

GIT

ABSTRACT:

Created by Linus Thorwald's, creator of Linux, in 2005.

- ◆ It is a free and open-source version control system used to handle small to very large projects efficiently.
- ◆ Git is a distributed version control system.
- ◆ Git also makes collaboration easier, allowing changes by multiple people to all be merged into one source.
- ◆ It is also used to tracking changes in the source code, enabling multiple developers to work together on non-linear development.

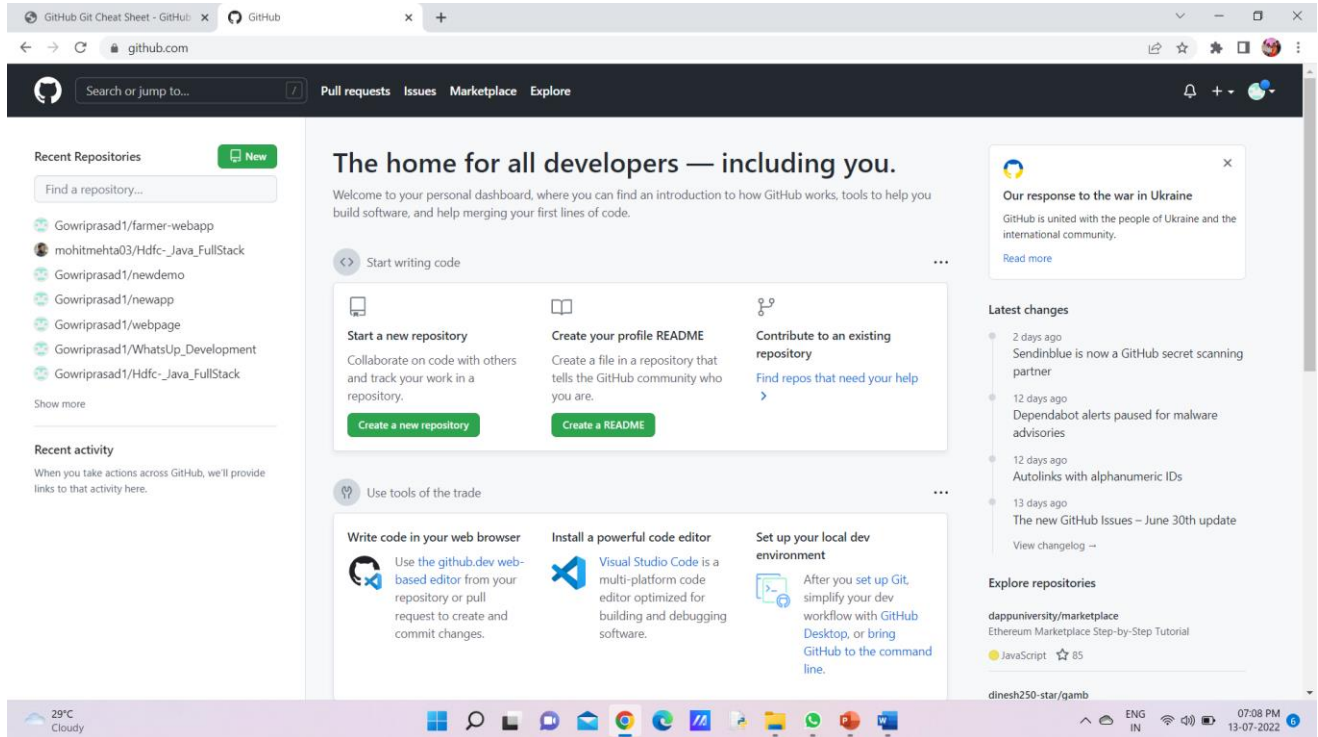
INSTALLATION:

- Go to GitHub.com and login.
- desktop.github.com by clicking this link also we can login to Git account.



After creating the Git account go to Dashboard of the Git Repository.

INTERFACE OF GIT REPOSITORY:

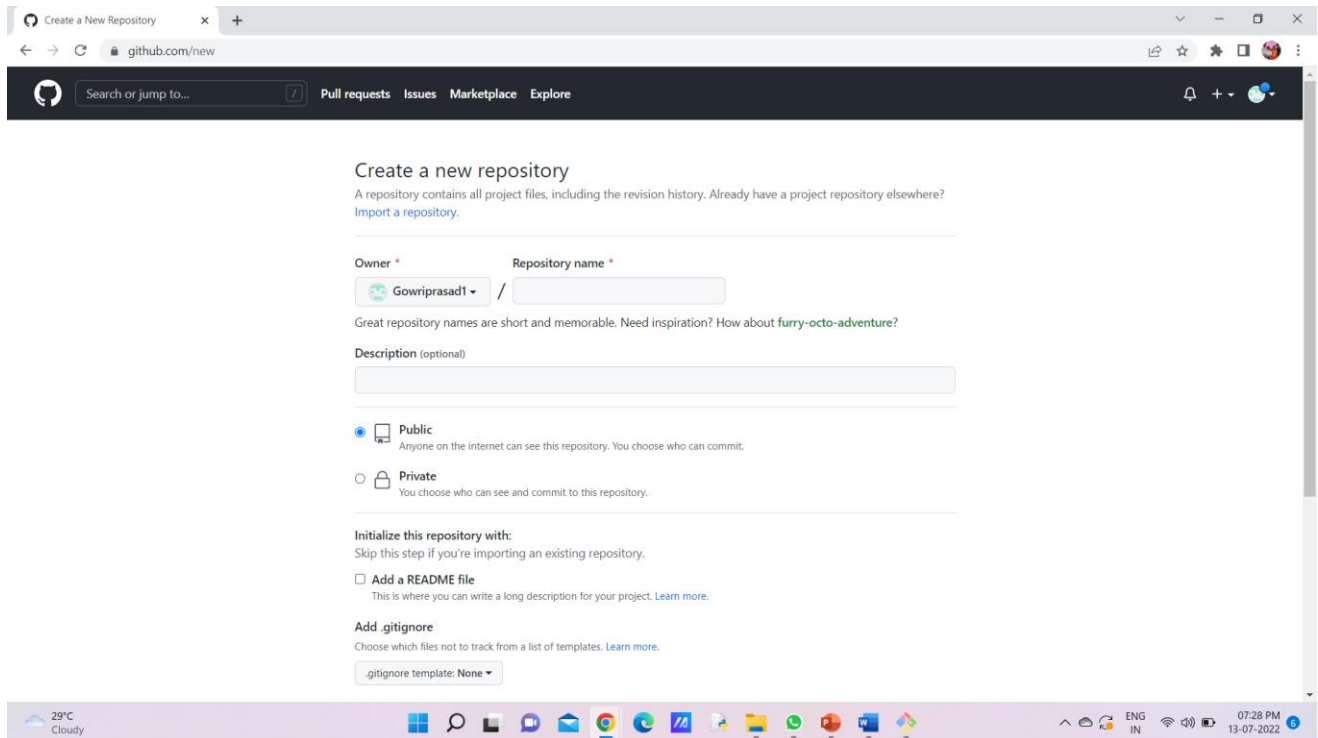


It is the interface of the Git repository.

