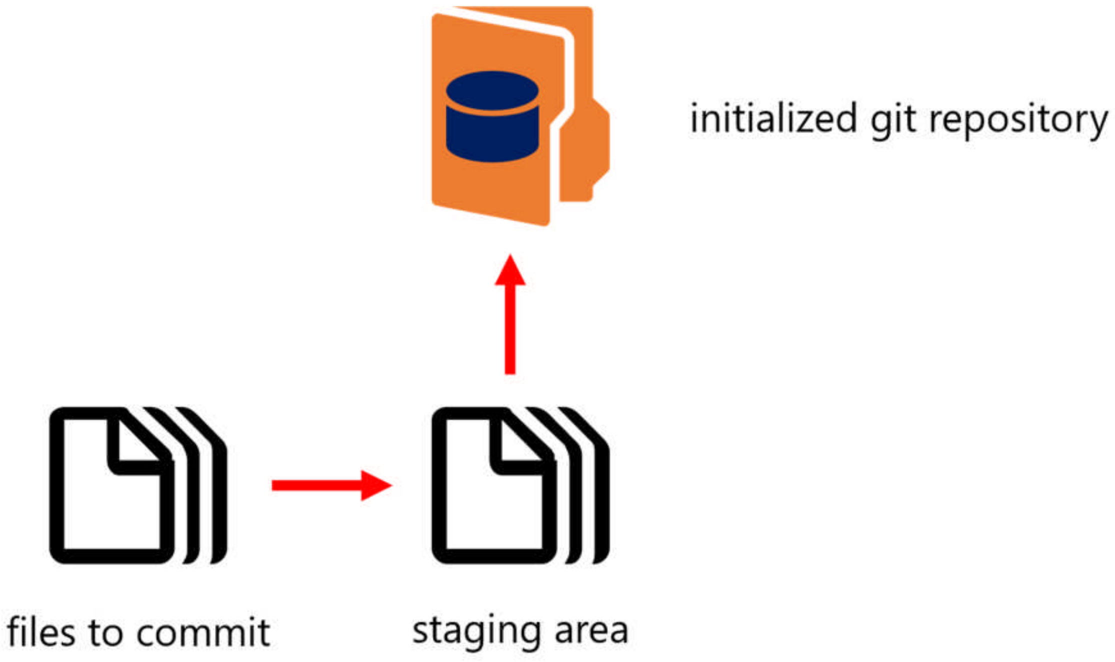
EDUNET FOUNDATION-Class Exercise Notebook

Lab 3 - GitHub Commands

With Git, you record local changes to your code using a *command-line* tool, called the "Git Shell" (you can use Git in other command-line tools — Refer to Git Shell through the following sections). Command-line lets you enter commands to view, change, and manage files and folders in a simple terminal, instead of using a graphical user interface (GUI). If you have not used command-line before, don't worry, once you get started, it is incredibly straightforward.



Essentially, when using Git, you make changes to your code files as you normally would during the development process. When you have completed a coding milestone, or want to snapshot certain changes, you add the files you changed to a staging area and then commit them to the version history of your project (repository) using Git. Below, you'll learn about the Git commands you use for those steps.

Terminal Commands

While using Git on the command line, chances are you will also use some basic terminal commands while going through your project and system files / folders, including:

- **pwd** - check where you are in the current file system
- **ls** - list files in the current directory (folder)
- **cd [directory-name]** - moves to the given directory name or path

- **mkdir [directory-name]** - makes a new directory with the given name

Creating Repositories

When you wish to utilize Git for a project, the first command you must do is *git init*, with the name of your project:

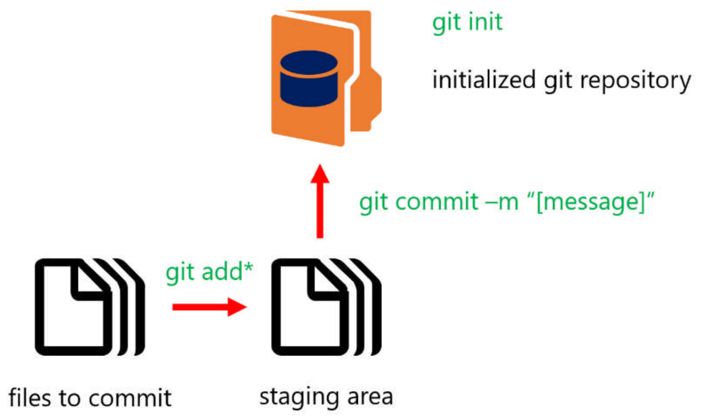
git init [project-name]

You run this command on the Git Shell command-line in the main *directory* (folder) of your project, which you can navigate to in the Shell using the commands listed above. Once you run this command, Git creates a hidden .git file inside the main directory of your project. This file tracks the version history of your project and is what turns the project into a Git *repository*, enabling you to run Git commands on it.

