



# Connect a GitHub Repo with AWS

C Chess

```
git-core-doc-2.40.1-1.amzn2023.0.3.noarch
perl-Error-1:0.17029-5.amzn2023.0.2.noarch
perl-File-Find-1.37-477.amzn2023.0.6.noarch
perl-Git-2.40.1-1.amzn2023.0.3.noarch
perl-TermReadKey-2.38-9.amzn2023.0.2.x86_64
perl-lib-0.65-477.amzn2023.0.6.x86_64

Complete!
● [ec2-user@ip-172-31-3-88 nextwork-web-project]$ git --version

git version 2.40.1
○ [ec2-user@ip-172-31-3-88 nextwork-web-project]$ █
```



# Introducing Today's Project!

## What is GitHub?

Github provides a space where we can store code on cloud. I created a repo and then push the code from my ec2 instance using https authentication using Personal Access Token instead of password.

## One thing I didn't expect...

That it would be this exciting

## This project took me...

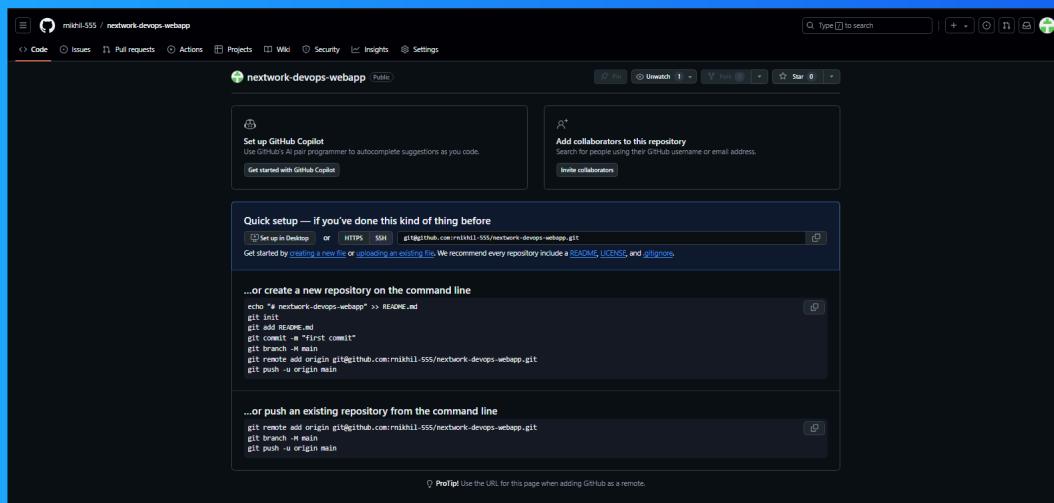
around 45 min



# Git and GitHub

Git is a version control system since it tracks our changes by taking snapshots of what our files look like at specific moments, and each snapshot is considered a 'version'. I installed Git using the commands "sudo dnf update -y sudo dnf install git"

GitHub makes collaboration, security, and access control much easier. I'm using GitHub in this project to because it helps us use Git and view our file changes in a more user-friendly way.





# My local repository

A Git repository is space on cloud where we can store our code using Git

git init is a command that sets up the directory as a local Git repository which means changes are now tracked for version control. I ran git init in this folder "nextwork-web-project".

After running git init, the response from the terminal was bunch of yellow text suggesting naming our main branch master or any other name of our choice. A branch in Git is parallel versions or 'alternate universes' of the same project

```
[ec2-user@ip-172-31-3-88 nextwork-web-project]$ git init
hint: Using 'master' as the name for the initial branch. This default branch name
hint: is subject to change. To configure the initial branch name to use in all
hint: of your new repositories, which will suppress this warning, call:
hint:
hint:   git config --global init.defaultBranch <name>
hint:
hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and
hint: 'development'. The just-created branch can be renamed via this command:
hint:
hint:   git branch -m <name>
Initialized empty Git repository in /home/ec2-user/nextwork-web-project/.git/
[ec2-user@ip-172-31-3-88 nextwork-web-project]$
```



# To push local changes to GitHub, I ran three commands

## git add

The first command I ran was "git remote add origin git@github.com:rnikhil-555/nextwork-devops-webapp.git" then "git add ." and finally "git commit"

## git commit

The second command I ran was git commit -m "Updated index.jsp with new content". Using '-m' flag lets us leave a message describing what the commit is about.