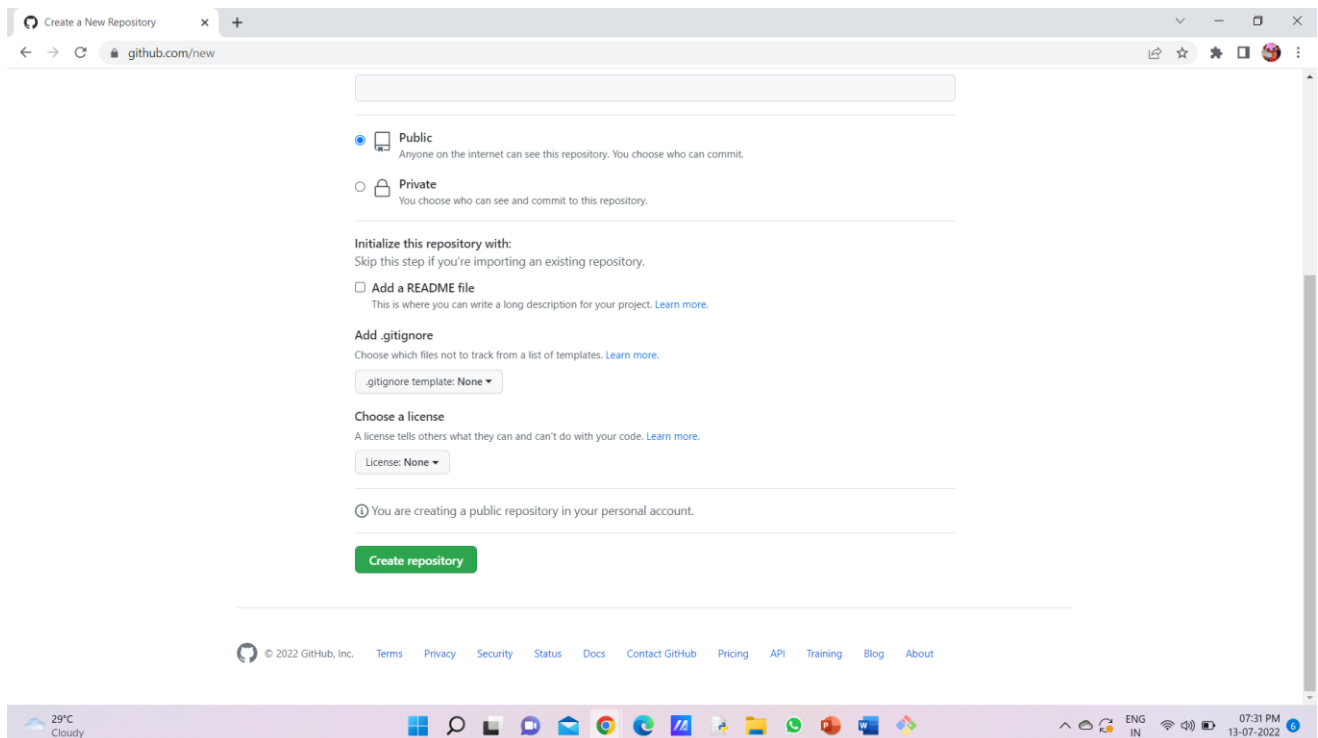
CREATE REPOSITORY:

Here by clicking the new repository then we can create the new repository. And also, by clicking the plus (+) icon then it shows the pop-up menu then it shows an option create new repository.

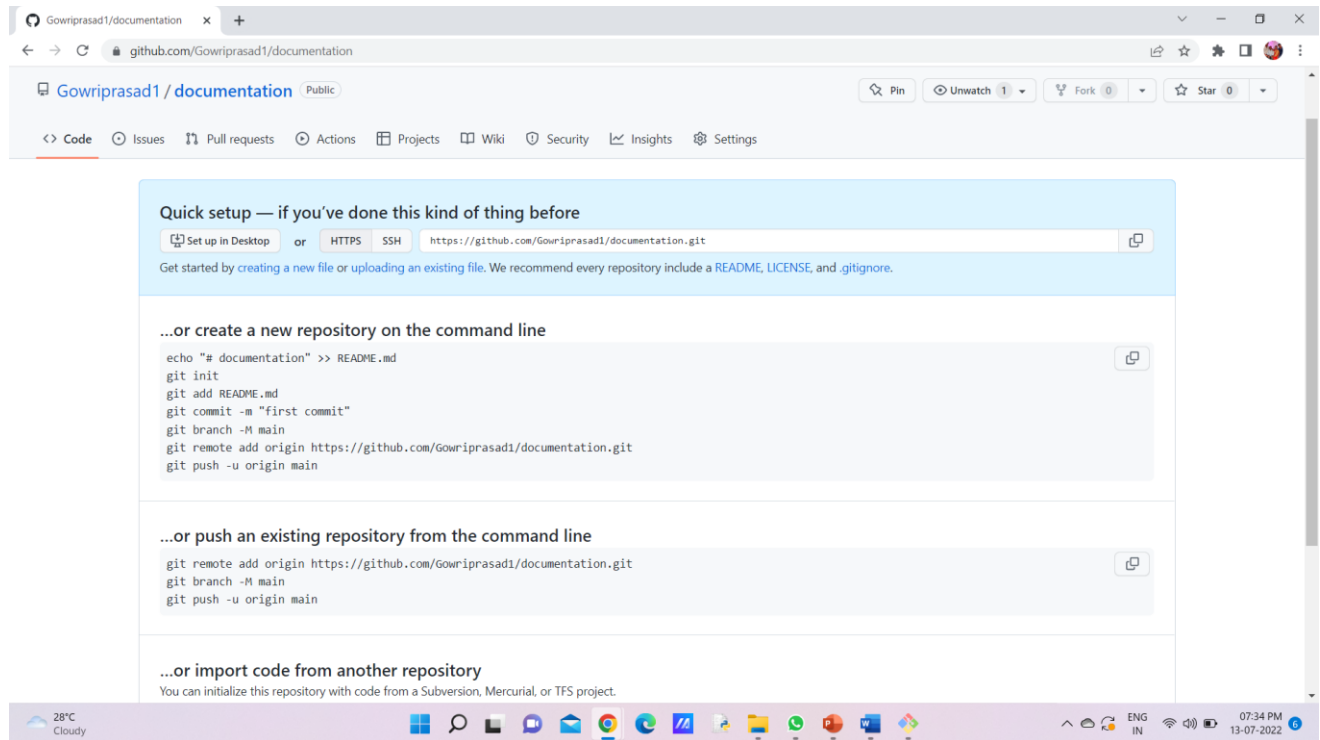
A new repository can either be created locally, or an existing repository can be cloned. When a repository was initialized locally, you have to push it to GitHub afterwards.



Here it is the interface of the creating new repository. We can give the repository name and add some description then clicking the new repository button.



After creating the git repository, the interface should be created like this.



So this is the way of creating the git repository.

If you want to add some files or if you want to manipulate the data by using three ways.

