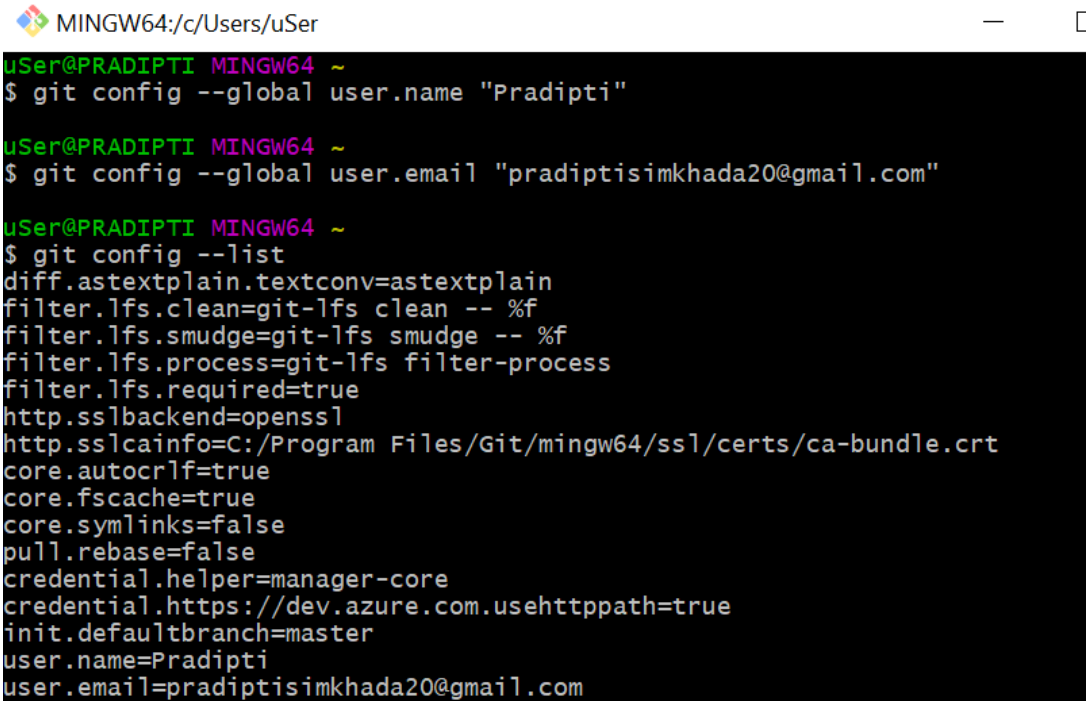
Tasks:

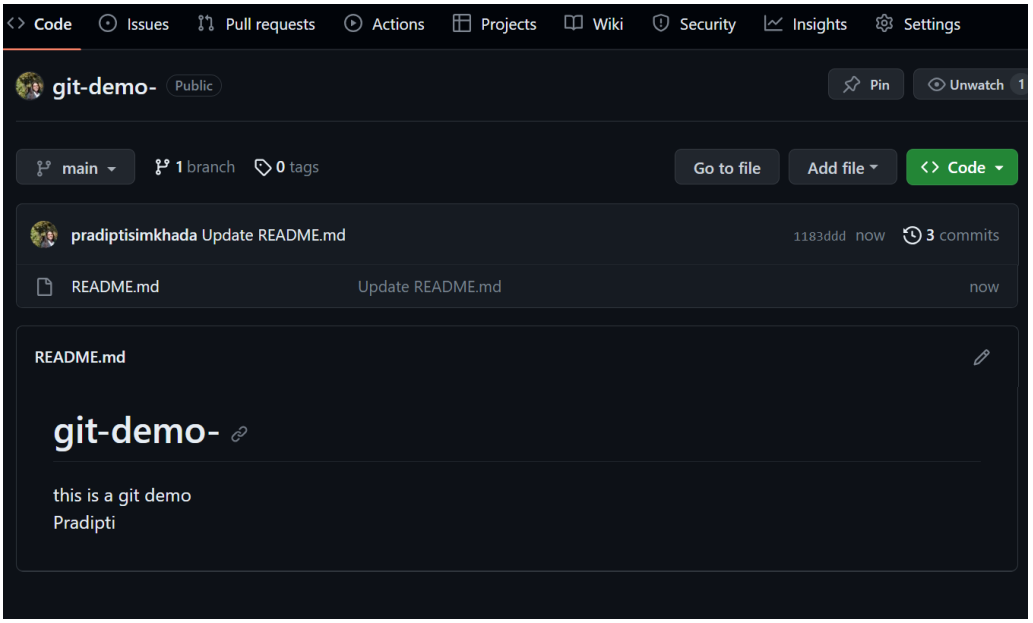
- Learn Git Basics
- Create a Github Account

