EXPERIMENT NO. 2

Aim:

To study and practice GIT commands for version control.

Theory:

Git is one of the most popular version control systems. It is a distributed version control system. Changes do not have to be committed to the same central repository, which would require that every person working on the project to access that central repository and download the latest code in order to save changes.

Some of the basic operations in Git are:

1. Initialize
2. Add
3. Commit
4. Pull
5. Push

Some advanced Git operations are:

1. Branching
2. Merging
3. Rebasing

The following diagram depict the all supported operations in GIT

Installation of GIT

1) In windows, download GIT from https://git-scm.com/ and perform the

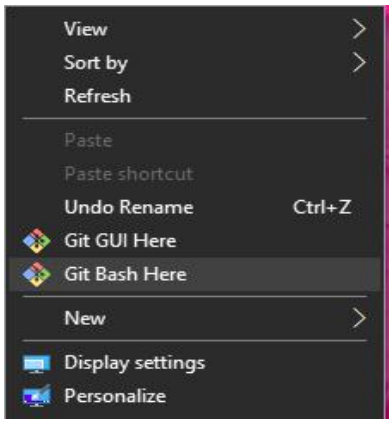
straightforward installation.

2) In Ubuntu, install GIT using $sudo apt install git, Confirm the version after

installation $git --version

Once installation is done, open the terminal in Ubuntu and perform the following steps or in

windows Right click and select Git bash here.



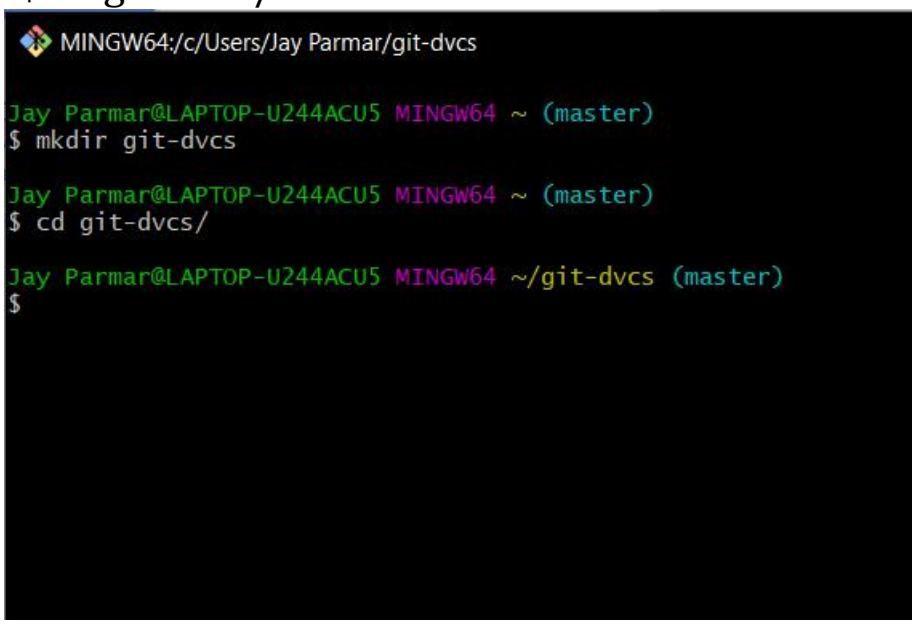
Version Control

To perform version control, let us create a directory dvcs (Distributed version control system)

and change directory to dvcs.

