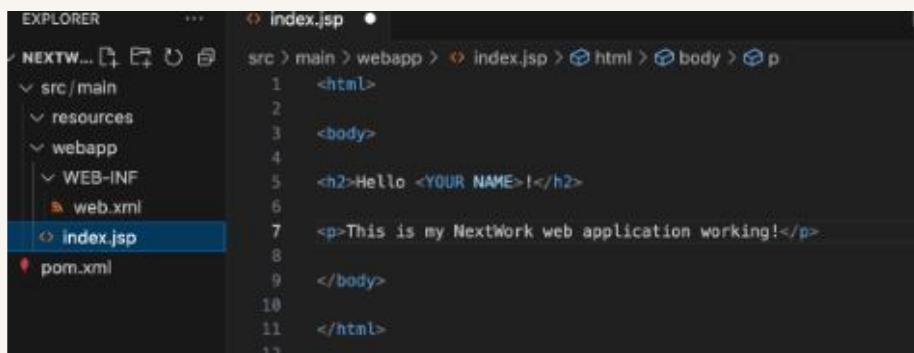




# Set Up a Web App Using AWS and VSCode



shravani durgi



```
EXPLORER      index.jsp •
NEXTW...  src/main/resources/webapp/WEB-INF/web.xml index.jsp
src/main/resources/webapp/WEB-INF/web.xml
src/main/resources/webapp/index.jsp
pom.xml

<html>
<body>
<h2>Hello <YOUR_NAME>!</h2>
<p>This is my NextWork web application working!</p>
</body>
</html>
```



shravani durgi  
NextWork Student

[NextWork.org](http://NextWork.org)

# Introducing Today's Project!

## What is VSCode and why is it useful?

We'll use Visual Studio Code (VSCode) to connect with your instance, so you can create and edit your web app's code.

## How I'm using VSCode in this project

We'll use Visual Studio Code (VSCode) to connect with your instance, so you can create and edit your web app's code.

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

I haven't expected build errors and also the ssh connection again through VSCode

## This project took me...

The project took me around 120- 180 minutes



# Launching an EC2 instance

I started this project by launching an EC2 instance because of which I can create an environment/ a virtual computer required for the project.

## I also enabled SSH

SSH is a Secure Shell protocol to make sure only authorized users get to access the remote server. I enabled SSH so that it will establish a secure connection between me and my EC2 instance.

## Key pairs

A key pair is a secure access to the EC2 instance. It has two parts private key and public key. Public key is with AWS and private key is with user by which AWS can verify if you are allowed to access or not.

Once I set up my key pair, AWS automatically downloaded the .pem file



# Set up VSCode

Visual Studio Code (VSCode) is one of the most popular tools for creating and managing coding projects. You'll often hear people call VSCode an IDE (Integrated Development Environment), which means software that help you write and edit code. It's sim

We'll use Visual Studio Code (VSCode) to connect with your instance, so you can create and edit your web app's code.





# My first terminal commands

A terminal is where you send instructions to your computer using text instead of clicks. The first command I ran for this project is cd ~/Desktop/Devops

I updated my private key's permissions using commands icacls "nextwork-keypair.pem" /reset icacls "nextwork-keypair.pem" /grant:r "USERNAME:R" icacls "nextwork-keypair.pem" /inheritance:r

```
C:\Users\santh\Desktop>New folder\Desktop>icacls "nextwork-keypair.pem" /inheritance:r
processed file: nextwork-keypair.pem
Successfully processed 1 files; Failed processing 0 files

C:\Users\santh\Desktop>New folder\Desktop>icacls "nextwork-keypair.pem" /reset
processed file: nextwork-keypair.pem
successfully processed 1 files; Failed processing 0 files

C:\Users\santh\Desktop>New folder\Desktop>icacls "nextwork-keypair.pem" /grant:r "USERNAME:R"
USERNAME: No mapping between account names and security IDs was done.
Successfully processed 0 files; Failed processing 1 files

C:\Users\santh\Desktop>New folder\Desktop>icacls "nextwork-keypair.pem" /inheritance:r
processed file: nextwork-keypair.pem
successfully processed 1 files; Failed processing 0 files

C:\Users\santh\Desktop>New folder\Desktop>icacls "nextwork-keypair.pem" /reset
processed file: nextwork-keypair.pem
Successfully processed 1 files; Failed processing 0 files

C:\Users\santh\Desktop>New folder\Desktop>icacls "nextwork-keypair.pem" /grant:r "desktop-a0t33n8\santh:R"
processed file: nextwork-keypair.pem
Successfully processed 1 files; Failed processing 0 files

C:\Users\santh\Desktop>New folder\Desktop>icacls "nextwork-keypair.pem" /inheritance:r
processed file: nextwork-keypair.pem
successfully processed 1 files; Failed processing 0 files
```



