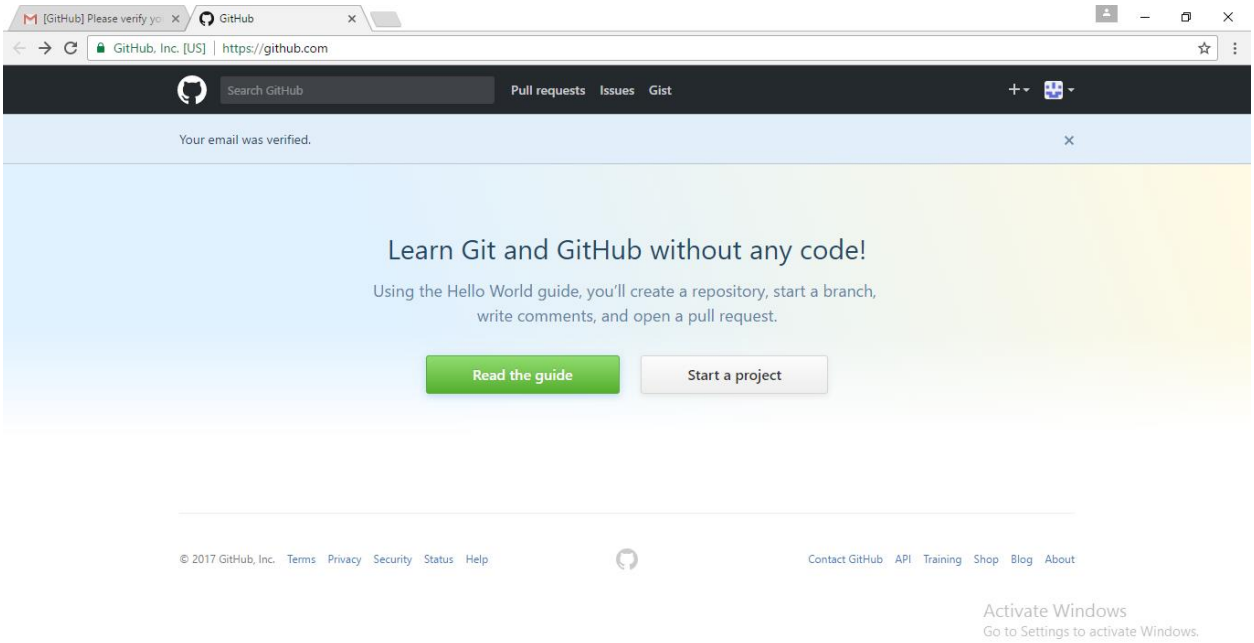
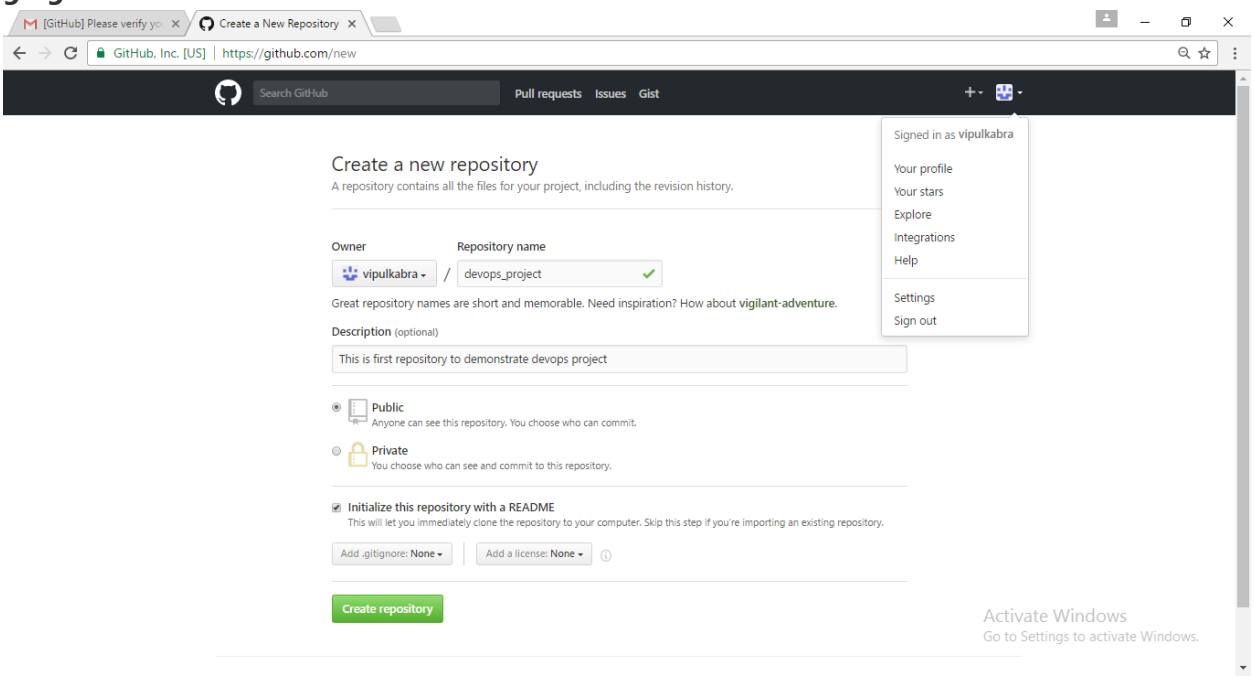
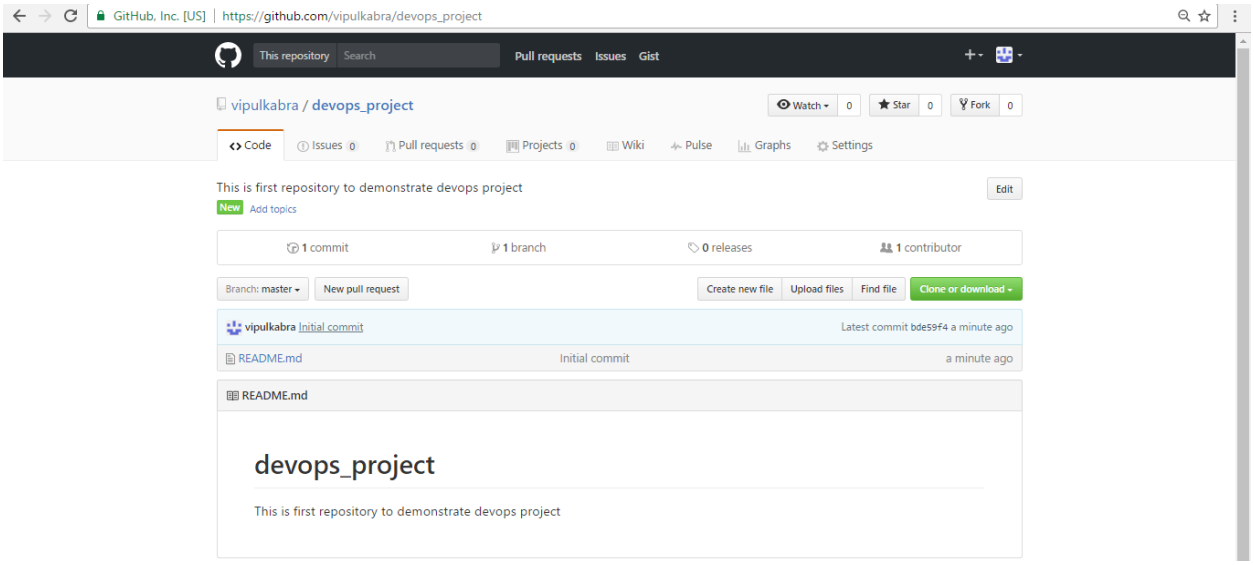
- For Remote repository
- Create online Account https://github.com/ and get your account verified by Email



