When I heard about Git, the first thing that came into my mind is that it is a short form of GitHub. Only after a bit of surfing in the internet I came to know about Git.

I would like to show to use Git. It is an open source distributed version control system. It contains the database of all the changes made and all the edits made to the project by different members. So, one of the most popular service provider of distributed version control system is GitHub. I will explain how to use the GitHub by using Git. One should have basic knowledge in how to use the command line.

Installing git is very easy process. If you are using Linux, you can install git with the help of command line. If you are using windows, you can go to <https://git-scm.com/> and download required files. You can download git bash where you can use the command line for the git.

To start with the Git, we need to initialize it. So, use this command to initialize it. Use the git bash to enter the command. You need to direct the terminal to your working folder.

git init

This will create a hidden folder with the name .git. you can see it if you change the view settings.

When you are working in a group project, others might commit some changes to the code. So, if you want to see who made what changes or if someone wants to see what changes you made you need to give some user name. so to do it, use command

git.config --global user.name “GIVE USER NAME HERE”

git.config --global user.email ”EMAIL HERE”

This way we can give our details do that others can know who made what changes.

To track all the changes we made to the code we can use

git status

This gives status of all the present files.

To keep track of all the projects, you need to add the files first to the staging area and then commit the changes you made.

To add the files to index and to commit use the following commands.

git add <file name>

git commit –m “commit you want to make”

This way we can make commits to keep track of all the changes by following all the commits. When you make a change to your code and save it, it will not be reflected to the staging area. This can be seen with the help of git status command. It shows all the files which are not added to the staging area. So add the files again and commit the changes you made. The commits you made need to be more specific and clear so that others can easily can understand all the changes you made.

git add . command adds all the files present in the folder to the staging area.

To see your history of all the changes you made to the code, you can see it by using the ‘git log’ command. This way you can keep track of all the changes made to the code.

We can create new files with the help of touch command

Touch <file\_name>

This will create the file in the present directory. Do not forget to add extension to the file name. If you want to create a python file add .py at the end. Git has a default file where you can list all the files and folders which you wouldn’t to list to the git. It is called .gitignore file. Create .gitignore file by using the command

touch.gitignore

Create the gitignore file and add all the files which you want git to ignore them. Add the .gitignore to the staging area and see the status.

To store your repository you must create an account to git service provider, in this case it is GitHub. Signup to the GitHub and create a new repository. Use

Git remote add origin [https://github.com/<user](https://github.com/%3cuser) name>/<repository name>

and git push –u origin master

Or you can this by going to the GitHub and creating a new repository. You can see the same instructions when you create a new repository. Push will send the content in the staging area to the online repository. Once you make any changes to the code you need to add the files to staging area commit them and push to the online server

If you want to pull your code to a different machine you can use

git pull [https://github.com/<user](https://github.com/%3cuser) name>/<repository name>

All the changes you made till now are happening locally and in your repository. What if you want to monitor a remote repository? You can clone other repositories and begin developing on it. You can clone by using

git clone<url>

You can get the url from the git service provider again in this case it is GitHub again. You can got to the GitHub and find the required repository there. If it is a public repository, you can get it normally. If is a private one you need to get the access to see the contents. Once you go to the remote repository you can see the clone/download button. You can get the repository url here.

The most important feature in the git is branching. To explain what is branching let’s assume that you are working on a very big project. You are not sure if the code will work properly or not. So, what you can do is to create a branch. You can work on your project in this branch and test all the features. We can upload all the change to the online repository. But the only thing is it will not be reflected to the master branch. So once you test your branch repository completely, you can merge it with the main branch. To create a branch

git branch <branch name>

You can create as many branches as you want. To see the list of all the available branches

git branch –list

The branch which is highlighted is the branch that you are working on presently. To change to another branch first you need to checkout of the present branch.

git checkout <present branch name>