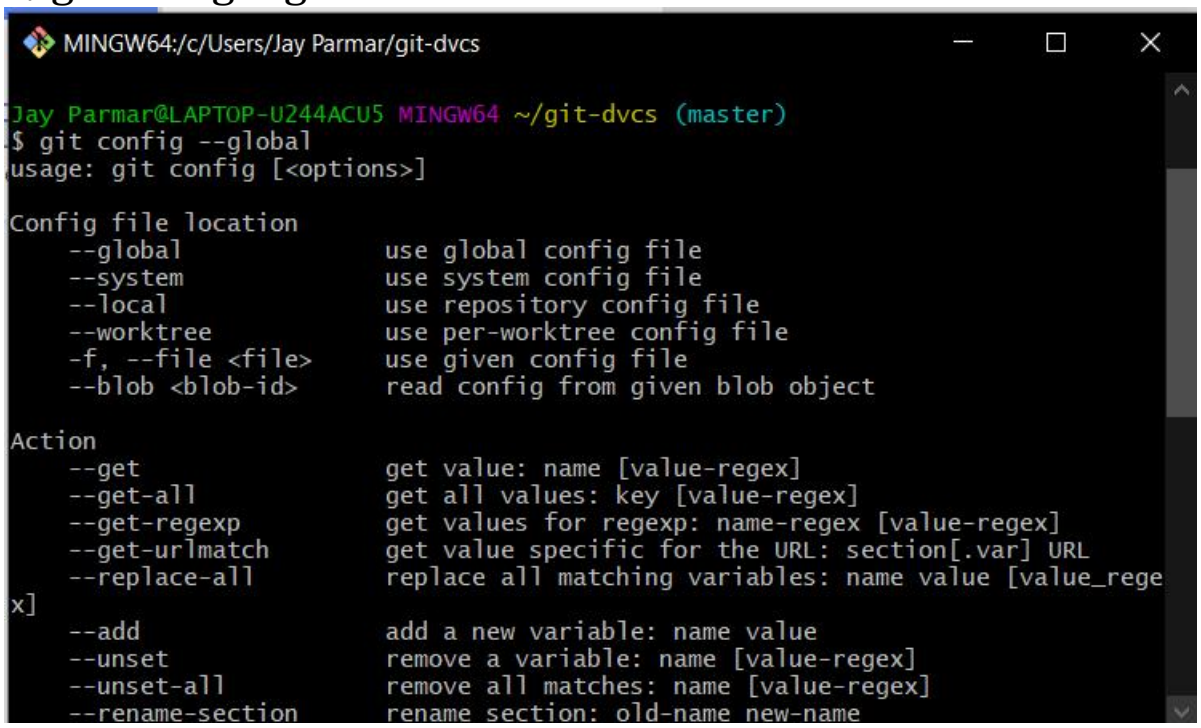
$ mkdir git-dvcs

$ cd git-dvcs/



Now check the user information using

$ git config –-global



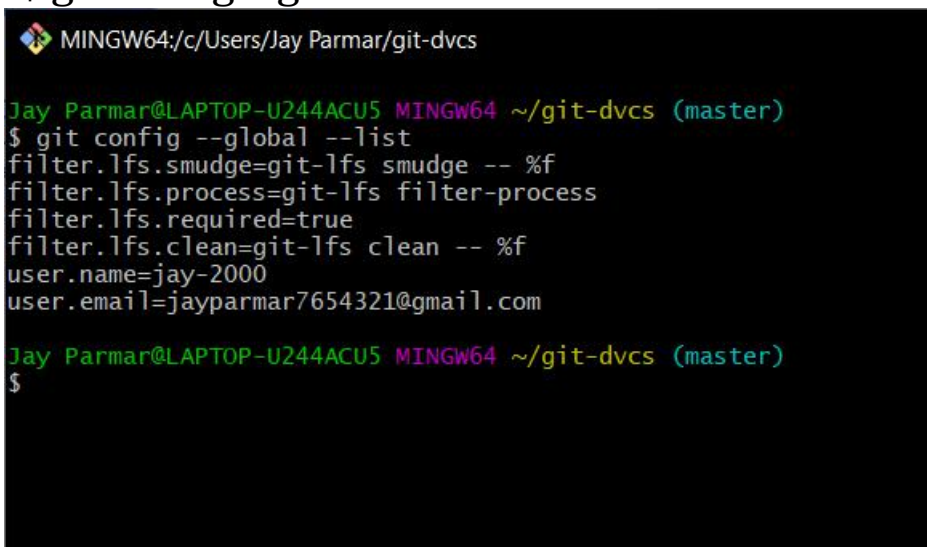
As there are no users defined, let us define it using following two commands

$ git config --global user.name "jay-2000"

$ git config --global user.email “jayparmar7654321@gmail.com”

Now, check the list of users

$ git config --global –list



Let us create a repository for version control named ”git-demo-project”

$ mkdir git-demo-project

$ cd git-demo-project/

Now, initialize the repository using following command

$ git init


Jay Parmar@LAPTOP-U244ACU5 MINGW64 ~/git-dvcs (master)
$ mkdir git-demo-project
Jay Parmar@LAPTOP-U244ACU5 MINGW64 ~/git-dvcs (master)
$ cd git-demo-project/
Jay Parmar@LAPTOP-U244ACU5 MINGW64 ~/git-dvcs/git-demo-project (master)
$ git init
Initialized empty Git repository in C:/Users/Jay Parmar/git-dvcs/git-demo-projec
t/.git/
Jay Parmar@LAPTOP-U244ACU5 MINGW64 ~/git-dvcs/git-demo-project (master)
$

Now, let us add some files inside our repository “git-demo-project”

To add files in index and staging area, add command is used along with dot (. Dot means

current directory)

$ git add .

