



NextWork.org

Connect a GitHub Repo with AWS



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```
● [ec2-user@ip-172-31-46-57 nextwork-web-project]$ git --version
git version 2.40.1
```

Introducing Today's Project!

What is GitHub?

GitHub is a platform for storing, sharing, and collaborating on code projects, using Git for version control to track changes and manage contributions. Today I used it for saving changes remotely in the GitHub repo.

One thing I didn't expect...

One thing I didnt expect was you cant log in into the remote GitHub repository through Git with the password, you have to use a token.

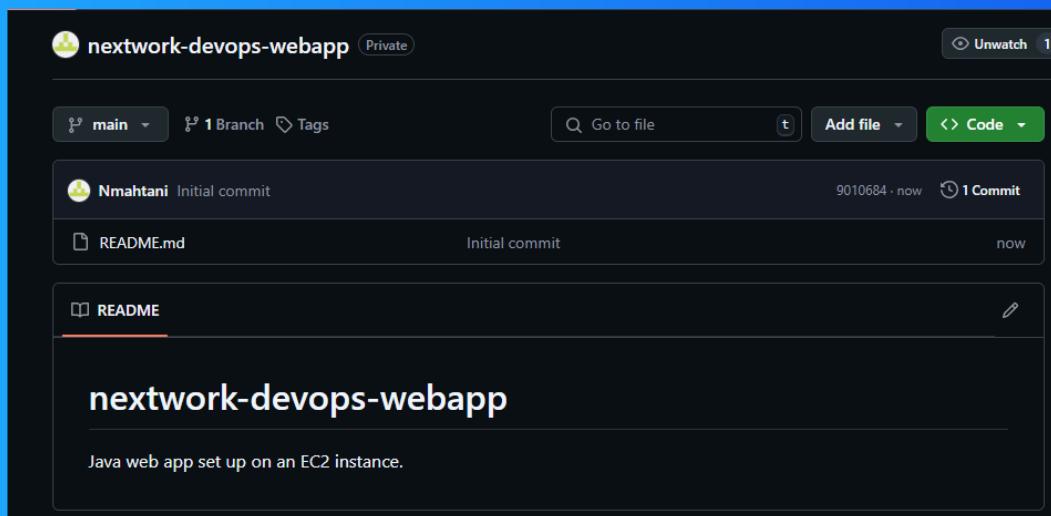
This project took me...

I took around 2 hours with this project.

Git and GitHub

Git is like a time machine and filing system for your code. It tracks every change you make which lets you go back to earlier version of your work if something breaks. I installed Git using the commands "sudo dnf update -y" "sudo dnf install git -y".

GitHub is a place for people to store and share their code and projects online. I'm using GitHub in this project to use Git and see my file changes in a more user-friendly way.



My local repository

A Git repository is a folder that contains all the project files and their entire version history.

git init is a command that creates a local repository in my computer. I ran git init in my directory to create a local repository so any changes it is only visible to me.

After running git init, the response from the terminal was that it created a Git empty repository in my working directory.

```
● [ec2-user@ip-172-31-46-57 nextwork-web-project]$ pwd  
/home/ec2-user/nextwork-web-project  
● [ec2-user@ip-172-31-46-57 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-172-31-46-57 nextwork-web-project]$ █
```

To push local changes to GitHub, I ran three commands

git add

The first command I ran was to stage all the files to be committed in the next step. A staging area is when you set aside for review the changes in your files.

git commit

The second command I ran was to commit the changes in my local repository. Using "-m" means that you are attaching a message to it describing the changes made in the commit.

git push

The third command I ran was to push or save the changes in my GitHub repo. Using "-u" means that next time I don't have to indicate the branch to push into. In this case is master branch.

Authentication

When I commit changes to GitHub, Git asks for my credentials because its a security procedure for access.

Local Git identity

Git needs my name and email because Git wants to track who made what change.

Running git log showed me the history of commits and the author.

