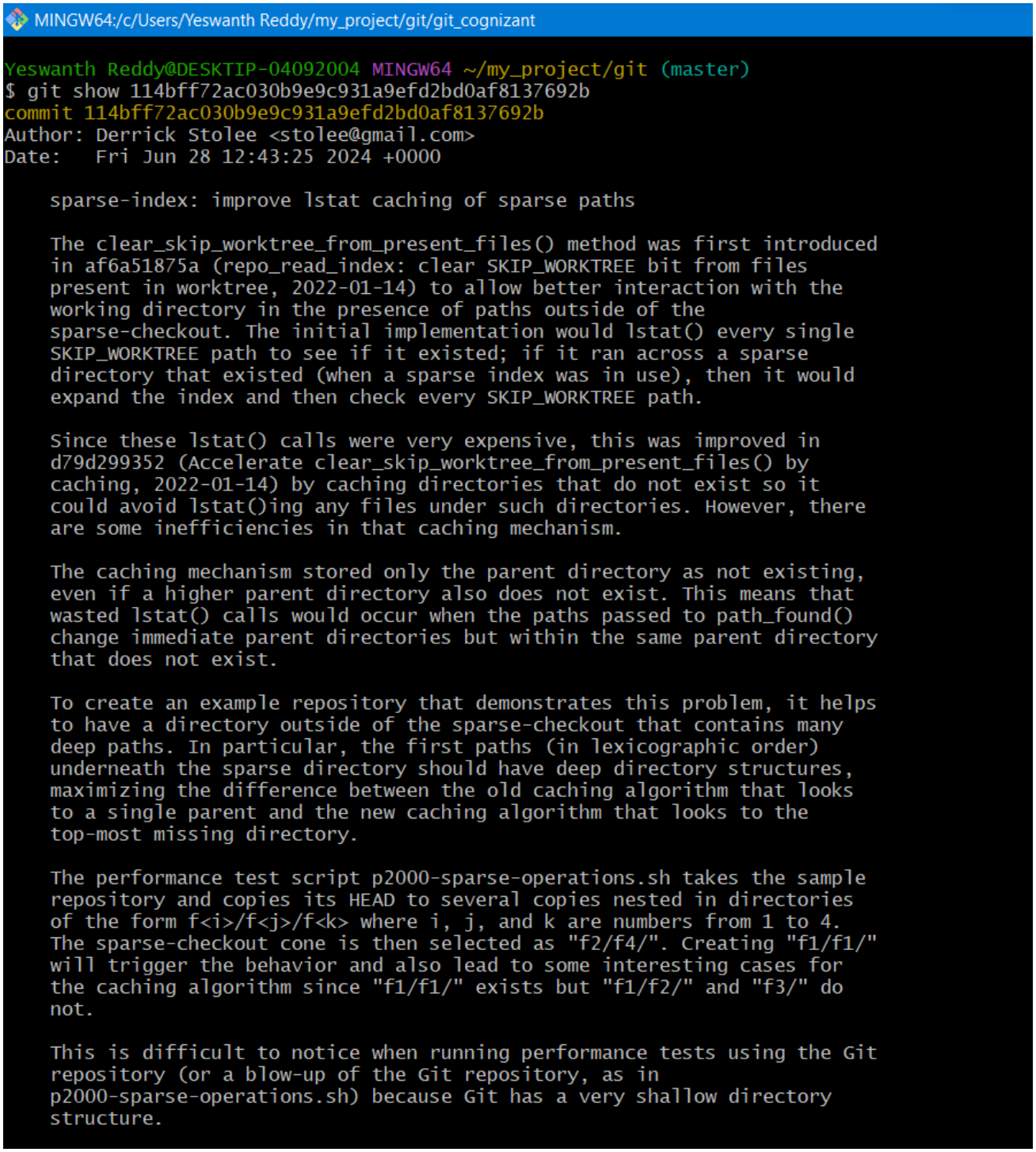


2. Navigate into the cloned repository.



3. Check the commit history.

4. Show changes introduced by a specific commit.



Exercise 3: Setting Up Git

Objective:

Set up Git configuration and verify it.