Click on "**Start a Project"** and create repository
Provide name for repository and small description
Choose Private or Public (Public will be open to all will be free, Private will be paid one)
Check box **Initialize this repository with a README** this will add readme file when repository is created
If you want to add any file that need to be not checked in and check out add them in **gitignore**

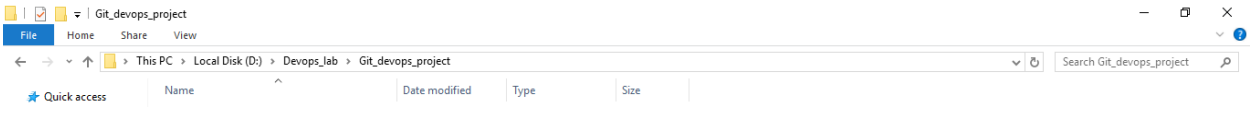


- Click on Create repository which will create repository for you with readme file

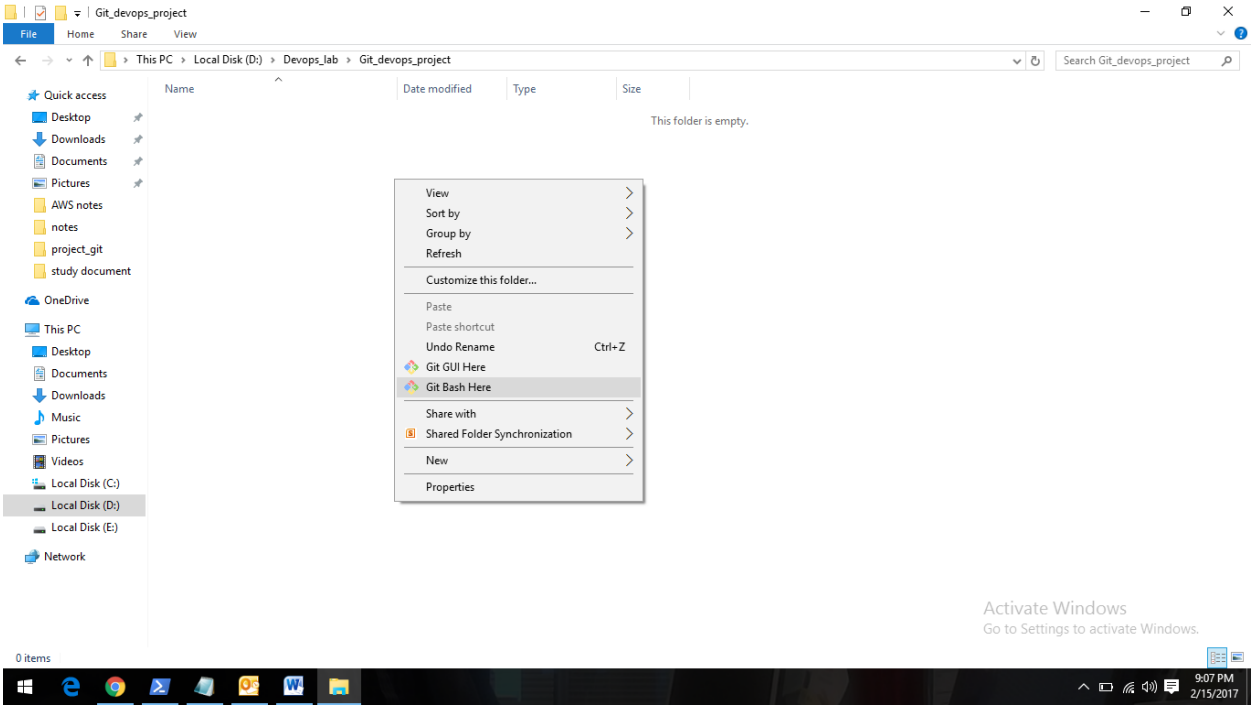


For Local repository

- Create a directory where you need to maintain Git Local repository
  In this case **D:/Devops_lab/Git_devops_project**



