

Q1. Create Azure DevOps Environment and configure Azure DevOps Git Repository ,configure on your local git to implement this upload few test files on the same.

Azure DevOps Environment:

Azure DevOps Environment is a cloud-based service that provides a set of development tools for software development teams to plan, develop, test, and deploy applications. It includes features for version control, continuous integration (CI), continuous delivery (CD), agile project management, and more.

An environment in Azure DevOps represents a collection of resources, such as virtual machines, databases, and web servers, where you deploy and run your applications. Environments can be used for various purposes, such as development, testing, staging, and production.

Configure Azure DevOps Git Repository:

To configure a Git repository in Azure DevOps, follow these steps:

1.Create a New Project: Sign in to Azure DevOps, navigate to the project where you want to create the repository, and create a new project if necessary.

2.Create a Git Repository: Within the project, navigate to the Repos tab and click on "New repository". Give your repository a name and optionally add a description.

3.Set Repository Options: Configure repository options such as version control system (Git), permissions, and branch policies as per your project requirements.

4.Configure Local Git Environment:

To configure your local Git environment to work with Azure DevOps, follow these steps:

5.Install Git: If you haven't already, download and install Git on your local machine from the official Git website: [Git Downloads](#).

6.Clone Repository: Clone the Azure DevOps Git repository to your local machine using the git clone command. You can find the clone URL on the Azure DevOps repository page.

7.Configure Remote: Inside the cloned repository directory, set the Azure DevOps repository as the remote origin using the git remote add origin <repository_url> command.

8.Pull Latest Changes: Fetch the latest changes from the remote repository using git pull origin <branch_name>.

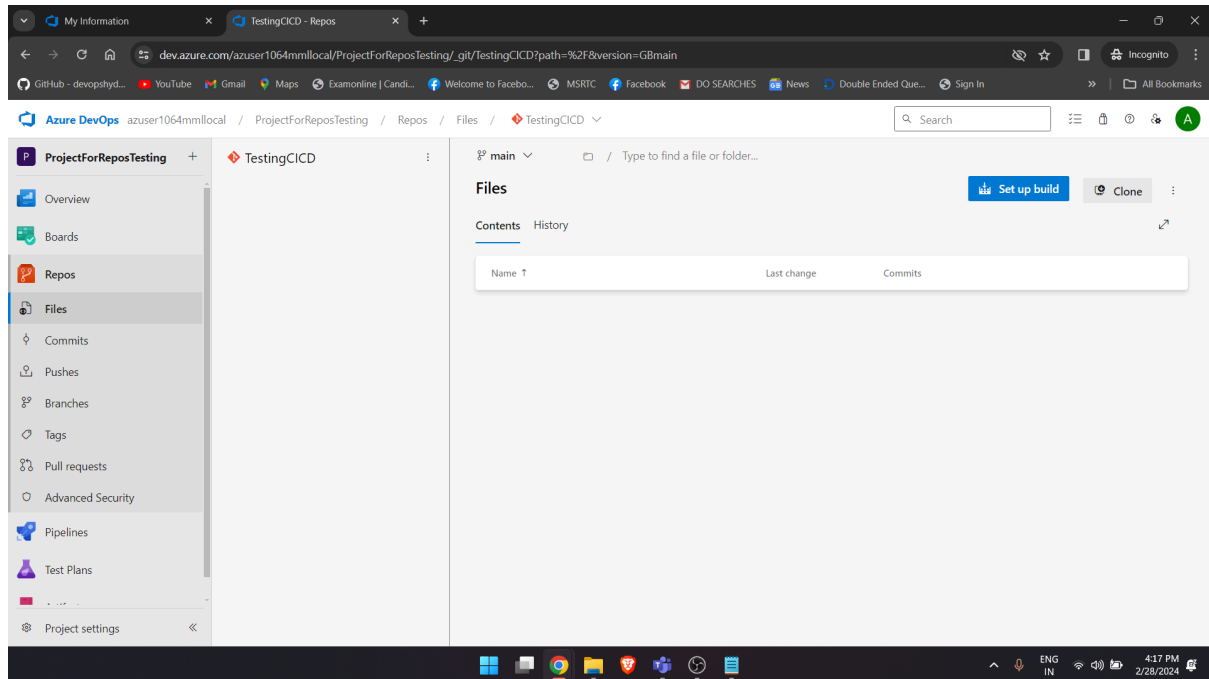
9.Add Test Files: Create and add your test files to the local repository using git add and git commit commands.

10.Push Changes: Push your changes to the Azure DevOps repository using git push origin <branch_name>.

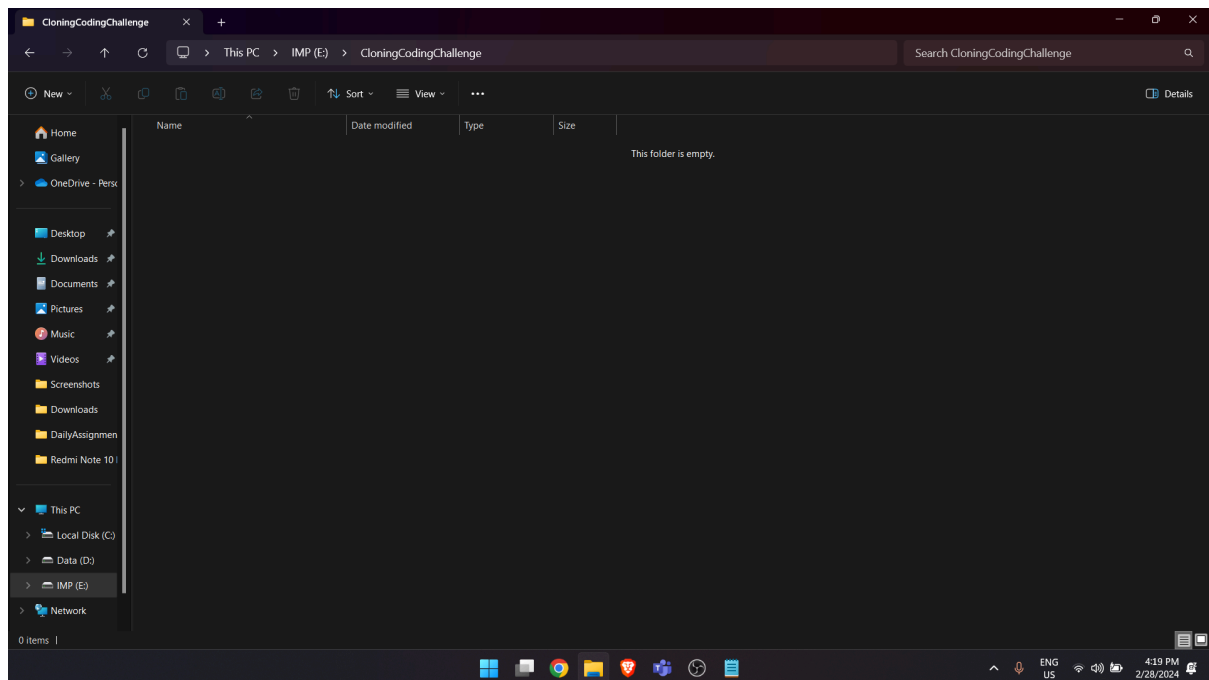
By following these steps, you can configure a Git repository in Azure DevOps and set up your local Git environment to work with it. This allows you to collaborate with your team, version control your code, and seamlessly integrate with Azure DevOps' CI/CD pipelines.