Making Changes

- **git add [file]** or **git add ***
  Once you make changes to your files and choose to snapshot them to your project's version history, you have to add them to the staging area with *git add*, by file name, or by including all of the files in your current folder using *git add **.
- **git commit -m "[message]"**
  To finally commit the changes, you made to your files from the staging area to your repository's version history, you need to run *git commit* with a descriptive message of what changes you made.
- **git status**
  If at any point, you wish to view a summary of the files you have changed and not yet committed, simply run git status in your project's repository on the Git Shell command-line.

How It Works



GitHub Workflow

Now, with the basic Git commands in place, you can utilize Git to snapshot the version history of your project. Simply initialize a new repository by running *git init* in your project's main directory. Using *git add **, or *git add* with specific file names, you add your changes to the staging area. Finally, using *git commit*, you can add your changes to the repository's version history.

1. Open Anaconda Command Prompt and install git library

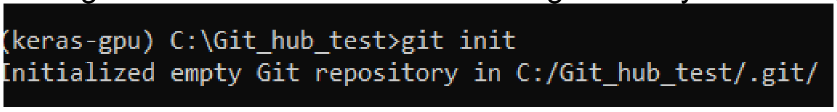
   pip install git

2. Create a directory with two random .txt files. Place any piece of text in those files.

Configure the access of github profile on local github library
   git config --global user.name username
   git config --global user.email useremail

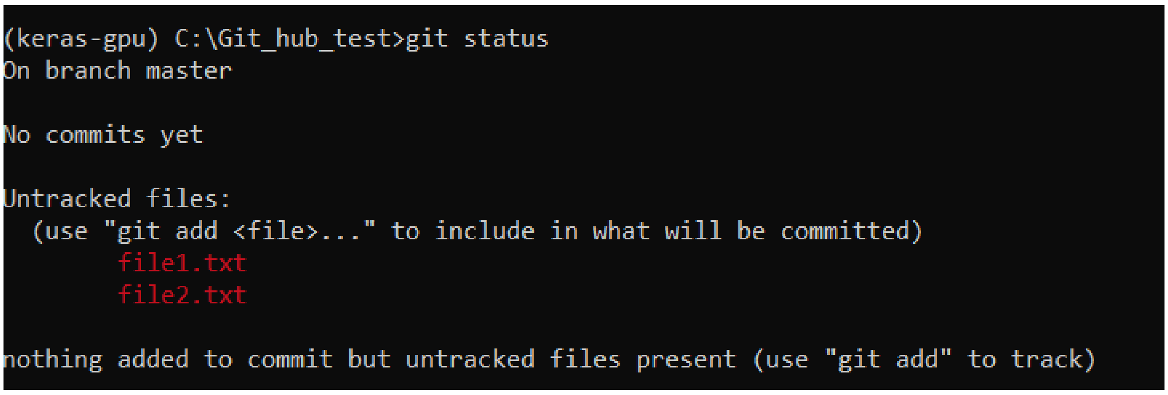
   ** Place your github login username and email information.