Instructions:

1. Set your username for Git.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (master)
$ git config --global user.name "KAMBHAM HEMANTH REDDY"
```

2. Set your email for Git.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (master)
$ git config --global user.email "kk8325@srmist.edu.in"
```

3. Verify your configuration settings.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (master)
$ git config --list
diff.astextplain.textconv=astextplain
filter.lfs.clean=git-lfs clean -- %f
filter.lfs.smudge=git-lfs smudge -- %f
filter.lfs.process=git-lfs filter-process
filter.lfs.required=true
http.sslbackend=openssl
http.sslcainfo=C:/Program Files/Git/mingw64/etc/ssl/certs/ca-bundle.crt
core.autocrlf=true
core.fscache=true
core.symlinks=false
pull.rebase=false
credential.helper=manager
credential.https://dev.azure.com.usehttppath=true
init.defaultbranch=master
user.email=kk8325@srmist.edu.in
user.name=KAMBHAM HEMANTH REDDY
user.nmae=KAMBHAM_HEMANTH_REDDY
core.repositoryformatversion=0
core.filemode=false
core.bare=false
core.logallrefupdates=true
core.symlinks=false
core.ignorecase=true
remote.origin.url=https://github.com/git/git.git
remote.origin.fetch=+refs/heads/*:refs/remotes/origin/*
branch.master.remote=origin
branch.master.merge=refs/heads/master
user.email=kk8325@srmist.edu.in
user.name=KAMBHAM HEMANTH REDDY
user.nmae=KAMBHAM_HEMANTH_REDDY
```

Exercise 4: Basic Git Commands

Objective:

Practice basic Git commands by modifying files and tracking changes.

Instructions:

1. Create a new file named file2.txt and add some content to it.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (master)
$ echo "This is the content for file2.txt" > file2.txt
```

2. Add the file to the staging area.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (master)
$ git add file2.txt
warning: in the working copy of 'file2.txt', LF will be replaced by CRLF the next time Git touches it
```

3. Commit the new file with a commit message.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (master)
$ git commit -m "Add file2.txt with initial content"
[master ced5b8e54a] Add file2.txt with initial content
 1 file changed, 1 insertion(+)
 create mode 100644 file2.txt
```

4. Modify the existing file1.txt and add more content to it.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (master)
$ echo "Adding more content to the file1.txt" >> file1.txt
```

5. Add the modified file to the staging area.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (master)
$ git add file1.txt
warning: in the working copy of 'file1.txt', LF will be replaced by CRLF the next time Git touches it
```