Implementation :

Creation of Repos :

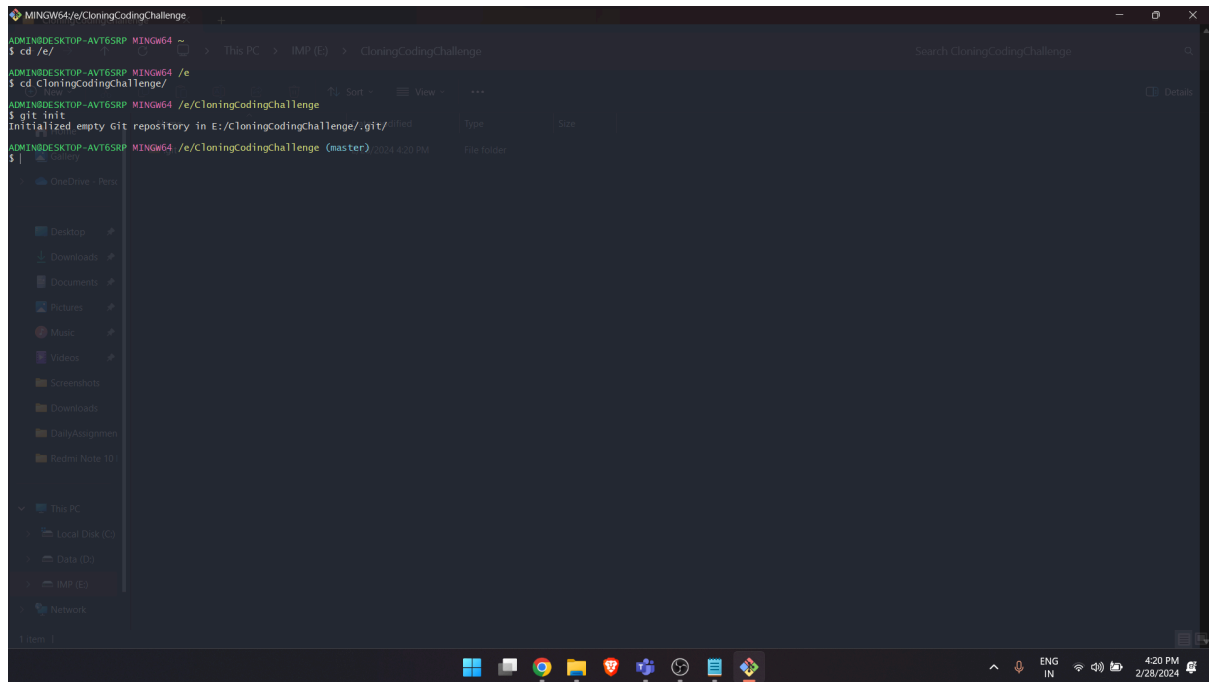


Creating a file in local :



Using file explorer the directory is made.

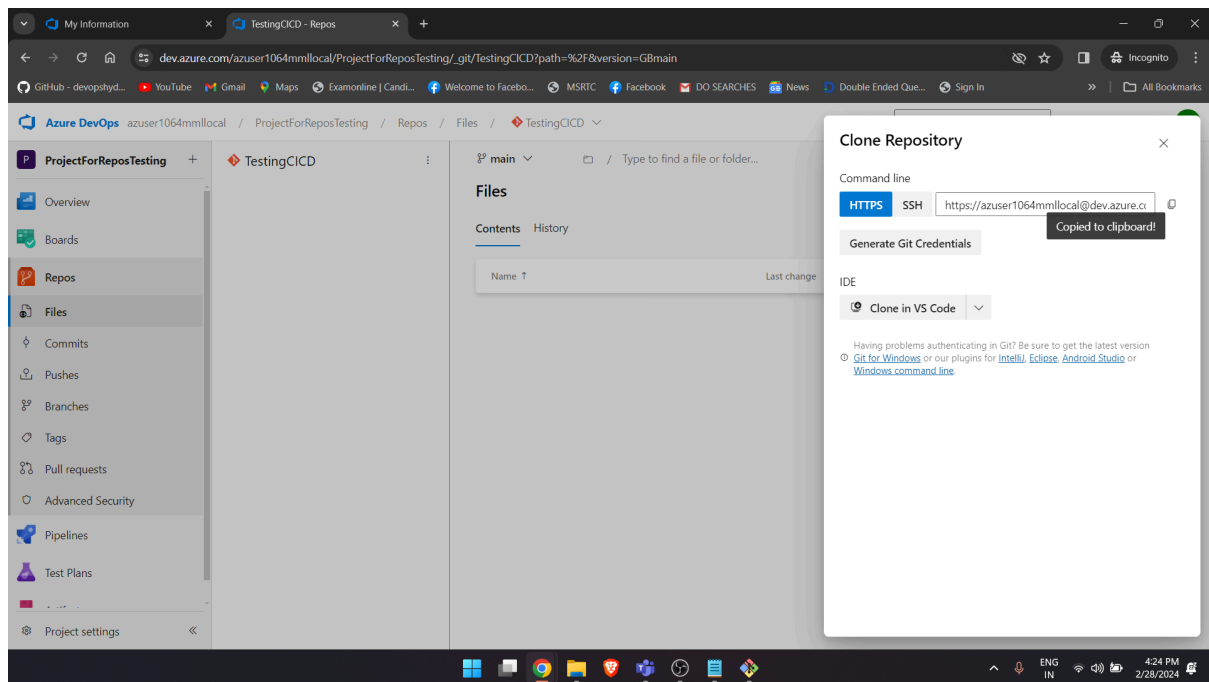
Git init :



```
MINGW64~/e/CloningCodingChallenge
ADMIN@DESKTOP-AVT6SRP MINGW64 ~
$ cd /e/
ADMIN@DESKTOP-AVT6SRP MINGW64 /e
$ cd CloningCodingChallenge/
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge
$ git init
Initialized empty Git repository in E:/CloningCodingChallenge/.git/
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge (master) 2024/4/28 PM
$ |
```

