

# Assignment 01

## Git Utility

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## 1 Introduction to Git

Git is a open source platform. It is available globally on git hub website and also in the form of desktop application with Graphical User Interface(GUI) for Windows, Mac and Linux platforms. It is version control system that helps us to manage changes made to documents and other computer files. We can maintain source files, documentations, short stories, pictures and manage the large projects. Projects with lot of revision and changes can be backtracked to the older version. Multiple person can work at a time on the single project from different places. The changes are clearly communicated with no error.

## 2 How to use Git?

For using the gitHub we have required GitHub account. We can sign-up account easily its free for every one. GitHub provides free unlimited storage publicly and chrages \$7 per month for private storage.

```
git config --global user.name "Syed Farhan Alam Zaidi"
```

Create a new repository

A repository contains all the files for your project, including the revision history.

Owner: farhan-93 / Repository name: assignment01 ✓

Great repository names are short and memorable. Need inspiration? How about [symmetrical-fiesta](#).

Description (optional)

☒ Public  
Anyone can see this repository. You choose who can commit.

☐ Private  
You choose who can see and commit to this repository.

Figure 2.1: Create Repository

```
git config --global user.email "syedfarhanalam1993@gmail.com"
```

## 2.1 Create Repository

After configure git, make directory with the command "mkdir assignment01", and enter in the working directory assignment01 using "cd assignment01". Then, initialize the repository with "git init" command. We can also do it by using GUI on website. see figure 2.1. Figure 2.2 shows the current assignment01 repository.

## 2.2 Create file

After create the repository I make a file. I created the file in assignment01 repository with the name "assignment01.tex" see figure 2.3.

## 2.3 Commit

Commit is the process of updating the repository. It saves the all updated files. After create the empty file, I modified the data in the .tex file. and than commit it. See figure 2.4.