6. Commit the changes with a commit message.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (master)
$ git commit -m "Update file1.txt with additional content"
[master 0d489c8235] Update file1.txt with additional content
 1 file changed, 1 insertion(+)
 create mode 100644 file1.txt
```

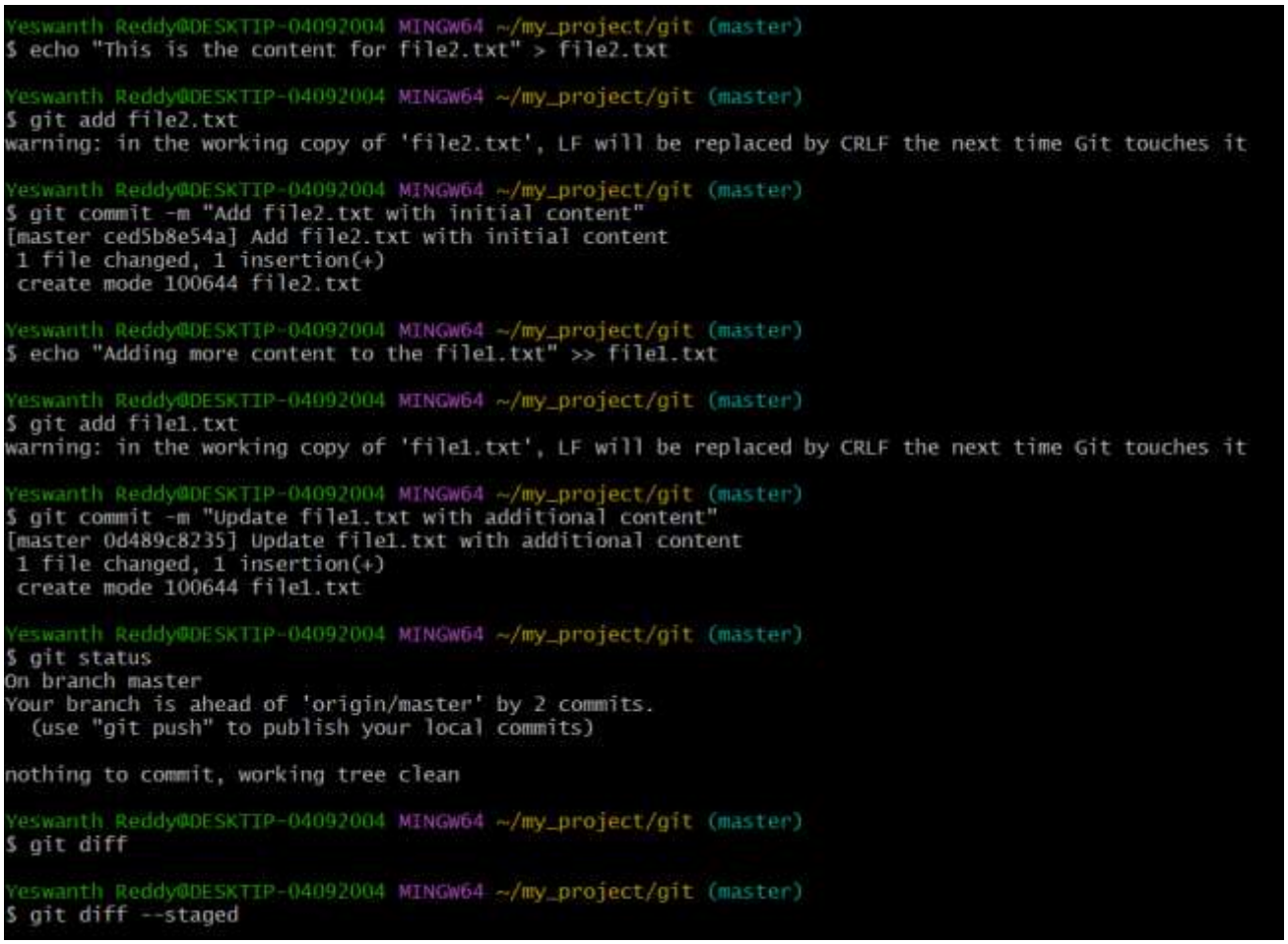
7. View the current status of your repository.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (master)
$ git status
On branch master
Your branch is ahead of 'origin/master' by 2 commits.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean
```

8. View the differences between your working directory and the repository.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (master)
$ git diff
```

Exercise 4 : Picture



Exercise 5: Branching and Merging

Objective:

Create a new branch, make changes, and merge it back to the main branch.

Instructions:

1. Create a new branch named new-feature.

```
MINGW64:/c/Users/Yeswanth Reddy/my_project/git/git_cognizant

Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (master)
$ git checkout -b new-feature
Switched to a new branch 'new-feature'
```

2. Switch to the new branch (if not already switched).

```
MINGW64:/c/Users/Yeswanth Reddy/my_project/git/git_cognizant

Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (master)
$ git checkout -b new-feature
Switched to a new branch 'new-feature'

Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (new-feature)
```

3. Create a new file named feature.txt and add some content to it.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (new-feature)
$ echo "This s the content for feature.txt" > feature.txt
```

4. Add the file to the staging area.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (new-feature)
$ git add feature.txt
warning: in the working copy of 'feature.txt', LF will be replaced by CRLF the next time Git touches it
```

5. Commit the new file with a commit message.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (new-feature)
$ git commit -m "Add feature.txt with initial content"
[new-feature 3cf1e67c2f] Add feature.txt with initial content
 1 file changed, 1 insertion(+)
 create mode 100644 feature.txt
```