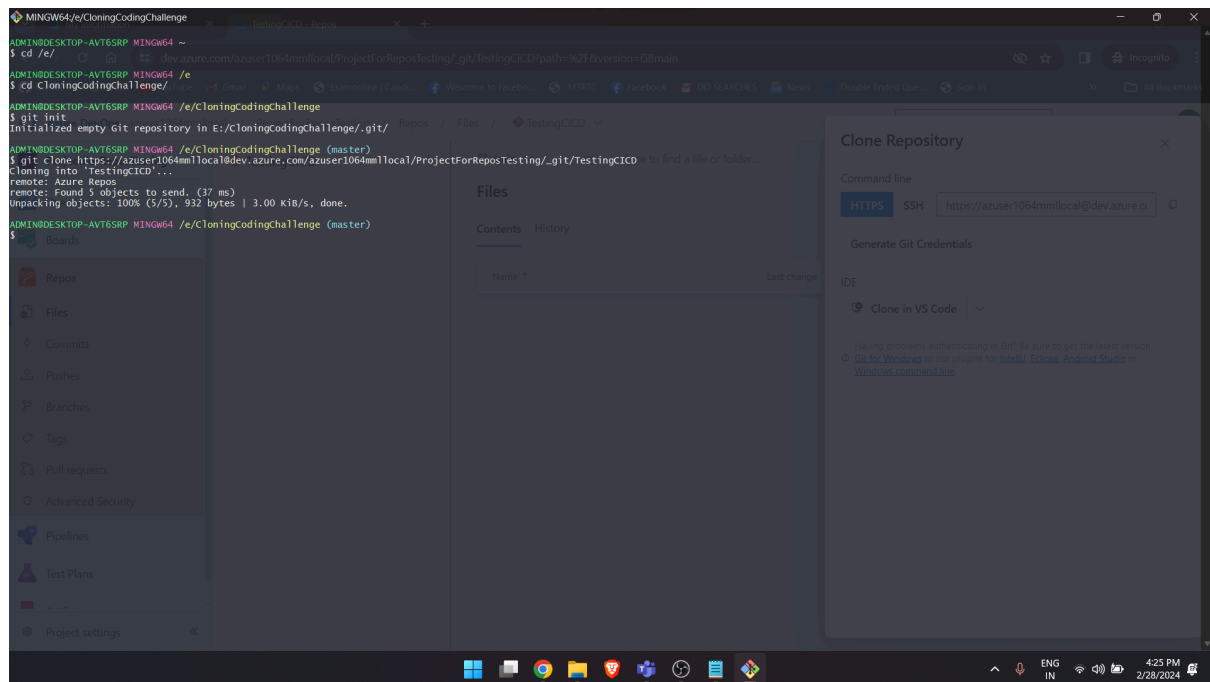
Using git bash we started git in the local system.

Cloning from Azure DevOps :



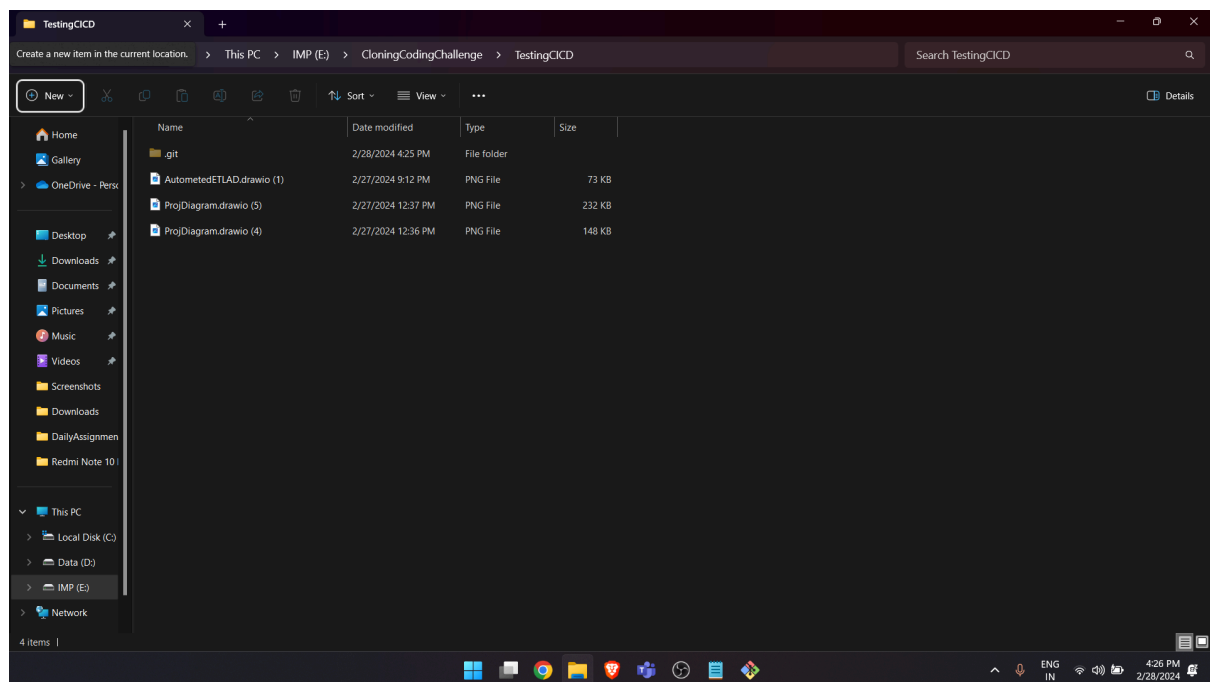
Copied the path.

