Series: Web Application Dev in 5 days

September, 2022

Lesson 0: Git Basics

Code version control using Git (etechdev-precourse, 15-30 mins)

Activities

- Creating an account on github.com
- Create a personal access token
- Create your first repository
- Cloning your repository locally
- Pushing a new file

Resources

- Resources to learn Git
- About READMEs
- How to write a Git Commit Message

Resources for advanced tasks (Read only after finishing the mandatory tasks):

- Learn Branching in Git
- Effective pull requests and other practices for teams using GitHub

Learning Objectives

At the end of this project, you are expected to be able to explain to anyone, without the help of Google.

Generally:

- What is source code management
- What is Git
- What is GitHub
- What is the difference between Git and GitHub
- How to create a repository
- What is a README
- How to write good READMEs
- How to commit
- How to write helpful commit messages
- How to push code
- How to pull updates
- How to create a branch
- How to merge branches
- How to work as collaborators on a project
- Which files should and which files should not appear in your repo

Learning Objectives

Requirements:

- A README.md file at the root of the etechdev-precourse repo, containing a description of the repository.
- A README.md file, at the root of the folder of this project (i.e. 0x01-git), describing what this project is about.
- **Do not use GitHub's web UI**, but the command line to perform the exercise (except for operations that can not possibly be done any other way than through the web UI). You won't be able to perform many of the task requirements on the web UI, and you should start getting used to the command line for simple tasks because many complex tasks can only be done via the command line.
- Your answer files should only contain the command, and nothing else

Basic usage

At the end of this project you should be able to reproduce and understand these command lines:

```
$ git clone <repo>
$ touch test
$ git add test
$ git commit -m "Initial commit"
$ git push origin main
```

Tools

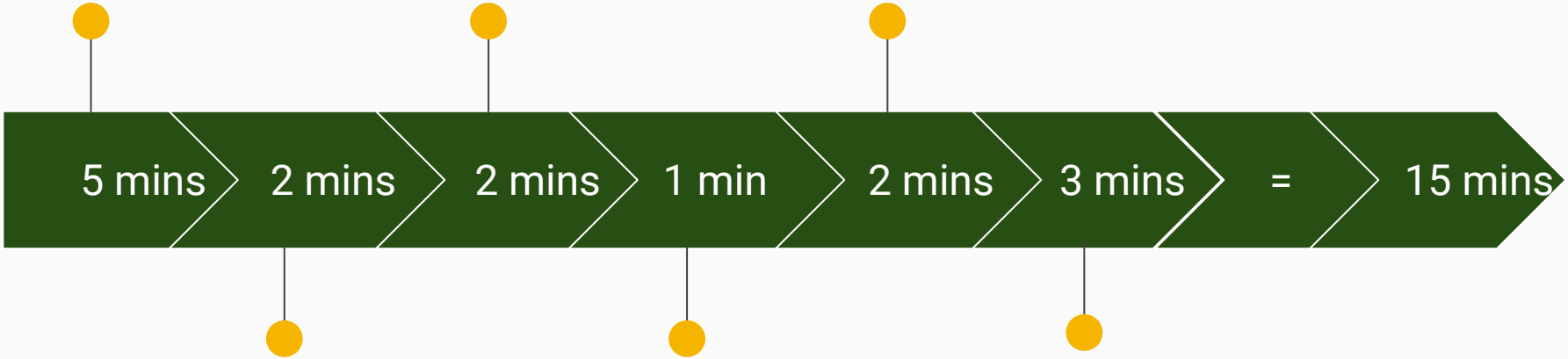
- GitHub Account
- Visual Studio Code or PyCharm
- Terminal

Procedure

Step 0:- Create an account on GitHub [if you do not have one already]