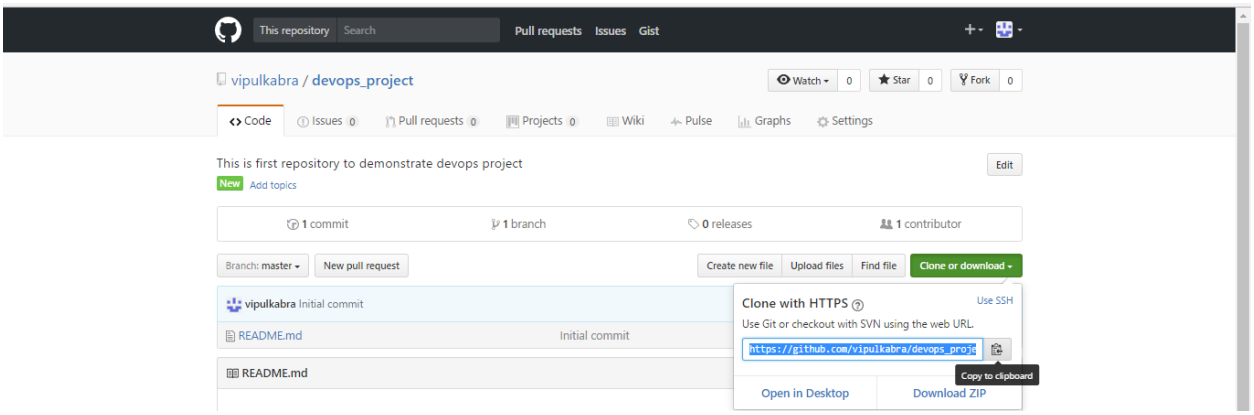
Right Click and select Git Bash



- Once you are in GIT bash to create repository you need to provide below command
  Git Init

- To link local repository to remote repository

  Go to Git Hub remote repository and get url link and copy the same as shown below



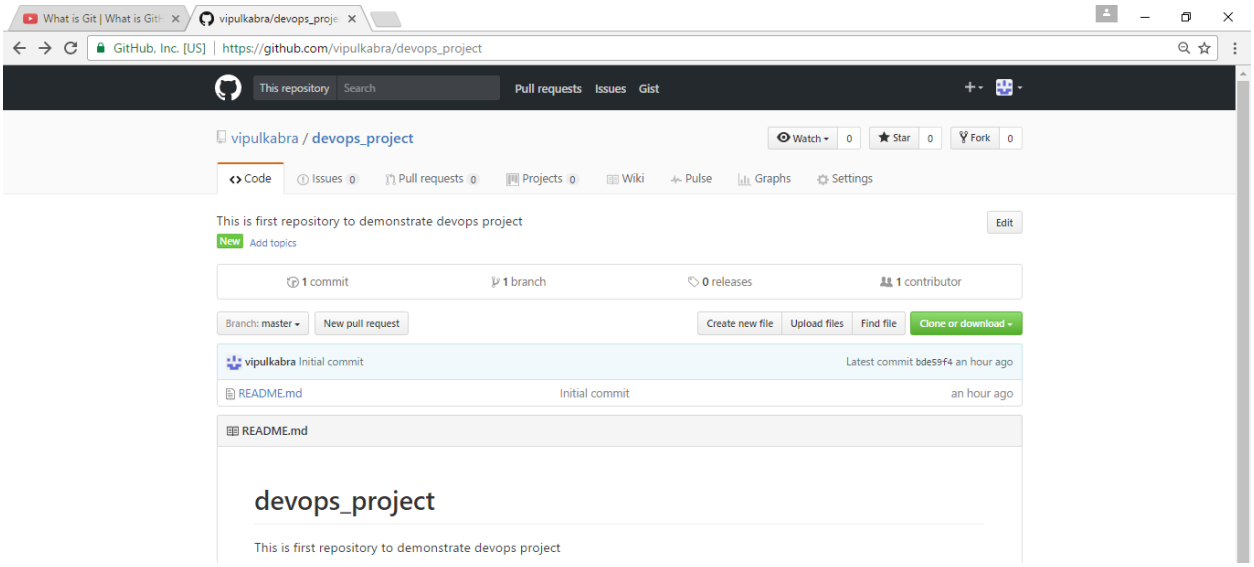
Give below command

Git remote add origin “https://github.com/vipulkabra/devops_project.git”

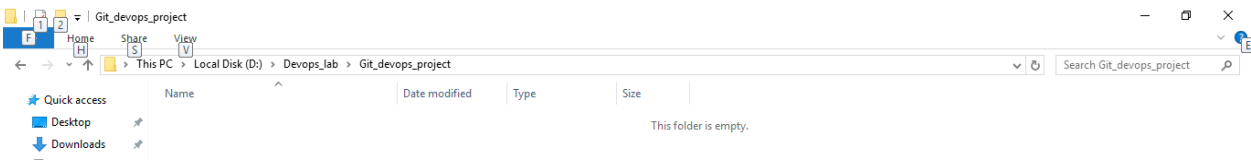
This will link your local and remote repository

- To get all files from remote repository added to your local repository we use pull command