Index and staging area

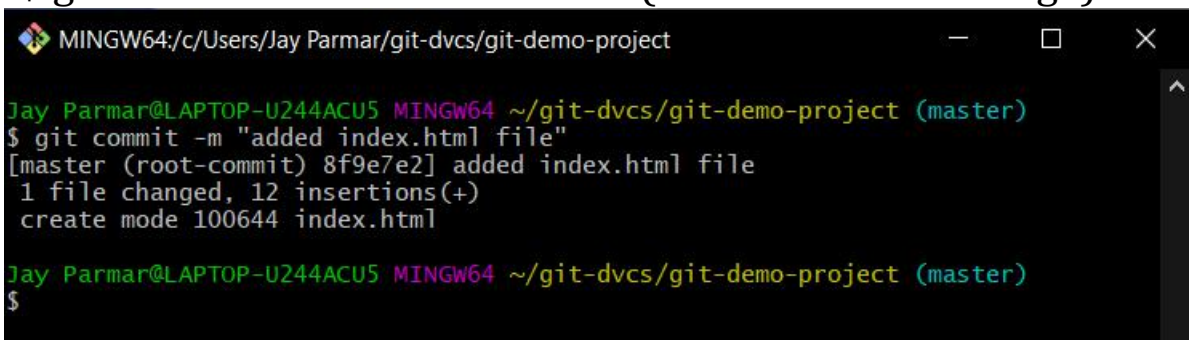
To check the status of repository, use

$ git status

Which will show you some untrack files, so untracks files can be tracked using commit command.

Now, let us commit the changes

$ git commit -m "First Commit" (#here -m for message)



Added index.html in our directory

$ touch teststatus

```
Jay Parmar@LAPTOP-U244ACU5 MINGW64 ~/git-dvcs/git-demo-project (master)
$ touch teststatus

Jay Parmar@LAPTOP-U244ACU5 MINGW64 ~/git-dvcs/git-demo-project (master)
$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        teststatus

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

Jay Parmar@LAPTOP-U244ACU5 MINGW64 ~/git-dvcs/git-demo-project (master)
$
```