Learn Git Basics

➔ Downloaded and configured the git.



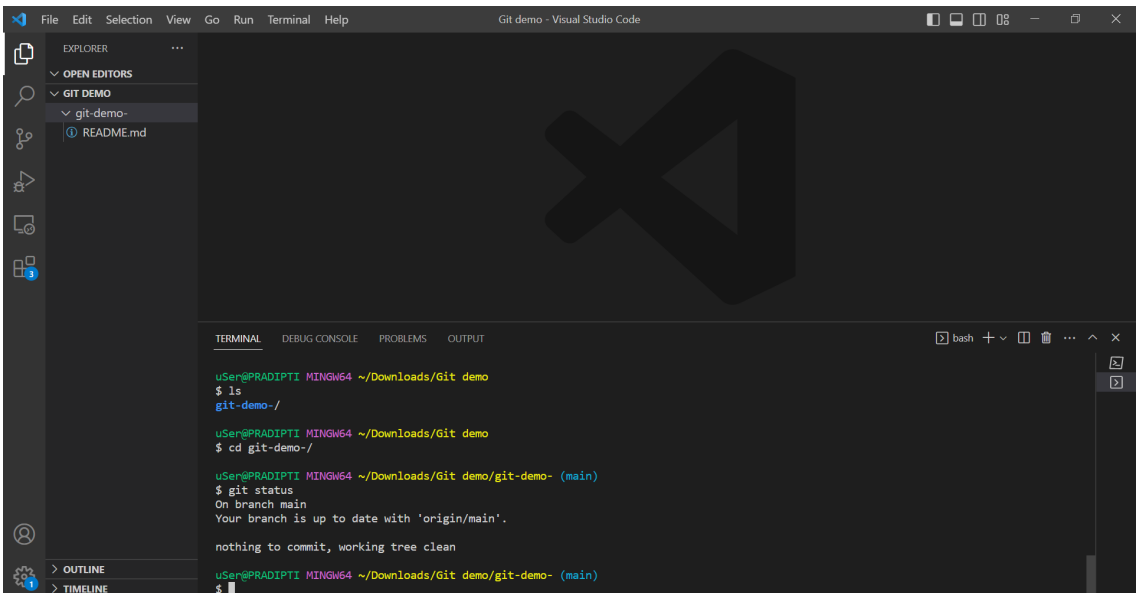
➔ Opened a new repository named git-demo-



➔ Cloned the git-demo- repository to the local system using **git clone** command.

```
TERMINAL  DEBUG CONSOLE  PROBLEMS  OUTPUT                    powershell

PS C:\Users\uSer\Downloads\Git demo> git --version
git version 2.34.1.windows.1
PS C:\Users\uSer\Downloads\Git demo> git clone https://github.com/pradiptisimkhada/git-demo-.git
Cloning into 'git-demo-'...
remote: Enumerating objects: 9, done.
remote: Counting objects: 100% (9/9), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 9 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (9/9), done.
PS C:\Users\uSer\Downloads\Git demo>
```