  In remote repository we have readme file as shown below



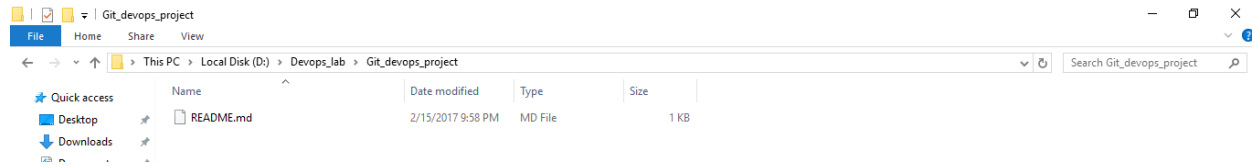
Whereas local repository is blank as shown below



To add remote repository all file to local repository in this case Readme file we use below command

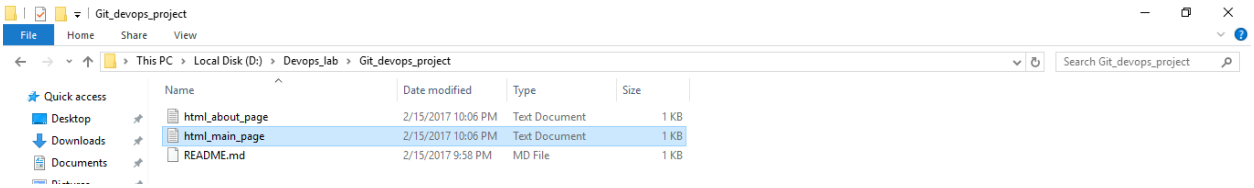
Git pull origin master

Now in local repository you will find readme file has been added as shown below



- Git operation on changes (add, status, commit)

Create some file in local repository (html_main_page, html_about_page) add some text to it



To check the Git status use below command this will display what new file been added highlighted in red.

Git status

Now say out of this 2 files you need one to be added to staging area we use below command

Git add html_main_page.txt

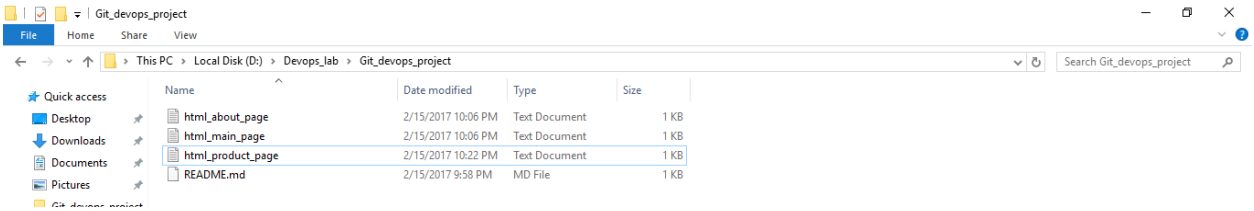
Also we will check the status since out of 2 we have added 1 file only so will use below command to check status as we did earlier

Git Status

```
vipul@vipul MINGW64 /d/Devops_lab/Git_devops_project (master)
$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)

        html_about_page.txt
        html_main_page.txt

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

vipul@vipul MINGW64 /d/Devops_lab/Git_devops_project (master)
$ git add html_about_page.txt

vipul@vipul MINGW64 /d/Devops_lab/Git_devops_project (master)
$ git status
On branch master
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        new file:   html_about_page.txt

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

        html_main_page.txt


vipul@vipul MINGW64 /d/Devops_lab/Git_devops_project (master)
```

We have seen before adding 2 files where in red when we gave Git status command
After adding 1 file and checking status It have shown added file in green and one which we have not added is still in red. This mean the one showing in green is ready to commit

Now let see how to add multiple file. So far we have one file which needs to be added. We will create one more text file so we have 2 file and will add both in one go. We have added html_product_page here



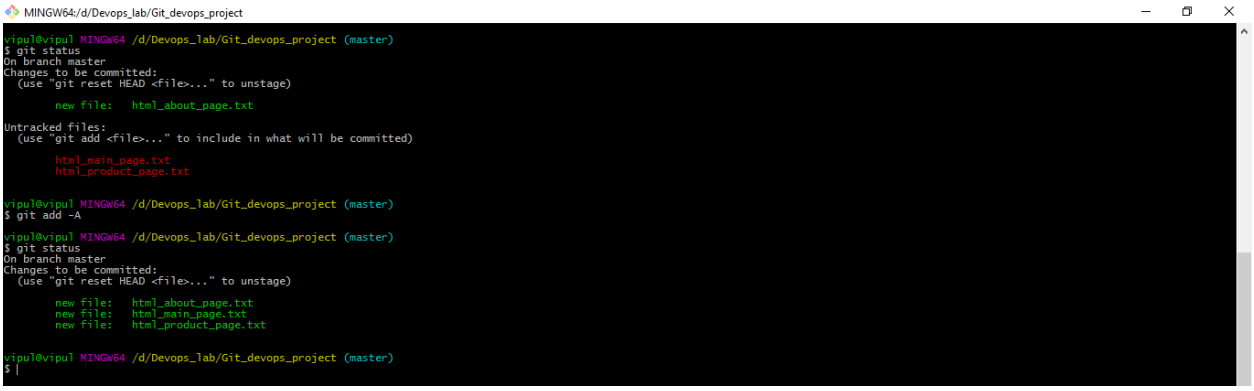
Let us give Git status to see if we have multiple file ready to add in staging area

Git status

We can see her new product file added and along with earlier main page in red so this 2 file is ready to move in staging area, lets add now multiple file in one command to staging area.
Use below command to do so