Cloning using git bash:

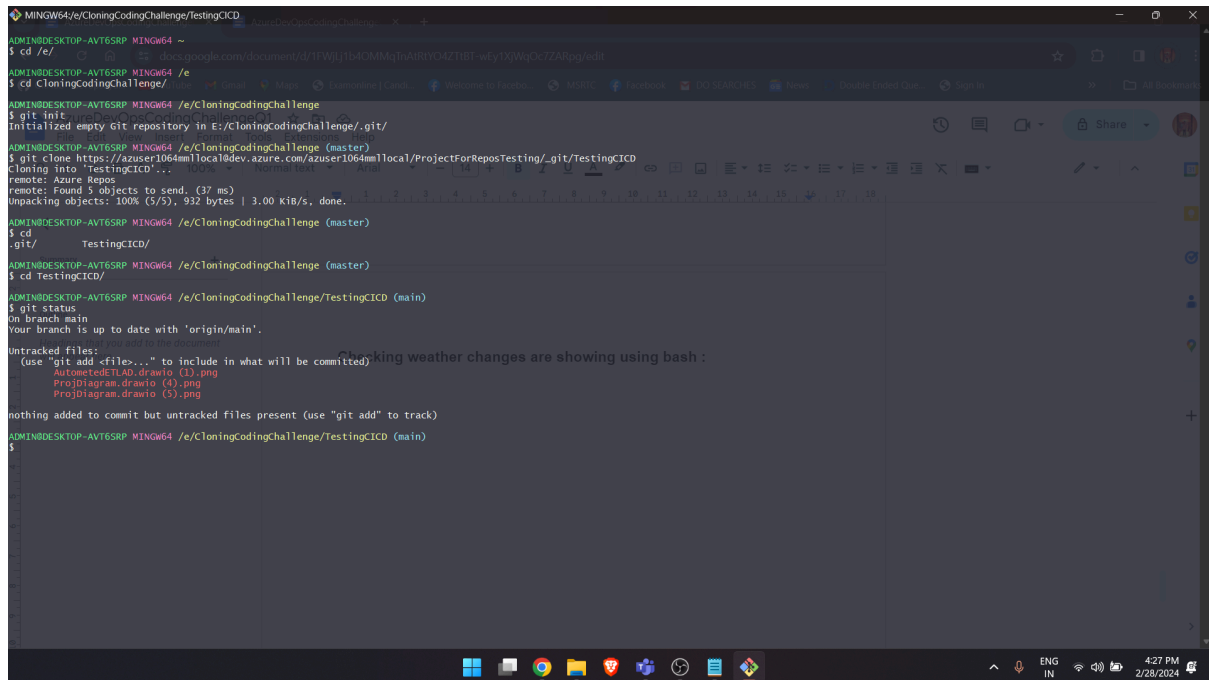


Successfully cloned the repository.

Adding Sample files to local :



Checking weather changes are showing using bash :



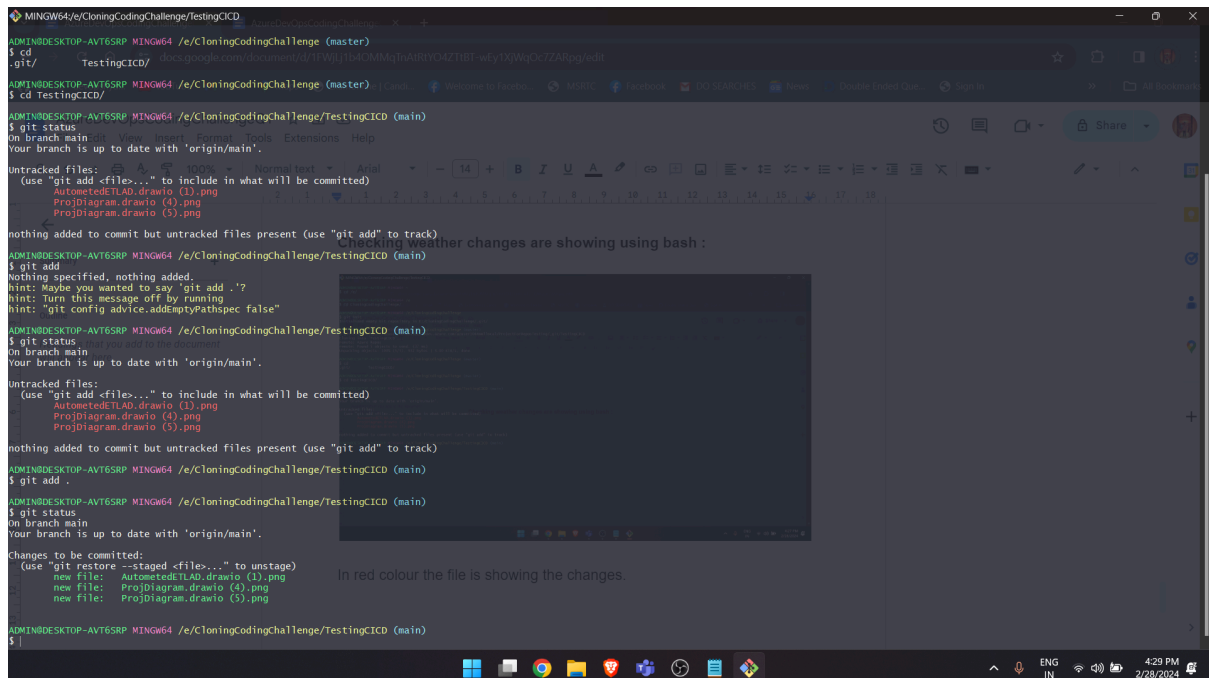
```
MINGW64/e/CloningCodingChallenge/TestingCICD
ADMIN@DESKTOP-AVT6SRP MINGW64 ~
$ cd /e/
ADMIN@DESKTOP-AVT6SRP MINGW64 /e
$ cd CloningCodingChallenge/
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge
$ git init
Initialized empty Git repository in E:/CloningCodingChallenge/.git/
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge (master)
$ git clone https://azuser1064m1.localdev.azure.com/azuser1064m1/ProjectForReposTesting/.git/TestingCICD
Cloning into 'TestingCICD'...
remote: Azure Repos
remote: Found 5 objects to send, (37 ms)
Unpacking objects: 100% (5/5), 932 bytes | 3.00 KiB/s, done.
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge (master)
$ cd
  .git/      TestingCICD/
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge (master)
$ cd TestingCICD/
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    AutomatedTLAD.drawio (1).png
    ProjDiagram.drawio (4).png
    ProjDiagram.drawio (5).png

nothing added to commit but untracked files present (use "git add" to track)
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$
```

In red colour the file is showing the changes.