Step 2:- Create your first repository

Step 4:- Clone your repository



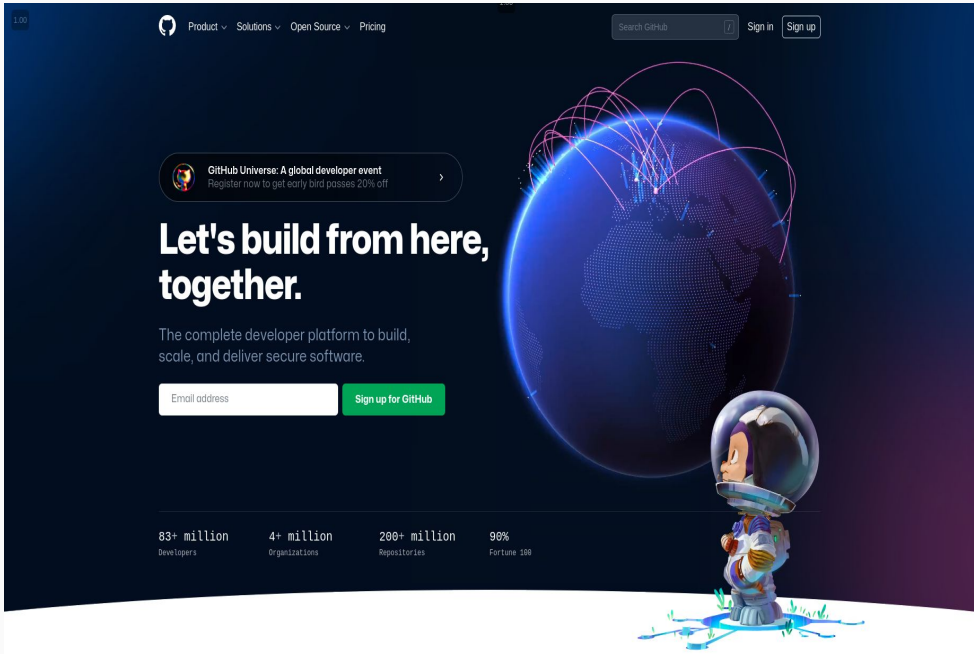
Step 1:- Create a Personal Access Token on Github

Step 3:- Open the terminal on your OS

Step 5:- Create the README.md and push the modifications

Step 0 - Create an account on GitHub [if you do not have one already] (5 mins)

You will need a GitHub account for all your projects at EtechDev. If you do not already have a github.com account, you can create an account for free here www.github.com

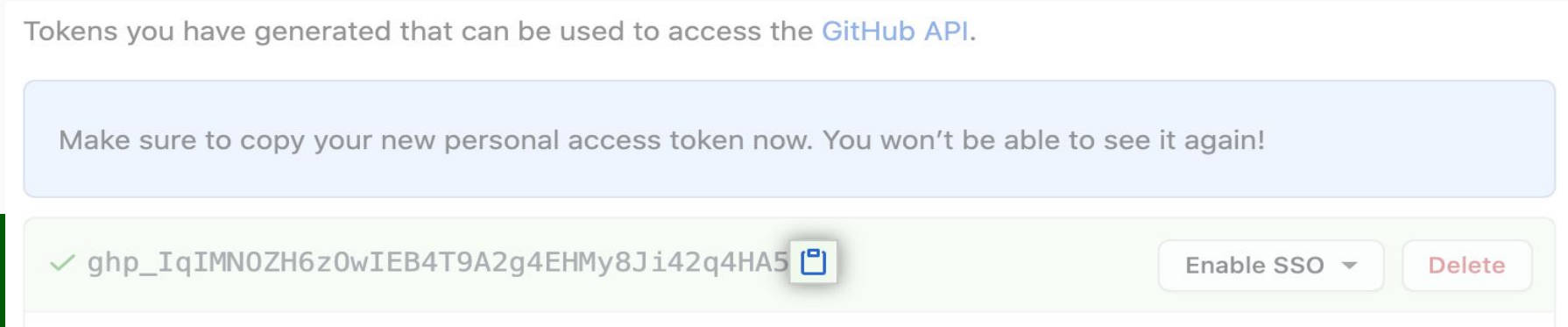


Step 1 - Create a Personal Access Token on Github

To have access to your repositories and authenticate yourself, you need to create a Personal Access Token on Github.

