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Connect a GitHub Repo with AWS

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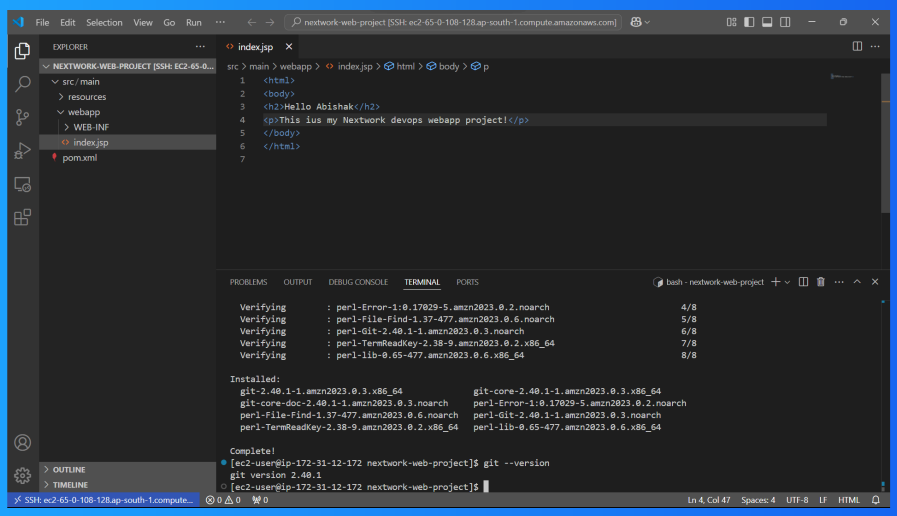

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Introducing Today's Project!

What is GitHub?

GitHub is a cloud service, which also lets us access our work from anywehere and collaborate with other developers over the internet.we used GitHub in this project to see our file changes in a more user-friendly way.

One thing I didn't expect...

The one thing I didn't expect iin this project is how easy it is to connect webapp on ourEC2 instance with our GitHub repository.

This project took me...

I took approximately 2.5 hours for learning as well as practical implementation for this project in the devops CI/CD pipeline.

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Git and GitHub

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

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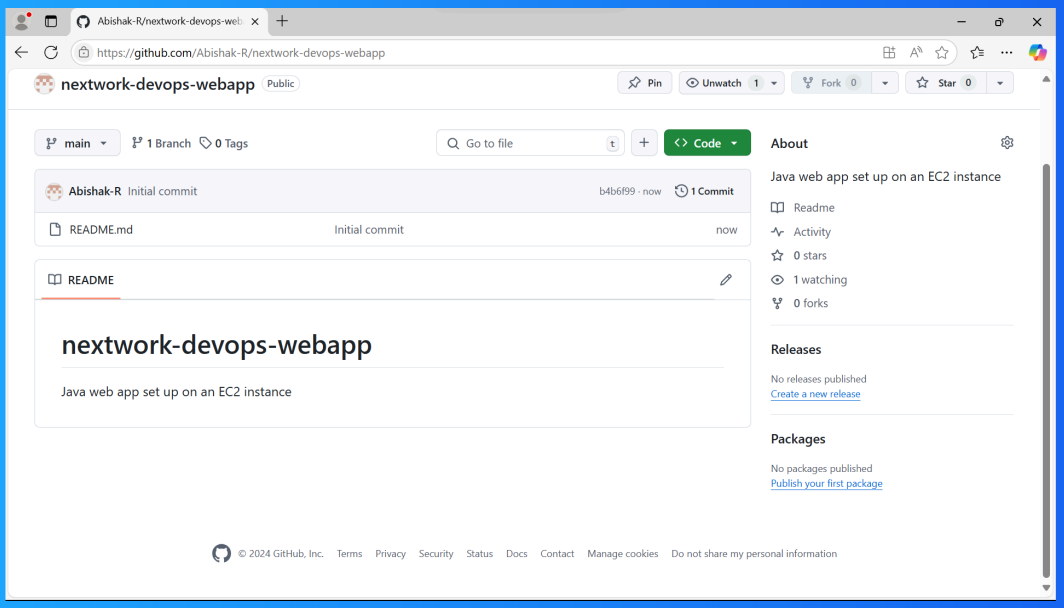