Staging the files using bash :



```
MINGW64/e/CloningCodingChallenge/TestingCICD
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge (master)
$ cd
  .git/      TestingCICD/
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge (master)
$ cd TestingCICD/
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    AutomatedTLAD.drawio (1).png
    ProjDiagram.drawio (4).png
    ProjDiagram.drawio (5).png

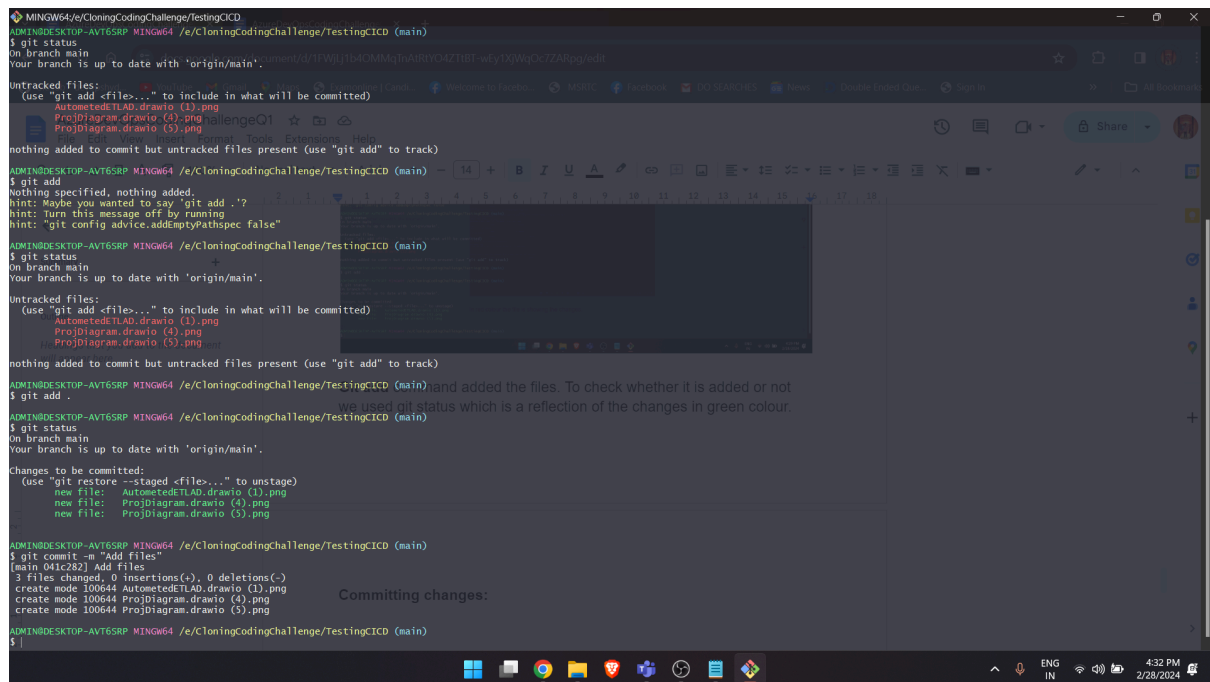
nothing added to commit but untracked files present (use "git add" to track)
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$ git add
Nothing specified, nothing added.
hint: Maybe you wanted to say 'git add -?'
hint: Turn this message off by running
hint: "git config advice.addEmptyPathsSpec false"
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   AutomatedTLAD.drawio (1).png
    new file:   ProjDiagram.drawio (4).png
    new file:   ProjDiagram.drawio (5).png

nothing added to commit but untracked files present (use "git add" to track)
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$
```

Git add command added the files. To check whether it is added or not we used git status which is a reflection of the changes in green colour.

Committing changes:



```
MINGW64/e/CloningCodingChallenge/TestingCICD
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    AutometedTLAD.drawio (1).png
    ProjDiagram.drawio (4).png
    ProjDiagram.drawio (5).png

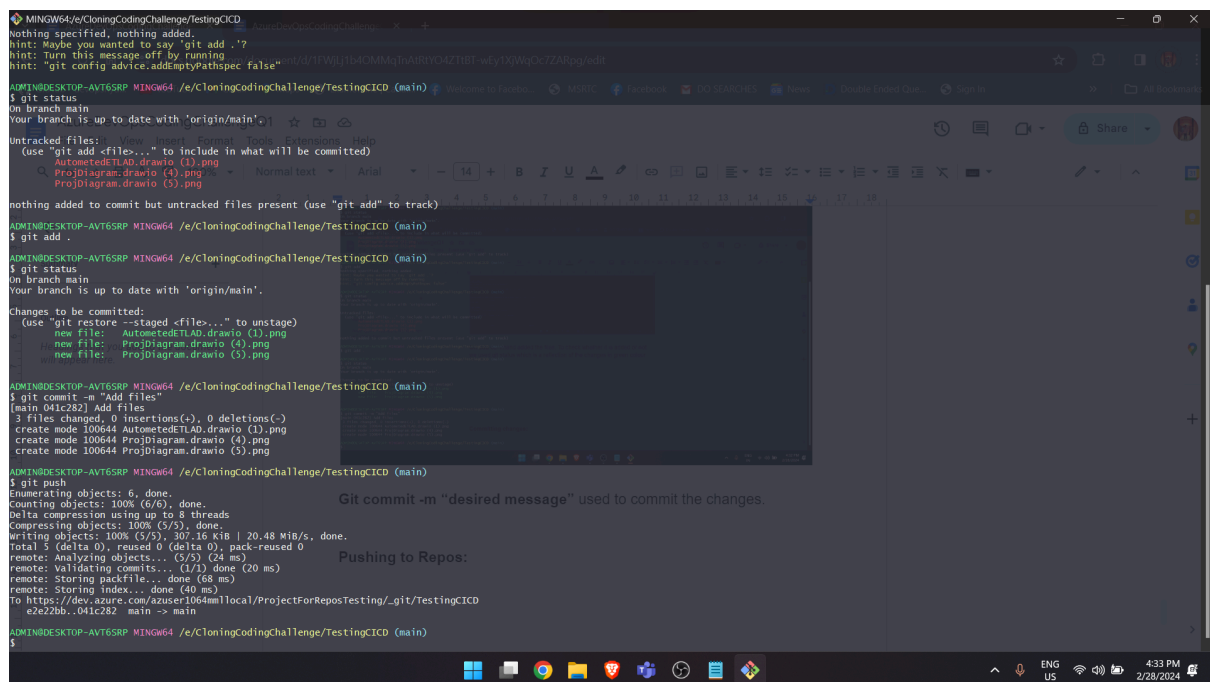
nothing added to commit but untracked files present (use "git add" to track)
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$ git add
Nothing specified, nothing added.
hint: Maybe you wanted to say 'git add .'?
hint: Turn this message off by running
hint: "git config advice.addEmptyPathspec false"
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    AutometedTLAD.drawio (1).png
    ProjDiagram.drawio (4).png
    ProjDiagram.drawio (5).png

nothing added to commit but untracked files present (use "git add" to track)
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$ git add .
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   AutometedTLAD.drawio (1).png
    new file:   ProjDiagram.drawio (4).png
    new file:   ProjDiagram.drawio (5).png
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$ git commit -m "Add files"
[main 041c282] Add files
3 files changed, 0 insertions(+), 0 deletions(-)
create mode 100644 AutometedTLAD.drawio (1).png
create mode 100644 ProjDiagram.drawio (4).png
create mode 100644 ProjDiagram.drawio (5).png
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$ |
```

