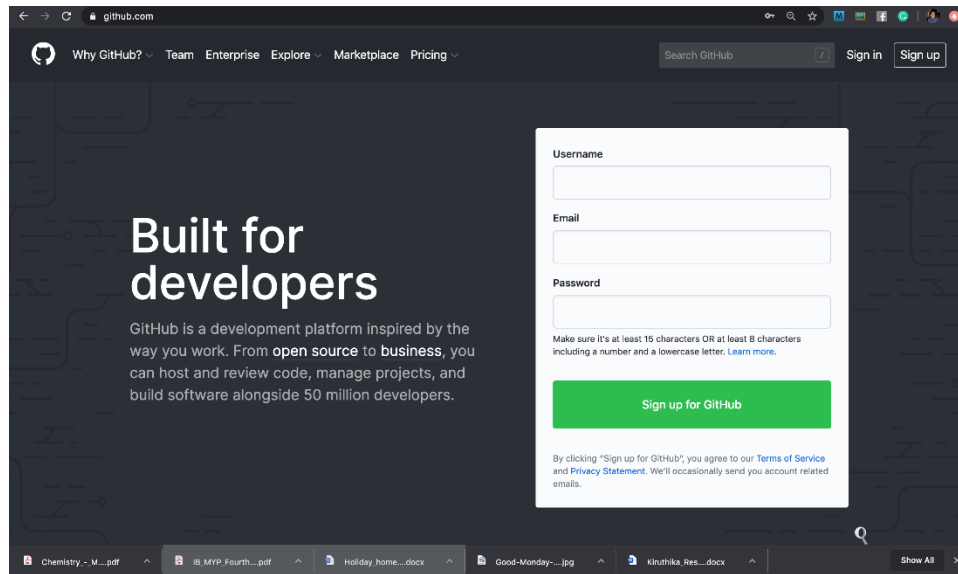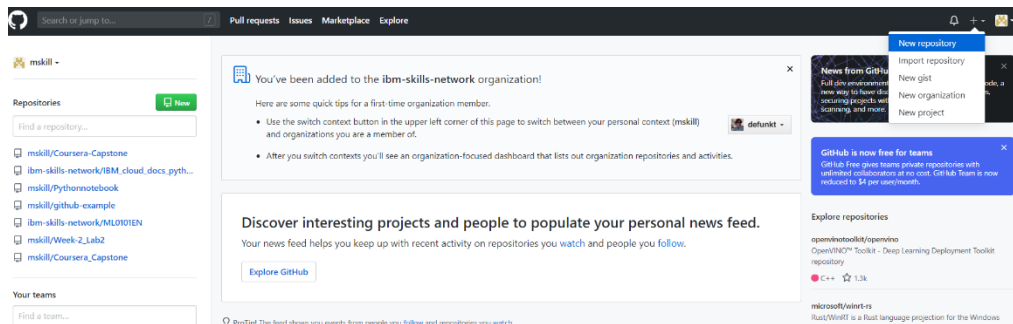**GITHUB – PART-1**

1) Create a GitHub account using https://github.com/. Use your personal email address and official emails come with restrictions.

2) Create a new repository (it's a container where all stuff goes) using the + sign as shown below:

3) Provide the necessary details like repository name. Select repository as Public and initialize the READMD. Click 'Create'

Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere?
Import a repository.

Owner   **Repository name** *

[🐱 mskill ▾] / [demo   ✓]

Great repository names are short and memorable. Need inspiration? How about **silver-octo-system**?

Description (optional)

[   ]

◉ 📖 **Public**
         Anyone can see this repository. You choose who can commit.

○ 🔒 **Private**
         You choose who can see and commit to this repository.

Skip this step if you're importing an existing repository.

☑ **Initialize this repository with a README**
     This will let you immediately clone the repository to your computer.

