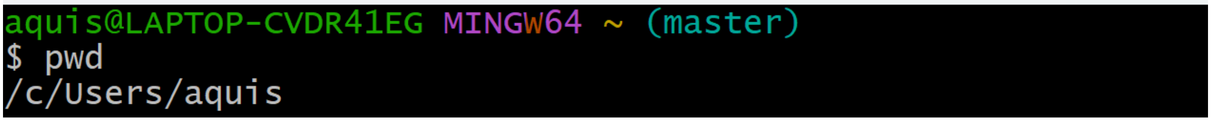
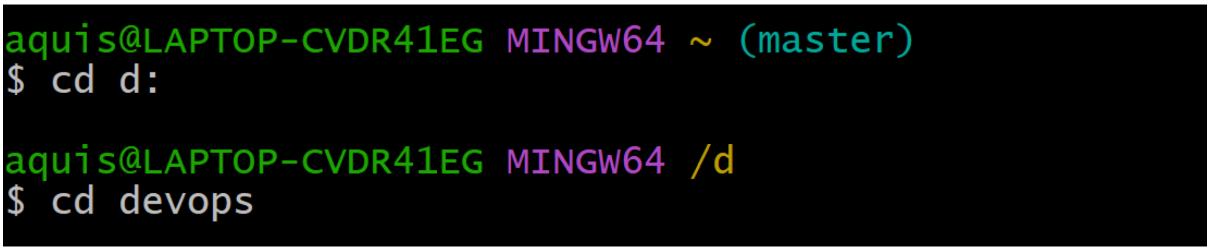
Creating branch and merging using Git Hub

1. **Check your pwd→**



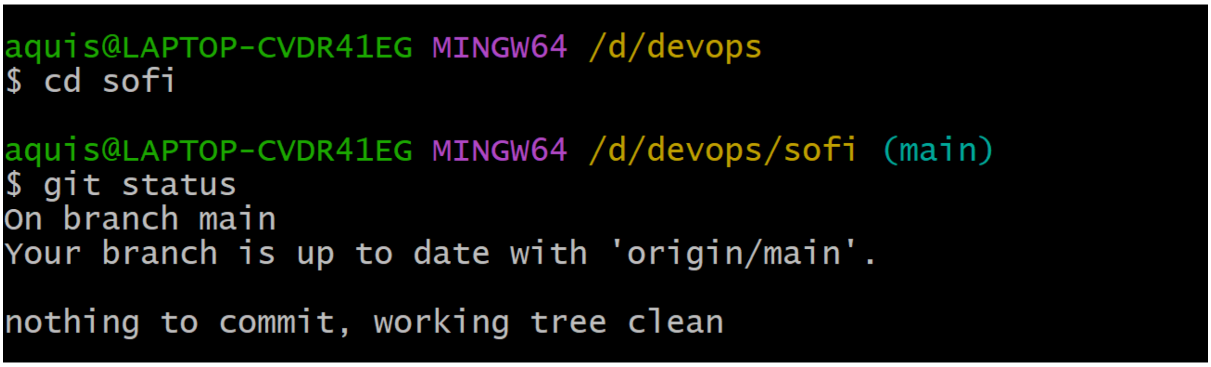
```
aquis@LAPTOP-CVDR41EG MINGW64 ~ (master)
$ pwd
/c/Users/aquis
```

2. **Go to your folder in d drive**



```
aquis@LAPTOP-CVDR41EG MINGW64 ~ (master)
$ cd d:

aquis@LAPTOP-CVDR41EG MINGW64 /d
$ cd devops
```

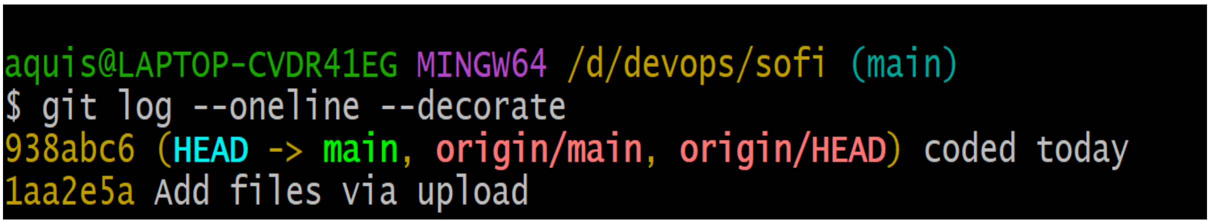
3. Go to repository which is there in your folder and check status



```
aquis@LAPTOP-CVDR41EG MINGW64 /d/devops
$ cd sofi

aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean
```

Here we can see branch is up to date whatever we did on our git hub page.