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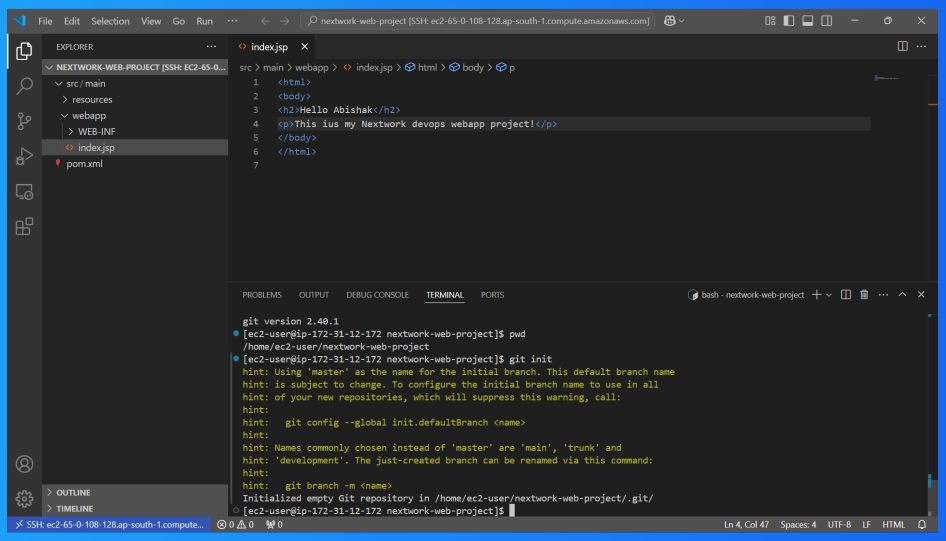
My local repository

To store your code using Git, you create Git repositories, which are folders that contain all your project files and their entire version history. Hosting a repo in the cloud, like on GitHub, means you can also collaborate with other engineers.

when we run git init inside a directory e.g. nextwork-web-project, it sets up the directory as a local Git repository which means changes are now tracked for version control.

After running git init, the response from the terminal was that the branch master has been created. A branch in git is a parallel version of our code.It is usually a parallel version of the master branch itself(not other branches).



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To push local changes to GitHub, I ran three commands

git add

The first command I ran was git add .which stages all files in nextwork-web-project to be saved in the next version of our project.A staging area is where we're telling Git to put together all your modified files for a final review before commiting.

git commit

The second command I ran was git commit -m "Updated index.jsp with new content"which saves the staged changes as a snapshot in your project's history. Using '-m' means a message describing what the commit is about, making it easier to review.

git push

The third command I ran was git push -u origin master which pushes your committed changes to origin, which you've bookmarked as your GitHub repo.Using"u" means we're telling Git to remember to push to master by default.

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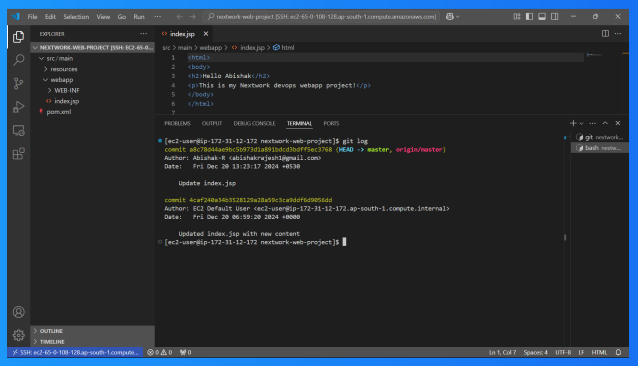
Authentication

When I commit changes to GitHub, Git asks for my credentials because to check if we have the authority to p[ush changes to our Git Repository.

Local Git identity

Git needs author information for commits to track who made what change. If we don't set it manually, Git uses the system's default username, which might not accurately represent your identity in our project's version history.

Running git log showed me the history of commits, which also mentions the commit author's name.