[Add .gitignore: None ▾]   [Add a license: None ▾]   ⓘ

[**Create repository**]

4) Now, your repository is created, and it looks as:

🗐 mskill / **demo**   [👁 Unwatch ▾] [1] [⭐ Star] [0] [🍴 Fork] [0]

<> Code   ⓘ Issues 0   🎋 Pull requests 0   ▷ Actions   🗂 Projects 0   📖 Wiki   🛡 Security 0   📈 Insights   ⚙ Settings

No description, website, or topics provided.   [Edit]
Manage topics

-○- **1** commit   🎋 **1** branch   📦 **0** packages   🏷 **0** releases   👥 **1** contributor

[Branch: master ▾] [New pull request]   [Create new file] [Upload files] [Find file] [**Clone or download ▾**]

🐱 **mskill** Initial commit   Latest commit d3b011e now

📄 README.md   Initial commit   now
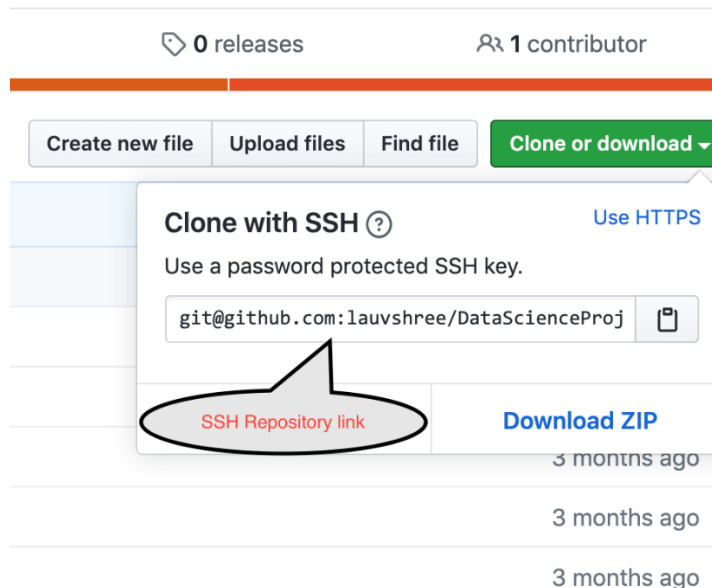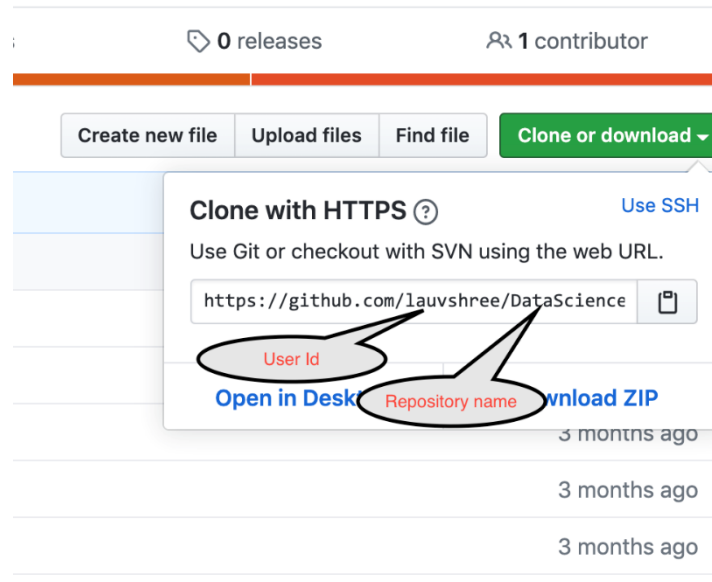
📖 README.md   ✎

demo

5) To download the repository, we have option 'Clone and download'. Also, there are two options
   to copy repository locally using 'SSH' and 'HTTPS'

6) Copy the SSHRepositoryLink on to your clipboard.
7) These instructions presume that you have SSH key generated. However, if you don't have one please follow the step-by-step procedure in this link (https://help.github.com/en/enterprise/2.15/user/articles/generating-a-new-ssh-key-and-adding-it-to-the-ssh-agent) before you proceed further.