Git commit -m “desired message” used to commit the changes.

Pushing to Repos:



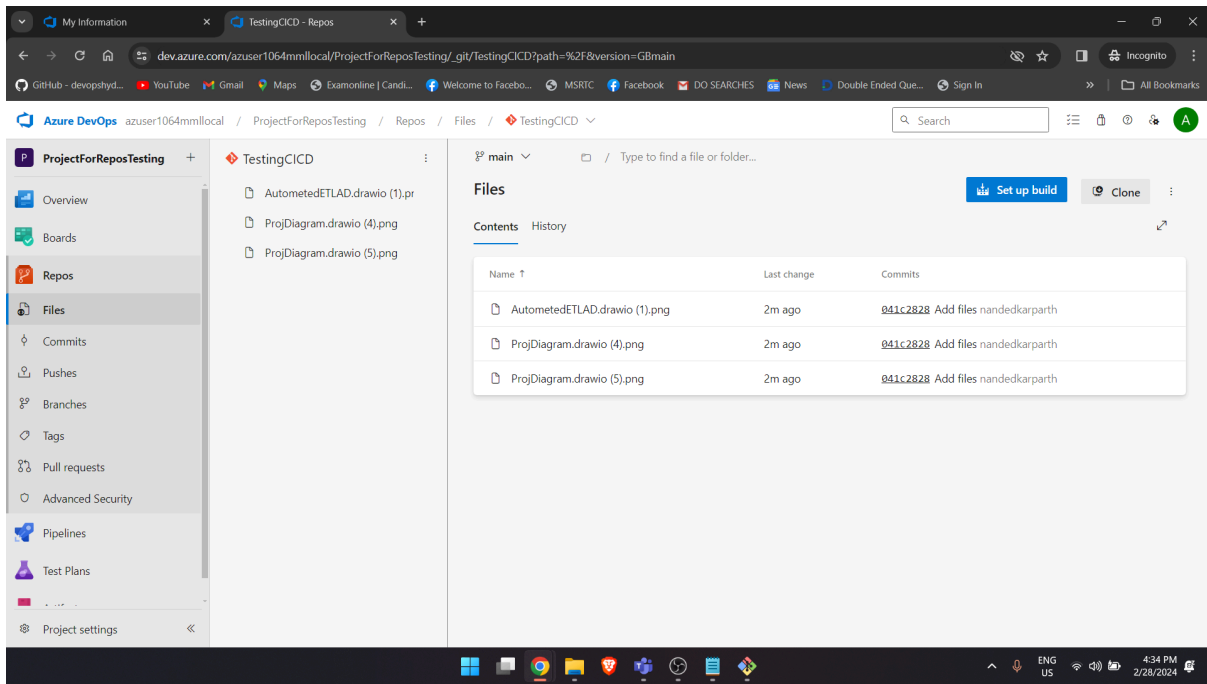
```
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    AutometedTLAD.drawio (1).png
    ProjDiagram.drawio (4).png
    ProjDiagram.drawio (5).png

nothing added to commit but untracked files present (use "git add" to track)
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$ git add .
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

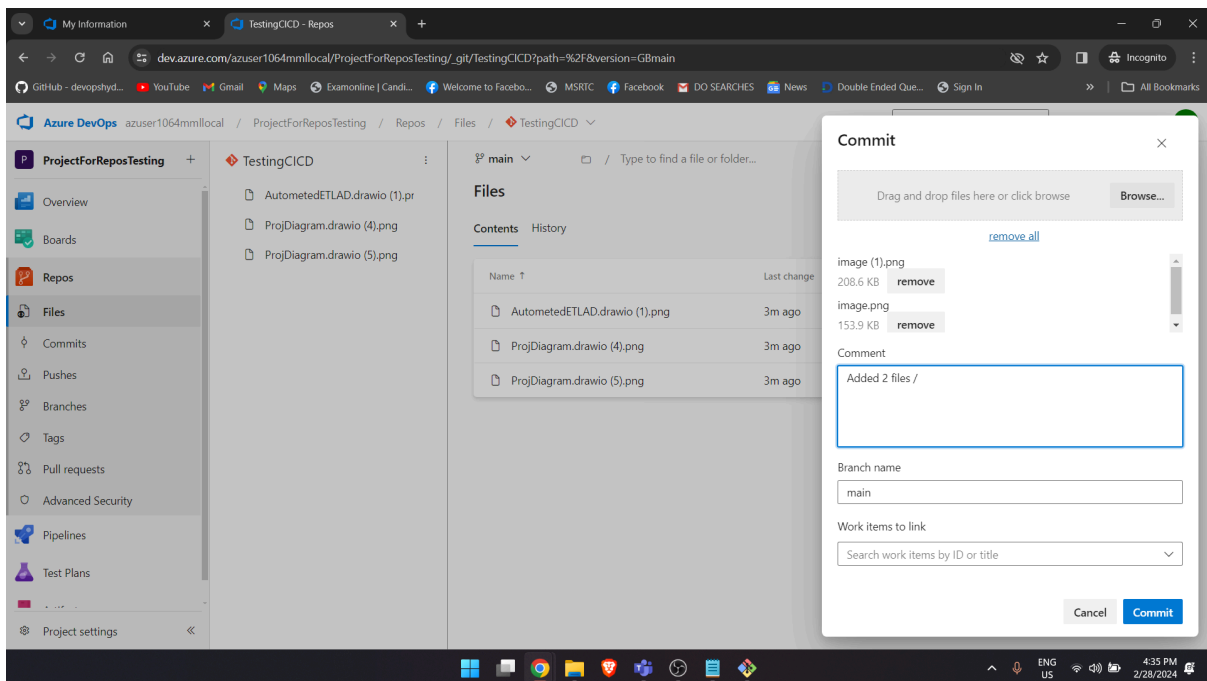
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   AutometedTLAD.drawio (1).png
    new file:   ProjDiagram.drawio (4).png
    new file:   ProjDiagram.drawio (5).png
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$ git commit -m "Add files"
[main 041c282] Add files
3 files changed, 0 insertions(+), 0 deletions(-)
create mode 100644 AutometedTLAD.drawio (1).png
create mode 100644 ProjDiagram.drawio (4).png
create mode 100644 ProjDiagram.drawio (5).png
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$ git push
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 8 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (5/5), 307.16 Kib | 20.48 MiB/s, done.
Total 5 (delta 0), reused 0 (delta 0), pack-reused 0
remote: Analyzing objects... (5/5) (24 ms)
remote: Validating commits... (1/1) done (20 ms)
remote: Storing packfile... done (68 ms)
remote: Storing index... done (40 ms)
To https://dev.azure.com/azuser1064m1/local/ProjectForReposTesting/_git/TestingCICD
   e2e22bb..041c282  main -> main
ADMIN@DESKTOP-AVT6SRP MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$
```