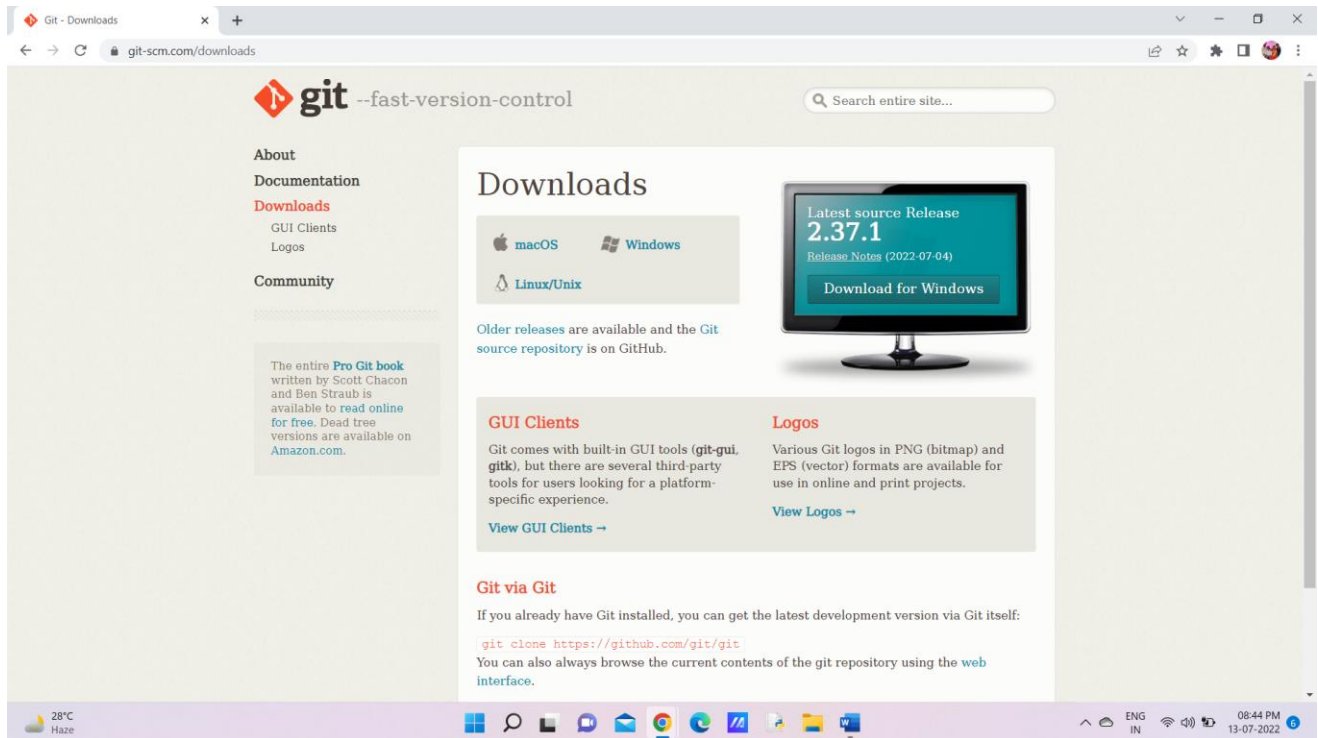
1.By using Git bash

Git Bash is an application that provides Git command line then it is used for efficiently manipulating the files and directories.

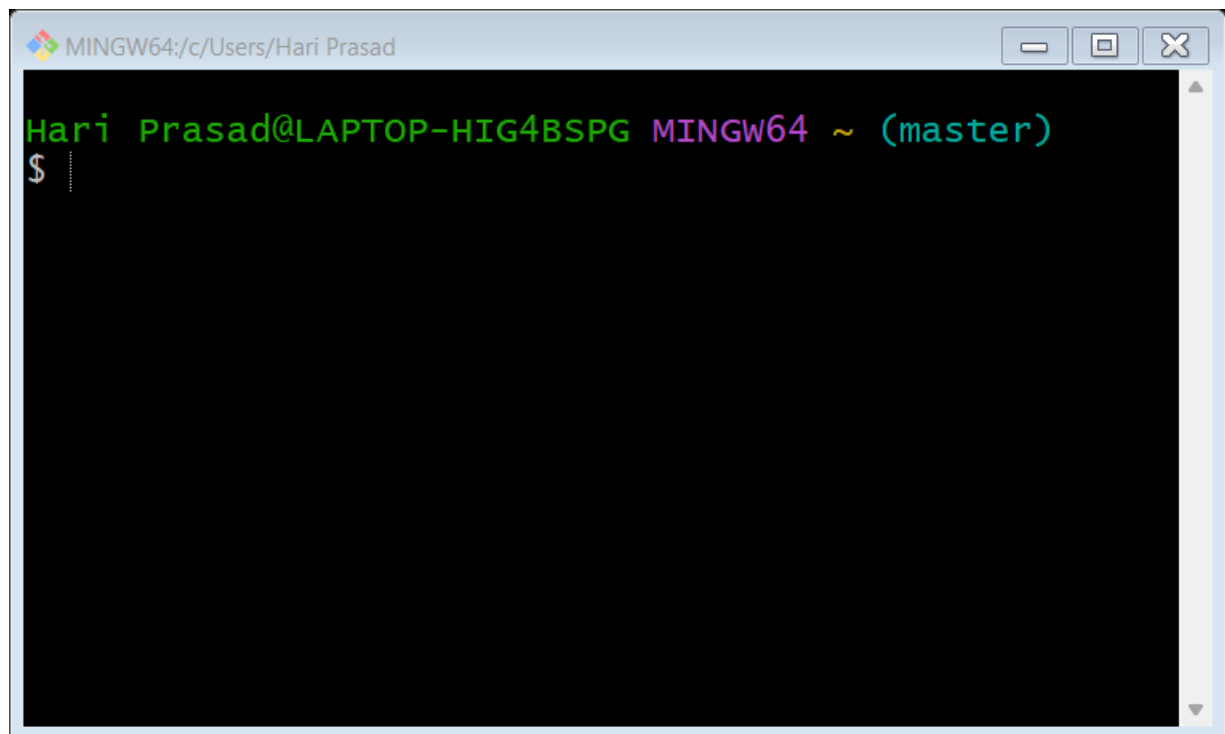
INSTALLING GIT BASH:

Download the git bash by using the browser. Go to chrome or google then enter “Download Git” .

It is an interface of installing Git bash then click it windows. After that we can download exe file.



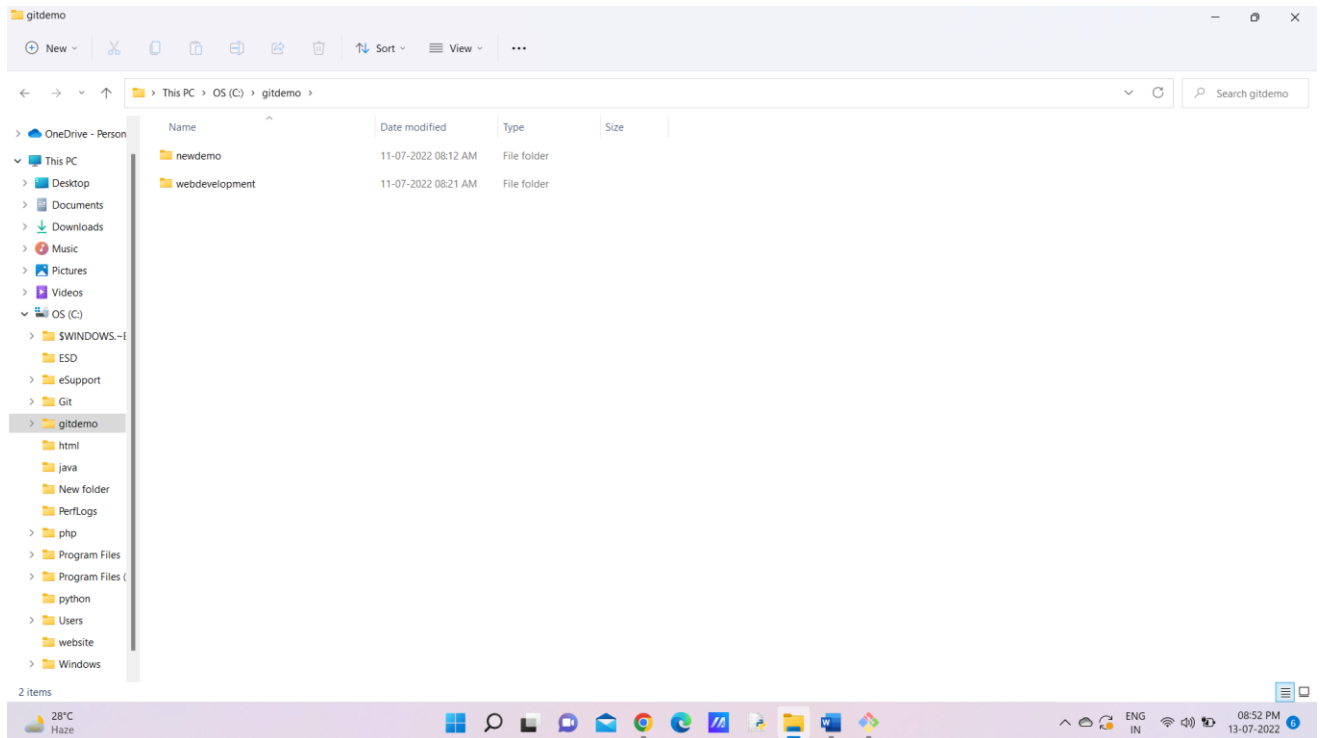
After setup the git this is the interface of git bash.



WORKING WITH GIT BASH:

CLONING: Cloning is nothing but if you want to access any other files which is in public mode then you can access the files.