8) Open the command prompt or terminal to use the GitHub commands:
To change the directory simply use:
```
cd <name of the directory you want to change to>
```

To go to the folder **"Downloads"** use: `cd Downloads`

Create a empty folder in Downloads using SSH repository link that we have created in GitHub
Repository as:

`git clone pastesshrepositorylinkhere`


```
Command Prompt
Microsoft Windows [Version 10.0.17763.1217]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Skill07>cd
C:\Users\Skill07

C:\Users\Skill07>cd Downloads

C:\Users\Skill07\Downloads>git clone git@github.com:mskill/demo.git
Cloning into 'demo'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), done.

C:\Users\Skill07\Downloads>
```

Now, the folder is copied to my 'Downloads'. Just check the 'Downloads' have you got the folder demo?

9) To check my folder, enter the folder using cd command again as:
`cd demo`

10) Get the list of the files in the folder demo, use:
For Windows: `dir`
For Mac: `ls`

```
C:\Users\Skill07\Downloads\demo>dir
 Volume in drive C has no label.
 Volume Serial Number is A20C-B44D

 Directory of C:\Users\Skill07\Downloads\demo

05/30/2020  09:13 PM    <DIR>          .
05/30/2020  09:13 PM    <DIR>          ..
05/30/2020  09:13 PM                 6 README.md
               1 File(s)              6 bytes
               2 Dir(s)  96,149,942,272 bytes free
```

11) To view the content of the file:
 For Windows: `type README.md`
 For Mac: `cat README.md`

```
C:\Users\Skill07\Downloads\demo>type README.md
# demo
```

12) To open a README.md file:
 For Windows: `notepad README.md`
 For Mac: `open README.md`

13) To create a new file:
 For Windows: `notepad test.txt`
 For Mac: `vi test.txt`

14) Add to the repository:
 For Windows/Mac: `git add test.txt`

 Check the status of the file using:
 `git status`

```
C:\Users\Skill07\Downloads\demo>notepad test.txt

C:\Users\Skill07\Downloads\demo>git add test.txt

C:\Users\Skill07\Downloads\demo>git status
On branch master
Your branch is up to date with 'origin/master'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   test.txt
```

Similarly, add the new file as shown below:

```
C:\Users\Skill07\Downloads\demo>notepad test2.txt

C:\Users\Skill07\Downloads\demo>git add test2.txt

C:\Users\Skill07\Downloads\demo>git status
On branch master
Your branch is up to date with 'origin/master'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   test.txt
        new file:   test2.txt
```

Commit the changes in the repository using:
`git commit -m "write message here"`

```
C:\Users\Skill07\Downloads\demo>git commit -m "Initial Commit"
[master dc2e94d] Initial Commit
 2 files changed, 2 insertions(+)
 create mode 100644 test.txt
 create mode 100644 test2.txt
```

Push the file to remote repository using:
git push

```
C:\Users\Skill07\Downloads\demo>git push
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 366 bytes | 122.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0)
To github.com:mskill/demo.git
   d3b011e..dc2e94d  master -> master
```

Now, this make the changes in my GitHub repository

mskill / demo

| ⊙ Unwatch ▾ | 1 | ⭐ Star | 0 | ⑂ Fork | 0 |

<> Code   ① Issues **0**   ⑂ Pull requests **0**   ⊙ Actions   ▥ Projects **0**   ▭ Wiki   ⊙ Security **0**   〰 Insights   ⚙ Settings

No description, website, or topics provided.   Edit

Manage topics

○ 2 commits	⑂ 1 branch	⊟ 0 packages	◇ 0 releases	⋀ 1 contributor

| Branch: master ▾ | New pull request | | | Create new file | Upload files | Find file | Clone or download ▾ |

mskill Initial Commit   Latest commit dc2e94d 4 minutes ago

▢ README.md	Initial commit	40 minutes ago
▢ test.txt	Initial Commit	4 minutes ago
▢ test2.txt	Initial Commit	4 minutes ago

Create a repository now without README.md file

Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere
Import a repository.