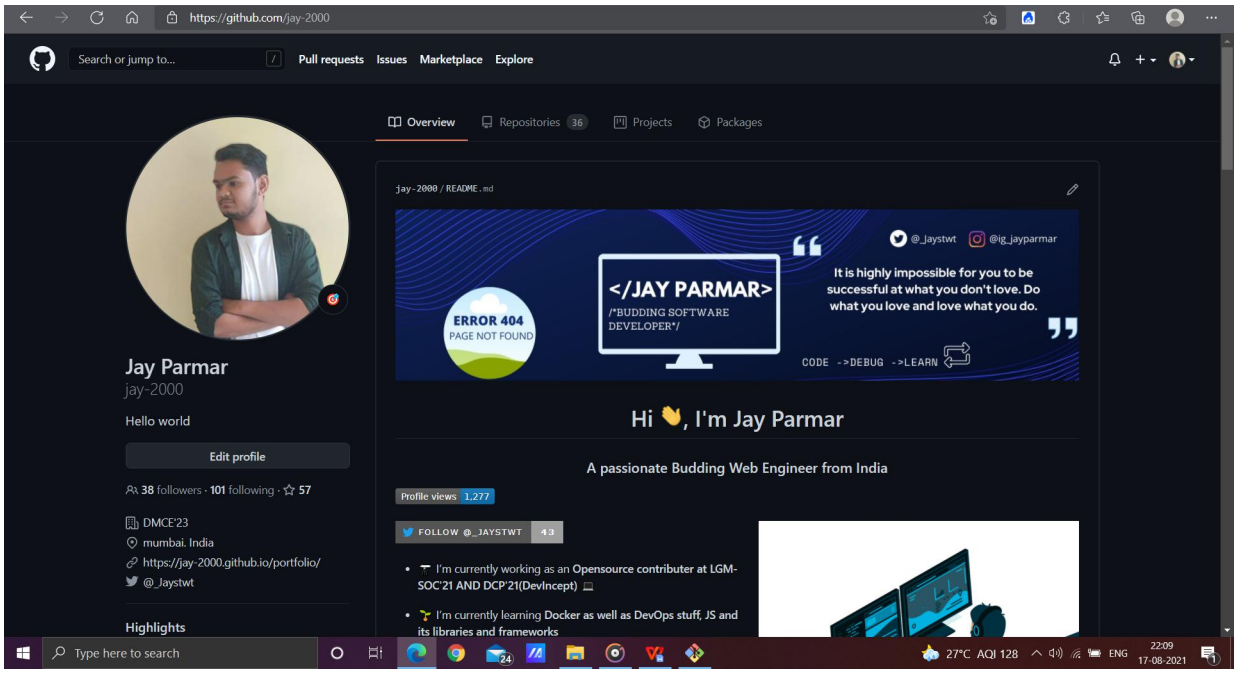
History of Commits

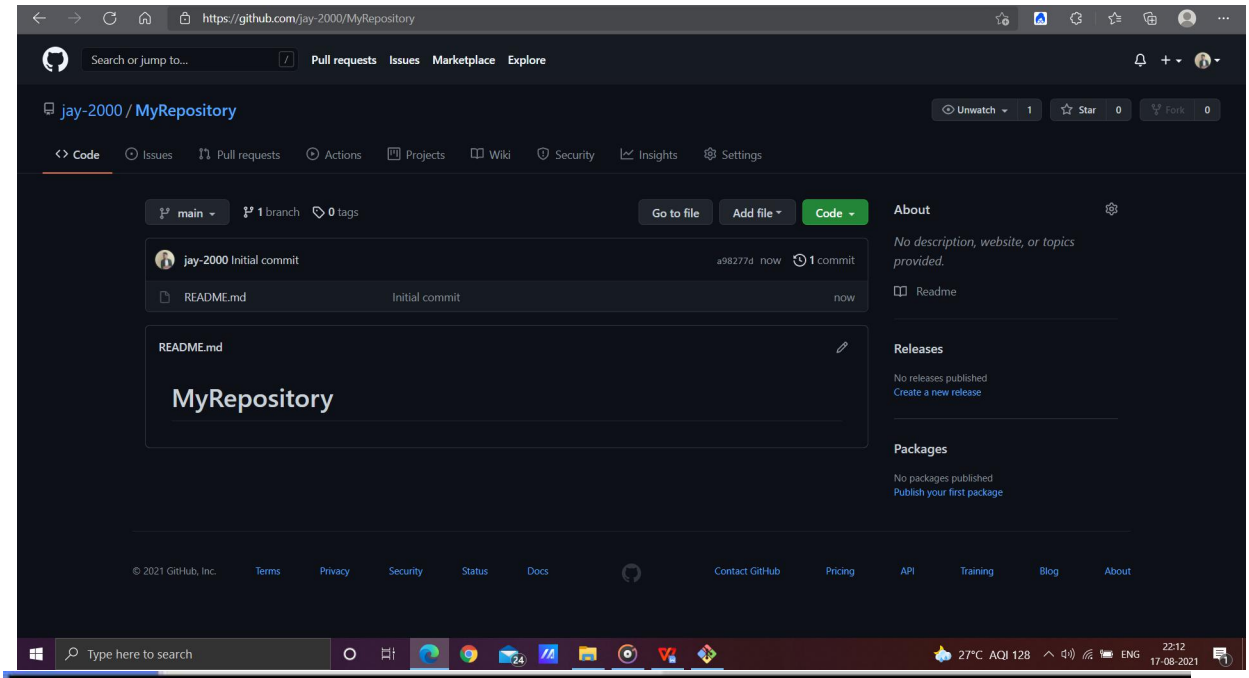
$ git log

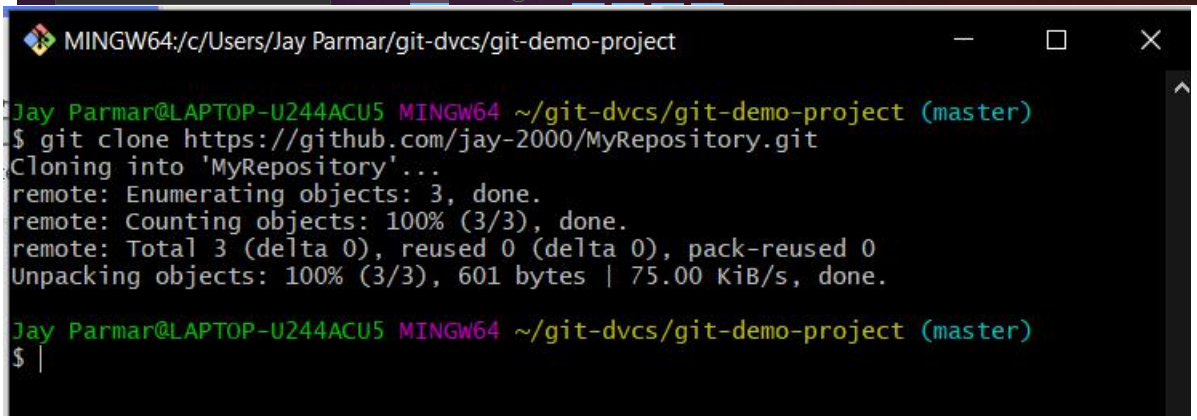
```
MINGW64:/c/Users/Jay Parmar/git-dvcs/git-demo-project

Jay Parmar@LAPTOP-U244ACU5 MINGW64 ~/git-dvcs/git-demo-project (master)
$ git log
commit 8f9e7e2db2fb604f654875fe9a2dc30d0313c5c3 (HEAD -> master)
Author: jay-2000 <jayparmar7654321@gmail.com>
Date:   Tue Aug 17 22:03:37 2021 +0530

    added index.html file

Jay Parmar@LAPTOP-U244ACU5 MINGW64 ~/git-dvcs/git-demo-project (master)
$
```

Now Create a Repository on github.com. Open github.com→ create an account→After login

Select New repository from the menu.


https://github.com/jay-2000
Search or jump to...
Pull requests
Issues
Marketplace
Explore
Overview
Repositories 36
Projects
Packages
Jay Parmar
jay-2000
Hello world
Edit profile
38 followers · 101 following · 57
DMCE'23
mumbai, India
https://jay-2000.github.io/portfolio/
@_Jaystwt
Highlights
jay-2000 / README.md
@_Jaystwt
@ig_jayparmar
ERROR 404
PAGE NOT FOUND
</JAY PARMAR>
/*BUDDING SOFTWARE DEVELOPER*/
It is highly impossible for you to be successful at what you don't love. Do what you love and love what you do.
CODE ->DEBUG ->LEARN
Hi 👋, I'm Jay Parmar
A passionate Budding Web Engineer from India
Profile views 1,277
FOLLOW @_JAYSTWT 43
I'm currently working as an Opensource contributer at LGM-SOC'21 AND DCP'21(DevIncept)
I'm currently learning Docker as well as DevOps stuff, JS and its libraries and frameworks
Type here to search
27°C AQI 128
ENG
22:09
17-08-2021