Git add –A **(Use A in capital here)**

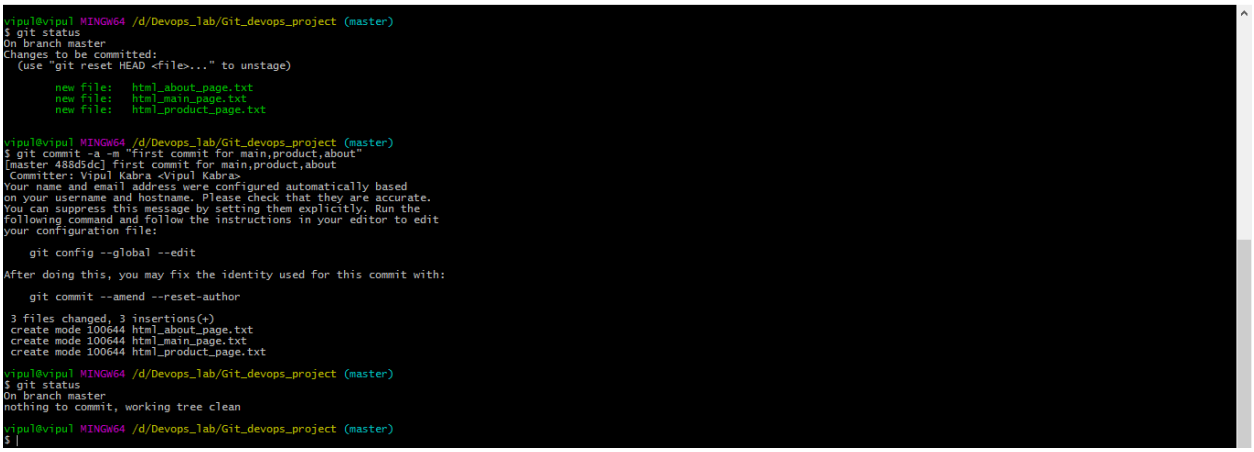
To check if file added we will again use Git status



We could see those 2 file have been added in staging area along with one we gave at initial so have all the 3 added here

Let's see how to commit and move all 3 file from staging area to local repository
Use below commit command to do so

Git commit –a –m "first commit for main,about,product"



Your all 3 files has been commited and when we give status it says nothing to commit

You can check logs and track all commit that you made by using below command

Git Log

- Creating Branch and Switching Branch

To create branch and switch to new branch use below command

Git branch finance

Git checkout finance

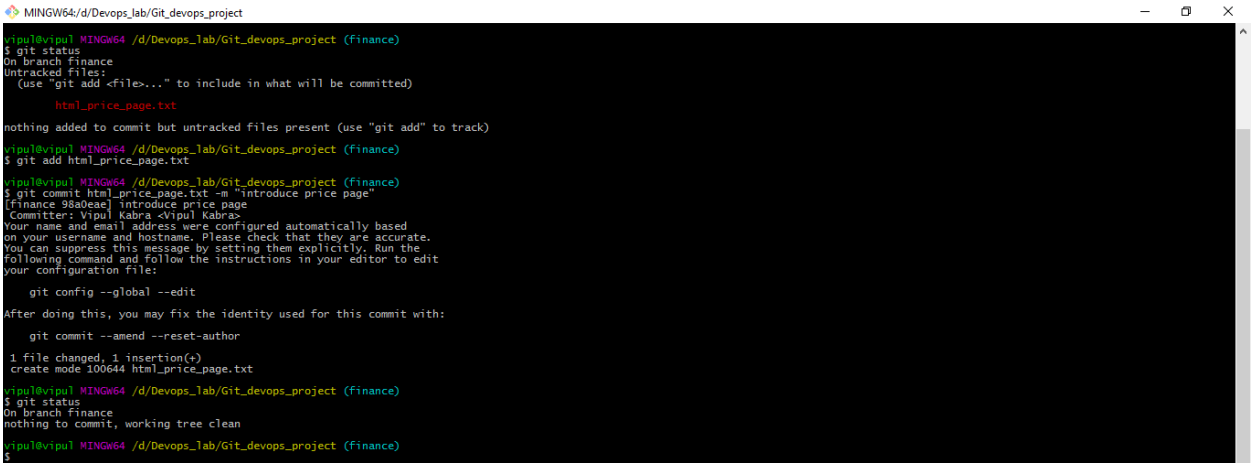
Introducing file in new branch lets add one file say html_price_page in finance branch

Let us add and commit this file using below command

Git status

Git add html_price_page

Git commit html_price_page –m “introduce price page”



What has happen now is the new branch you created and file added will be shown in new branch and not in master branch however new branch will show files of master branch as well