6. Switch back to the main branch.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (new-feature)
$ git checkout master
Switched to branch 'master'
Your branch is ahead of 'origin/master' by 2 commits.
  (use "git push" to publish your local commits)
```

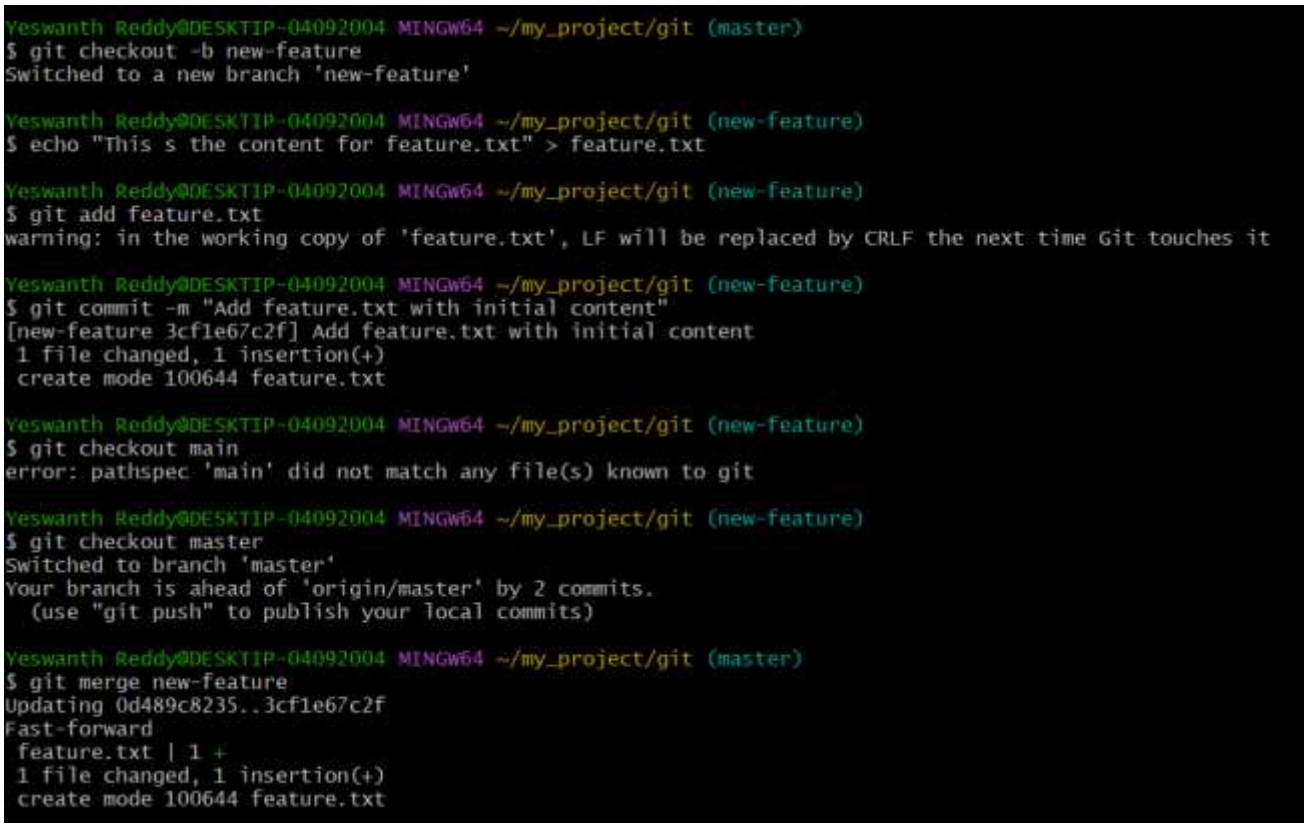
7. Merge the new-feature branch into the main branch.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (master)
$ git merge new-feature
Updating 0d489c8235..3cf1e67c2f
Fast-forward
 feature.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 feature.txt
```

8. Resolve any conflicts if they arise and commit the merge.

No conflicts raised during the commit the merge.

Exercise 6 : Picture



Exercise 6: Remote Repositories

Objective:

Add a remote repository and push your local changes.