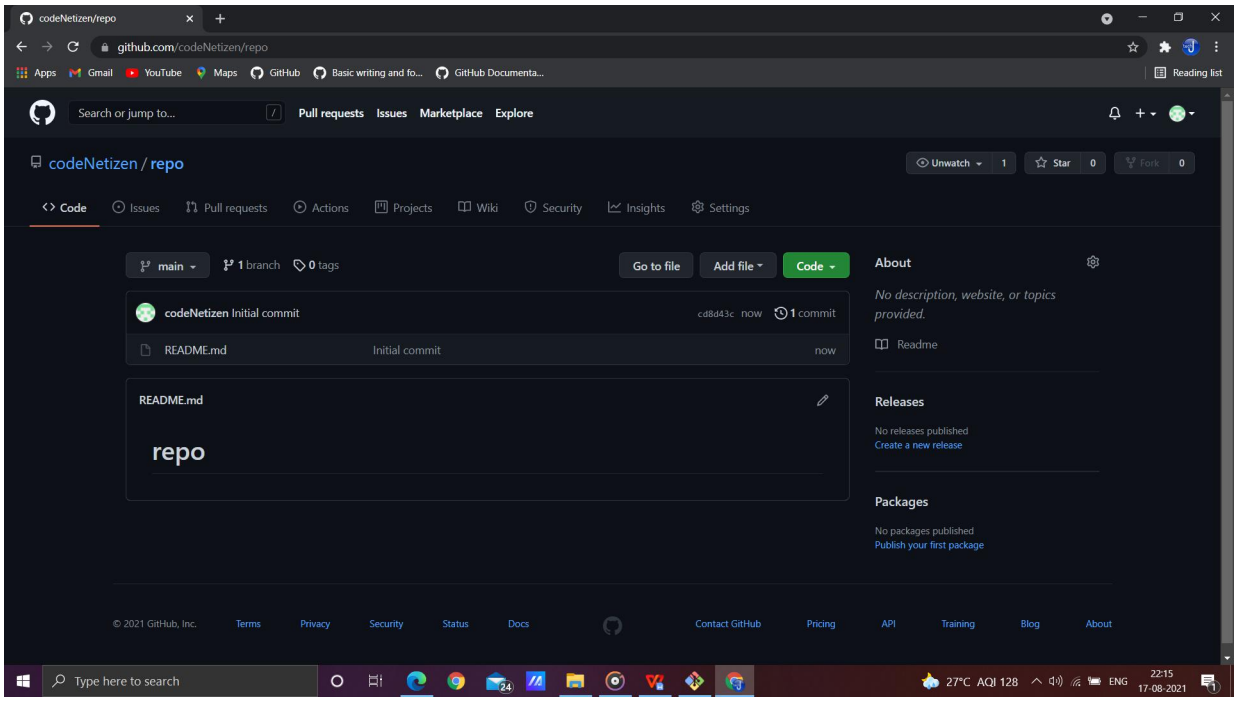


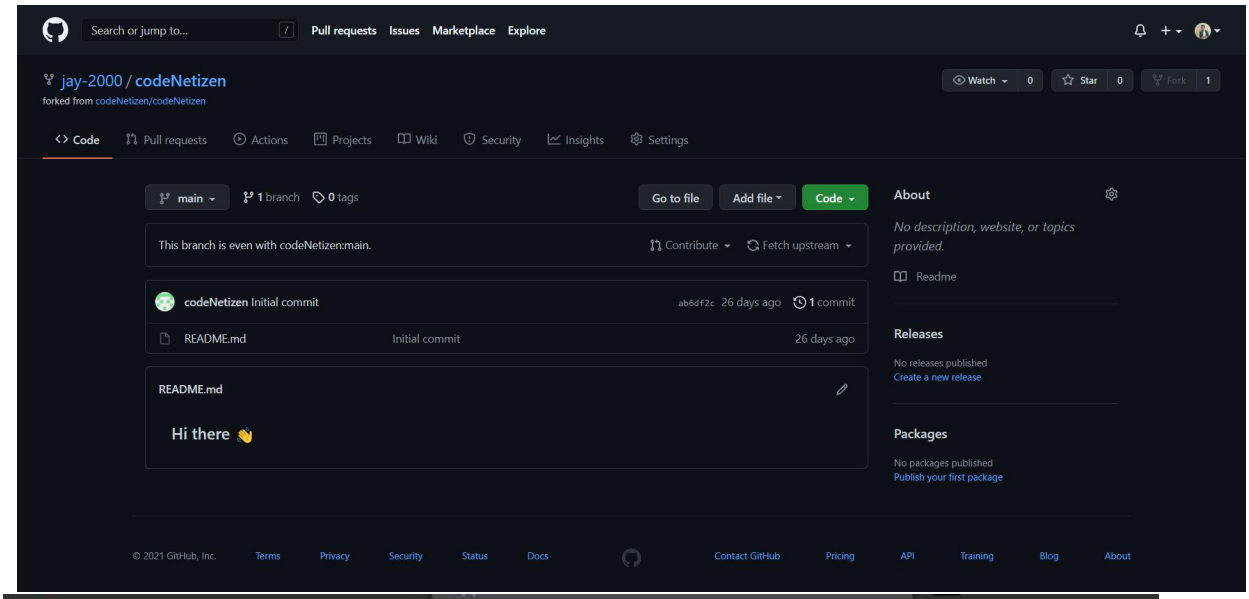


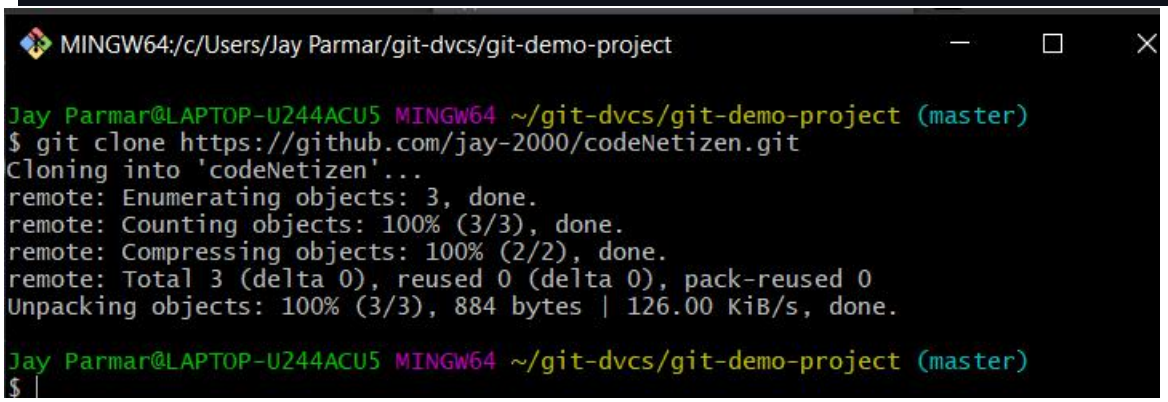
Now fork the repository (Sharing with other users who wants to contribute).

Login with another account→Copy and Paste URL of repository→then just click on fork to clone

to others account.


codeNetizen/repo
github.com/codeNetizen/repo
Search or jump to...
Pull requests
Issues
Marketplace
Explore
codeNetizen / repo
Unwatch 1
Star 0
Fork 0
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
main
1 branch
0 tags
Go to file
Add file
Code
codeNetizen Initial commit
cd8d43c now
1 commit
README.md
Initial commit
now
README.md
repo
About
No description, website, or topics provided.
Readme
Releases
No releases published
Create a new release
Packages
No packages published
Publish your first package
© 2021 GitHub, Inc.
Terms
Privacy
Security
Status
Docs
Contact GitHub
