
A MINI TUTORIAL

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September 7, 2016

Configure the User Settings

1. The commands that are used to configure

- System wide configuration

```
git config --system
```

- User based configuration

```
git config --global
```

- Project based configuration

```
git config
```

2. The variables that we can configure are

- User name

```
git config --global user.name "Your name"
```

- User email address

```
git config --global user.email "Your email address"
```

- Custom editor

```
git config --global core.editor "Editor"
```

- Git bash colored user interface

```
git config --global color.ui true
```

3. To view the configurations

```
git config --list
```

Create Repository w/o Github

1. If you want to start off with the project without creating a repository on Github then create the directory called “xyz” where you want to start the project and then use git bash to navigate to the folder and once in there use the command

```
git init
```

This command will start tracking any changes that are made in the “xyz” folder from here on.

Create Repository on Github

1. Go to <https://github.com/> and create a repository “xyz”.
2. Once created click on clone or download button and get a url link to the project which will look like <https://github.com/yourname/xyz.git>.
3. Open the github bash in folder where you want the project and use the following command to clone the project.

```
git clone https://github.com/yourname/xyz.git
```

4. This will create a folder called “xyz” in the directory you used the command.

Making commits

1. To add all the changes to the “staged” index use the command

```
git add .
```

2. To commit the changes to the same “branch”

```
git commit -m "Write down the message about the commit"
```

3. To remove a deleted file (working directory) from the repository

```
git rm file_name
```

4. To move or rename a file

```
git mv firstname secondname
```

5. To add and commit at the same time

```
git commit -am "write the message here"
```

Viewing commits and logs

1. To view commits made so far

```
git log
```

2. To view past 3 commits

```
git log -n 3
```

3. We can use time filter to view the commits

```
git log --since=2016-09-15 --until=2016-09-22
```

4. We can use author filter to view the commits

```
git log --author="Aditya"
```

The author can be matched on partial string but is case sensitive

5. To filter by words in the commit message

```
git log --grep="regex"
```

6. To check the commits from "HEAD" going backwards.

```
git log HEAD
```

Managing repositories

1. To check the status of the current branch

```
git status
```

It gives the difference between the working directory, staging index and git repository.

2. To see the differences between the repository and working directory, file by file

```
git diff filename<optional>
```

3. To view the differences between the git repository and staging index, file by file

```
git diff --staged
```

4. To view changes side by side

```
git diff --color-words filename
```

5. Undo changes in the working directory

```
git checkout
```

This will checkout the the files from the repository to the working directory.