Let's switch branch to Master and LS to see what all you see using below command

Git checkout Master

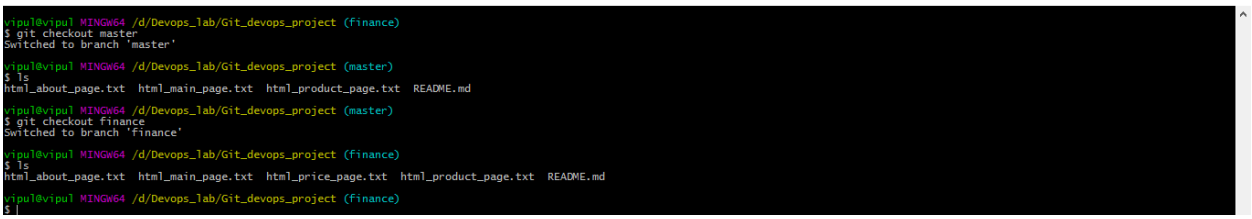
Ls

Here you cannot see the file that we added in new branch as html_price_page.txt

Lets switch back to finance branch and list what we have using below command

Git checkout Finance

Ls



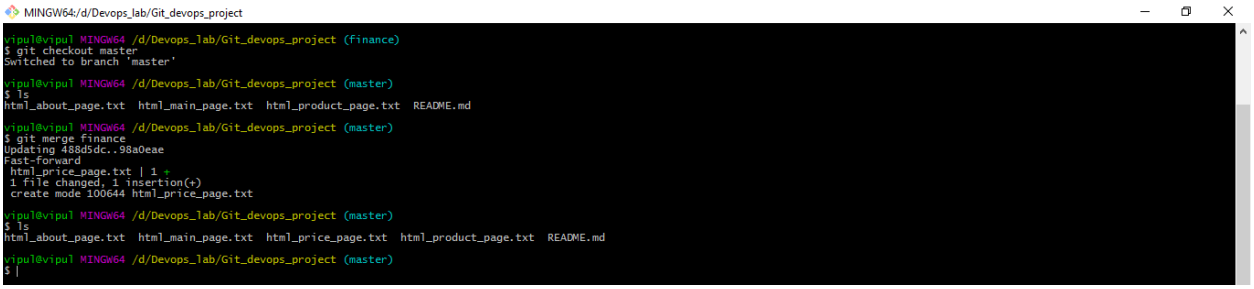
You will see here you have html_price_page.txt whereas same was not present in main branch.

- Merging Branch

  In order to merge branch you have to be in main branch and give below command in our case we have to be in Master branch to merge finance branch.

  Use below command

```
git checkout master
ls
git merge finance
ls
```



- To Add all your work in remote repository

Produce ssh key using below command

Ssh–keygen (no space all continue for all other parameter just space enter)

To get SSH ket give below command

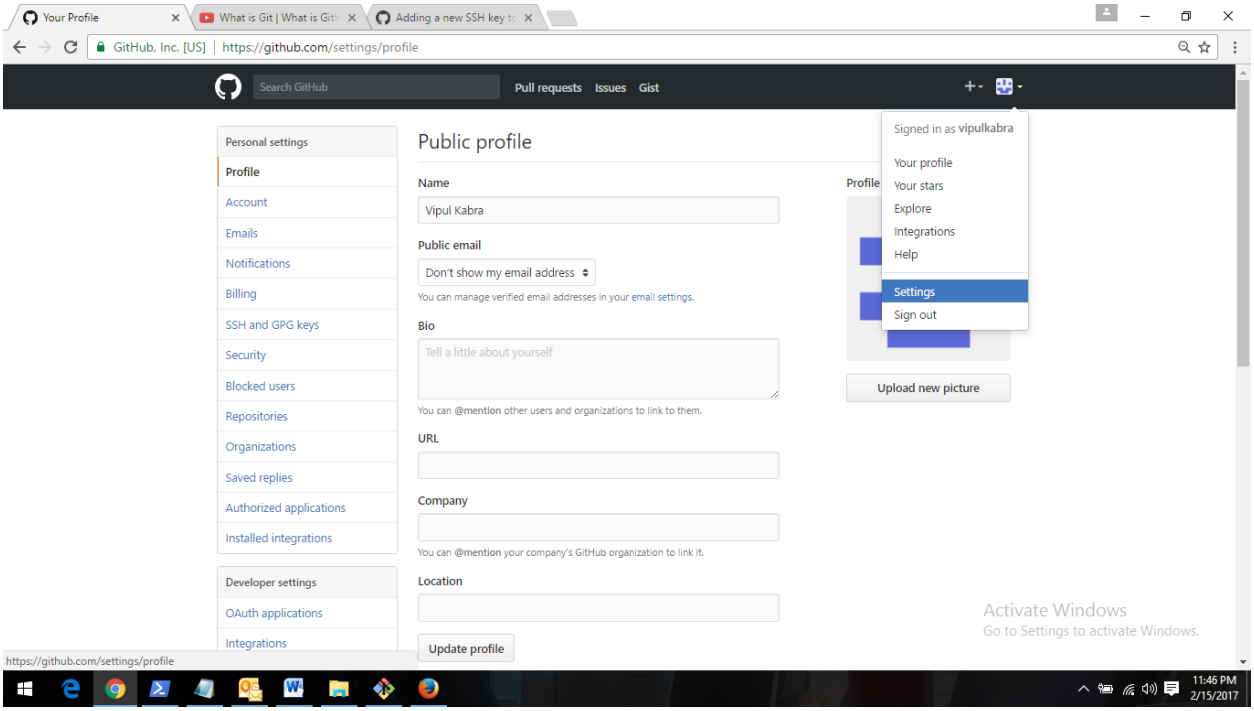
CAT /c/Users/vipul/.ssh/id_rsa.pub (Location will be found on above screen)