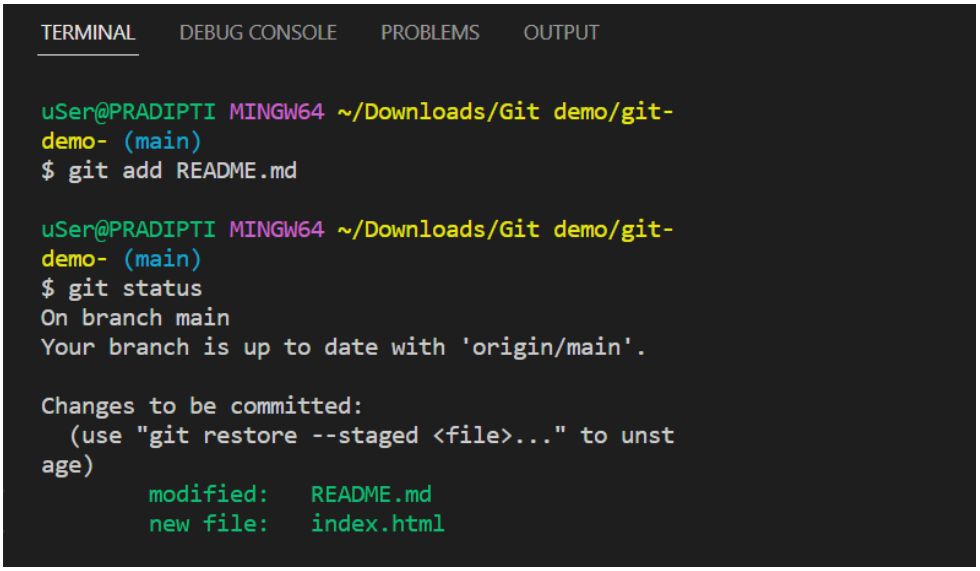
➔ Checked the status of the repository with **git status.**



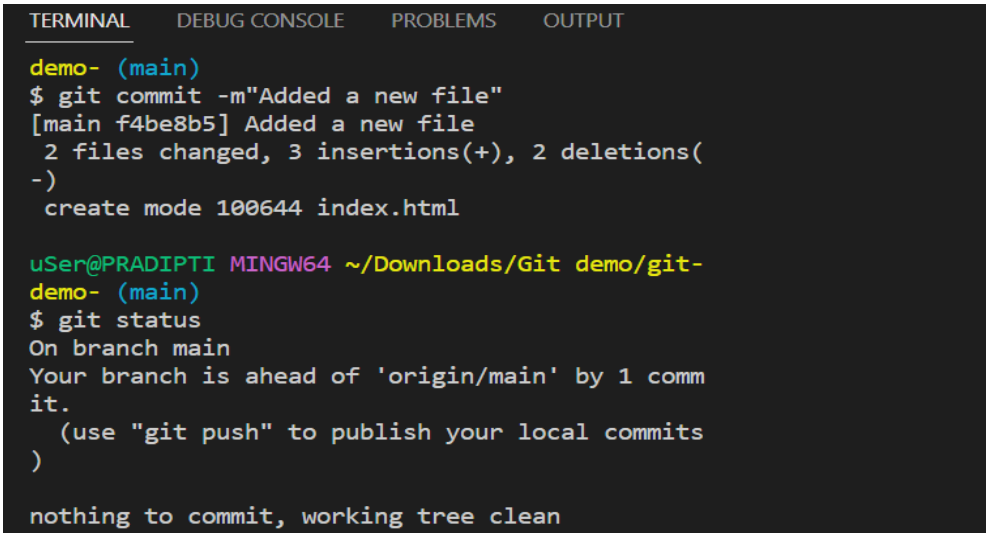
➔ Added a new file index.html in the local repository and modified the ReadMe file so to check its status used **git status** command

```
TERMINAL  DEBUG CONSOLE  PROBLEMS  OUTPUT

uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/git-
demo- (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

Changes not staged for commit:
  (use "git add <file>..." to update what will
be committed)
  (use "git restore <file>..." to discard chang
es in working directory)
        modified:   README.md

Untracked files:
  (use "git add <file>..." to include in what w
ill be committed)
        index.html
```