Instructions:

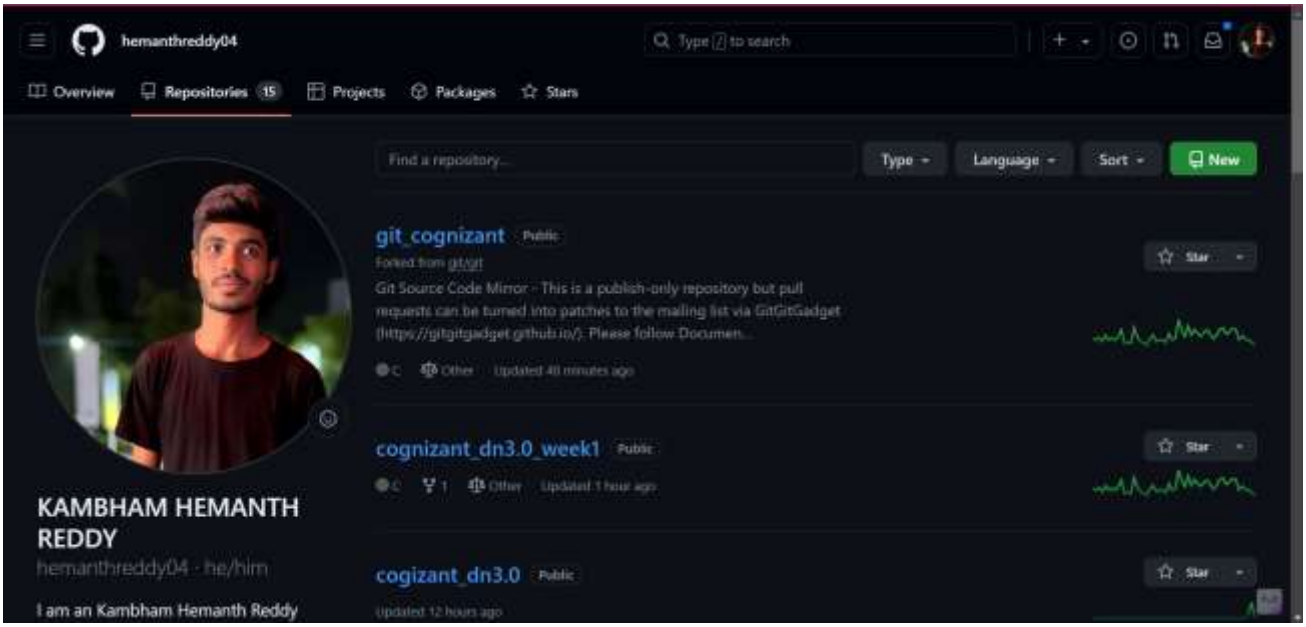
1. Add a remote repository URL to your local Git repository.

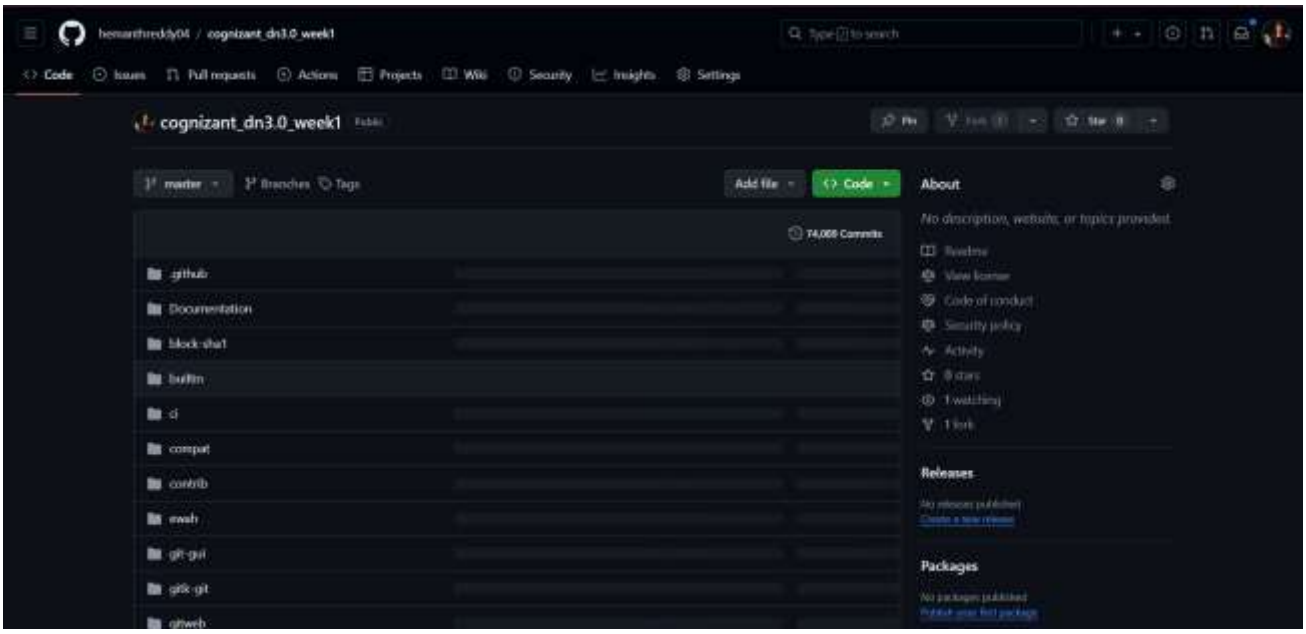
```
MINGW64:/c/Users/Yeswanth Reddy/my_project/git/git_cognizant

Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (master)
$ git remote add cognizantweek1 https://github.com/hemanthreddy04/cognizant_dn3.0_week1.git
```