3. Change the folder to as current working directory. And run git init code



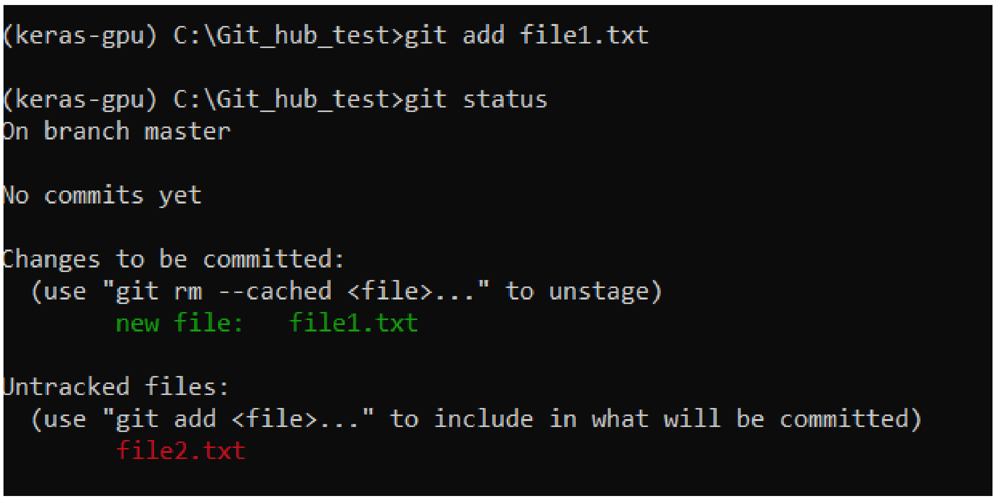
```
(keras-gpu) C:\Git_hub_test>git init
Initialized empty Git repository in C:/Git_hub_test/.git/
```

4. Git status shows files are untracked



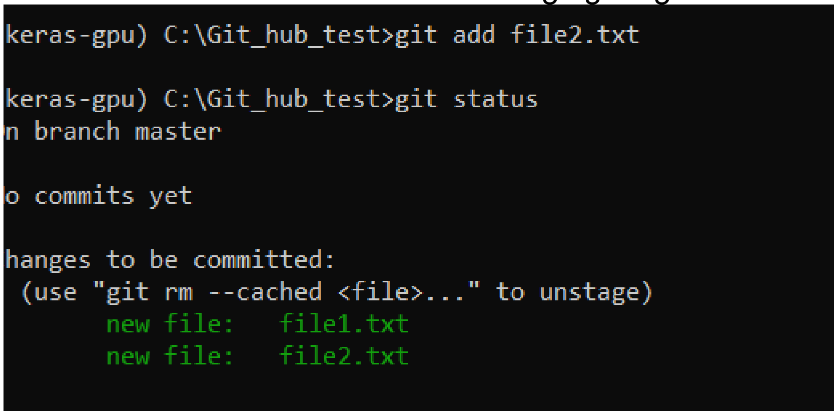
```
(keras-gpu) C:\Git_hub_test>git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        file1.txt
        file2.txt

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

5. Add file1.txt to stage and check git status



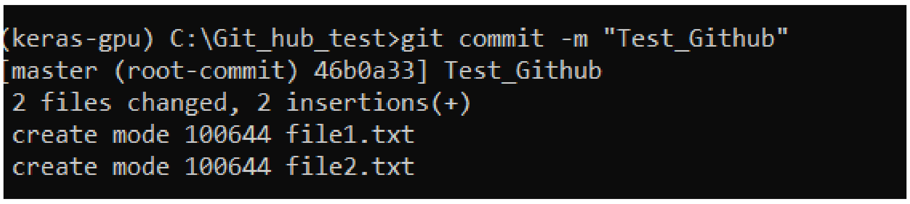
```
(keras-gpu) C:\Git_hub_test>git add file1.txt