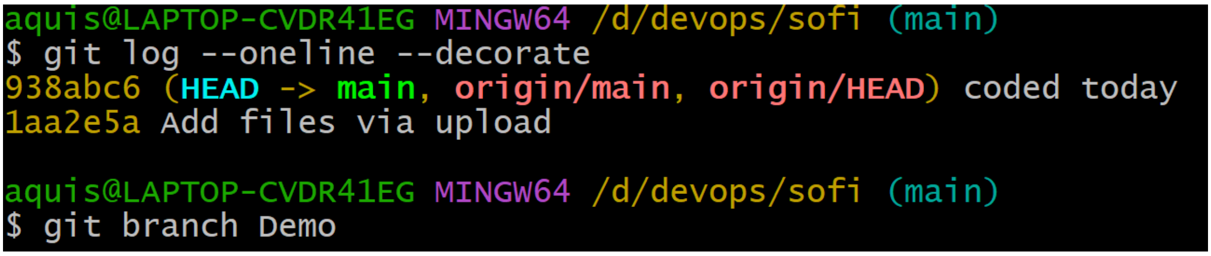
4. Now to see main branch, we write a following code as:



```
aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (main)
$ git log --oneline --decorate
938abc6 (HEAD -> main, origin/main, origin/HEAD) coded today
1aa2e5a Add files via upload
```

We can see here "head" is a main which is a local master→ that means our head is in main

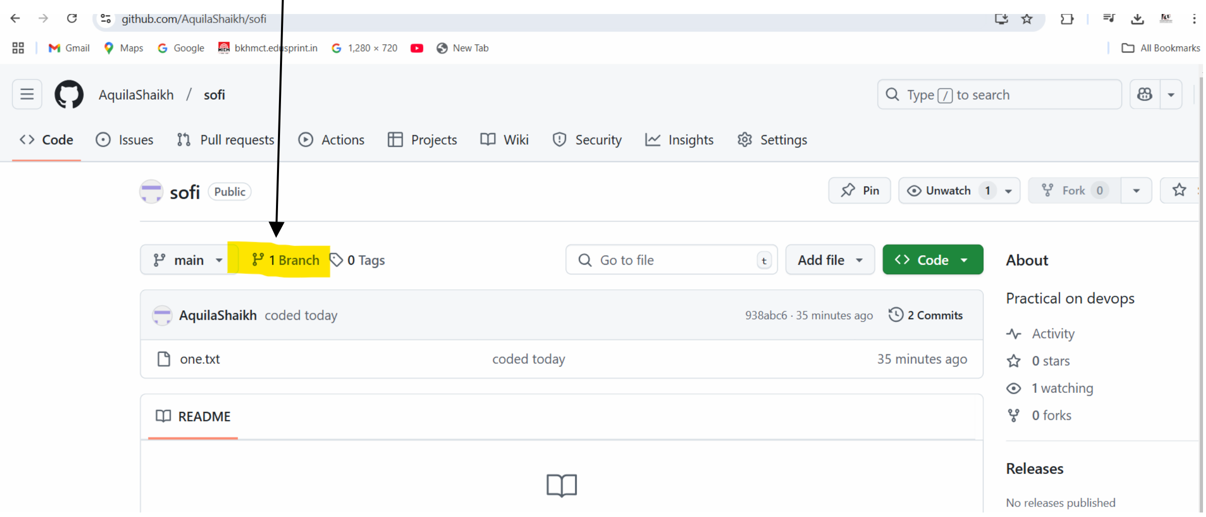
5. **Lets create a new branch →**



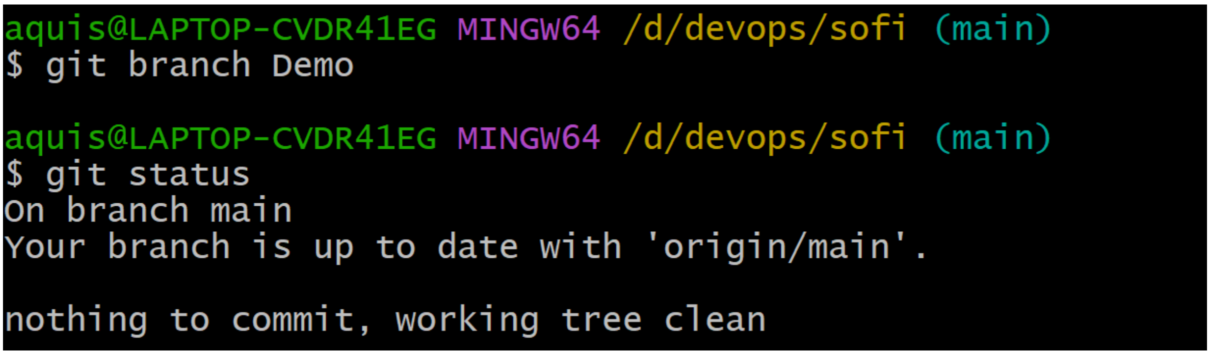
```
aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (main)
$ git log --oneline --decorate
938abc6 (HEAD -> main, origin/main, origin/HEAD) coded today
1aa2e5a Add files via upload

aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (main)
$ git branch Demo
```

6. **The above branch we have created on local ---- we have not yet uploaded on git hub**

You can go to git hub page and check there is only one branch.