2. Push your local changes to the remote repository.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (master)
$ git push -u cognizantweek1 master
Enumerating objects: 360812, done.
Counting objects: 100% (360812/360812), done.
Delta compression using up to 4 threads
Compressing objects: 100% (84742/84742), done.
Writing objects: 100% (360812/360812), 235.13 MiB | 1.91 MiB/s, done.
Total 360812 (delta 273713), reused 360794 (delta 273702), pack-reused 0 (from 0)
```

Exercise 6 : Pictures






```
To https://github.com/hemanthreddy04/cognizant_dn3.0_week1.git
 * [new branch]            master -> master
branch 'master' set up to track 'cognizantweek1/master'.
```

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (master)
$ git remote -v
cognizantweek1  https://github.com/hemanthreddy04/cognizant_dn3.0_week1.git (fetch)
cognizantweek1  https://github.com/hemanthreddy04/cognizant_dn3.0_week1.git (push)
origin  https://github.com/git/git.git (fetch)
origin  https://github.com/git/git.git (push)
```

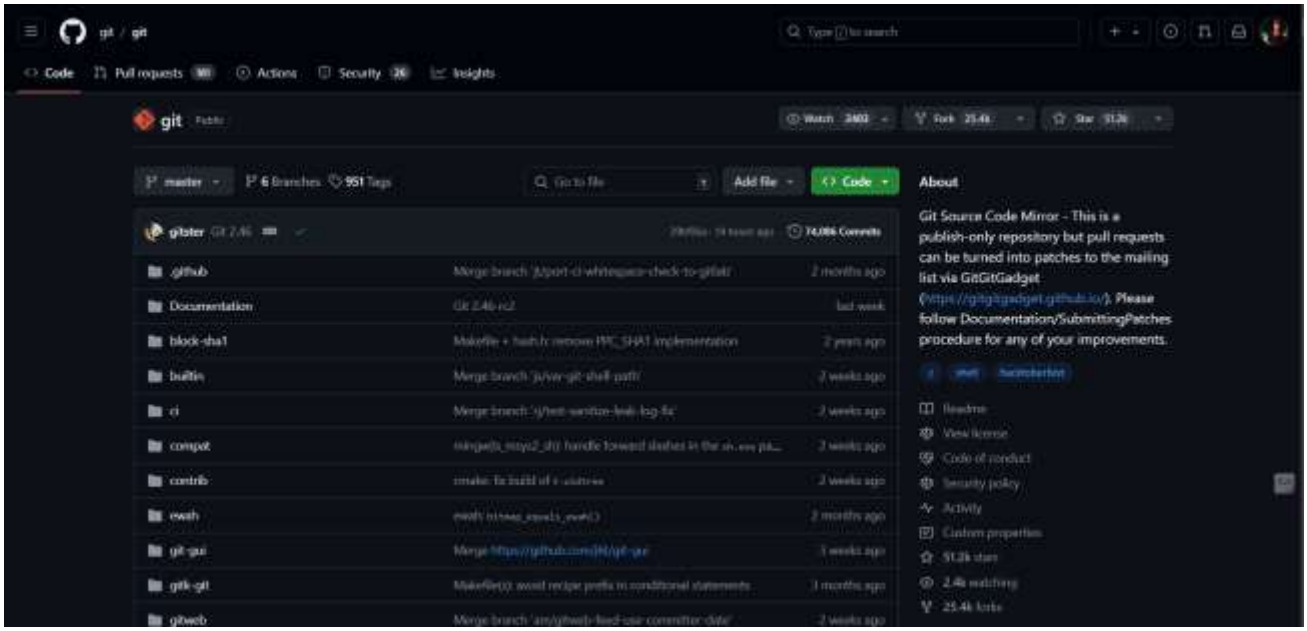
Exercise 7: Collaborating with Git

Objective:

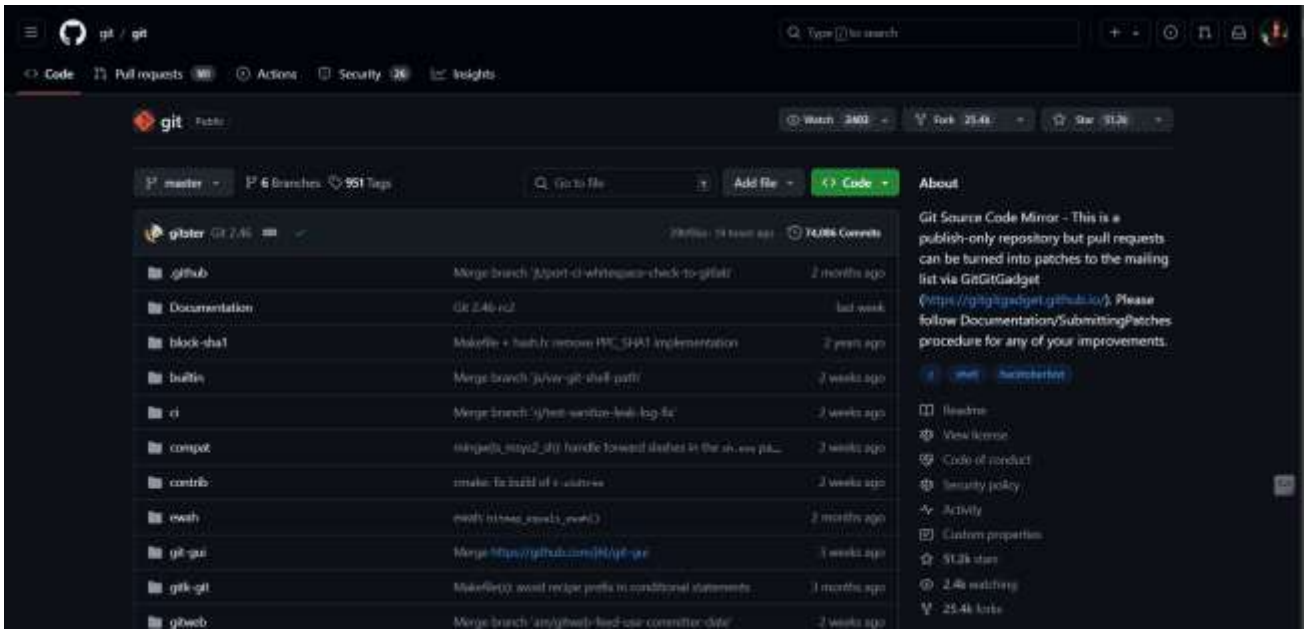
Collaborate on a repository by creating a pull request.