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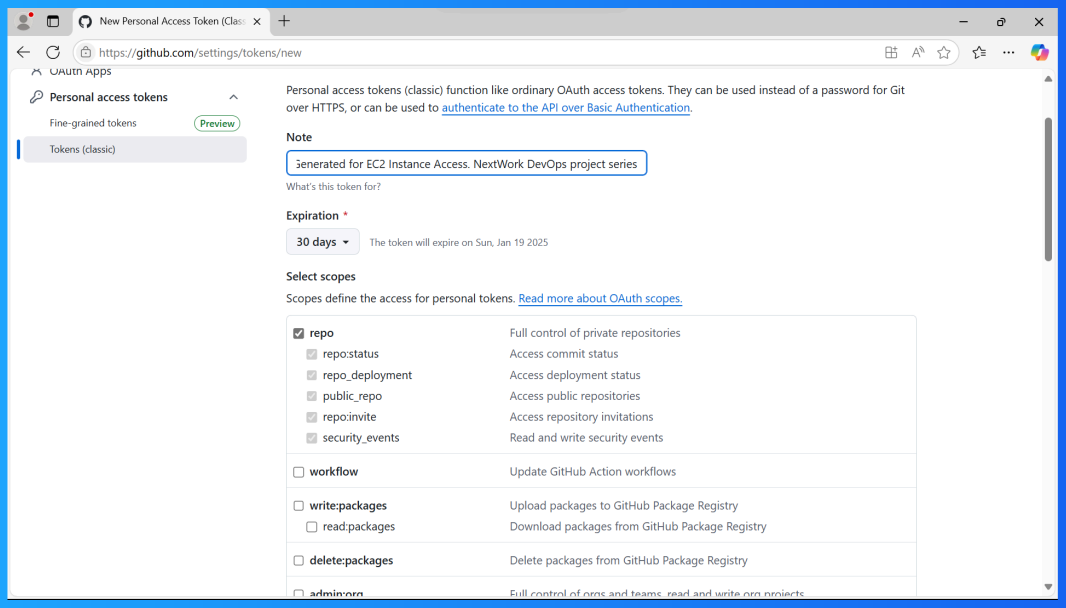
GitHub tokens

GitHub authentication failed when I entered my password because password authentication is no longer supported.We need to use tokens instead.

A GitHub token is an alternative for password in terms of authentication. I'm using one in this project because eralier we are not able to connect our EC2 instance to our GitHub Repo.

I could set up a GitHub Token by visiting the Developer settings in the GitHub.



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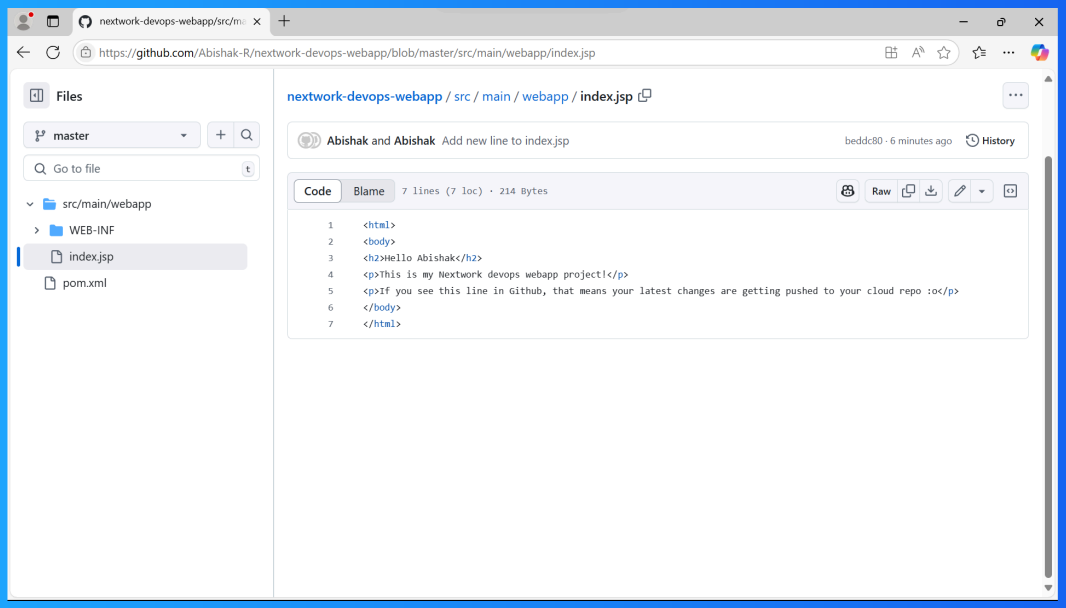
Making changes again

I wanted to see Git working in action, so I updated my index.jsp file. I couldn't see the changes in my GitHub repo initially because saving changes locally does not update my Git repository.To make your changes visible we must perform git commands.

I finally saw the changes in my GitHub repo after executing the commands 1.git add . 2.git commit -m "Add new line to index.jsp" git push



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