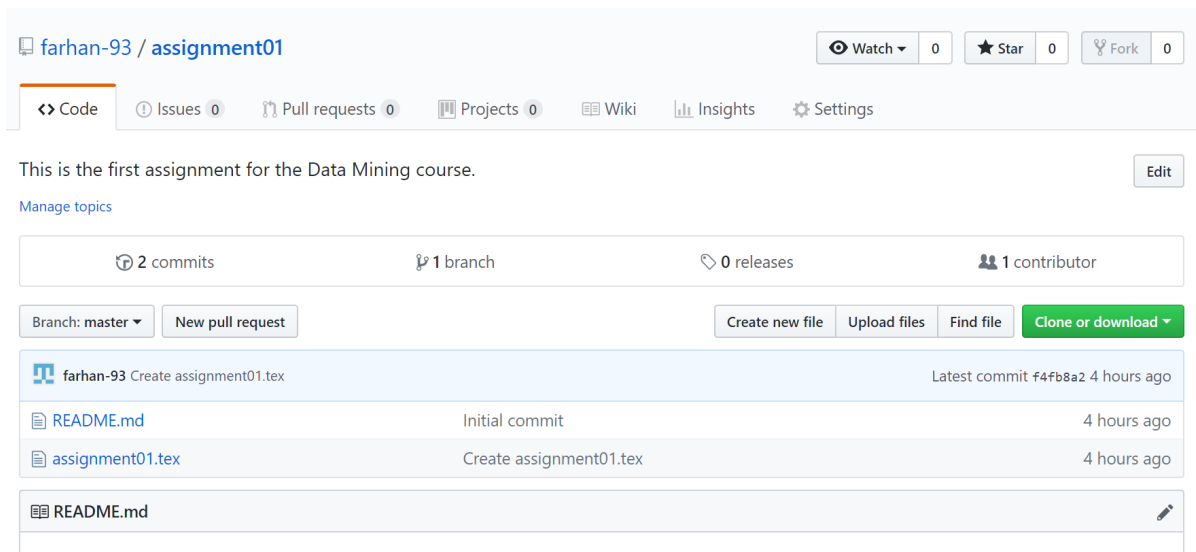


Figure 2.2: Repository

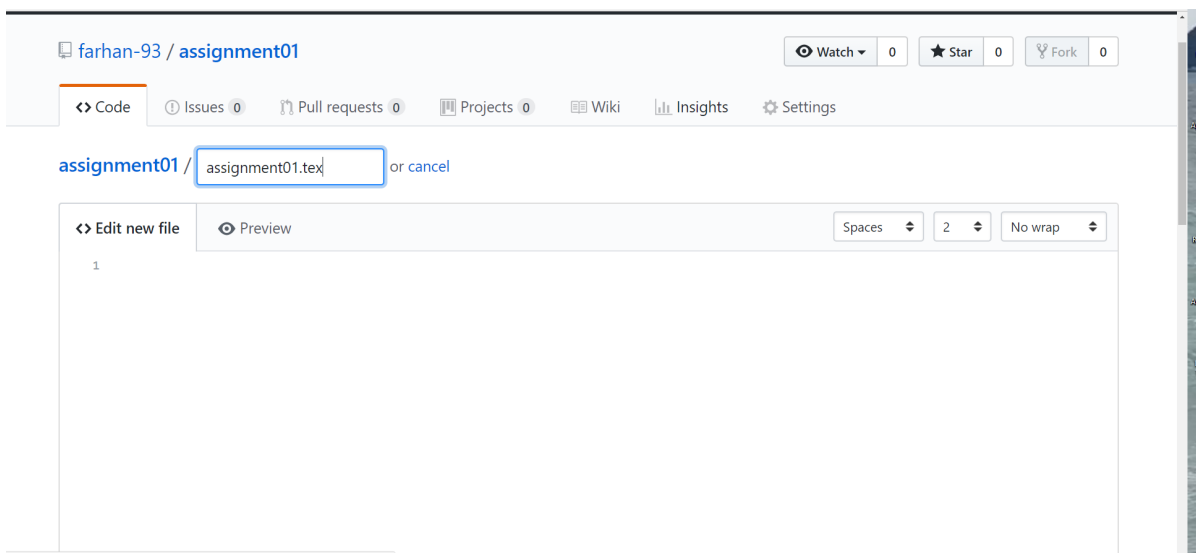



Figure 2.3: Create file

```
..
48 \par git config --global user.name "Syed Farhan Alam Zaidi"
49 \par git config --global user.email "syedfarhanalam1993@gmail.com"
50
51 \subsection{Create Repository}
52 \par After configure git, make directory with the command "mkdir assignment01", and enter in the working directory assignemnt01 using "cd
assignment01". Than, initialize the repository with "git init" command. We can also do it by using GUI on website.
53
54
55
56
```



### Commit changes

Update assignment01.tex

Add an optional extended description...

☒ Commit directly to the `master` branch.  
☐ Create a new branch for this commit and start a pull request. [Learn more about pull requests.](#)