Pricing
API
Training
Blog
About
Type here to search
27°C AQI 128
ENG
22:15
17-08-2021





Pull and Push Processes

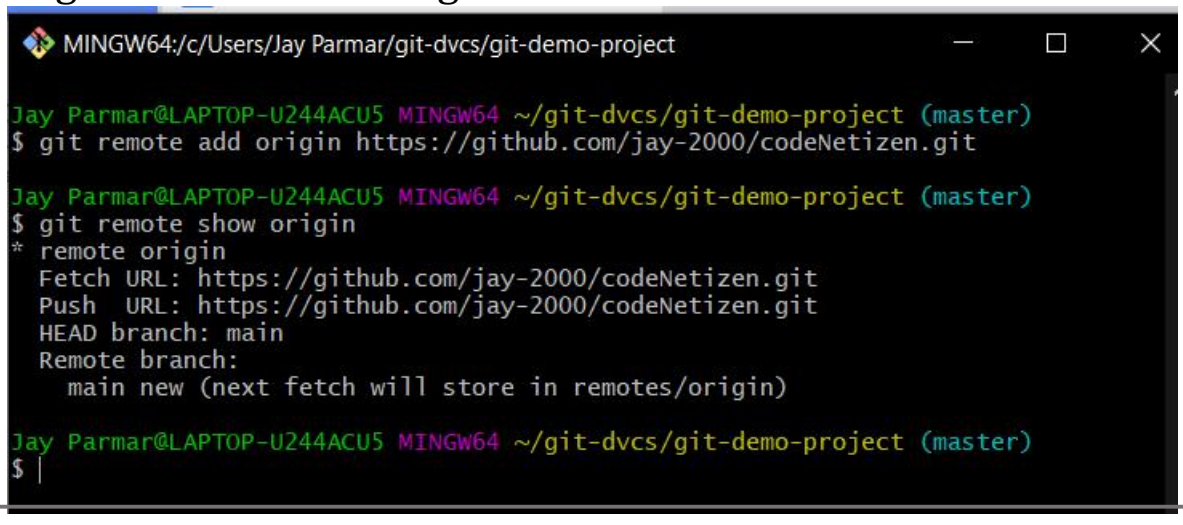
Push → Push changes to Web repository

Pull → Pull changes to Local repository

1) Push command to remote reference origin master

$ git remote add origin https://github.com/bhushanjadhav1/siesworkshop.git

$ git remote show origin



```
Jay Parmar@LAPTOP-U244ACU5 MINGW64 ~/git-dvcs/git-demo-project (master)
$ git pull https://github.com/jay-2000/codeNetizen.git
warning: no common commits
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), 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), 884 bytes | 68.00 KiB/s, done.
From https://github.com/jay-2000/codeNetizen
 * branch            HEAD       -> FETCH_HEAD
fatal: refusing to merge unrelated histories

Jay Parmar@LAPTOP-U244ACU5 MINGW64 ~/git-dvcs/git-demo-project (master)
```