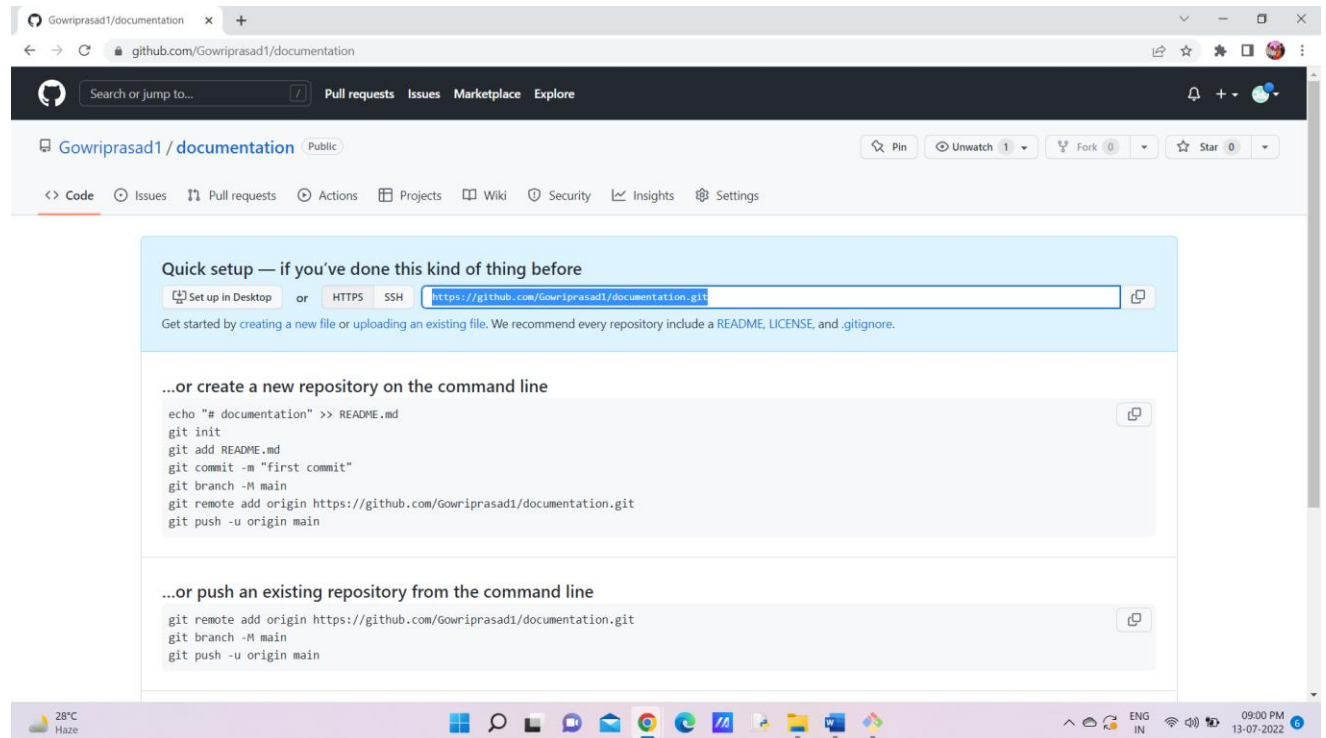
Here we have some commands for manipulating the files and directories in git repository. We have two repository's one is local repository which means it in our local operating system files.



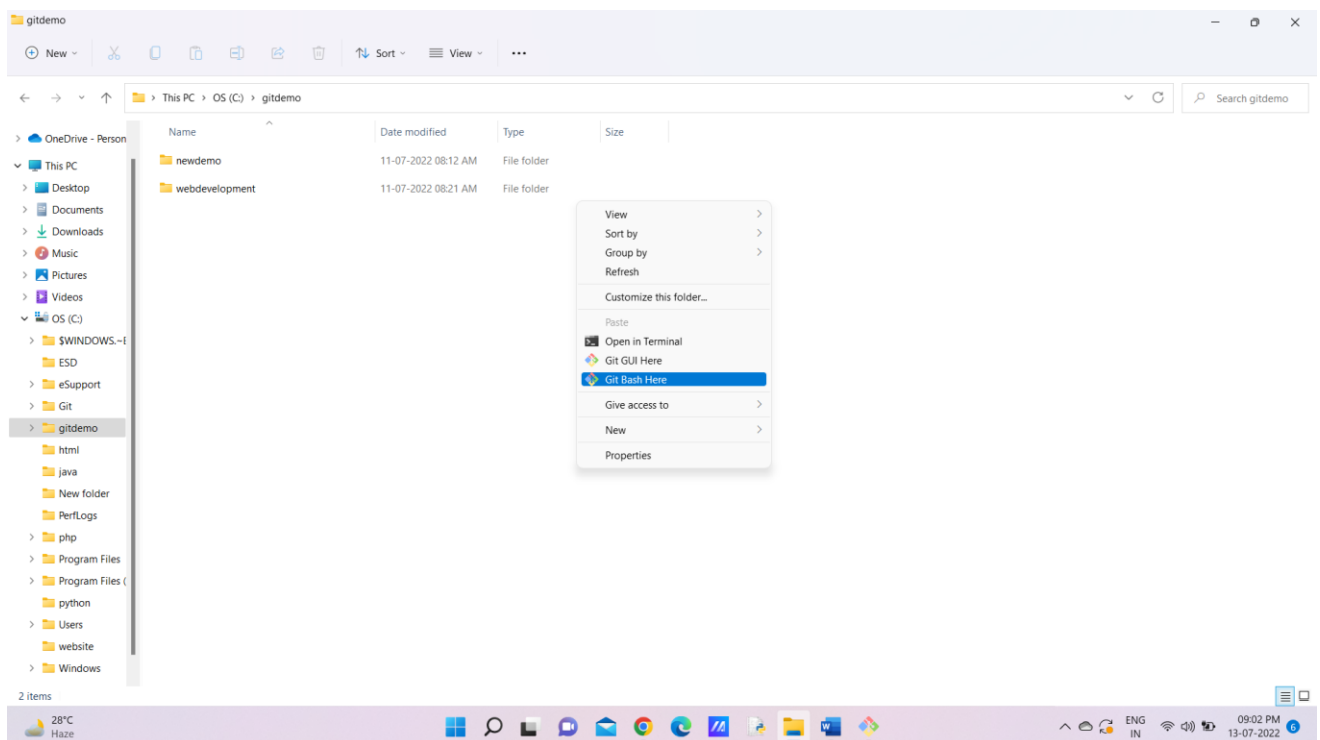
Second one is remote repository which is nothing but git interface we can create a file by using directly.

STEPS FOR MANIPULATING FILES AND DIRECTORIES:

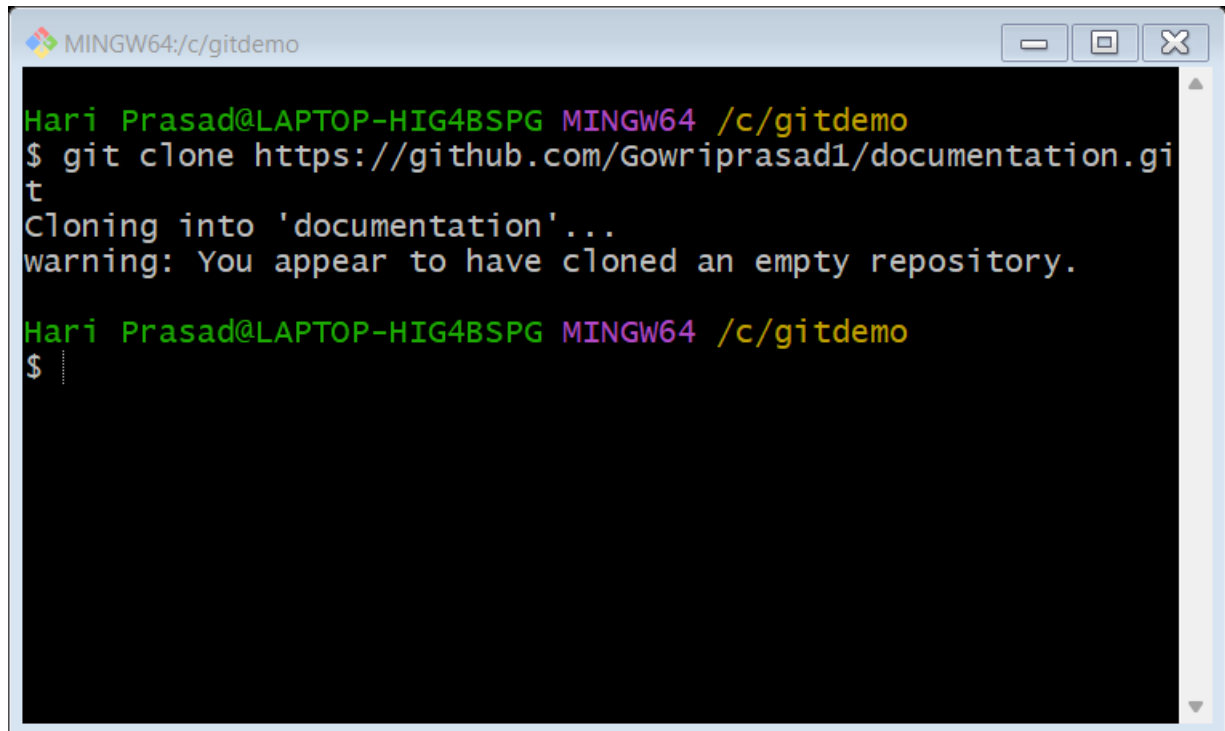
- 1) Open the project (Git) interface in Git Hub.
- 2) Then copy the URL what you are import the files in your pc.



3) So go to local repository then we can click the right button click it **GIT BASH HERE**

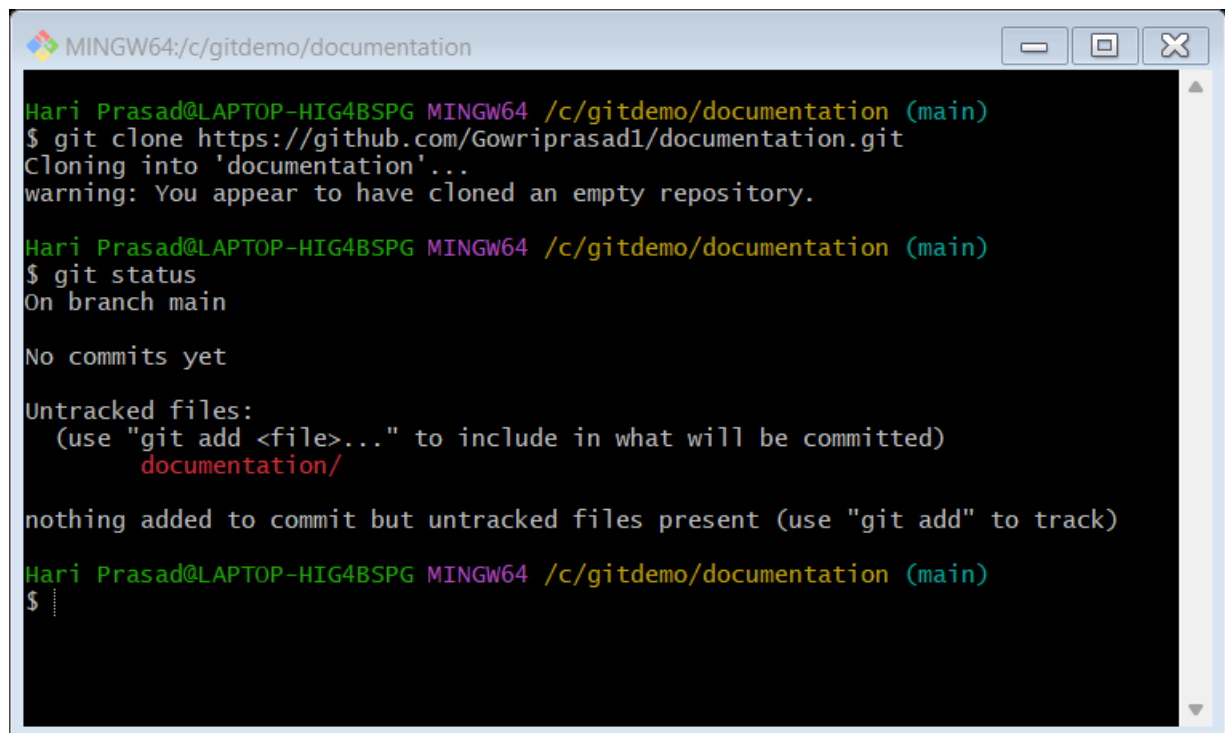


4) Then it opens the Git command line and enter the **“\$git clone url”**
URL means what you are copying in the git remote repository.

A terminal window titled 'MINGW64:/c/gitdemo' with standard Windows window controls. The prompt is 'Hari Prasad@LAPTOP-HIG4BSPG MINGW64 /c/gitdemo'. The user enters '\$ git clone https://github.com/Gowriprasad1/documentation.git'. The output shows 'Cloning into 'documentation'...' followed by a warning: 'warning: You appear to have cloned an empty repository.' The prompt returns to '\$ '.

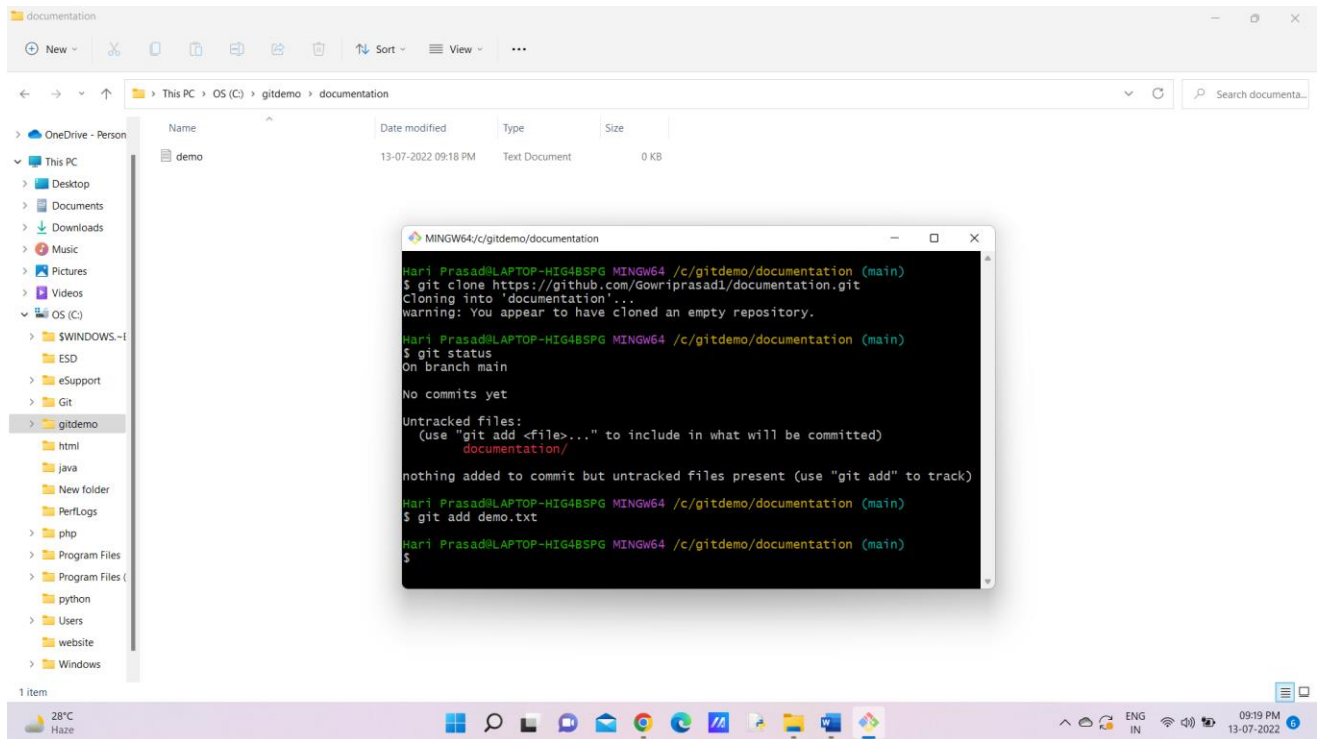
So, it directly imported to our pc. It has created the documentation directory.