Commit changes Cancel

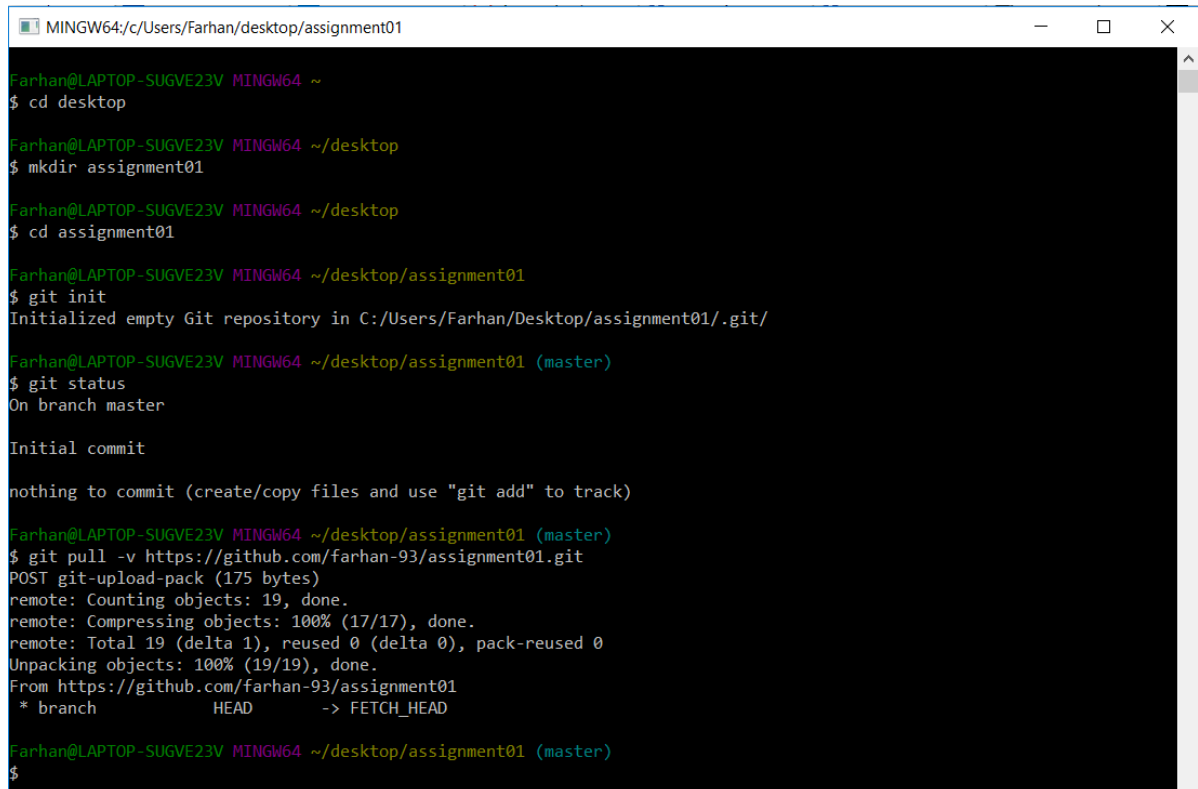
Figure 2.4: Commit the file

## 2.4 Pulling

Pulling is the process of remotely access the file to the local computer. Local computer must has the git repository. The git repository can be create by "*git init*" command. After creating the git repository on my local computer, pull the directory from gitHub. Shown in figure 2.5.

## 2.5 Pushing

Pushing is the process of remotely update the file to gitHub repository from the local computer. Local computer must has the git repository. The process of pushing is shown in figure 2.6 and 2.7. In figure 2.6 shows that its requires authentication when we push to the GitHub repository. Figure 2.7 shows the successful push operation.



```
MINGW64:/c:/Users/Farhan/desktop/assignment01
Farhan@LAPTOP-SUGVE23V MINGW64 ~
$ cd desktop
Farhan@LAPTOP-SUGVE23V MINGW64 ~/desktop
$ mkdir assignment01
Farhan@LAPTOP-SUGVE23V MINGW64 ~/desktop
$ cd assignment01
Farhan@LAPTOP-SUGVE23V MINGW64 ~/desktop/assignment01
$ git init
Initialized empty Git repository in C:/Users/Farhan/Desktop/assignment01/.git/
Farhan@LAPTOP-SUGVE23V MINGW64 ~/desktop/assignment01 (master)
$ git status
On branch master

Initial commit

nothing to commit (create/copy files and use "git add" to track)
Farhan@LAPTOP-SUGVE23V MINGW64 ~/desktop/assignment01 (master)
$ git pull -v https://github.com/farhan-93/assignment01.git
POST git-upload-pack (175 bytes)
remote: Counting objects: 19, done.
remote: Compressing objects: 100% (17/17), done.
remote: Total 19 (delta 1), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (19/19), done.
From https://github.com/farhan-93/assignment01
* branch      HEAD       -> FETCH_HEAD
Farhan@LAPTOP-SUGVE23V MINGW64 ~/desktop/assignment01 (master)
$
```

Figure 2.5: pull the file from "github.com/farhan-93/assignment01.git"