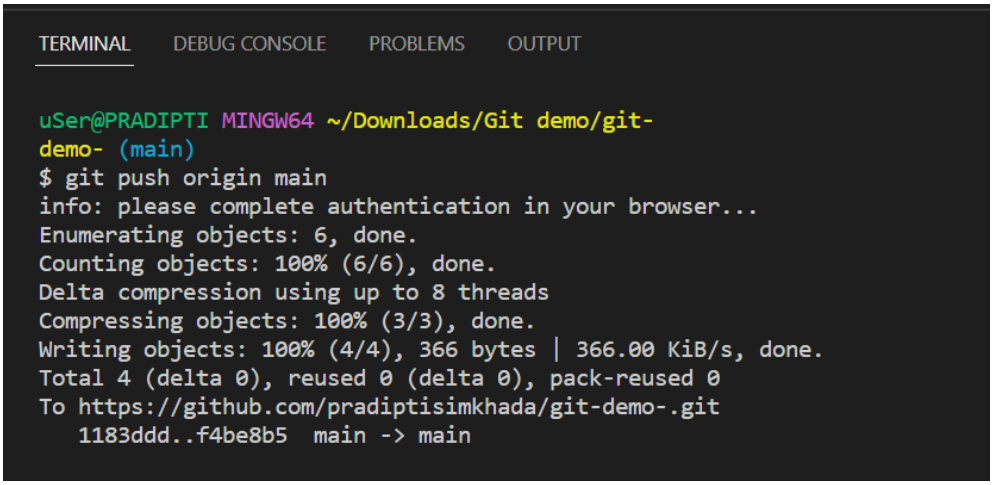
➔ Added both new and modified files to the repository using **git add <file name>** , to add all the changes **git add .** can also be used



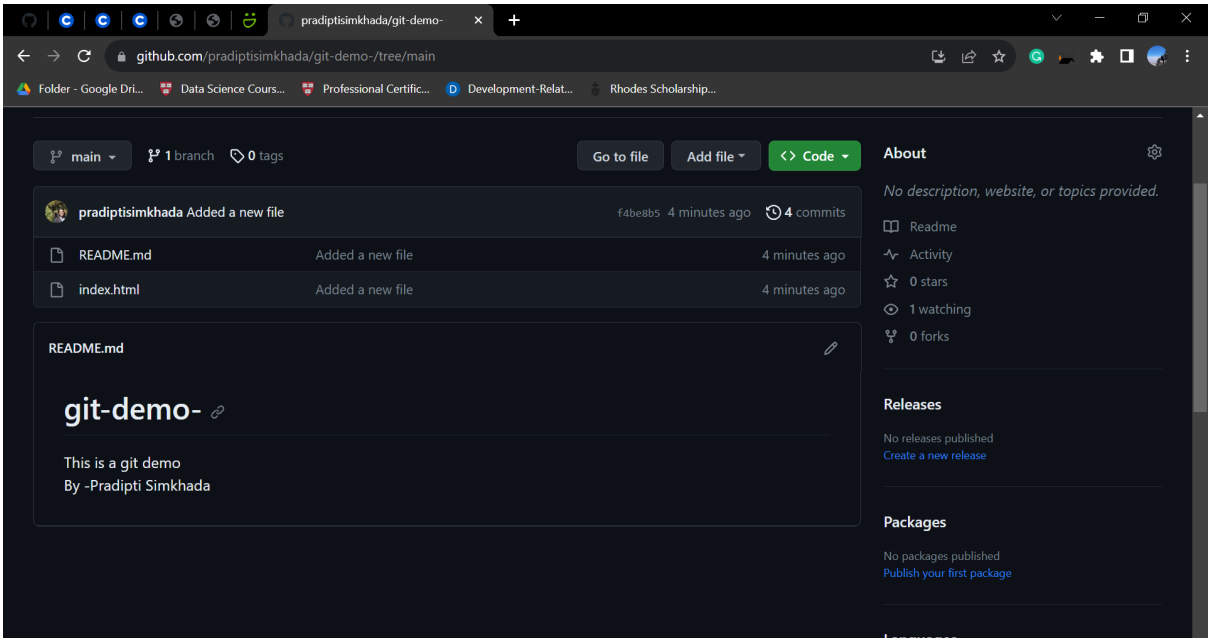
➔ **git commit -m "message"** is used to log the changes in the repository



➔ **git push origin main** is used to push the committed changes to the remote repository.



➔ After all the command the repository in the github account will view as such.