## git push

The third command I ran was "git push -u origin master ". By using -u we're setting an 'upstream' for our local branch, which means we're telling Git to remember to push to master by default.



# Authentication

When I commit changes to GitHub, Git asks for my credentials because it needs to double check that we have the right to push any changes to the remote origin our local repo is connected with.

## Local Git identity

Git needs my name and email because it needs to track who made what change in the repository.

Running git log showed me the history of commits along with the author name

```
[ec2-user@ip-172-31-3-88 nextwork-web-project]$ git log
commit 792fdcf2419e2691721e3e5f2be8bce93837c1d3 (HEAD -> master, origin/master)
Author: EC2 Default User <ec2-user@ip-172-31-3-88.ap-south-1.compute.internal>
Date:  Mon Oct 28 14:24:29 2024 +0000

    Updated index.jsp with new content
[ec2-user@ip-172-31-3-88 nextwork-web-project]$ []
```

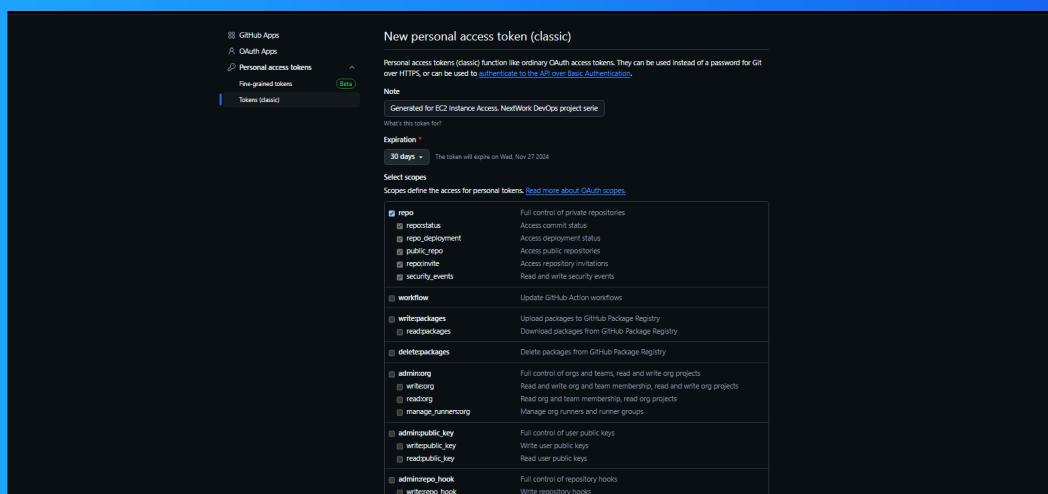


# GitHub tokens

GitHub authentication failed when I entered my password because there are too many security risks and passwords can get intercepted over the internet

A GitHub token is a unique string of characters that looks like a random password. I'm using one in this project because GitHub phased out password authentication to connect with repositories over HTTPS

I could set up a GitHub token by going to settings, developer settings then personal Acces token (classic) and then create the token





# Making changes again

I wanted to see Git working in action, so I updated index.jsp. I couldn't see the changes in my GitHub repo initially because i haven't committed and push the code

I finally saw the changes in my GitHub repo after pushing the code

```
1 <html>
2
3 <body>
4
5 <h2>Hello Nikhill!</h2>
6
7 <p>If you see this line in Github, that means your latest changes are getting pushed to your cloud repo :o</p>
8
9
10
11 </body>
12
13 </html>
```



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