Git push command is used to reflect changes on azure repos.

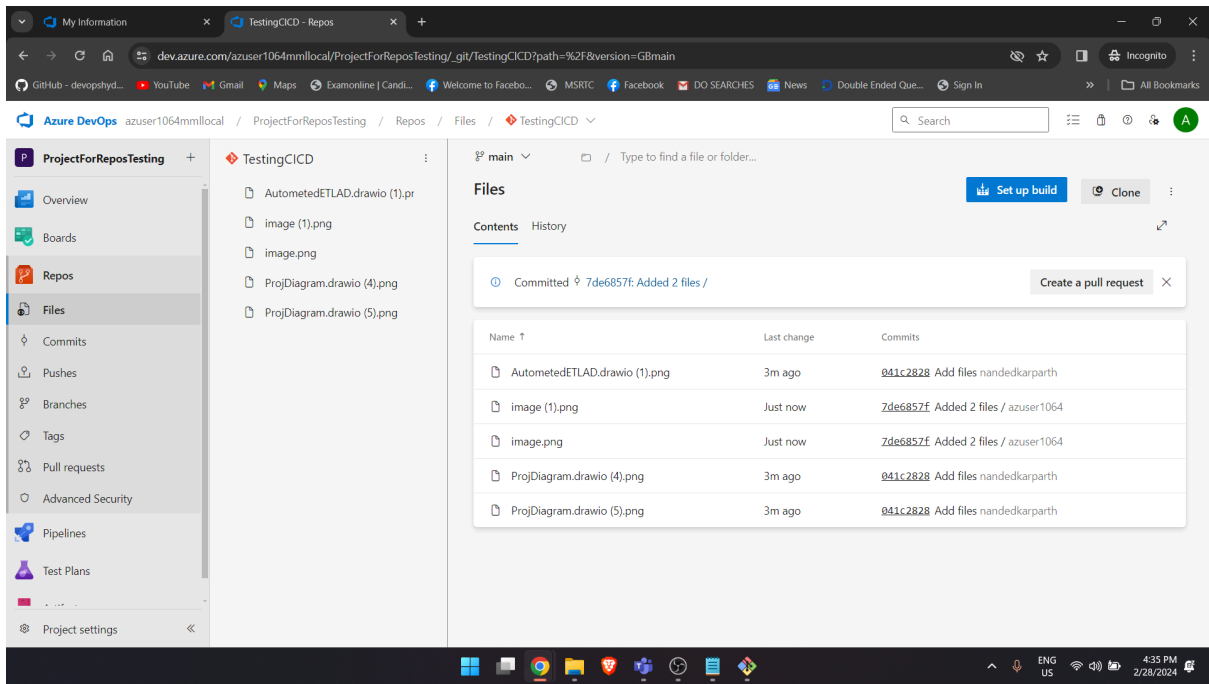


We can see on azure repos the files are added.