(keras-gpu) C:\Git_hub_test>git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   file1.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        file2.txt
```

6. Now add another file2.txt to staging stage and check git status



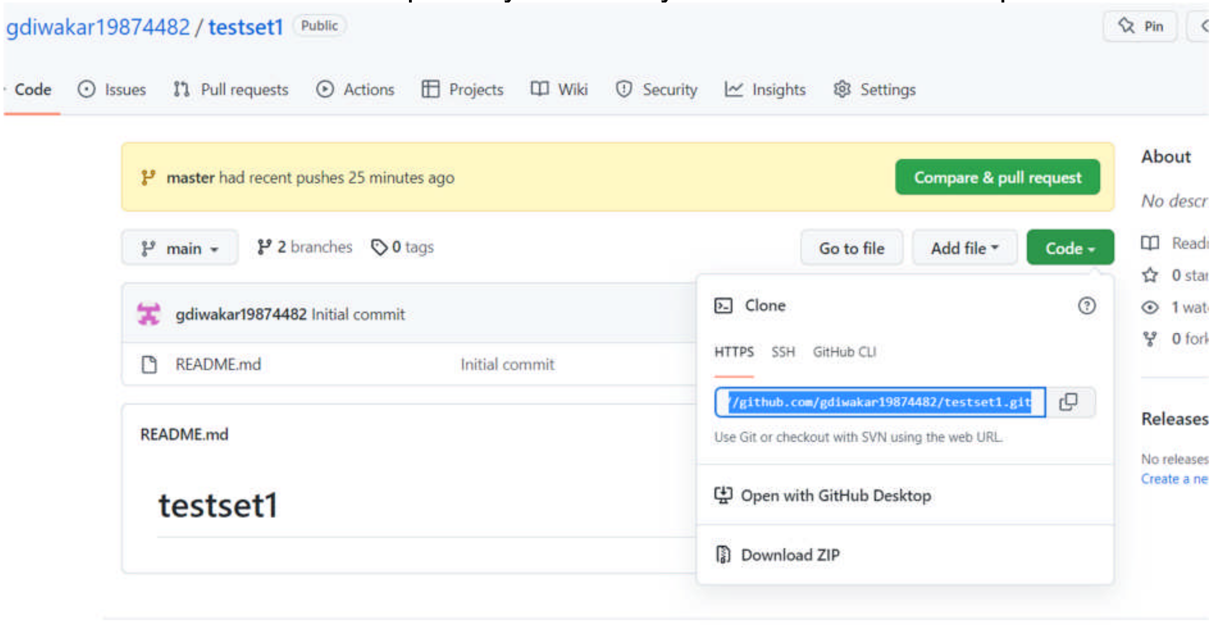
```
keras-gpu) C:\Git_hub_test>git add file2.txt

keras-gpu) C:\Git_hub_test>git status
n branch master

o commits yet

hanges to be committed:
 (use "git rm --cached <file>..." to unstage)
       new file:   file1.txt
       new file:   file2.txt
```

7. Commit the traced file using git commit command. You can also mention the commit message.



```
(keras-gpu) C:\Git_hub_test>git commit -m "Test_Github"
[master (root-commit) 46b0a33] Test_Github
 2 files changed, 2 insertions(+)
 create mode 100644 file1.txt
 create mode 100644 file2.txt
```

8. Add the address of repository to where you test files are to be uploaded.



master had recent pushes 25 minutes ago

gdiwakar19874482 Initial commit

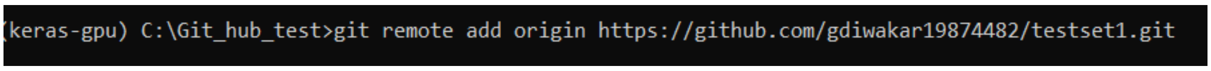
README.md Initial commit

README.md

testset1

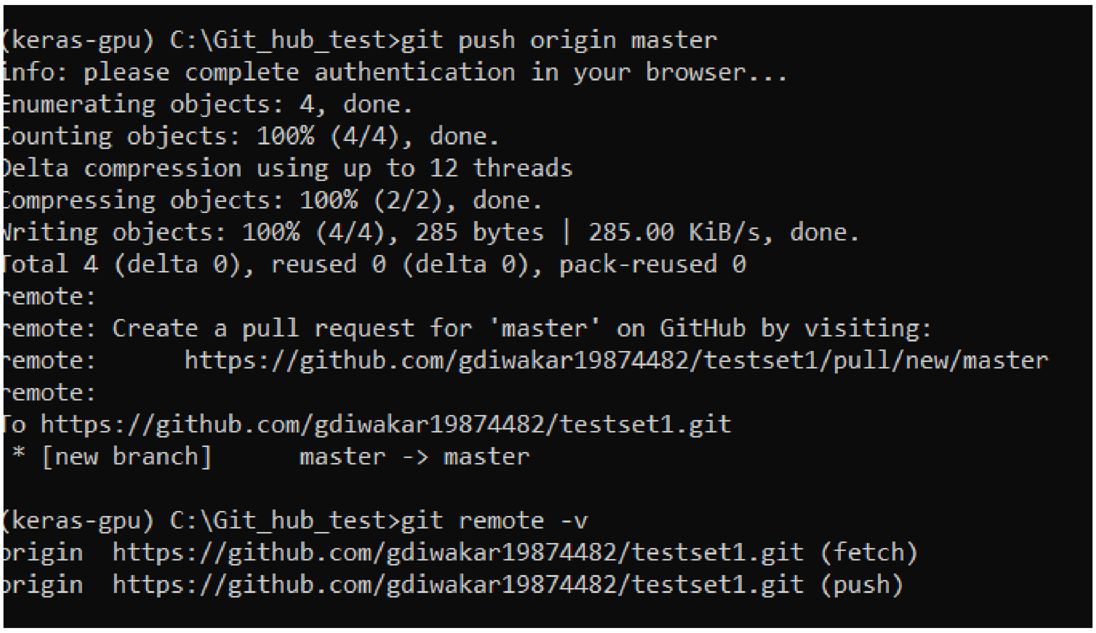
/github.com/gdiwakar19874482/testset1.git

Use Git or checkout with SVN using the web URL.