- 5) Check the git status whether they have any files or not in the local repository.

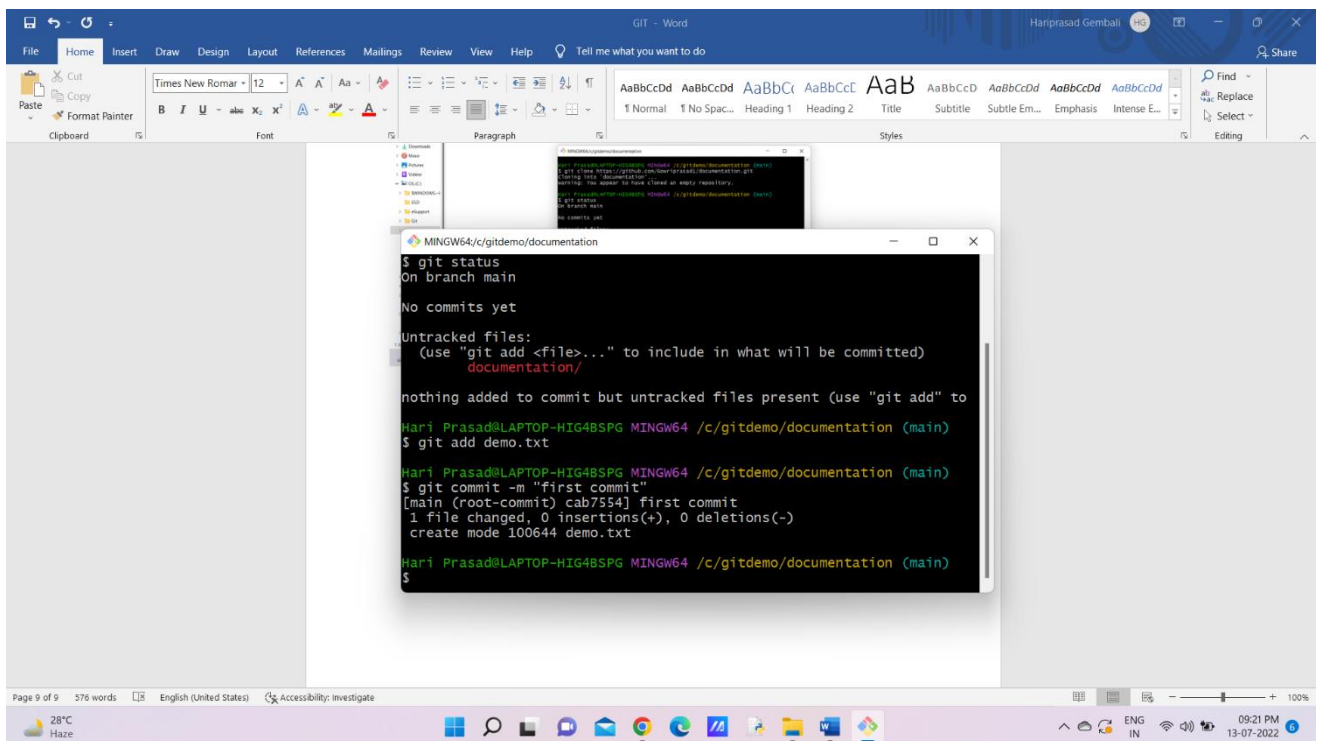
A terminal window titled 'MINGW64:/c/gitdemo/documentation' with standard Windows window controls. The prompt is 'Hari Prasad@LAPTOP-HIG4BSPG MINGW64 /c/gitdemo/documentation (main)'. The user enters '\$ git clone https://github.com/Gowriprasad1/documentation.git', which outputs 'Cloning into 'documentation'...' and a warning. Then the user enters '\$ git status'. The output shows 'On branch main', 'No commits yet', and 'Untracked files: (use "git add <file>..." to include in what will be committed) documentation/'. It concludes with 'nothing added to commit but untracked files present (use "git add" to track)'. The prompt returns to '\$ '.

Here they have no files in the local repository.

- 6) So, create a text file or other files in that documentation folder. And if we want to add the file in your remote repository using git bash, we can use this command “git add filename”.



- 7) Then commit the file for inserting in remote repository or not by using this command \$git commit -m “some message”