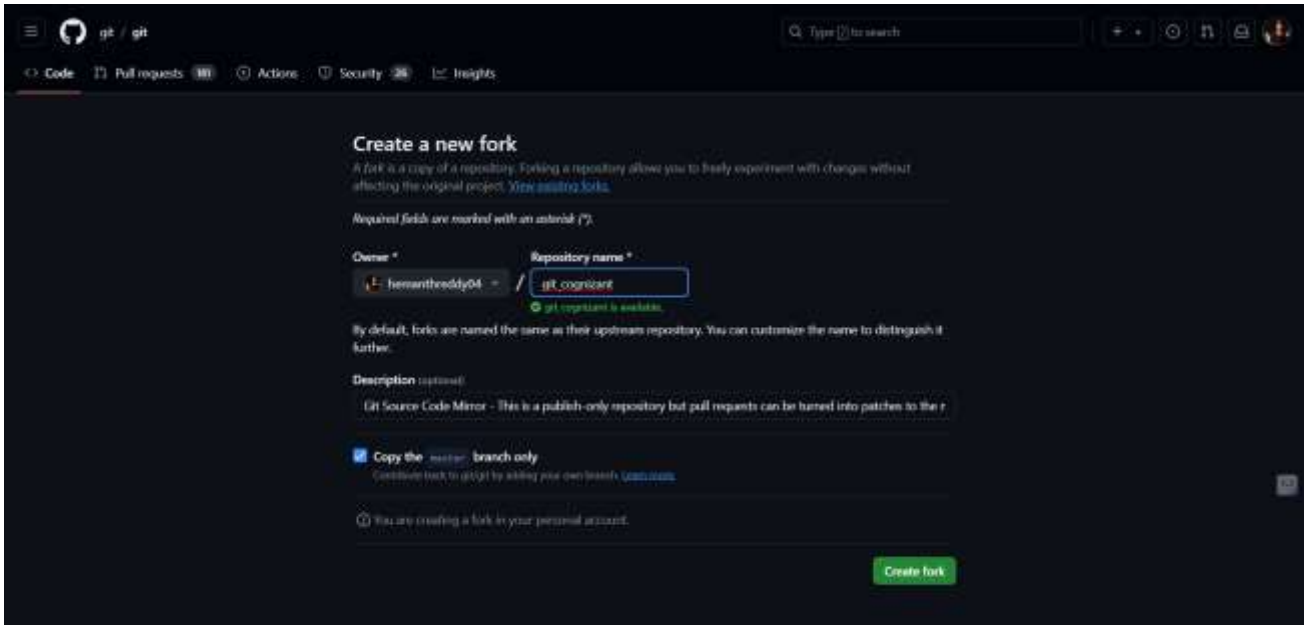
Instructions:

1. Fork a repository on GitHub.



2. Clone your forked repository to your local machine.






```
MINGW64:/c/Users/Yeswanth Reddy/my_project/git/git_cognizant

Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (master)
$ git clone https://github.com/hemanthreddy04/git_cognizant
Cloning into 'git_cognizant'...
remote: Enumerating objects: 360803, done.
remote: Counting objects: 100% (38/38), done.
remote: Compressing objects: 100% (18/18), done.
Receiving objects: 100% (360803/360803), 235.53 MiB | 4.25 MiB/s, done.
remote: Total 360803 (delta 21), reused 35 (delta 20), pack-reused 360765
Resolving deltas: 100% (273730/273730), done.
Updating files: 100% (4509/4509), done.
```

3. Navigate into the cloned repository.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git (master)
$ cd git_cognizant
```

4. Create a new branch for your changes.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git/git_cognizant (maste
r)
$ git checkout -b my-changes
Switched to a new branch 'my-changes'
```

5. Make your changes and commit them.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git/git_cognizant (my-ch
anges)
$ git commit -m "Describe your changes"
[my-changes 8efa602b40] Describe your changes
 1 file changed, 1 insertion(+)
 create mode 100644 file3.txt
```

6. Push the branch to your forked repository.

```
Yeswanth Reddy@DESKTIP-04092004 MINGW64 ~/my_project/git/git_cognizant (my-ch
anges)
$ git push -u origin my-changes
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 305 bytes | 101.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
remote:
remote: Create a pull request for 'my-changes' on GitHub by visiting:
remote:      https://github.com/hemanthreddy04/git_cognizant/pull/new/my-chan
ges
remote:
To https://github.com/hemanthreddy04/git_cognizant
 * [new branch]            my-changes -> my-changes
branch 'my-changes' set up to track 'origin/my-changes'.
```

7. Create a pull request from your forked repository to the original repository.