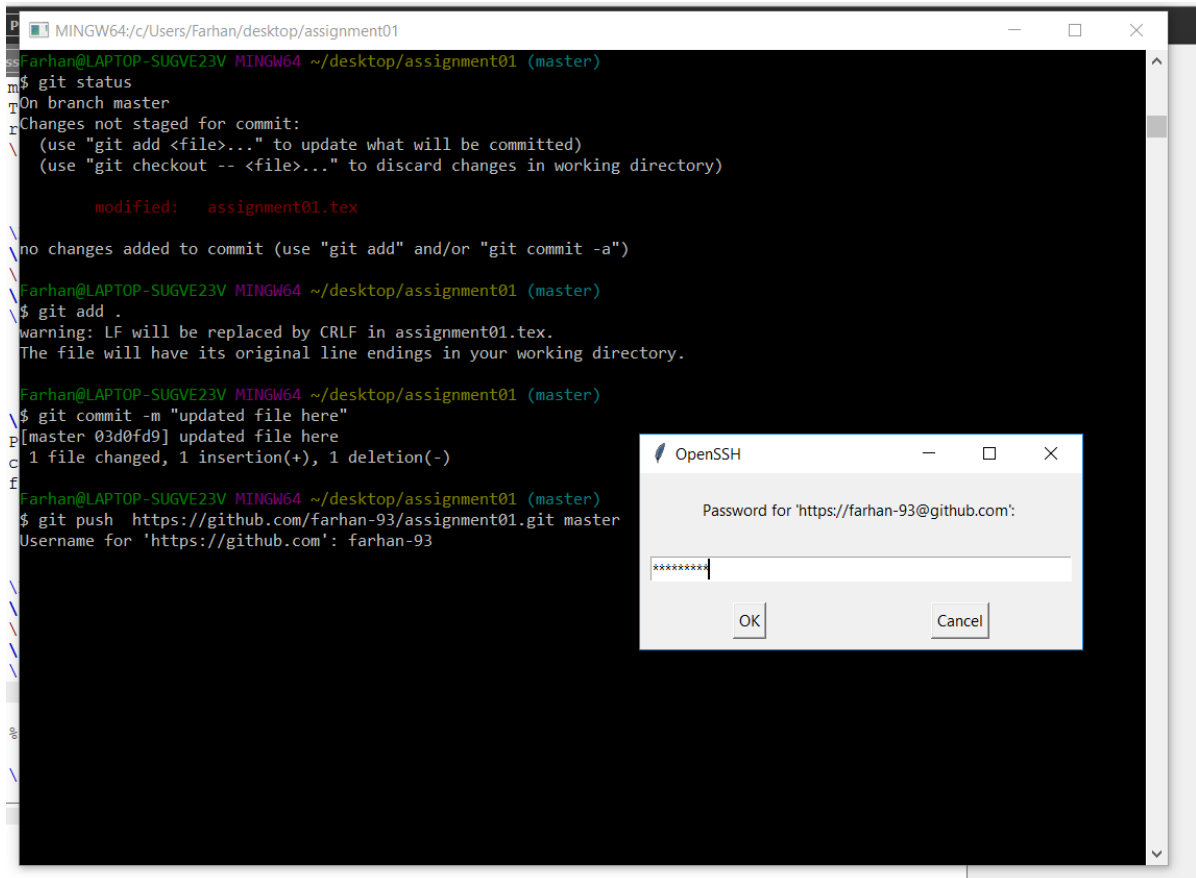


Figure 2.6: authentication during push the file from local computer to "github.com/farhan-93/assignment01.git"

```
MINGW64:/c:/Users/Farhan/desktop/assignment01
Farhan@LAPTOP-SUGVE23V MINGW64 ~/desktop/assignment01 (master)
$ git status
On branch master
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   assignment01.tex

no changes added to commit (use "git add" and/or "git commit -a")
Farhan@LAPTOP-SUGVE23V MINGW64 ~/desktop/assignment01 (master)
$ git add .
warning: LF will be replaced by CRLF in assignment01.tex.
The file will have its original line endings in your working directory.
Farhan@LAPTOP-SUGVE23V MINGW64 ~/desktop/assignment01 (master)
$ git commit -m "updated file here"
[master 03d0fd9] updated file here
1 file changed, 1 insertion(+), 1 deletion(-)
Farhan@LAPTOP-SUGVE23V MINGW64 ~/desktop/assignment01 (master)
$ git push https://github.com/farhan-93/assignment01.git master
Username for 'https://github.com': farhan-93
Counting objects: 3, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 312 bytes | 0 bytes/s, done.
Total 3 (delta 2), reused 0 (delta 0)
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
To https://github.com/farhan-93/assignment01.git
   6cce053..03d0fd9  master -> master
Farhan@LAPTOP-SUGVE23V MINGW64 ~/desktop/assignment01 (master)
$
```

Figure 2.7: push the file from local computer to "github.com/farhan-93/assignment01.git"