- 8) After the commit the file by using the `git log` command we can see that id of that file.

```
MINGW64:/c/gitdemo/documentation

nothing added to commit but untracked files present (use "git add" to
track the file)

Hari Prasad@LAPTOP-HIG4BSPG MINGW64 /c/gitdemo/documentation (main)
$ git add demo.txt

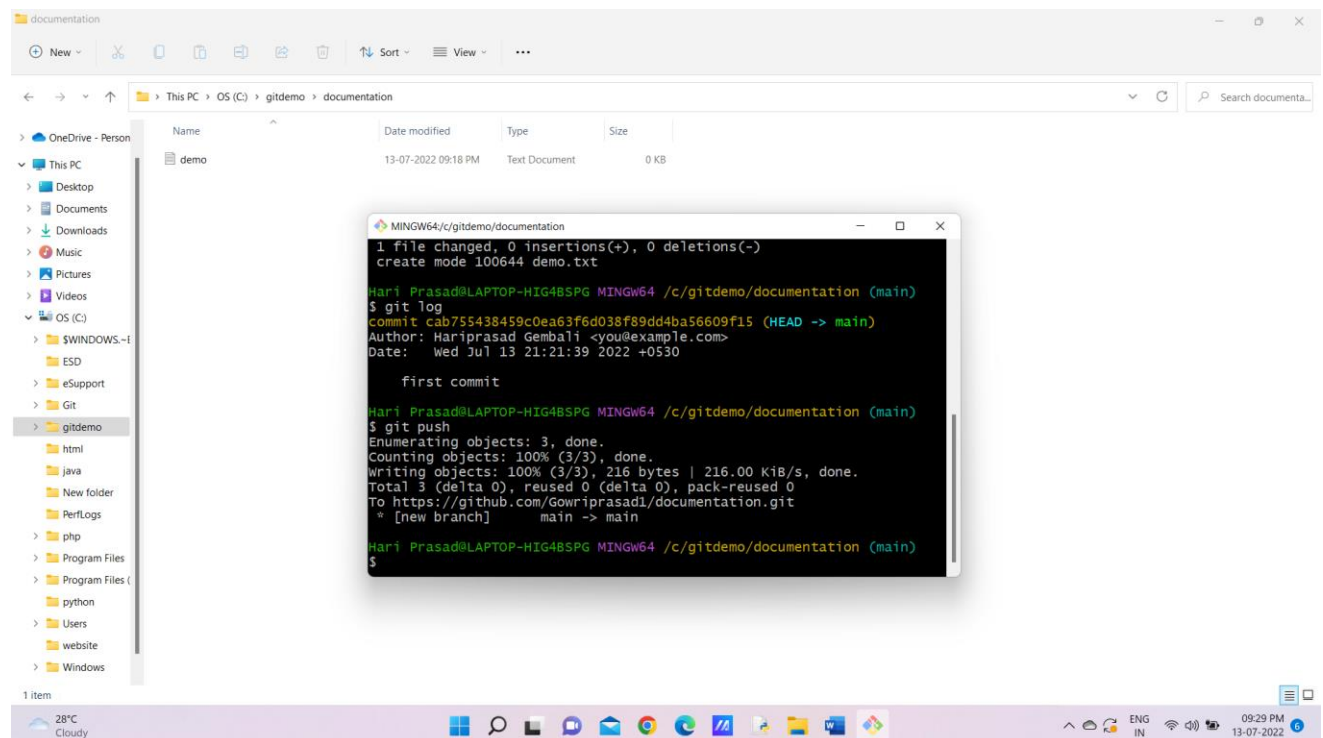
Hari Prasad@LAPTOP-HIG4BSPG MINGW64 /c/gitdemo/documentation (main)
$ git commit -m "first commit"
[main (root-commit) cab7554] first commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 demo.txt

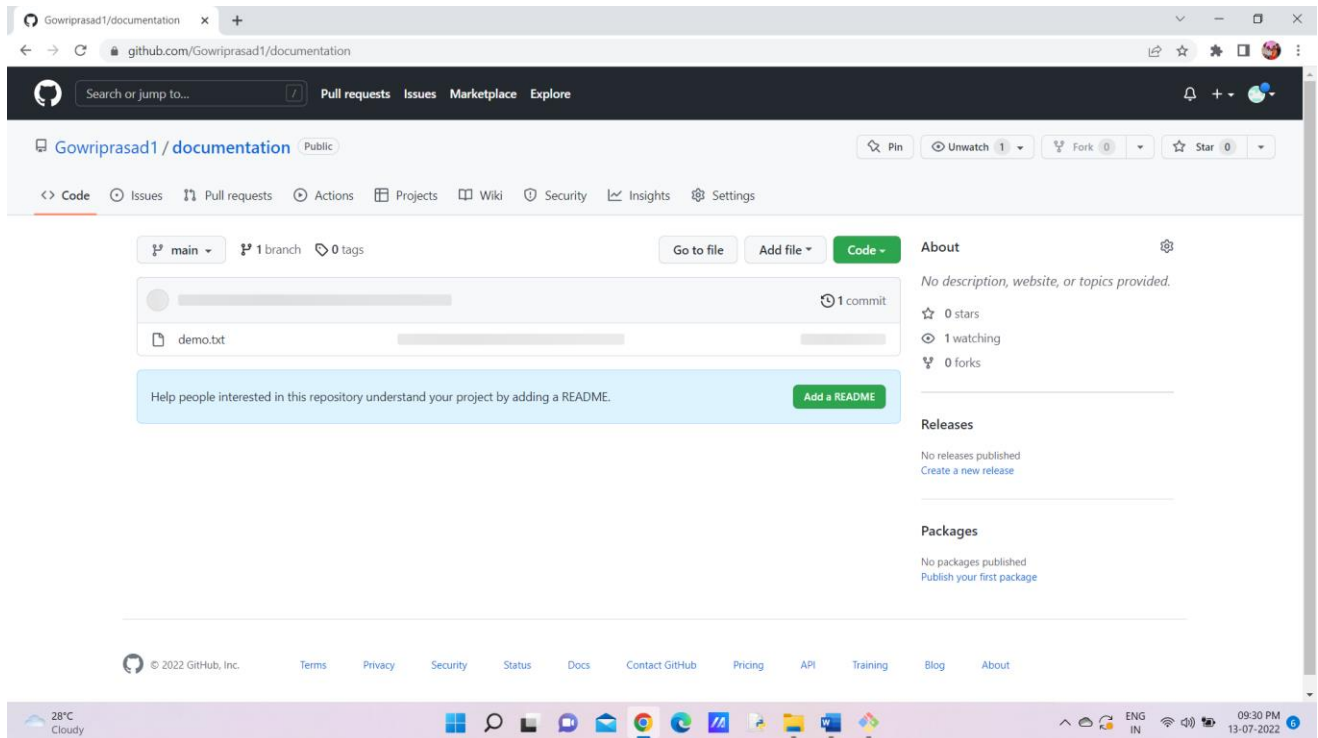
Hari Prasad@LAPTOP-HIG4BSPG MINGW64 /c/gitdemo/documentation (main)
$ git log
commit cab755438459c0ea63f6d038f89dd4ba56609f15 (HEAD -> main)
Author: Hariprasad Gembali <you@example.com>
Date:   Wed Jul 13 21:21:39 2022 +0530

    first commit

Hari Prasad@LAPTOP-HIG4BSPG MINGW64 /c/gitdemo/documentation (main)
$
```

- 9) After that we can push that file into local repository to remote repository by using this command `$git push`.

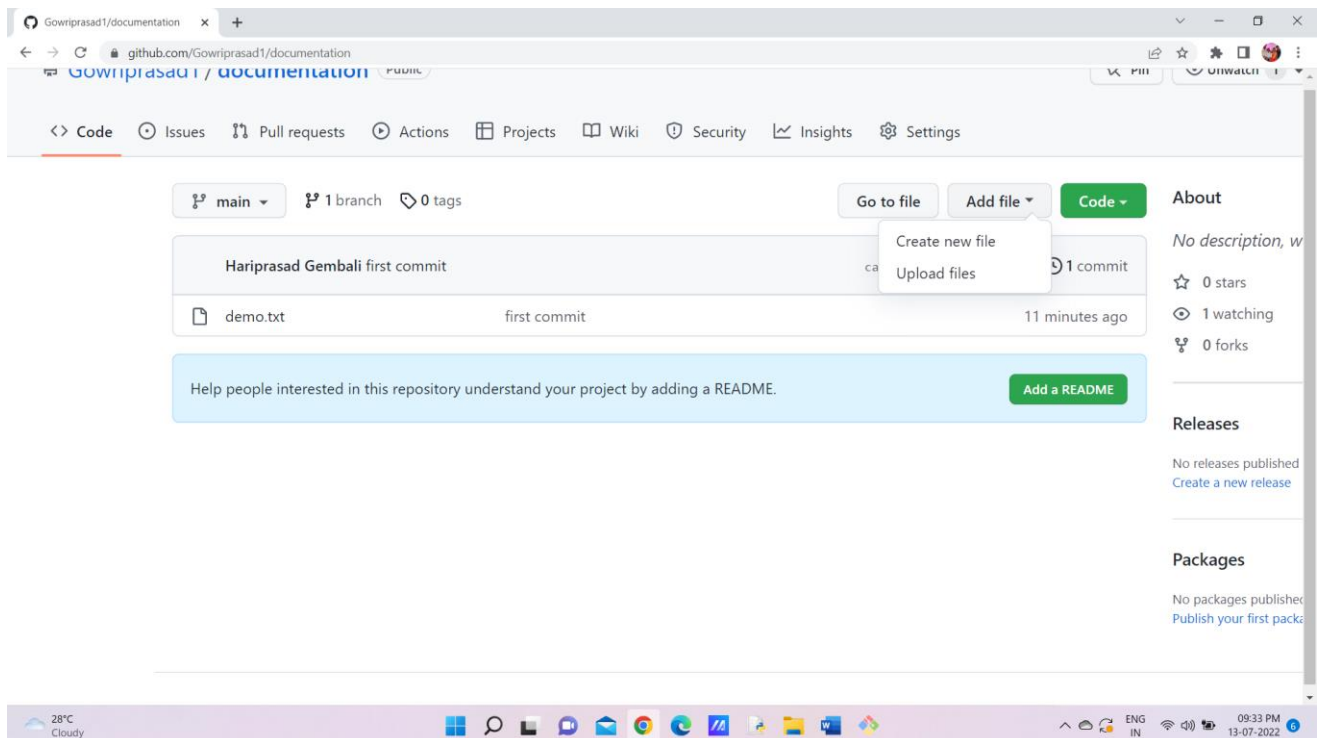




It is the interface of after adding some files into git repository.

CREATING FILES IN GITHUB:

- 1) Create the file icon.
- 2) Upload the file.