You can follow this tutorial to create a token.

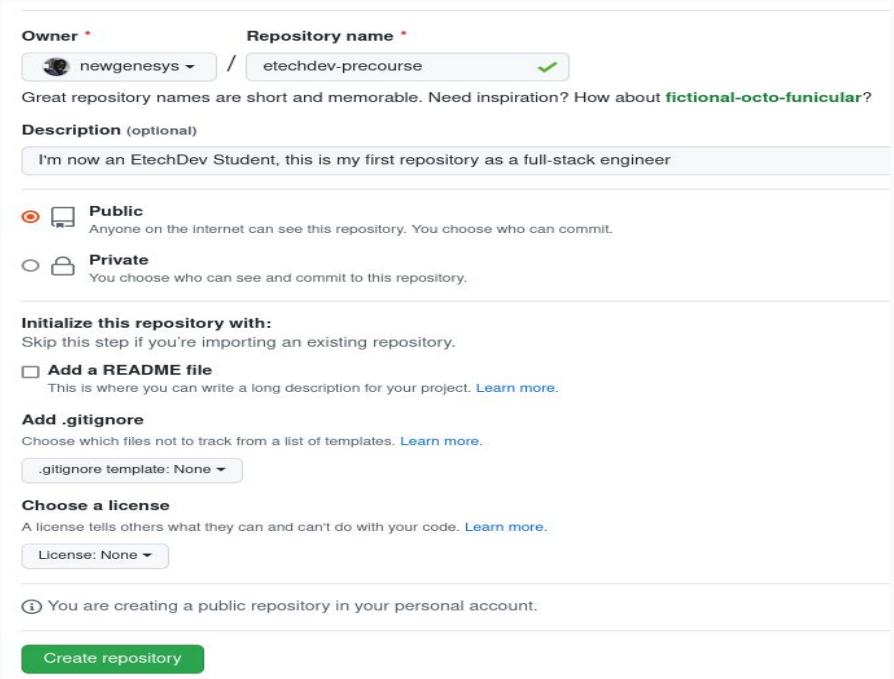
Once it's created, you should have a token that looks like this:



Step 2 - Create your first repository

Using the graphic interface on the [github website](), create your first repository.

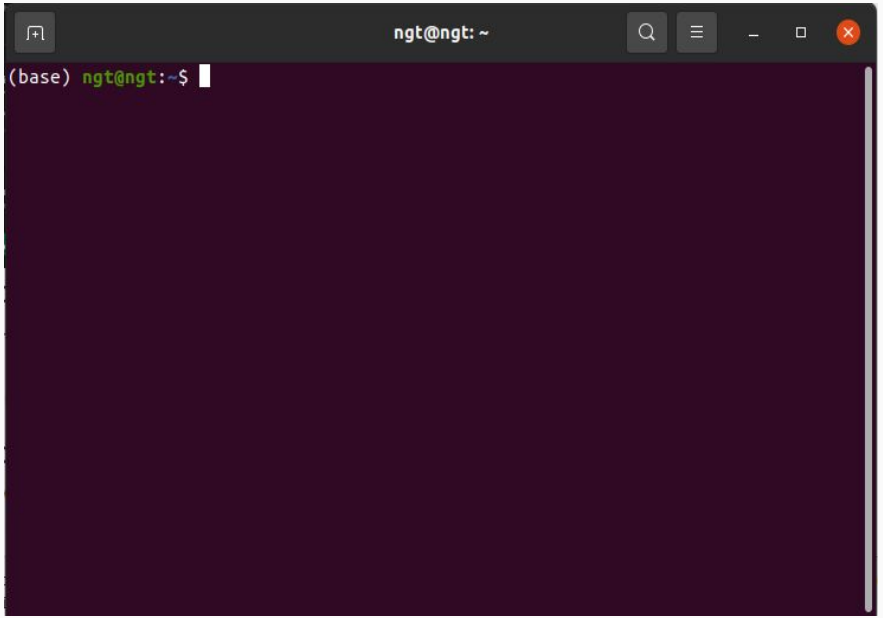
- **Name:** etechdev-precourse
- **Description:** I'm now an EtechDev Student, this is my first repository as a full-stack engineer
- Public repo
- **No** README, .gitignore, or license