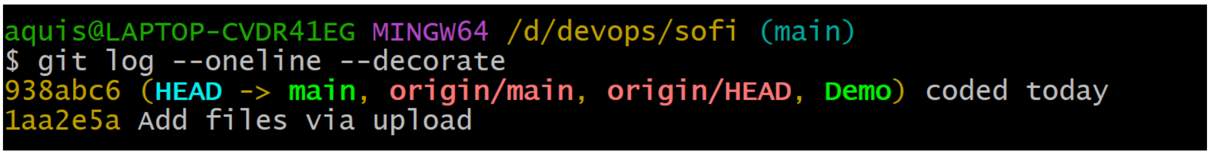
7. **Now check status →**



```
aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (main)
$ git branch Demo

aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean
```

- → **Nothing to Comit**

8. **Now check log status→**

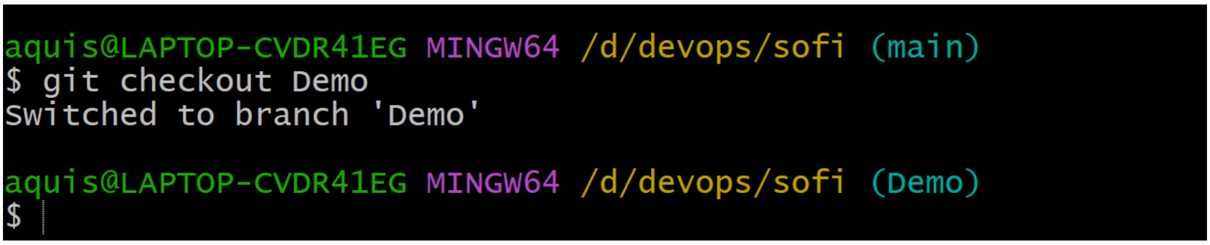


```
aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (main)
$ git log --oneline --decorate
938abc6 (HEAD -> main, origin/main, origin/HEAD, Demo) coded today
1aa2e5a Add files via upload
```

Here we can see head is having “main” branch as well as “Demo” branch

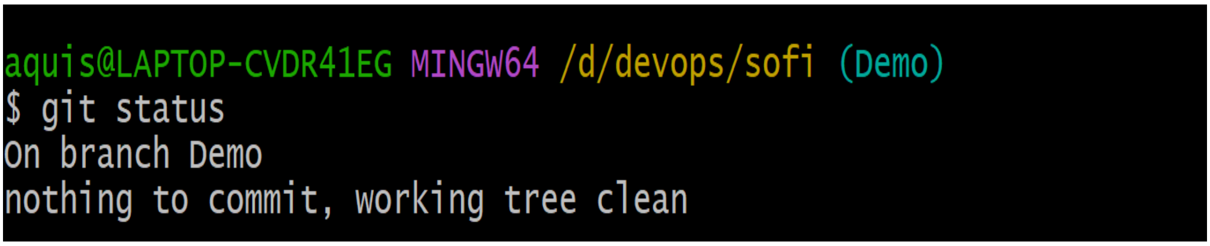
9. **To perform any changes to a particular branch we need to go to that branch**

- → **Moving to branch “Demo” usinng checkout command**



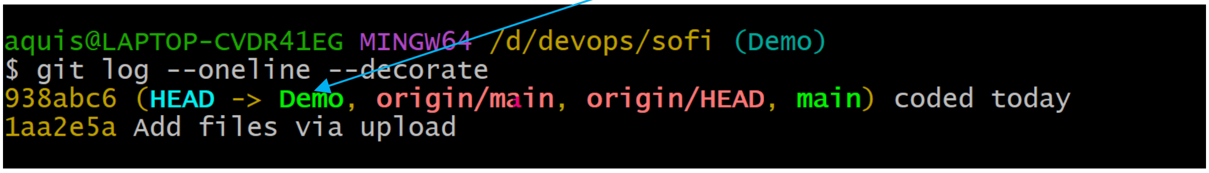
```
aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (main)
$ git checkout Demo
Switched to branch 'Demo'

aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (Demo)
$
```

10. We can also use git status command to check , we are on which branch



```
aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (Demo)
$ git status
On branch Demo
nothing to commit, working tree clean
```

