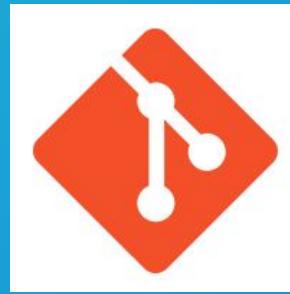


Git & GitHub





Hello!

I am Aashna Naushad

Github id: aashnanaushad

Download a code editor

Visual Studio Code :

<https://code.visualstudio.com/download>

Alternatives:

- Sublime text
- Notepad++
- VIM ,etc

Version Control System

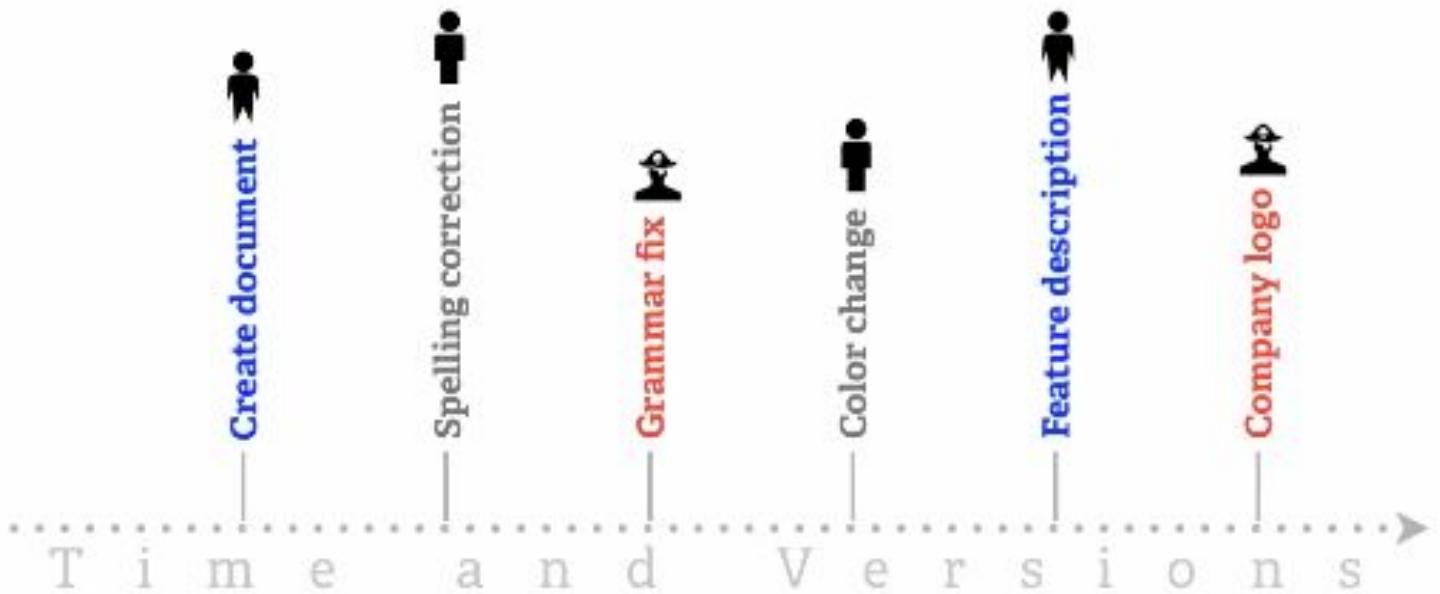
Created by Linus Torvalds, creator of Linux, in 2005

- Create
- Save
- Edit
- **Save again**

Providing clarity on:

- Who did the modification?
- When was the change done?
- Why was the change done?
- What are the contents of modification ?

Collaborative History Tracking



GIT

Why GIT is a good implementation of Version Control?

- GIT is fast and modern implementation of Version Control
- GIT provides a history of content change
- GIT facilitates collaborative changes to files
- GIT is easy to use

More About GIT

Created by Linus Torvalds, creator of Linux, in 2005

- Came out of Linux development community
- Designed to do version control on Linux kernel

Goals of Git:

- Speed
- Support for non-linear development (thousands of parallel branches)
- Fully distributed
- Able to handle large projects efficiently

GitHub

GitHub.com is a site for online storage of Git repositories.

- You can create a **remote repo** there and push code to it.
- Many open source projects use it, such as the Linux kernel.
- You can get free space for open source projects, or you can pay for private projects.
 - Free private repos for educational use: <https://education.github.com/>

Version Control System

A category of software tools that helps record changes to files by keeping a track of modifications done to the code

Repository

A directory or storage space where your projects can live

Terminologies

Git

It is a free and open source distributed version control system designed to handle everything from small to very large projects with speed and efficiency

Remote

A common repository that all team members use to exchange their changes

GitHub

It is an American multinational corporation that provides hosting for software development and version control using Git

Branch

A branch is a version of the repository that diverges from the main working project

Step 0

Install git and create a github account

Download a GIT installer

<https://git-scm.com/downloads>

Creating Github Account

1. Goto <https://github.com/>
2. Sign up
3. Login

Step 1

Configuring git

Configure your Username and Email

- `git config --global user.name "username"`
- `git config --global user.email eg-mail@gmail.com`

Step 2

Creating a local git repository

- `git init` //initializing a repository with .git file.
-

Step 3

Add a new file to the repo

Step 4

Check out git status

- `git status` //displays the state of the working directory and the staging area.

Step 5

Adding this file to staging environment

- **git add .** // to add all files
- **git add <file_path>** // to add specified file

Step 6

Committing the changes

- **git commit -m “commit_message”**
- Commit messages
 - Tell what it does (present tense)
 - Short and crisp
 - Issue or bug number helps

Step 7

Create a new branch

- **git branch <branch_name>** // creates new branch
- **git checkout <branch_name>** // change working to new branch
- **git checkout -b <branch_name>** // shorthand for above 2 commands

Step 8

Create a new repo in github

Adding a Remote

- `git remote add <name> <git-url>`

List out all the remotes:

- `git remote -v`

Fetching update:

- `git fetch <remote-name>` //does not merge with current changes

Step 9

Push a branch to github

- git push <remote> <branch>

Updating with the latest in git

- git pull
- git pull <remote> <branch>

Working with Existing Repo

Cloning a Repository

- `git clone <clone_url>`
- `git clone -b <branchname> <clone_url>`

Fork a Repository

- Navigate to the repository you wish to fork
- Click on Fork

Creating a Pull Request(PR)

- Go to the latest updated branch
- Click compare and pull request option

GIT documentation

<https://git-scm.com/docs>

PS: Student education pack: [**https://git-scm.com/docs**](https://git-scm.com/docs)



Big concept

Keep doing... You will get the flow... As it is always said
“PRACTICE makes a man PERFECT”



Thanks!

Any questions?

You can mail me at aashnanaushad@gmail.com