Step 3 - Open the terminal

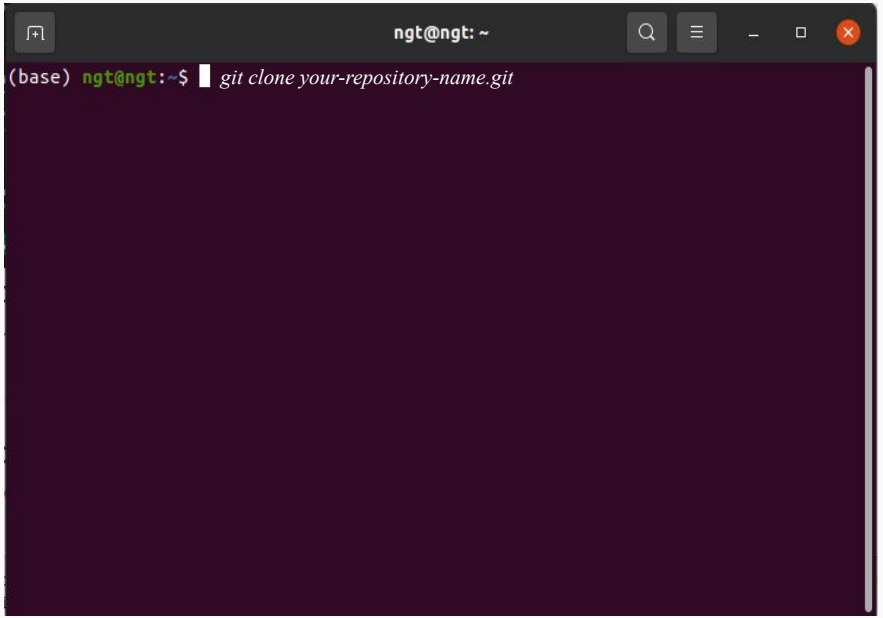
- On Ubuntu, press Ctrl+Alt+T to open the terminal (shell).
- This opens the shell where you can type commands.
- Ensure git is installed if not run the command

    - *sudo apt install git*



Step 4 - Clone your repository

- On the terminal window of the Ubuntu, do the following:
  - Ensure your terminal is in your home directory
    - Use *cd* command to move
  - Clone your repository
    - *git clone your-repository-name.git*
  - You will be asked to enter your git credentials (your username and password)



Step 6 - Create the README.md and push the modifications

- Inside the etechdev-precourse directory
- Create the directory 0x01/ using the mkdir command
  - *mkdir 0x01-git*
- cd into the 0x01-git directory
  - *cd 0x01-git*
- create a README.md file with the content “My First readme” using the following command
  - *echo 'My first readme' > README.md*
  - *cat README.md*
- Update your git identity
  - *git config --global user.email "you@example.com"*
  - *git config --global user.name "Your Name"*
- Add this new file to git, commit the change with this message “My first commit” and push to the remote server / origin
  - *git add .*
  - *git commit -m “My first commit”*
  - *git push*

Checkpoint - repo session

- Created a new directory called 0x01-git in your etechdev-precourse repo.
- Make sure you include a non empty README.md in your directory:
  - at the root of your repository etech-precourse
  - AND in the directory 0x01-git
- **An important part:** Make sure you commit and push your code to Github

- etechdev-precourse/
  - 0x01-git/
  - README.md

Congratulations!

Good job!

You pushed your first file in your first repository of the first task of your first EtechDev project.

You can now check your repository on GitHub to see if everything is good.