

GIT and GITHUB hands on

Install git bash

- **For windows**

<https://www.stanleyulili.com/git/how-to-install-git-bash-on-windows/>

- **For linux**

If you're on Fedora (or any closely-related RPM-based distribution, such as RHEL or CentOS), you can use `dnf`: `$ sudo dnf install git-all`

If you're on a Debian-based distribution, such as Ubuntu, try `apt`:
`$ sudo apt install git-all`

- **For mac**

Check the instructions here: <https://git-scm.com/download/mac>

Create a github account

if you dont have a github account, create one at <https://github.com/>

Fork a repository to contribute of exsisting repository:

<https://docs.github.com/en/github/getting-started-with-github/fork-a-repo>

Clone a repository to work locally on existing repository:

```
$ git clone <url of the repo>
```

Tell git you exist:

configure your name and email.

```
$ git config --global user.name 'My_Name'
```

```
$ git config --global user.email 'myEmail@wherever.com'
```

Create a repositroy locally

1. Create a directory to contain your project:

```
$ mkdir <directory name>
```

2. Go into the new directory.

```
$ cd <directory name>
```

3. Type `$ git init`

4. Write some code for example:

```
$ gedit hello.py
```

5. Check you should have now hello.py file inside your directory

```
$ ll
```

6. `$ git status`

you will see hello.py file is not yet tracked by git.

7. Track file of repository

```
$ git add <file name>
```

or to add all the file of the directory use: `$ git add *`

8. To commit the changes use `$ git commit`, you can add comment on the commit like

```
$ git commit -m"initial commit hellow world added"
```

Connect local repo to github

- Go to github.
- Log in to your account.
- Click the new repository button in the top-right. You'll have an option there to initialize the repository with a README file.
- Click the "Create repository" button.

Push local repository to github

```
$ git remote add origin https://github.com/username/reponame.git
```

```
$ git remove -v
```

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

Creating Branch

check the the branch you are on, usually shows master

```
$ git branch
```

create a branch

```
$ git branch new_branch
```

now if you do git branch it should show two branches

Change to different branch

```
$ git checkout <branch name>
```

from any branch you can push new files and changes just you have change the following command like: `$ git push -u origin <branch name>`

Contribute to someone else's repository

- Go to the repository on github. (Say it's by myfriend, and is called the_repo, then you'll find it at https://github.com/myfriend/the_repo.)
- Click the "Fork" button at the top right.
- You'll now have your own copy of that repository in your github account.
- Open a terminal/shell.
- Type

```
$ git clone https://github.com/username/the_repo
```

where username is *your* username.

- You'll now have a local copy of *your version* of that repository.
- Change into that project directory (the_repo):

```
$ cd the_repo
```

- Add a connection to the original owner's repository.

```
$ git remote add myfriend git://github.com/myfriend/the_repo
```

Rest of the things works as it is for local repo.

For pull request: After pushing the changes you will see merge and compare option on github, there on left side there is a option for pull request.