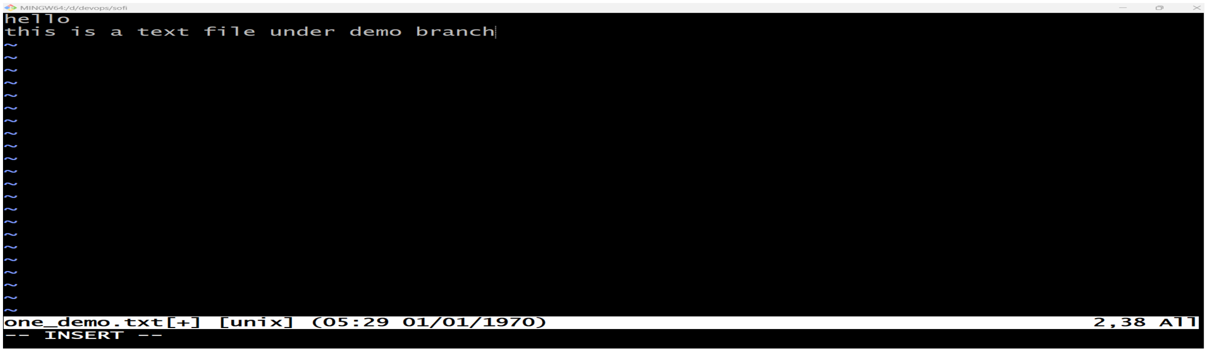
11. If we do a log , we can see that we are on “Demo” branch



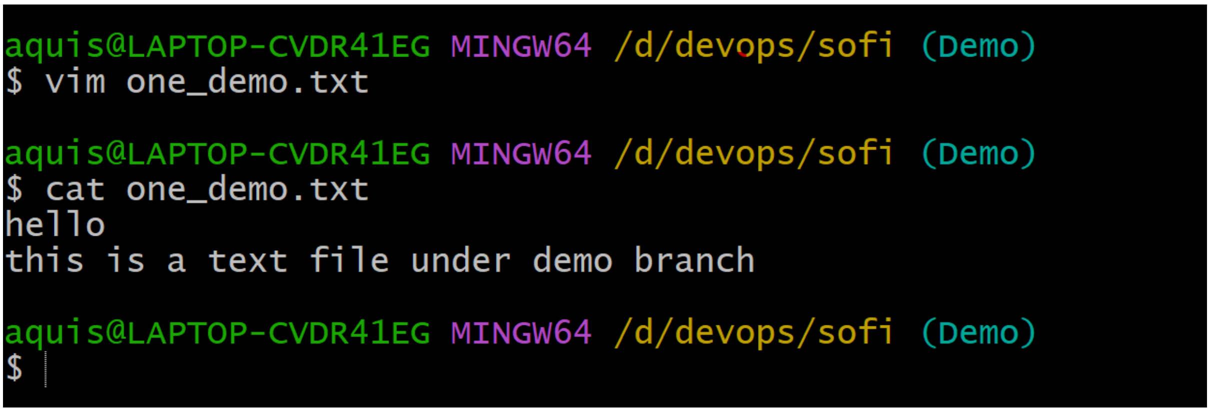
```
aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (Demo)
$ git log --oneline --decorate
938abc6 (HEAD -> Demo, origin/main, origin/HEAD, main) coded today
1aa2e5a Add files via upload
```

Note: there is no difference between “main” branch and “Demo” branch → both are same

12. Lets create a new file in “Demo” branch

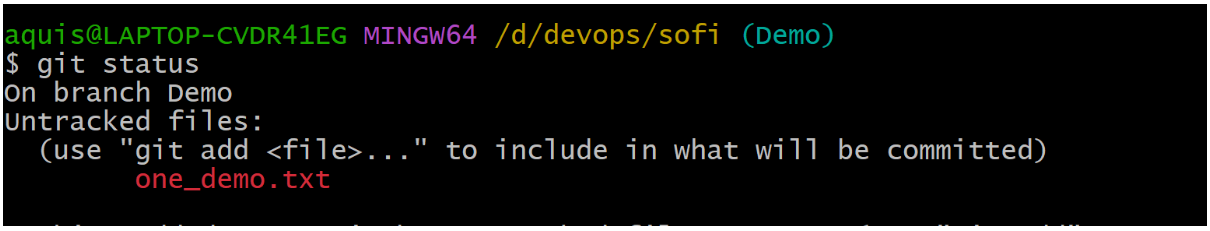


```
hello
this is a text file under demo branch
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
one_demo.txt[+] [unix] (05:29 01/01/1970)                          2,38 All
-- INSERT --
```



