An Introduction to Git

The Invisible College

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Figure 1: Argentinean pop/rock band GIT was formed in the early-'80s

> Git is a distributed revision control system with an emphasis on speed, data integrity, and support for distributed, non-linear workflows. Git was initially designed and developed by Linus Torvalds for Linux kernel development in 2005, and has since become one of the most widely adopted version control systems for software development.

Please note the below assume you are using a Terminal shell in Linux or OSX operating system. If you are using Windows you will use "dir" instead of "ls" to list files using Command Terminal. Also note the slashes are different for writing file paths. Linux and OSX use forward slash / while Windows uses back slash \.

Tell Git Who You Are

```
$ git config --global user.name "Dr Doeg"
$ git config --global user.email doeg@example.com
```

Tag your commits with name and email.

Setting Up a Local Git Repository

```
$ cd path/to/project/folder
$ git init
```

Using the command line navigate to the project folder and initialize a git repository.

```
$ git add .
OR...
$ git add file2.jpg
```

Add all the files in the folder to the stage.

Or add files individually.

```
git commit -m "comment on the file changes"
```

Commit the additions.

PUSH YOUR LOCAL REPOSITORY TO GITHUB

```
$ git remote add origin https://github.com/...
   YourAccount/WhatYouNamedTheRepo.git
$ git remote -v
```

Setup the remote repository location on GitHub using your account.

```
$ git push origin master
```

Push the committed structure to the remote server.

CLONING AN EXISTING REPOSITORY FROM GITHUB

```
$ cd path/to/whereUwant/folder
```

Navigate to the desired location in file structure.

```
$ git clone https://github.com/YOUR-USERNAME/YOUR-REPOSITORY
```

Set the location on the GitHub server to place the repositiory.

UPDATING AN EXISTING REPOSITORY FROM GITHUB

```
$ git pull -u origin master
```

Update the current project folder from the GitHub remote server.

GET GIT TO TELL YOU WHERE IT'S AT

```
$ git status
```

Get information on the git repository.

GET GIT AND GITHUB

https://git-scm.com/downloads
https://github.com/

Download git and register an account at GitHub.

MORE ON GIT

https://git-scm.com/book/en/v2

Look at the official documentation for more information.