



GITHUB TUTORIAL

A Visual Guide to Understanding Git & GitHub Commands

By Srestha Pragya Shrivastava

[HTTPS://GITHUB.COM/PRAGYA1403](https://github.com/PRAGYA1403)

Introduction to Git & GitHub

Git is a version control system to manage your code history.
GitHub is a hosting service for Git repositories.
They help in collaboration and version tracking

Basic Setup

Install Git and set your user details

Check git version in the git bash

```
git config --global user.name "Your Name"  
git config --global user.email "your@email.com"
```

```
sriva@LAPTOP-GUUF4D45 MINGW64 ~/Downloads/Wipro_Srestha_Pragya (master)  
$ git --version  
git version 2.38.1.windows.1  
  
sriva@LAPTOP-GUUF4D45 MINGW64 ~/Downloads/Wipro_Srestha_Pragya (master)  
$ git config --global user.name  
Srestha Pragya Shrivastava  
  
sriva@LAPTOP-GUUF4D45 MINGW64 ~/Downloads/Wipro_Srestha_Pragya (master)  
$ git config --global user.email  
srivastavapragya1403@gmail.com  
  
sriva@LAPTOP-GUUF4D45 MINGW64 ~/Downloads/Wipro_Srestha_Pragya (master)  
$
```

Create & Initialize a Repo

Start a new project or clone an existing one.



git init starts a new repo. git clone download an existing repo

```
git init
git clone <https url>
```

```
sriva@LAPTOP-GUUF6D45 MINGW64 ~/Downloads/Wipro_Srestha Pragma
$ git init
Initialized empty Git repository in C:/Users/sriva/Downloads/Wipro_Srestha Pragma/.git/
```

```
sriva@LAPTOP-GUUF6D45 MINGW64 ~/Downloads/Wipro_Srestha Pragma (master)
$ git clone https://github.com/PRAGYA1403/Wipro.git
Cloning into 'Wipro'...
remote: Enumerating objects: 40, done.
remote: Counting objects: 100% (40/40), done.
remote: Compressing objects: 100% (35/35), done.
remote: Total 40 (delta 9), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (40/40), 221.96 KiB | 1.25 MiB/s, done.
Resolving deltas: 100% (9/9), done.

sriva@LAPTOP-GUUF6D45 MINGW64 ~/Downloads/Wipro_Srestha Pragma (master)
$
```

Name	Date modified	Type	Size
▼ Today			
 file	08-04-2025 00:19	Text Document	1 KB
 Wipro	08-04-2025 00:42	File folder	

Stage & Commit

Add files to staging, commit with message. `git ls-files` used to see the staged files after adding and committing.

```
git add file
git commit -m " your message"
git ls-files
```

```
sriva@LAPTOP-GUUFGB45 MINGW64 ~/Downloads/Wipro_Srestha Pragya (master)
$ git add file1.txt

sriva@LAPTOP-GUUFGB45 MINGW64 ~/Downloads/Wipro_Srestha Pragya (master)
$ git commit -m "File Updated"
[master 72894ae] File Updated
1 file changed, 1 insertion(+)
 create mode 100644 file1.txt

sriva@LAPTOP-GUUFGB45 MINGW64 ~/Downloads/Wipro_Srestha Pragya (master)
$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    wipro/

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

sriva@LAPTOP-GUUFGB45 MINGW64 ~/Downloads/Wipro_Srestha Pragya (master)
$ git log
commit 72894aecaaff7680b3f31eae1190846f4af5356b (HEAD -> master)
Author: Srestha Pragya Shrivastava <srivastavapragya1403@gmail.com>
Date:   Tue Apr 8 19:28:26 2025 +0530

    File Updated

commit 94ea174a29011f89c1941cfda462a0af108d7803
Author: Srestha Pragya Shrivastava <srivastavapragya1403@gmail.com>
Date:   Tue Apr 8 00:19:57 2025 +0530

    File.txt is updated

sriva@LAPTOP-GUUFGB45 MINGW64 ~/Downloads/Wipro_Srestha Pragya (master)
$
```

```
sriva@LAPTOP-GUUFGB45 MINGW64 ~/Downloads/Wipro_Srestha Pragya (master)
$ git ls-files
file.txt
file1.txt

sriva@LAPTOP-GUUFGB45 MINGW64 ~/Downloads/Wipro_Srestha Pragya (master)
$
```