You will get SSH key which needs to be copied this is public ssh key

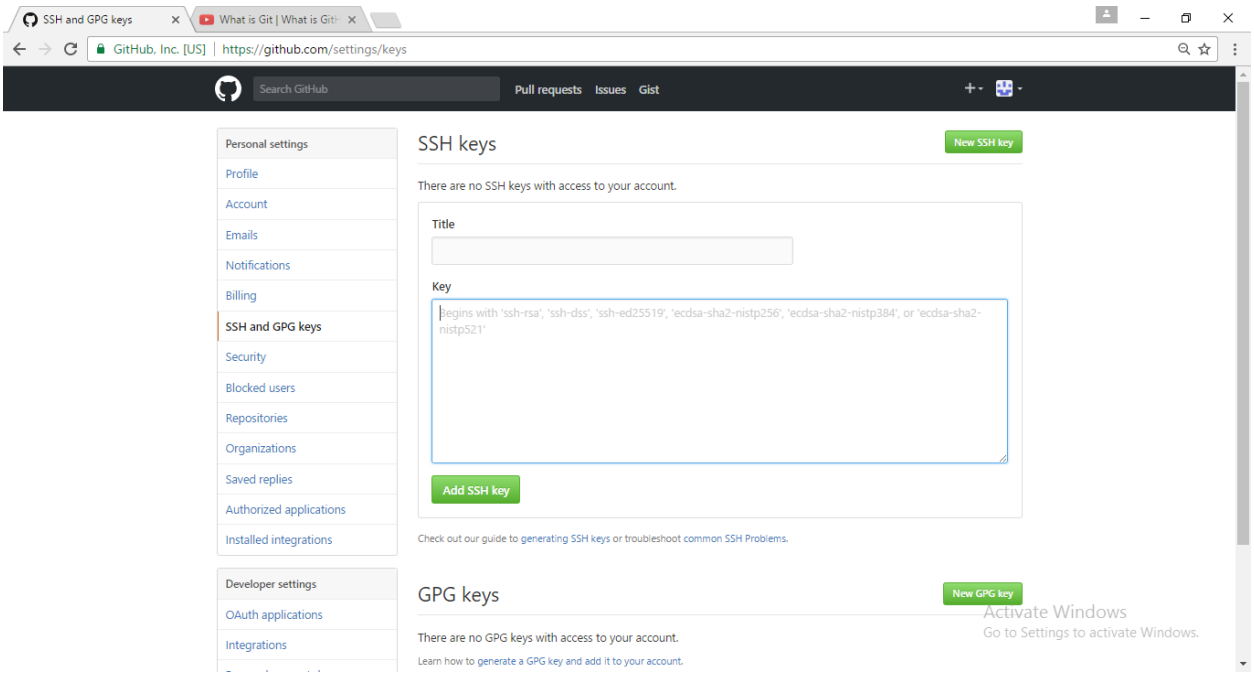
```
ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAABAQDDv8XltRRDGmF4tgoUnOHUS4zZFPEIrdmIrxeMVZRea0mBW7Y
dRD38Yq3wNbUArb4nHDIZCzQ9IZKfQtWAYktyTlDYUEHHoxj6XYY/ySkDxFntA8nEasBtEbKSWFqEjX
Y2Jti49Wnu4d7n5JNahm3cKcO73AX1bjIReBzF4KLTLvMSGmyHoJwVK2VAKEiQ39CS6gjuFy9oFbOSc
2ebnK9PEdhy1VLYN16r6D5PviqVM86PNwUCjudFsbGiDdObMCjfQFPhDN56hPPwhmeXqoqYrpgdti8g
4pFbUtxNijAmc93d7qlPZwKX/POoREvCC0H2Rr+4iuEeYo7Lh5vsEQxl vipul@vipul
```

To add this key

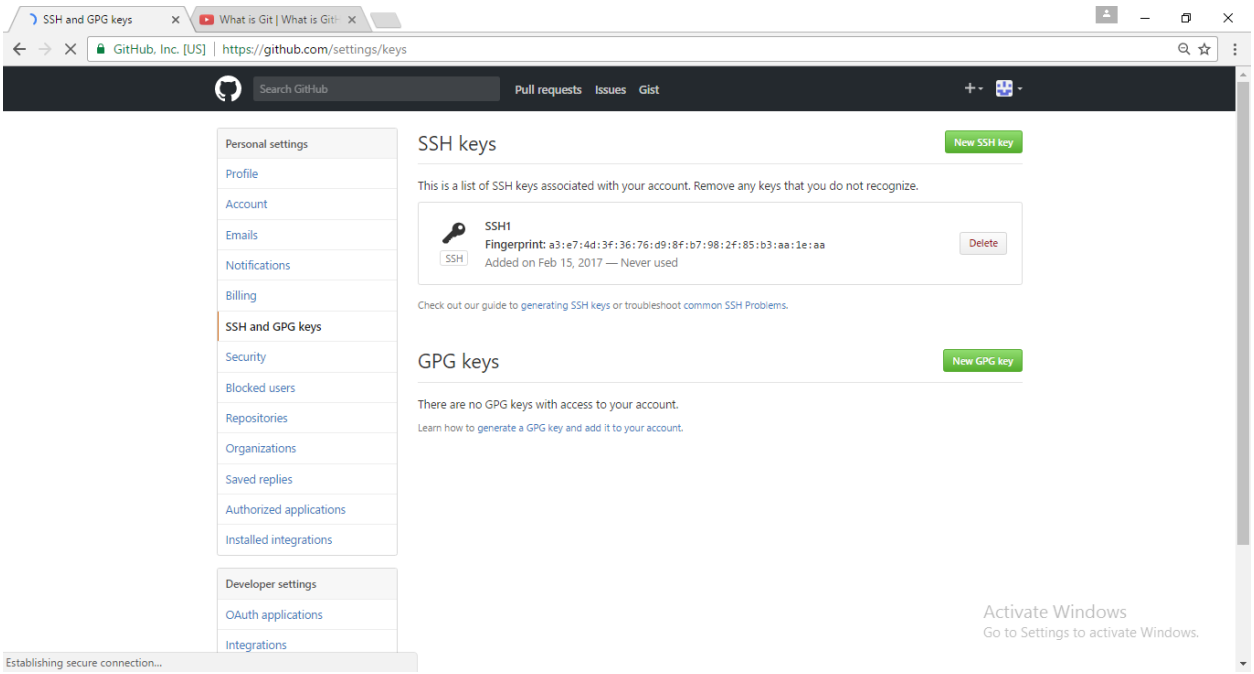
Go to Get Hub account →Setting



Select SSH and GPG key and select new to add on top right hand side



Provide SSH key title and paste key that we produced from Bash and select add SSH key this will add SSH key