# SSH connection to EC2 instance

To connect to my EC2 instance, I ran the command ssh -i [PATH TO YOUR .PEM FILE] ec2-user@[YOUR PUBLIC IPV4 DNS]

## This command required an IPv4 address

A server's IPV4 DNS is the public address for the EC2 server. The local computer will find and connect to your EC2 instance through this IPv4 DNS.

```
~~  \###|  
~~  \#/ --- https://aws.amazon.com/linux/amazon-linux-2023  
~~  V~' '-'>  
~~  /  
~~ .-. /  
~~ _/_ /  
~~ _/m/'  
[ec2-user@ip-172-31-80-76 ~]$ █
```



# Maven & Java

Apache Maven is a tool that helps developers build and organize Java software projects. It's also a package manager, which means it automatically download any external pieces of code your project depends on to work.

Maven is required in this project because it's really useful for kick-starting web projects! It uses something called archetypes, which are like templates, to lay out the foundations for different types of projects e.g. web apps.

Java is a popular programming language used to build different types of applications, from mobile apps to large enterprise systems.

Maven, which we just downloaded, is a tool that NEEDS Java to operate. So if we don't install Java, we won't be able to use Maven to generate/build our web app today.



# Create the Application

I generated a Java web app using the command mvn archetype:generate \ -DgroupId=com.nextwork.app \ -DartifactId=nextwork-web-project \ -DarchetypeArtifactId=maven-archetype-webapp \ -DinteractiveMode=false

An SSH Host is the computer or server you're connecting to using SSH. It's the target location where you want to run commands or manage files; in our case, the SSH Host is the EC2 instance we created.

Configuration details required to set up a remote connection include host should match up with your EC2 instance's IPv4 DNS. IdentityFile should match up to nextwork-keypair.pem's location in your local computer. User should say ec2-user.

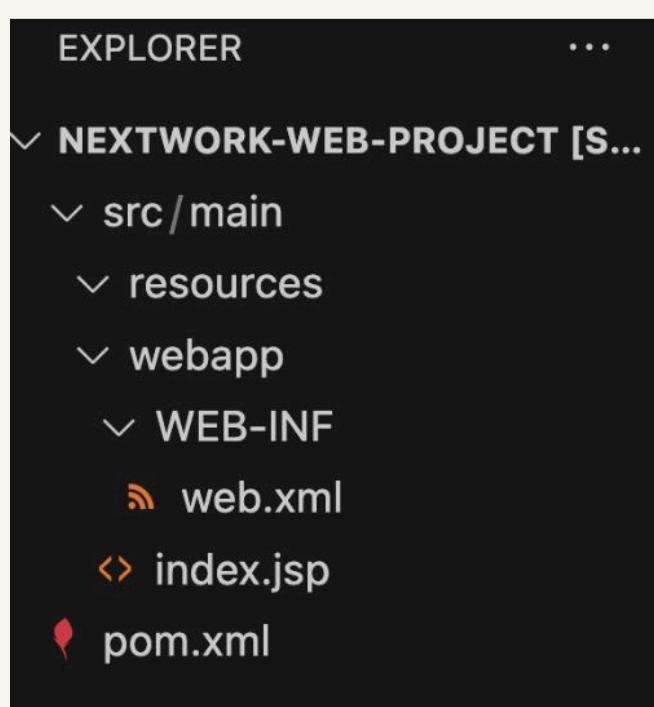
```
INFO] -----  
INFO] BUILD SUCCESS  
INFO] -----  
INFO] Total time: 12.494 s  
INFO] Finished at: 2024-10-08T22:42:05Z  
INFO] Final Memory: 17M/98M  
INFO] -----  
ec2-user@ip-172-31-31-204 ~]$ █
```



# Create the Application

Using VSCode's file explorer, I could see all the projects

The src (source) folder holds all the source code files that define how your web app looks and works. src is further divided into webapp, which are the web app's files e.g. HTML, CSS, JavaScript, and JSP files, and resources, which are the configu





# Using Remote - SSH

index.jsp is a file used in Java web apps. It's similar to an HTML file because it contains markup to display web pages.

I edited index.jsp by using the visual studio code. Using the editor view we can edit index.jsp



```
EXPLORER      index.jsp •
NEXTW... [+] ⌂ ⓘ
  src/main
    resources
  webapp
    WEB-INF
      web.xml
    index.jsp
  pom.xml

src > main > webapp > index.jsp > html > body > p
1   <html>
2
3   <body>
4
5   <h2>Hello <YOUR NAME>!</h2>
6
7   <p>This is my NextWork web application working!</p>
8
9   </body>
10
11  </html>
```



NextWork.org

# Everyone should be in a job they love.

Check out nextwork.org for  
more projects