```
(keras-gpu) C:\Git_hub_test>git remote add origin https://github.com/gdiwakar19874482/testset1.git
```

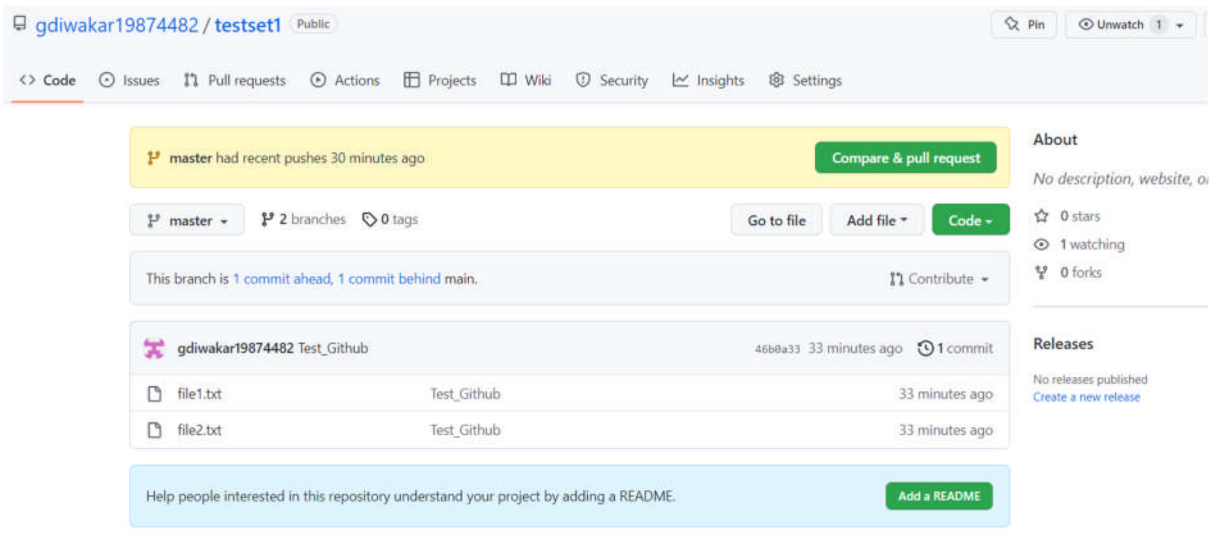
9. Upload your local repository to github using git push command



```
(keras-gpu) C:\Git_hub_test>git push origin master
info: please complete authentication in your browser...
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 285 bytes | 285.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'master' on GitHub by visiting:
remote:      https://github.com/gdiwakar19874482/testset1/pull/new/master
remote:
To https://github.com/gdiwakar19874482/testset1.git
 * [new branch]      master -> master

(keras-gpu) C:\Git_hub_test>git remote -v
origin  https://github.com/gdiwakar19874482/testset1.git (fetch)
origin  https://github.com/gdiwakar19874482/testset1.git (push)
```

**Note: GUI window will request for read/ write access.

10. You will observe and conclude that your local repository gets uploaded to github repository



gdiwakar19874482 / testset1 Public

master had recent pushes 30 minutes ago

This branch is 1 commit ahead, 1 commit behind main.

gdiwakar19874482 Test_Github 46b0a33 33 minutes ago 1 commit

file1.txt Test_Github 33 minutes ago

file2.txt Test_Github 33 minutes ago

Help people interested in this repository understand your project by adding a README.

About

No description, website, o

0 stars

1 watching

0 forks

Releases

No releases published

Create a new release