Status & Log

Check current repo status or view commit history.

```
git status  
git log
```

```
sriva@LAPTOP-GUUF4D45 MINGW64 ~/Downloads/Wipro_Srestha Pragma (master)  
$ git status  
On branch master  
Untracked files:  
  (use "git add <file>..." to include in what will be committed)  
    wipro/  
  
nothing added to commit but untracked files present (use "git add" to track)  
  
sriva@LAPTOP-GUUF4D45 MINGW64 ~/Downloads/Wipro_Srestha Pragma (master)  
$ git log  
commit 72894aecaaff7680b3f31eae1190846f4af5356b (HEAD -> master)  
Author: Srestha Pragma Shrivastava <srivastavapragya1403@gmail.com>  
Date:   Tue Apr 8 19:28:26 2025 +0530  
  
    File Updated  
  
commit 94ea174a29011f89c1941cfda462a0af108d7803  
Author: Srestha Pragma Shrivastava <srivastavapragya1403@gmail.com>  
Date:   Tue Apr 8 00:19:57 2025 +0530
```

Branching & Merging

Create, switch, merge and delete branch

This command will work only if we add and commit the files on both the branches

We use **cat** command to create a file then add and commit the file. After that we use merge command.

git branch new-branch
git branch [2 times tab]
git checkout new-branch
git merge branch-name
git branch -d branch-name

```
sriva@LAPTOP-GUUF4D5 MINGW64 ~/Downloads/Wipro_Pragya
$ git init
Initialized empty Git repository in C:/Users/sriva/Downloads/Wipro_Pragya/.git/

sriva@LAPTOP-GUUF4D5 MINGW64 ~/Downloads/Wipro_Pragya (master)
$ cat > file1.txt
Hello
sriva@LAPTOP-GUUF4D5 MINGW64 ~/Downloads/Wipro_Pragya (master)
$ git add file1.txt

sriva@LAPTOP-GUUF4D5 MINGW64 ~/Downloads/Wipro_Pragya (master)
$ git commit -m "File1.txt Updated"
[master (root-commit) 168041d] File1.txt Updated
1 file changed, 1 insertion(+)
create mode 100644 file1.txt

sriva@LAPTOP-GUUF4D5 MINGW64 ~/Downloads/Wipro_Pragya (master)
$ git branch wipro1

sriva@LAPTOP-GUUF4D5 MINGW64 ~/Downloads/Wipro_Pragya (master)
$ git branch
* master
  wipro1

sriva@LAPTOP-GUUF4D5 MINGW64 ~/Downloads/Wipro_Pragya (master)
$ git branch
HEAD    wipro1  master

sriva@LAPTOP-GUUF4D5 MINGW64 ~/Downloads/Wipro_Pragya (master)
$ git checkout wipro1
Switched to branch 'wipro1'

sriva@LAPTOP-GUUF4D5 MINGW64 ~/Downloads/Wipro_Pragya (wipro1)
$ cat > file1.txt
Pragya Shrivastava

sriva@LAPTOP-GUUF4D5 MINGW64 ~/Downloads/Wipro_Pragya (wipro1)
$ git add file1.txt
warning: in the working copy of 'file1.txt', LF will be replaced by CRLF the next time Git touches it

sriva@LAPTOP-GUUF4D5 MINGW64 ~/Downloads/Wipro_Pragya (wipro1)
$ git commit -m "File1.txt is Updated"
[wipro1 7bad2cf] File1.txt is Updated
1 file changed, 1 insertion(+)
create mode 100644 file1.txt
```

```
sriva@LAPTOP-GUUF4D5 MINGW64 ~/Downloads/Wipro_Pragya (wipro1)
$ git commit -m "File1.txt is Updated"
[wipro1 7bad2cf] File1.txt is Updated
1 file changed, 1 insertion(+)
create mode 100644 file1.txt

sriva@LAPTOP-GUUF4D5 MINGW64 ~/Downloads/Wipro_Pragya (wipro1)
$ git status
On branch wipro1
nothing to commit, working tree clean

sriva@LAPTOP-GUUF4D5 MINGW64 ~/Downloads/Wipro_Pragya (wipro1)
$ git log
commit 7bad2cfc3a172c904fd932de50cfe6c84bb1f58 (HEAD -> wipro1)
Author: Srestha Pragya Shrivastava <srivastavapragya1403@gmail.com>
Date: Tue Apr 8 21:15:44 2025 +0530

    File1.txt is Updated

commit 168041db5e817af0b49c811c78ab16e7ad4a06e3 (master)
Author: Srestha Pragya Shrivastava <srivastavapragya1403@gmail.com>
Date: Tue Apr 8 20:51:24 2025 +0530

    File1.txt Updated

sriva@LAPTOP-GUUF4D5 MINGW64 ~/Downloads/Wipro_Pragya (wipro1)
$ git checkout master
Switched to branch 'master'

sriva@LAPTOP-GUUF4D5 MINGW64 ~/Downloads/Wipro_Pragya (master)
$ git merge wipro1
Updating 168041d..7bad2cf
Fast-forward
 file1.txt | 1 +
1 file changed, 1 insertion(+)
create mode 100644 file1.txt
```