Owner   **Repository name** *

[🎮 mskill ▾] / [demo1 ✓]

Great repository nan demo1 is available. morable. Need inspiration? How about **improved-couscous**?

Description (optional)

[ ]

⦿ 🖥 **Public**
     Anyone can see this repository. You choose who can commit.

○ 🔒 **Private**
     You choose who can see and commit to this repository.

Skip this step if you're importing an existing repository.

☐ **Initialize this repository with a README**
     This will let you immediately clone the repository to your computer.

[Add .gitignore: None ▾]   [Add a license: None ▾]   ⓘ

Create repository

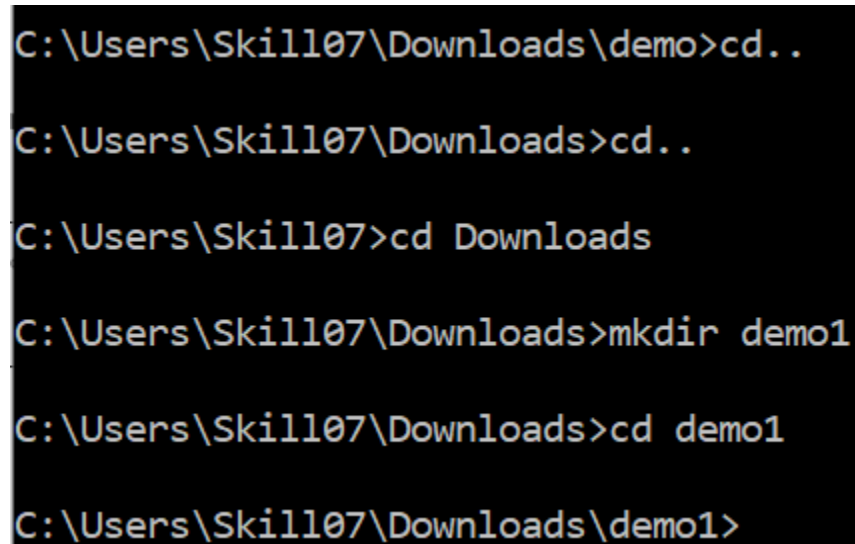Copy the SSHRepositoryLink on to your clipboard just as in Step 6.

To come out from the demo folder first use
`cd ..`

To make a directory in download folder:
```
mkdir demo1
cd demo1
```

```
C:\Users\Skill07\Downloads\demo>cd..

C:\Users\Skill07\Downloads>cd..

C:\Users\Skill07>cd Downloads

C:\Users\Skill07\Downloads>mkdir demo1

C:\Users\Skill07\Downloads>cd demo1

C:\Users\Skill07\Downloads\demo1>
```

To create a readmd file use

```
echo "# demo1" >> README.md
```

Initialize the directory

```
git init
```

Create and add a README.md file. You can use a normal text editor depending on which OS you are using.

```
git add README.md
```

Check the status of the file

```
git status
```

Commit the changes

```
git commit -m "first commit"
```

Add the origin where we have to push the file. This is the SSHRepositoryLink you copied when you created the repository.

```
git remote add origin git@github.com:mskill/demo1.git
```