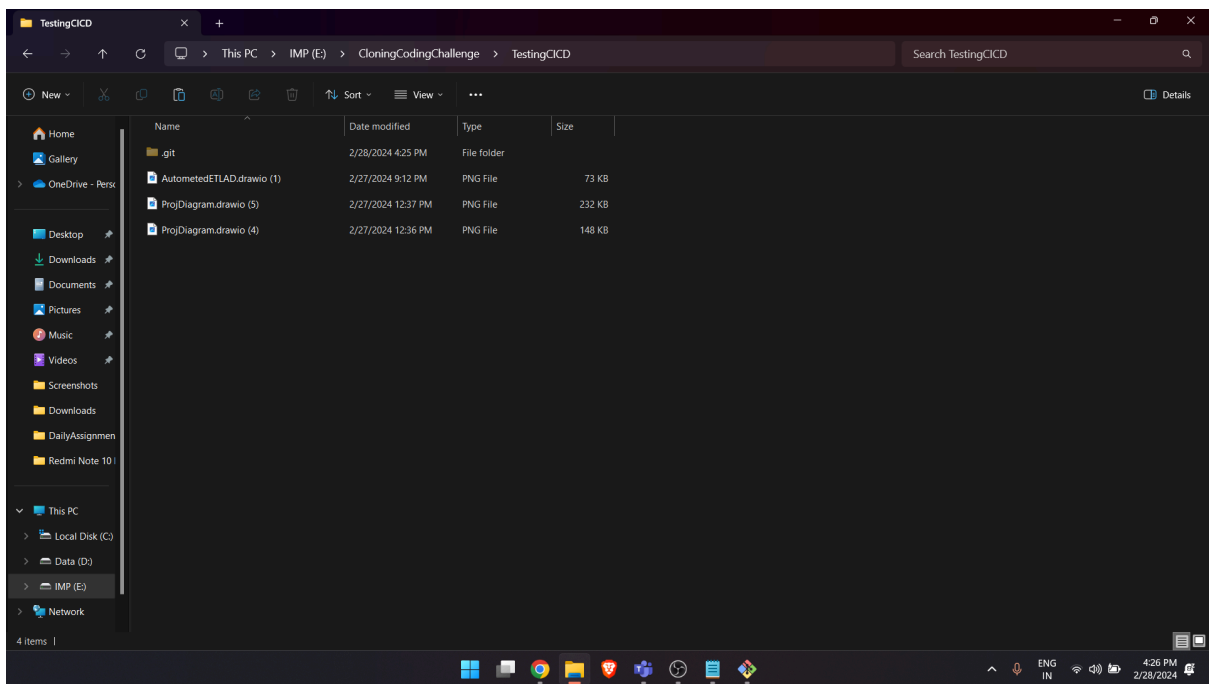
Adding files on Azure Repos :



Adding 2 files through repos.



Files added successfully.



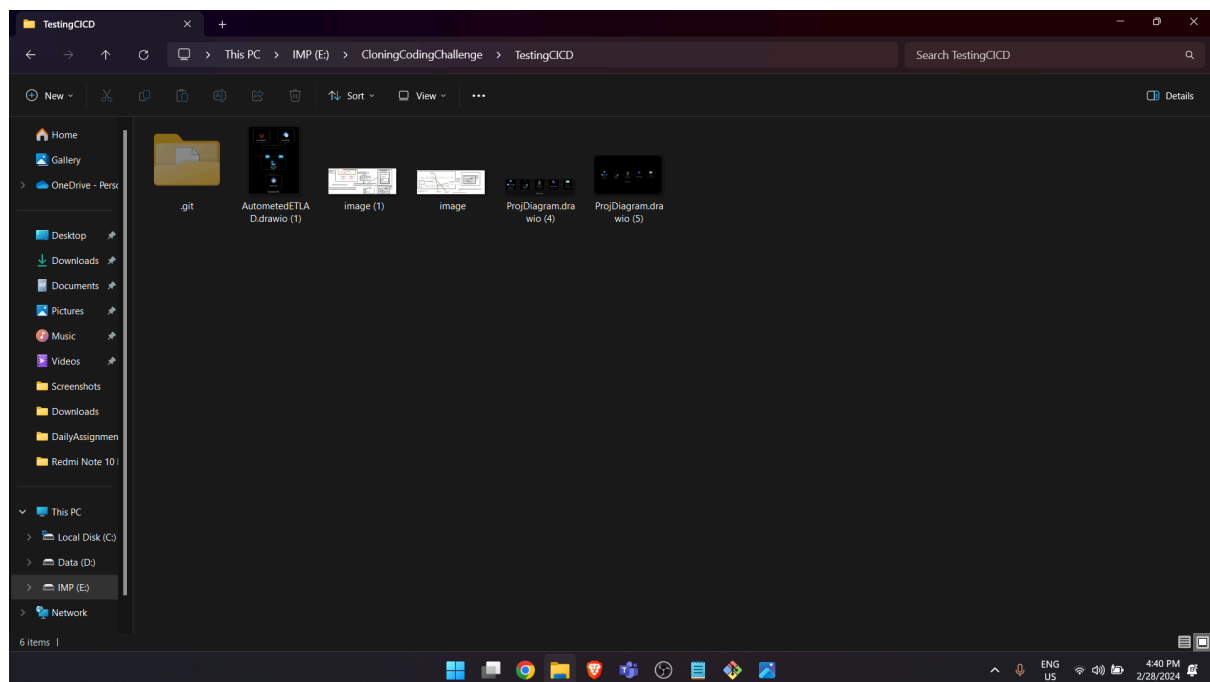
Locally there are no files.

Git pull to reflect changes in local :

```
MINGW64/e/CloningCodingChallenge/TestingCICD
nothing added to commit but untracked files present (use "git add" to track)
MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$ git add .
MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   AutometedETLAD.drawio (1).png
        new file:   ProjDiagram.drawio (4).png
        new file:   ProjDiagram.drawio (5).png
MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$ git commit -m "Add files"
[main 041c282] Add files
3 files changed, 0 insertions(+), 0 deletions(-)
create mode 100644 AutometedETLAD.drawio (1).png
create mode 100644 ProjDiagram.drawio (4).png
create mode 100644 ProjDiagram.drawio (5).png
MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$ git push
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 8 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (5/5), 307.16 KiB | 20.48 MiB/s, done.
Total 5 (delta 0), reused 0 (delta 0), pack-reused 0
remote: Analyzing objects... (5/5) (24 ms)
remote: Validating commits... (1/1) done (20 ms)
remote: Storing packfile... done (68 ms)
remote: Storing index... done (40 ms)
To https://dev.azure.com/azuser1064m1local/ProjectForReposTesting/_git/TestingCICD
c24220b..041c282  main -> main
MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$ git pull
remote: Found 4 objects to send, (44 ms)
Unpacking objects: 100% (4/4), 348.82 KiB | 793.00 KiB/s, done.
From https://dev.azure.com/azuser1064m1local/ProjectForReposTesting/_git/TestingCICD
  041c282..de6837  main       -> origin/main
Updating 041c282..de6837
Fast-forward
 image (1).png | Bin 0 -> 213589 bytes
 image.png     | Bin 0 -> 157680 bytes
 2 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 image (1).png
 create mode 100644 image.png
MINGW64 /e/CloningCodingChallenge/TestingCICD (main)
$
```

Using the git pull command updated the local directory.

Reflected Changes :



Got the files locally.