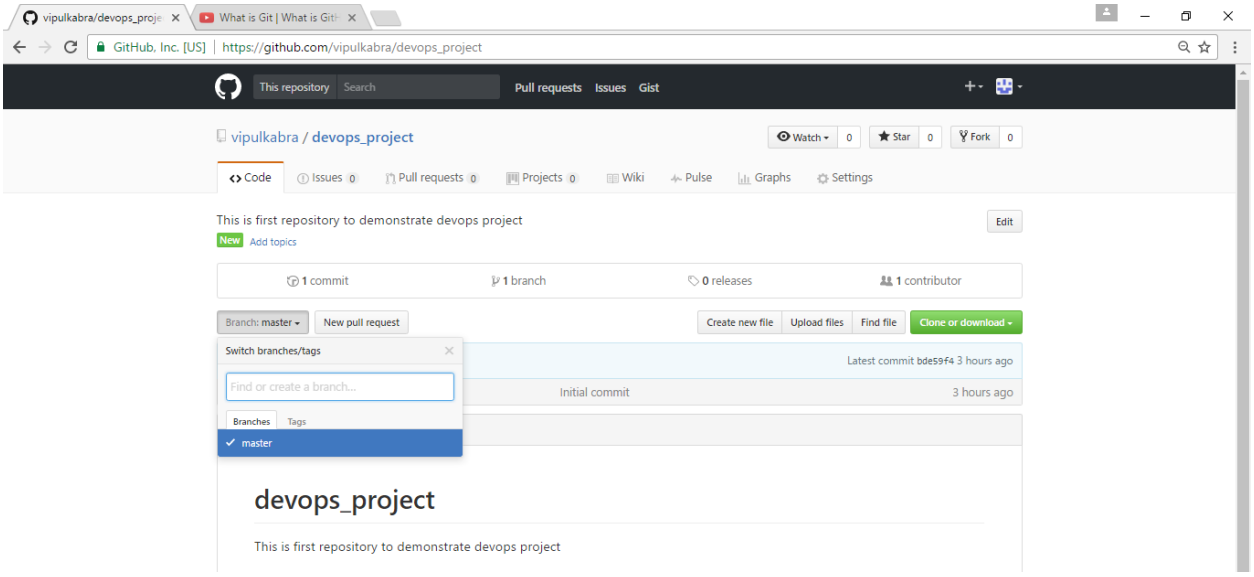


Go back to bash and give below command

Ssh -t git@github.com

To add your branch to remote repository

If you see in remote repository you don't have any branch added since they are in local at the moment

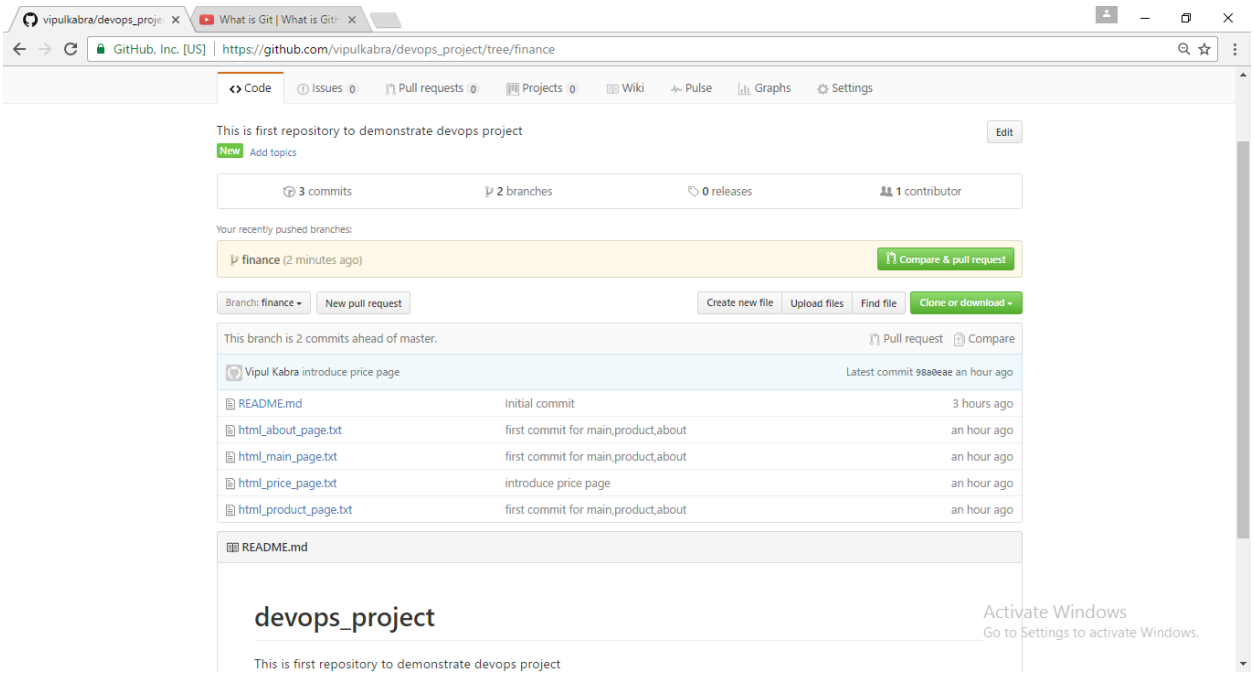


Git checkout finance

Git push origin finance

Pop up for Git hub user id and password provide the same

Check Git hub remote repository your all local file will be added with branch



Now your branch local repository is in sync with remote repository , you can do same for master as well

`git checkout master`

`git push origin master`