Push the file

```
git push -u origin master
```

```
C:\Users\Skill07\Downloads\demo1>echo "# demo1" >> README.md

C:\Users\Skill07\Downloads\demo1>git init
Initialized empty Git repository in C:/Users/Skill07/Downloads/demo1/.git/

C:\Users\Skill07\Downloads\demo1>git add README.md

C:\Users\Skill07\Downloads\demo1>git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   README.md


C:\Users\Skill07\Downloads\demo1>git commit -m "first commit"
[master (root-commit) a74d8ad] first commit
 1 file changed, 1 insertion(+)
 create mode 100644 README.md

C:\Users\Skill07\Downloads\demo1>git remote add origin git@github.com:mskill/demo1.git

C:\Users\Skill07\Downloads\demo1>git push -u origin master
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 218 bytes | 72.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To github.com:mskill/demo1.git
 * [new branch]      master -> master
Branch 'master' set up to track remote branch 'master' from 'origin'.
```
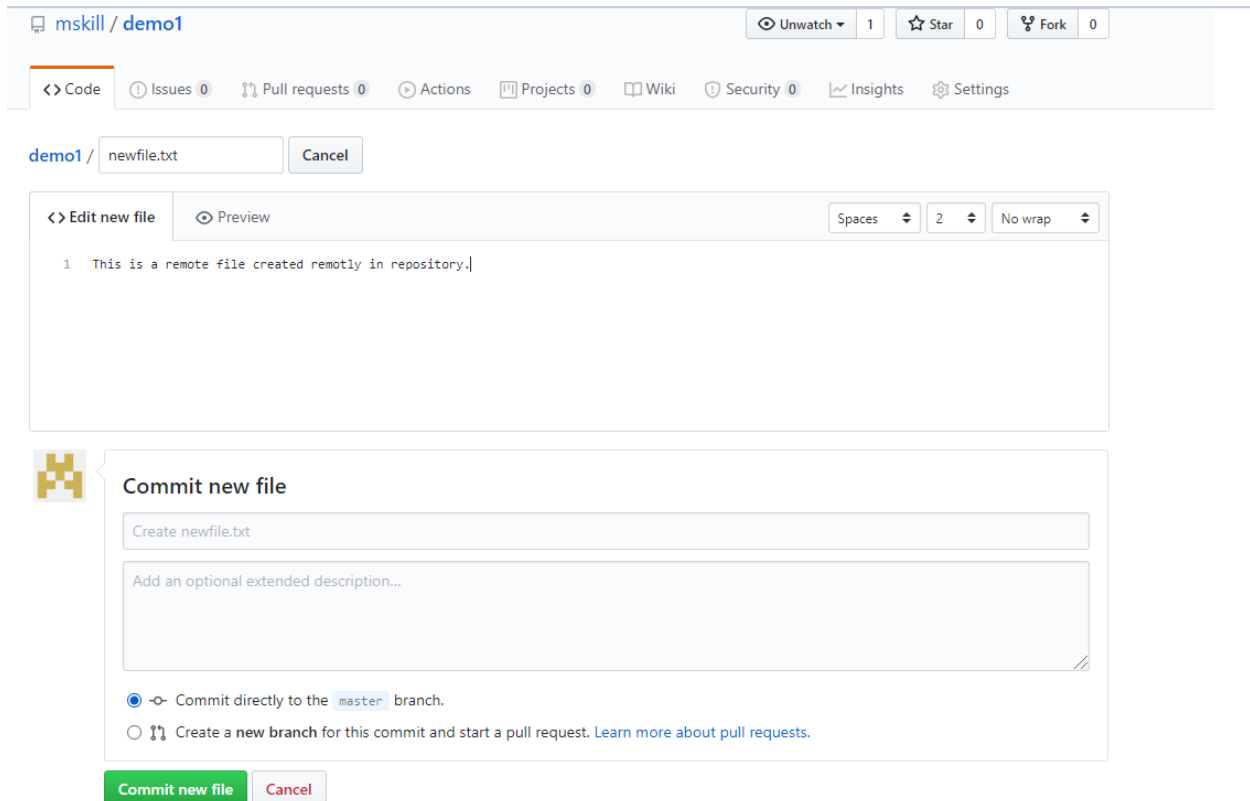
Now, the README.md file is created in our repository

| 📖 mskill / demo1 | | | | | ⊙ Unwatch ▾ 1 | ☆ Star 0 | ⑂ Fork 0 |

<> Code   ⓘ Issues 0   ⑂ Pull requests 0   ⊙ Actions   🗓 Projects 0   📖 Wiki   ⓘ Security 0   ⨏ Insights   ⚙ Settings

No description, website, or topics provided.