➔ A new local repository will be initialized using **git init** command

```
TERMINAL  DEBUG CONSOLE  PROBLEMS  OUTPUT

uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/lo
calRepo
$ ls -a
./  ../

uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/lo
calRepo
$ git init
Initialized empty Git repository in C:/Users/
uSer/Downloads/Git demo/localRepo/.git/

uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/lo
calRepo (master)
$ ls -a
./  ../  .git/
```

```
uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/lo
calRepo (master)
$ touch index.html

uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/lo
calRepo (master)
$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what
 will be committed)
        index.html
```

```
TERMINAL  DEBUG CONSOLE  PROBLEMS  OUTPUT

uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/lo
calRepo (master)
$ git add .

uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/lo
calRepo (master)
$ git status
On branch master

No commits yet

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

```
TERMINAL  DEBUG CONSOLE  PROBLEMS  OUTPUT

uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/lo
calRepo (master)
$ git commit -m"Add intial files"
[master (root-commit) ae25b11] Add intial fil
es
 1 file changed, 1 insertion(+)
 create mode 100644 index.html

uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/lo
calRepo (master)
$ git status
On branch master
nothing to commit, working tree clean

uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/lo
calRepo (master)
```

➔ Then to push the local repository to the remote repository **git remote add origin <repo link>** is run.

```
TERMINAL  DEBUG CONSOLE  PROBLEMS  OUTPUT

uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/lo
calRepo (master)
$ git remote add origin https://github.com/pr
adiptisimkhada/localRepo.git

uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/lo
calRepo (master)
$ git remote -v
origin  https://github.com/pradiptisimkhada/l
ocalRepo.git (fetch)
origin  https://github.com/pradiptisimkhada/l
ocalRepo.git (push)
```

➔ Rename the brach using **git branch -M <brach name>**

```
TERMINAL    DEBUG CONSOLE    PROBLEMS    OUTPUT
uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/lo
calRepo (master)
$ git branch
* master

uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/lo
calRepo (master)
$ git branch -M main

uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/lo
calRepo (main)
$ git push -u origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 248 bytes | 248.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/pradiptisimkhada/localRepo.git
```

➔ Basic Github Workflow will be

1. Github repository
2. Clone
3. Changes
4. Add
5. Commit
6. Push

➔ **git branch** is used to check which branch the code is running in.

```
uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/loca
lRepo (main)
$ git branch                                    KiB/s, done.
* main                                         sed 0
                                               o.git
```

➔ **git branch -M main** is used to rename the branch

➔ **git checkout <branch name>** is used to navigate to the existing branch

```
uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/loca
lRepo (feature1)
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
```

➔ **git checkout -b <new branch name>** is used to create a new branch

```
uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/loca
lRepo (main)
$ git checkout -b feature1
Switched to a new branch 'feature1'

uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/loca
lRepo (feature1)
$ git branch
* feature1
  main
```

➔ **git branch -d <branch name>** is used to delete a branch

```
uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/loca
lRepo ((ae25b11...))
$ git branch -d feature1
Deleted branch feature1 (was ae25b11).
```

➔ **git diff <branch name>** to find the difference between 2 branches

➔ **git merge <branch name>** merges 2 branches

```
uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/localRepo (feature2)
$ git diff main
diff --git a/index.html b/index.html
index bf9d4ff..c015613 100644
--- a/index.html
+++ b/index.html
@@ -1 +1,2 @@
-<p>This is for cloudtech</p>
\ No newline at end of file
+<p>This is for cloudtech</p>
+<p>This is a new feature</p>
\ No newline at end of file

uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/localRepo (feature2)
$ git merge main
Already up to date.
```

➔ After merging to the main branch we use **git pull origin main** to pull the code from the remote repository.

```
uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/localRepo (feature2)
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.

uSer@PRADIPTI MINGW64 ~/Downloads/Git demo/localRepo (main)
$ git pull origin main
remote: Enumerating objects: 1, done.
remote: Counting objects: 100% (1/1), done.
remote: Total 1 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (1/1), 632 bytes | 158.00 KiB/s, done.
From https://github.com/pradiptisimkhada/localRepo
 * branch            main       -> FETCH_HEAD
   ae25b11..0369dfa  main       -> origin/main
Updating ae25b11..0369dfa
Fast-forward
```