```
● [ec2-user@ip-172-31-46-57 nextwork-web-project]$ git log
commit fbf58ceec35a1f2ae73a03199f0b4e188a06a9e5 (HEAD -> master, origin/master)
Author: EC2 Default User <ec2-user@ip-172-31-46-57.eu-west-3.compute.internal>
Date:   Mon Nov 4 19:59:55 2024 +0000

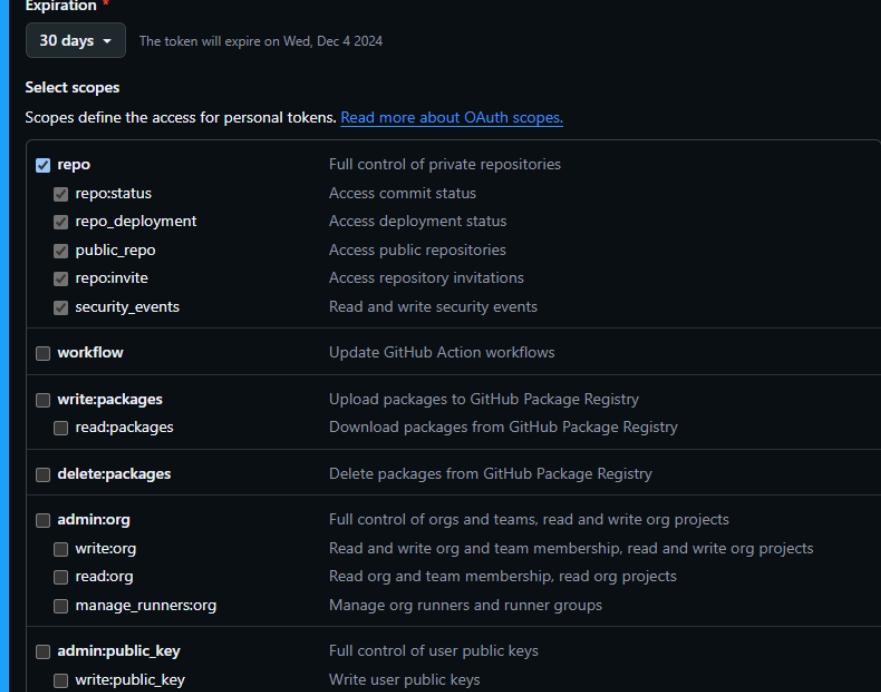
    Updated index.jsp with new content
○ [ec2-user@ip-172-31-46-57 nextwork-web-project]$ █
```

GitHub tokens

GitHub authentication failed when I entered my password because it is phased out password authentication to connect with repositories over HTTPS.

A GitHub token is a unique string of characters that looks like a random password. I'm using one in this project because is a more secure method for logging in and interacting with my repos.

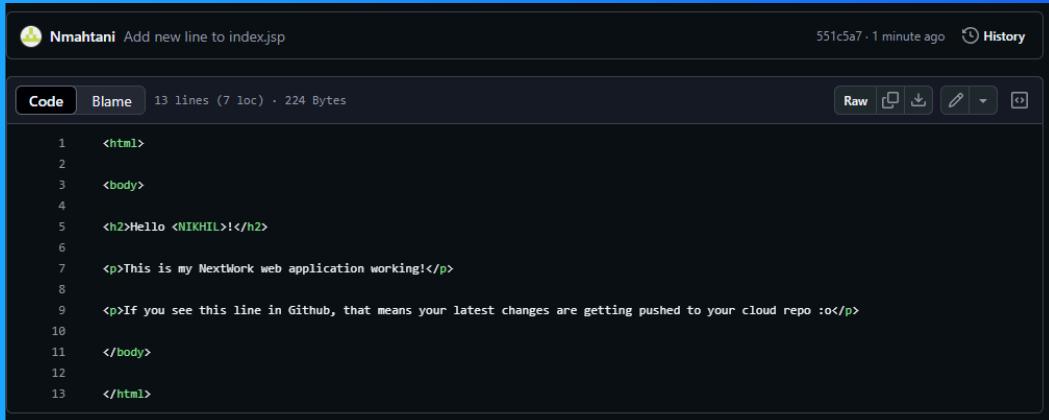
I could set up a GitHub token by creating a personal access token in settings in GitHub.



Making changes again

I wanted to see Git working in action, so I made changes in the index.jsp file. I couldn't see the changes in my GitHub repo initially because the changes were made only in the local repository.

I finally saw the changes in my GitHub repo after staging the index.jsp file, making the commit and then pushing it to my GitHub repo.



A screenshot of a GitHub commit page for a file named index.jsp. The commit was made by a user named Nmahtani, with the message "Add new line to index.jsp". The commit was pushed 1 minute ago with the commit hash 551c5a7. The code tab is selected, showing the following content:

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



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