Manage topics

Edit

-○- 1 commit   ⑂ 1 branch   🎁 0 packages   🏷 0 releases   🎗 1 contributor

Branch: master ▾   New pull request   Create new file   Upload files   Find file   Clone or download ▾

| 🎮 mskill first commit | | Latest commit a74d8ad 4 minutes ago |
| 🗋 README.md | first commit | 4 minutes ago |

📖 README.md   ✏

GITHUB – PART 2

Creating a file in Remote repository

Provide the file name and add a description to that file. To commit the changes in the repository, click 'Commit New File'

Adding a file remotely will not be there in the local directory. Check the files using `dir`

As per the screenshot above, there is 1 file in the repository.

To pull the file that is added in remote repository to local repository, we use PULL command

`git pull`

```
C:\Users\Skill07\Downloads\demo1>git pull
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (3/3), done.
Unpacking objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
From github.com:mskill/demo1
   a74d8ad..90475cb  master       -> origin/master
Updating a74d8ad..90475cb
Fast-forward
 newfile.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 newfile.txt
```

After pull, if I check the local repository using `dir`, there are 2 files as shown:

```
C:\Users\Skill07\Downloads\demo1>dir
 Volume in drive C has no label.
 Volume Serial Number is A20C-B44D

 Directory of C:\Users\Skill07\Downloads\demo1

05/30/2020  10:46 PM    <DIR>          .
05/30/2020  10:46 PM    <DIR>          ..
05/30/2020  10:46 PM                54 newfile.txt
05/30/2020  10:01 PM                12 README.md
               2 File(s)             66 bytes
               2 Dir(s)  96,242,581,504 bytes free
```

To add a branch in master branch

`git branch branchname`

Switch the branch

`git checkout branchname`

```
C:\Users\Skill07\Downloads\demo1>git branch mybranch

C:\Users\Skill07\Downloads\demo1>git status
On branch master
Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean

C:\Users\Skill07\Downloads\demo1>git checkout mybranch
Switched to branch 'mybranch'

C:\Users\Skill07\Downloads\demo1>git status
On branch mybranch
nothing to commit, working tree clean
```

Adding a file in branch

`echo "#content">> filename.txt`

Then add the file and push the file. To create the branch remotely we have to use

`git push --set-upstream origin branchname`

```
C:\Users\Skill07\Downloads\demo1>echo "#stuff on branch">> stuffonbranch.txt

C:\Users\Skill07\Downloads\demo1>git add stuffonbranch.txt

C:\Users\Skill07\Downloads\demo1>git commit -m "add to the branch"
[mybranch 70fede8] add to the branch
 1 file changed, 1 insertion(+)
 create mode 100644 stuffonbranch.txt

C:\Users\Skill07\Downloads\demo1>git push
fatal: The current branch mybranch has no upstream branch.
To push the current branch and set the remote as upstream, use

    git push --set-upstream origin mybranch


C:\Users\Skill07\Downloads\demo1>git push --set-upstream origin mybranch
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 332 bytes | 110.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
remote:
remote: Create a pull request for 'mybranch' on GitHub by visiting:
remote:      https://github.com/mskill/demo1/pull/new/mybranch
remote:
To github.com:mskill/demo1.git
 * [new branch]      mybranch -> mybranch
Branch 'mybranch' set up to track remote branch 'mybranch' from 'origin'.

C:\Users\Skill07\Downloads\demo1>git push
Everything up-to-date
```