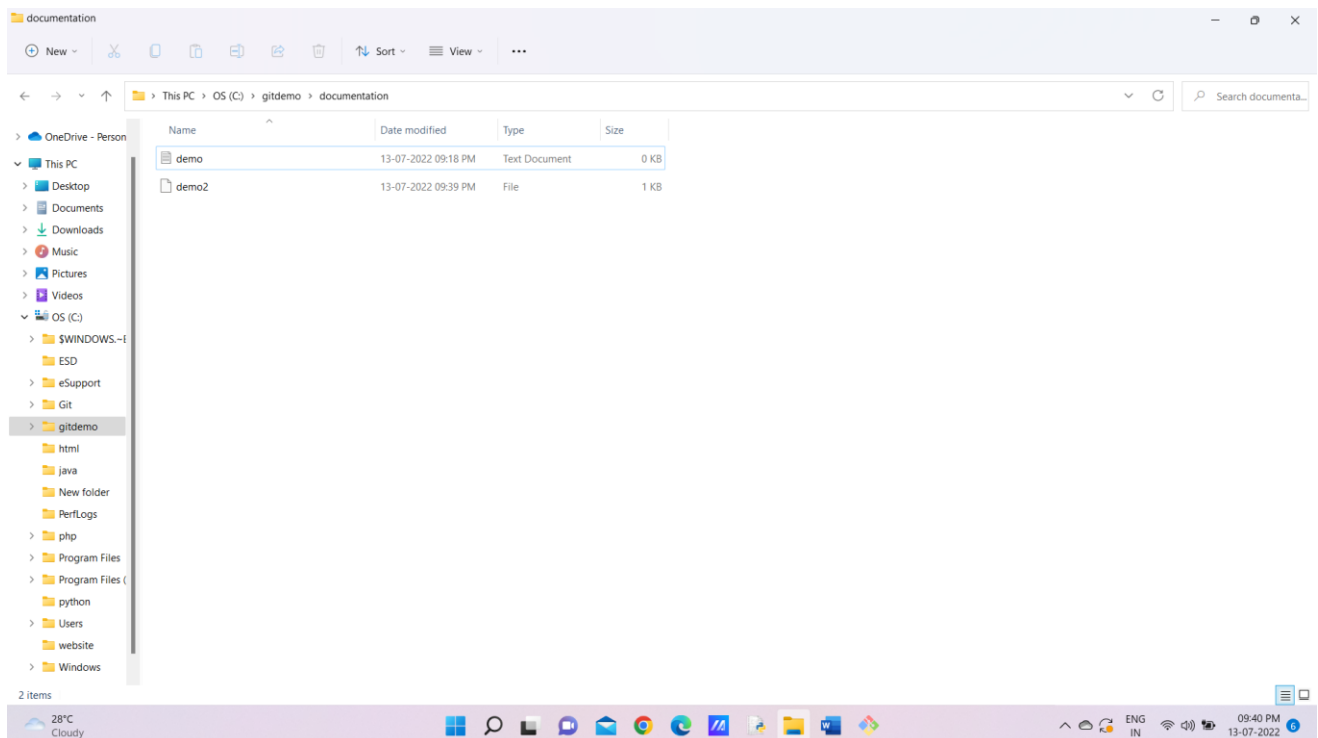


By creating the files using create new files or upload file in git repository. Then if you want to import that file into local repository using this command “\$git push”.

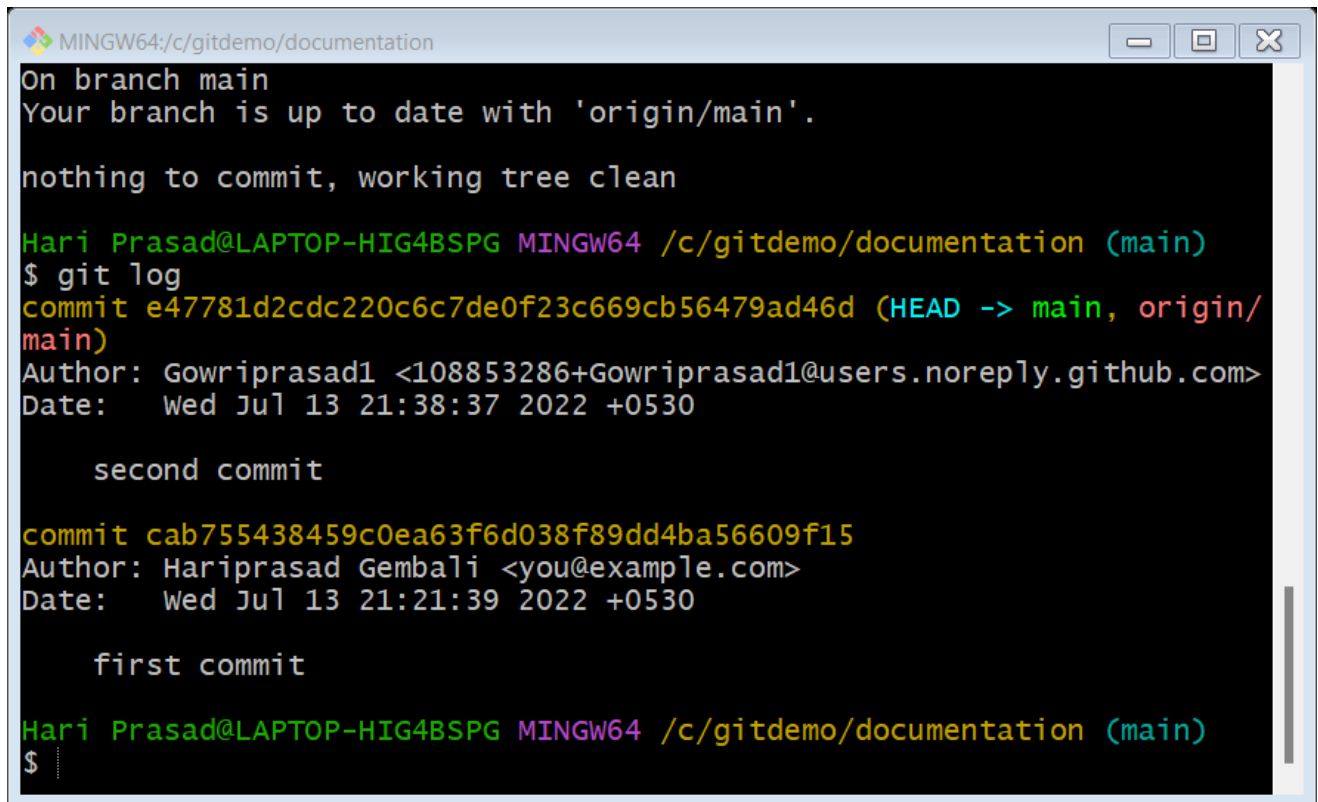
```
MINGW64:/c/gitdemo/documentation
Writing objects: 100% (3/3), 216 bytes | 216.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Gowriprasad1/documentation.git
 * [new branch]      main -> main

Hari Prasad@LAPTOP-HIG4BSPG MINGW64 /c/gitdemo/documentation (main)
$ git pull
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), 645 bytes | 80.00 KiB/s, done.
From https://github.com/Gowriprasad1/documentation
   cab7554..e47781d  main       -> origin/main
Updating cab7554..e47781d
Fast-forward
 demo2 | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 demo2

Hari Prasad@LAPTOP-HIG4BSPG MINGW64 /c/gitdemo/documentation (main)
$
```



After importing the file we can check whether it was import or not using `git log command`.

A terminal window titled 'MINGW64:/c/gitdemo/documentation' with standard Windows window controls. The terminal output shows the status of the 'main' branch, followed by the execution of 'git log'. The log displays two commits: a 'second commit' by 'Hariprasad Gembali' and a 'first commit' by 'Gowriprasad1'.

```
MINGW64:/c/gitdemo/documentation
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean

Hari Prasad@LAPTOP-HIG4BSPG MINGW64 /c/gitdemo/documentation (main)
$ git log
commit e47781d2cdc220c6c7de0f23c669cb56479ad46d (HEAD -> main, origin/main)
Author: Gowriprasad1 <108853286+Gowriprasad1@users.noreply.github.com>
Date: Wed Jul 13 21:38:37 2022 +0530

    second commit

commit cab755438459c0ea63f6d038f89dd4ba56609f15
Author: Hariprasad Gembali <you@example.com>
Date: Wed Jul 13 21:21:39 2022 +0530

    first commit

Hari Prasad@LAPTOP-HIG4BSPG MINGW64 /c/gitdemo/documentation (main)
$
```