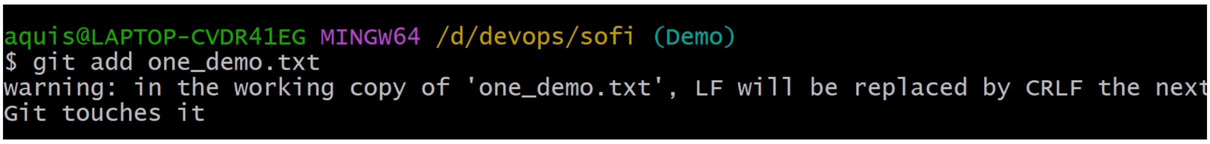
```
aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (Demo)
$ vim one_demo.txt

aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (Demo)
$ cat one_demo.txt
hello
this is a text file under demo branch

aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (Demo)
$
```

13. Check status



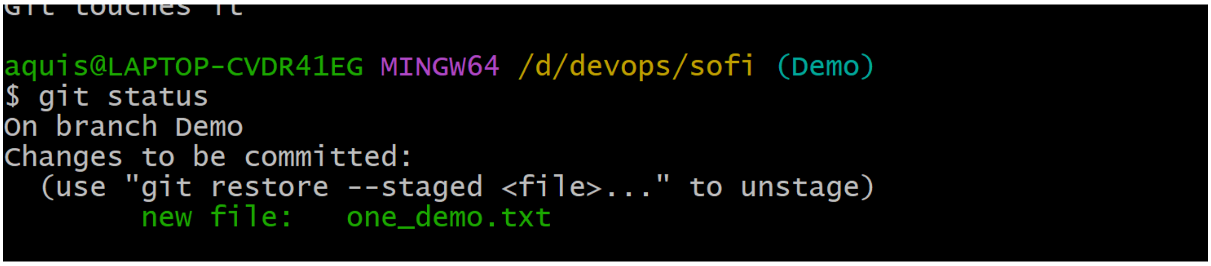
```
aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (Demo)
$ git status
On branch Demo
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        one_demo.txt
```

14. Add “one_demo.txt” file



```
aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (Demo)
$ git add one_demo.txt
warning: in the working copy of 'one_demo.txt', LF will be replaced by CRLF the next
Git touches it
```

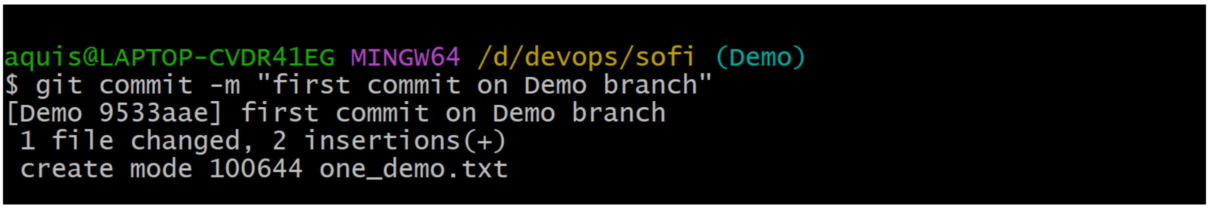
15. Again check status



```
Git touches it

aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (Demo)
$ git status
On branch Demo
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   one_demo.txt
```

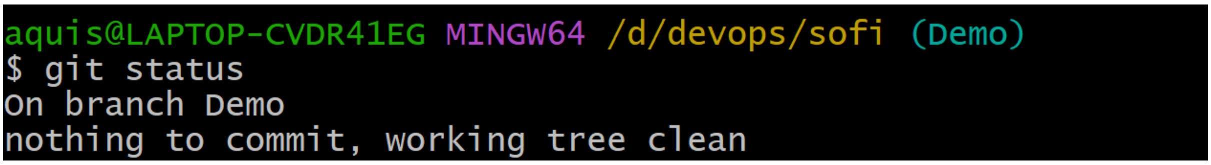
➔ "one_demo.txt" file is in staged state

16. Perform Commit



```
aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (Demo)
$ git commit -m "first commit on Demo branch"
[Demo 9533aae] first commit on Demo branch
 1 file changed, 2 insertions(+)
 create mode 100644 one_demo.txt
```

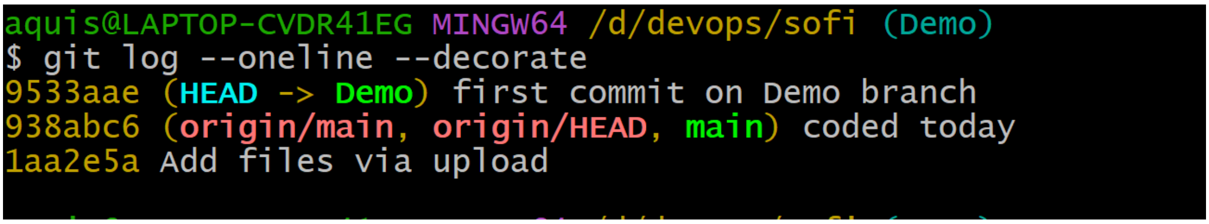
17. Check status



```
aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (Demo)
$ git status
On branch Demo
nothing to commit, working tree clean
```