MINGW64:/c/Users/Jay Parmar/git-dvcs/git-demo-project

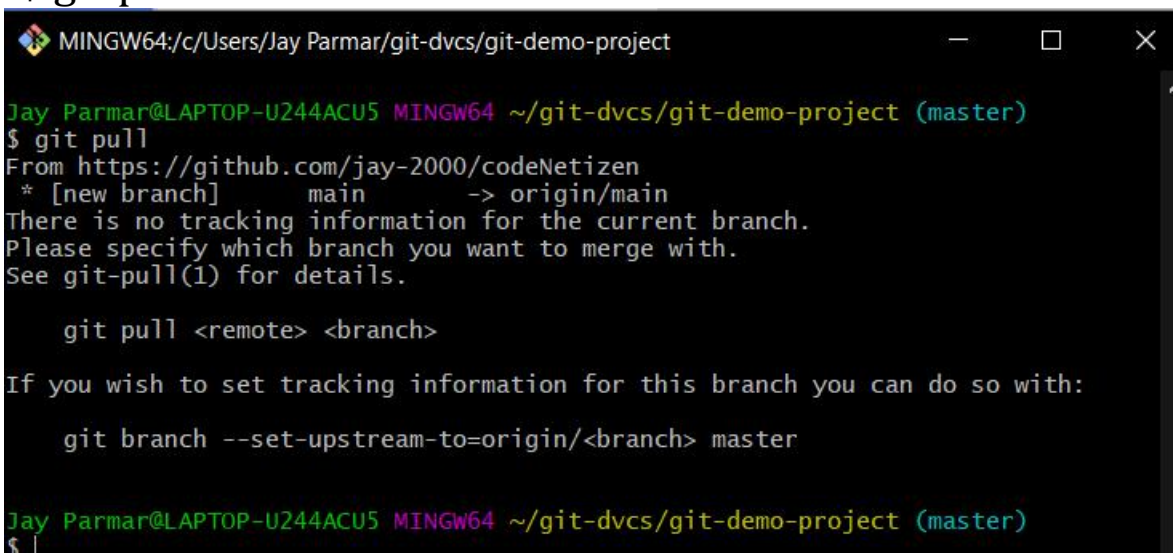
```
Jay Parmar@LAPTOP-U244ACU5 MINGW64 ~/git-dvcs/git-demo-project (master)
$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        MyRepository/
        codeNetizen/
        teststatus

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

Jay Parmar@LAPTOP-U244ACU5 MINGW64 ~/git-dvcs/git-demo-project (master)
$
```

MINGW64:/c/Users/Jay Parmar/git-dvcs/git-demo-project

```
Jay Parmar@LAPTOP-U244ACU5 MINGW64 ~/git-dvcs/git-demo-project (master)
$ git remote -v
origin  https://github.com/jay-2000/codeNetizen.git (fetch)
origin  https://github.com/jay-2000/codeNetizen.git (push)

Jay Parmar@LAPTOP-U244ACU5 MINGW64 ~/git-dvcs/git-demo-project (master)
$
```

```
Jay Parmar@LAPTOP-U244ACU5 MINGW64 ~/git-dvcs/git-demo-project (master)
$ git push -v origin master
Pushing to https://github.com/jay-2000/codeNetizen.git
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 400 bytes | 400.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
POST git-receive-pack (563 bytes)
remote:
remote: Create a pull request for 'master' on GitHub by visiting:
remote:      https://github.com/jay-2000/codeNetizen/pull/new/master
remote:
To https://github.com/jay-2000/codeNetizen.git
 * [new branch]      master -> master
updating local tracking ref 'refs/remotes/origin/master'

Jay Parmar@LAPTOP-U244ACU5 MINGW64 ~/git-dvcs/git-demo-project (master)
$
```

$ git pull



Conclusion:

Hence studied and practiced GIT commands for version control.