Switch the branch again to the master using

git checkout master

Merge command to merge the branches

git merge mybranch

As the merge command is used the new create branch will be merged to the master
branch and the file will be inserted to it. Previously, we have 2 file in the
master, now there are 3 files. Make sure to push the files using git push

```
C:\Users\Skill07\Downloads\demo1>git merge mybranch
Updating 90475cb..70fede8
Fast-forward
 stuffonbranch.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 stuffonbranch.txt

C:\Users\Skill07\Downloads\demo1>dir
 Volume in drive C has no label.
 Volume Serial Number is A20C-B44D

 Directory of C:\Users\Skill07\Downloads\demo1

05/30/2020  11:13 PM    <DIR>          .
05/30/2020  11:13 PM    <DIR>          ..
05/30/2020  10:46 PM                54 newfile.txt
05/30/2020  10:01 PM                12 README.md
05/30/2020  11:13 PM                20 stuffonbranch.txt
              3 File(s)             86 bytes
              2 Dir(s)  96,234,496,000 bytes free

C:\Users\Skill07\Downloads\demo1>git push
Total 0 (delta 0), reused 0 (delta 0)
To github.com:mskill/demo1.git
   90475cb..70fede8  master -> master
```

Now, the file which is in the branch, is now in the master branch

GITHUB – PART 3

How to fork a repository and commit the fork repository and create a pull request.

Open the link: https://github.com/romeokienzler/TensorFlow/

Click 'Fork' and copy the repository in your account.

Copy the SSH Repository Link and clone it locally using:

`git clone yoursshrepolink`

```
C:\Users\Skill07\Downloads\demo1>git clone git@github.com:mskill/TensorFlow.git
Cloning into 'TensorFlow'...
remote: Enumerating objects: 125, done.

Receiving objects: 100% (125/125), 202.17 KiB | 300.00 KiB/s, done.
Resolving deltas: 100% (53/53), done.

C:\Users\Skill07\Downloads\demo1>cd TensorFlow
```

Open and edit any file in the editor.

After saving the file,

`git add .`

And commit the changes with the message:

`git commit -m "message"`

```
C:\Users\Skill07\Downloads\demo1\TensorFlow>git add
Nothing specified, nothing added.
Maybe you wanted to say 'git add .'?

C:\Users\Skill07\Downloads\demo1\TensorFlow>git add .

C:\Users\Skill07\Downloads\demo1\TensorFlow>git commit -m "Made changes in README.md file"
[master 030f9fe] Made changes in README.md file
 1 file changed, 1 insertion(+)
```

`git push` to make the changes in remote repository

Click 'Compare' to compare the changes.

NOTE: This request will go to AUTHOR of the repository and if the changes looks good, only then the original repository can get the changes.

Comparing changes

Choose two branches to see what's changed or to start a new pull request. If you need to, you can also compare across forks.

| ⇅ | base repository: romeokienzler/TensorFlow ▾ | base: master ▾ | ← | head repository: mskill/TensorFlow ▾ | compare: master ▾ |

✓ **Able to merge.** These branches can be automatically merged.

⭡⭣ **Create pull request**   Discuss and review the changes in this comparison with others.   ⑦

○ **1 commit**   ⭡ **1 file changed**   ⬚ **0 commit comments**   ⚇ **1 contributor**

⬚ Commits on May 30, 2020

○   ⬛ **mskill**   Made changes in README.md file   030f9fe

⬚ Showing **1 changed file** with **1 addition** and **0 deletions**. | Unified | Split |

| ∨ | 1 ⬛⬜⬜⬜⬜ README.md ⧉ | ‹› | ⬚ | ⋯ |

```
...   ...   @@ -1,4 +1,5 @@
  1    1        # What's new in TensorFlow 2.0
       2   +  #Making the changes to the fork repository and checking the changes in README.md file
  2    3
  3    4        The following are all the changes coming in TensorFlow 2.0. Let's have a closer look at them:
  4    5
      ⭣
```

Create a Pull request to make the changes in the original file.

Note: The pull request will now send to the author of the repository and if accepted the changes will be made to the original repository.