➔ Git status is clean

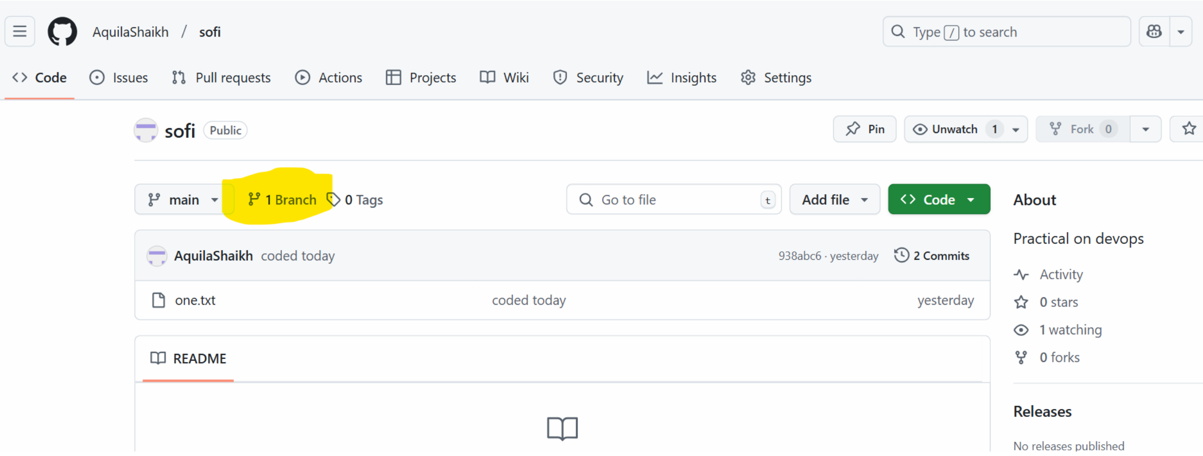
18. Check log



```
aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (Demo)
$ git log --oneline --decorate
9533aae (HEAD -> Demo) first commit on Demo branch
938abc6 (origin/main, origin/HEAD, main) coded today
1aa2e5a Add files via upload
```

➔ Head is in "Demo". Origin main and main are at the other place.

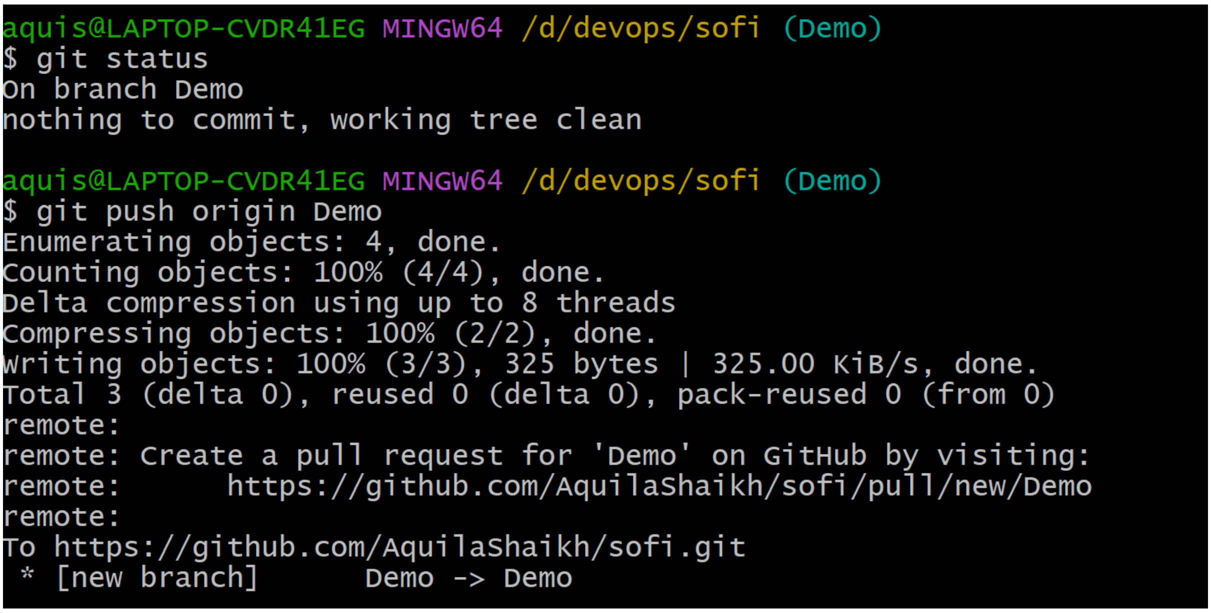
19. Go to github and check…. It is showing only one branch



AquilaShaikh coded today 938abc6 · yesterday 2 Commits

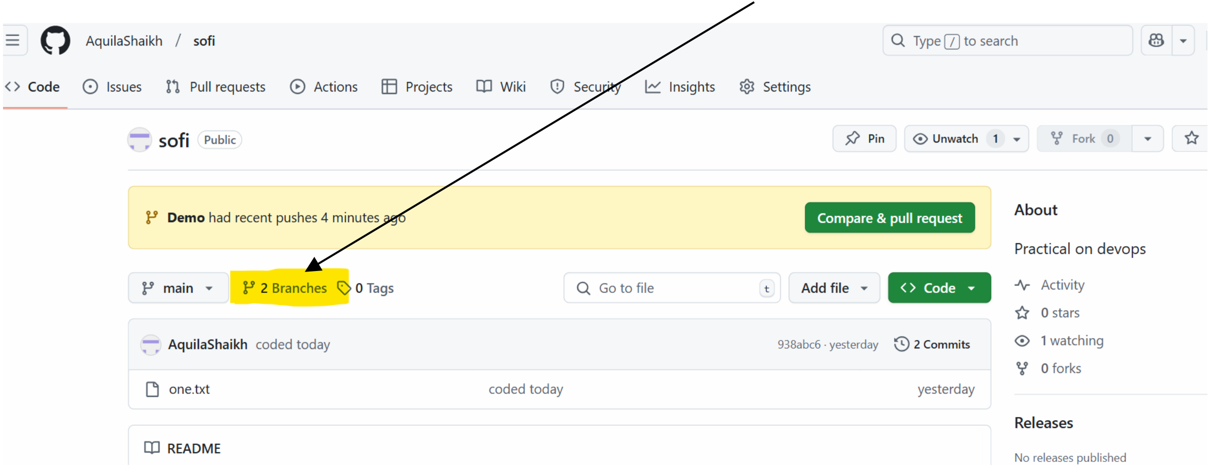
one.txt coded today yesterday

20. Now upload the branch on git hub using “Push” command.



```
aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (Demo)
$ git status
On branch Demo
nothing to commit, working tree clean

aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (Demo)
$ git push origin Demo
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 325 bytes | 325.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'Demo' on GitHub by visiting:
remote:      https://github.com/AquilaShaikh/sofi/pull/new/Demo
remote:
To https://github.com/AquilaShaikh/sofi.git
 * [new branch]      Demo -> Demo
```

21. Go to git hub and refeesh the page, you will be able to see 2 branches.

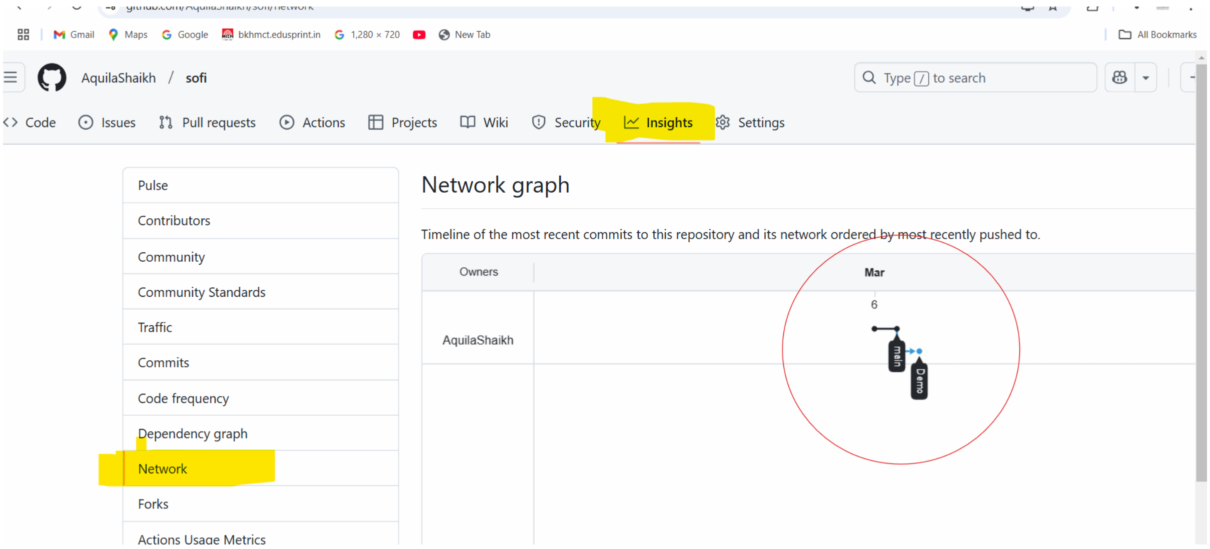


Demo had recent pushes 4 minutes ago

AquilaShaikh coded today 938abc6 · yesterday 2 Commits

one.txt coded today yesterday

22. Go to “insight” and click on “network”, you will be able to see our “Demo” branch.



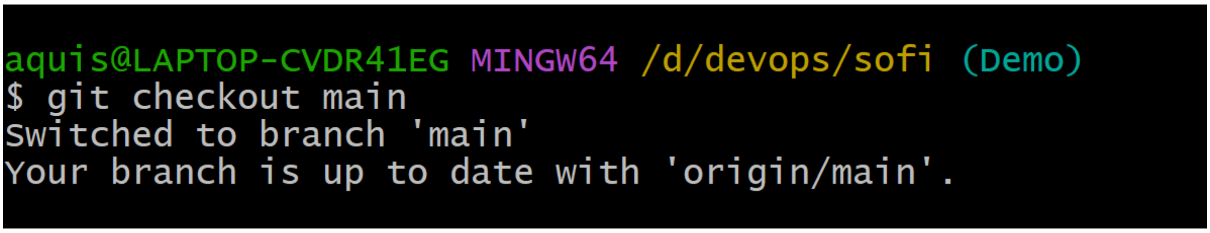
Network graph

Timeline of the most recent commits to this repository and its network ordered by most recently pushed to.

23. Now, Suppose you have something in “Main” but not in “Demo”

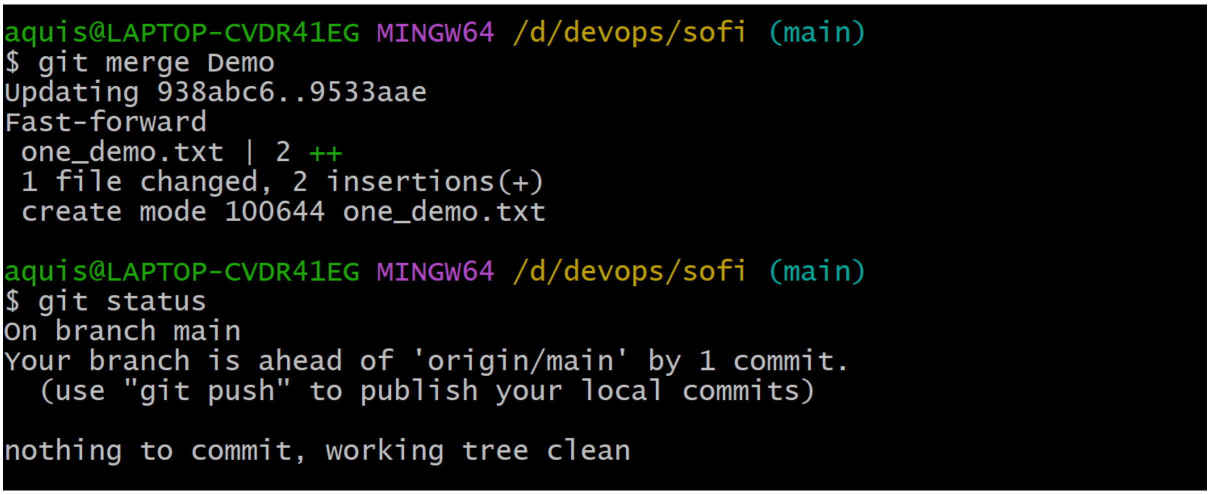
24. To avoid such confliction, we perform Merge operation.

    a. Go to “Main” branch



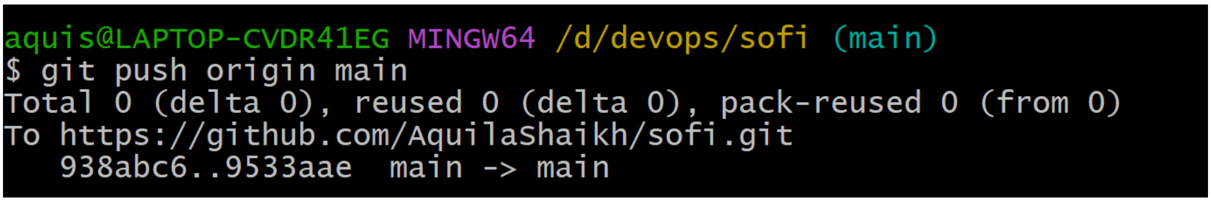
```
aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (Demo)
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
```

    b. Perform merge operation



```
aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (main)
$ git merge Demo
Updating 938abc6..9533aae
Fast-forward
 one_demo.txt | 2 ++
 1 file changed, 2 insertions(+)
 create mode 100644 one_demo.txt

aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (main)
$ git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean
```

    c. Push origin “main”



```
aquis@LAPTOP-CVDR41EG MINGW64 /d/devops/sofi (main)
$ git push origin main
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/AquilaShaikh/sofi.git
   938abc6..9533aae  main -> main
```

25. You will see the branch merging in insight→network.