Set Up a Web App in the Cloud

Abhishek Bhagat

Introducing Today's Project!

What is VSCode and why is it useful?

I used VSCode by doing remote SSH into EC2 Instance and then modifying the webapp index.jsp file directly via IDE.

How I'm using VSCode in this project

I used VSCode by doing remote SSH into EC2 Instance and then modifying the webapp index.jsp file directly via IDE.

One thing I didn't expect...

N/A

This project took me...

Around 2 hours.

Launching an EC2 instance

Since we want our web app to be entirely created and run on the cloud, we'll use a virtual server (EC2 instance) to house our development work.

I also enabled SSH

SSH is a protocol used to make sure only authorized users can access a remote server. I enabled SSH so that when I connect my EC2 instance later in this project, SSH verifies I have the correct private key that matches the public key on the server.

Key pairs

A key pair in EC2 is like the keys to your virtual computer. Just like you need a key to unlock and start your car, a key pair lets you securely access your EC2 instance.
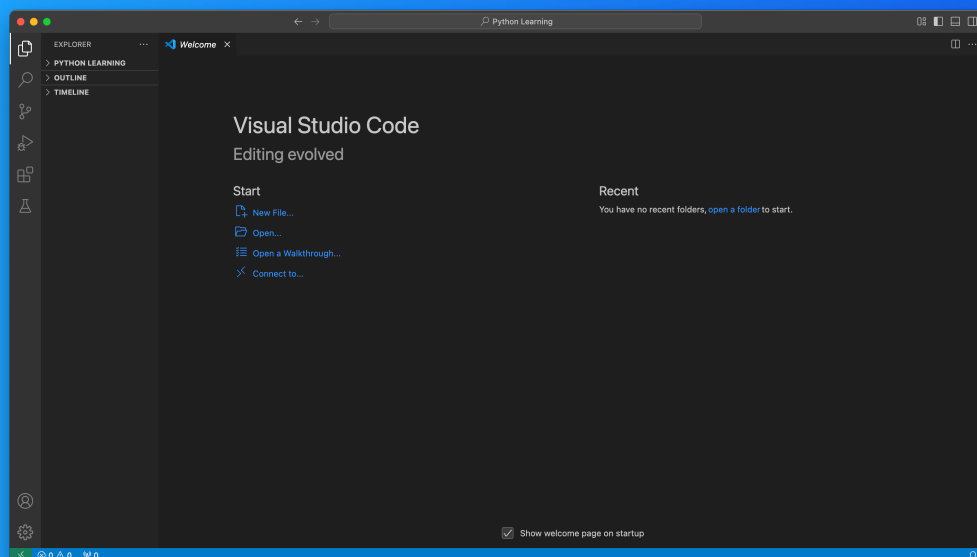
Once I set up my key pair, AWS automatically downloaded "devops-keypair.pem" file.

Set up VSCode

VSCode is one of the most popular tools for creating and managing coding projects.

I installed VSCode to connect with my instance, so i can create and edit my web app's code.

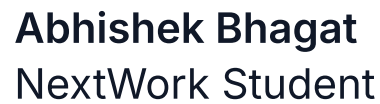**Abhishek Bhagat**
NextWork Student

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 also updated my private key's permissions by chmod 400 nextwork-keypair.pem chmod command stands for "change mode", and it changes the permissions of your .pem file. Using 400 makes it readable only by you (owner) and restricts access for others.

SSH connection to EC2 instance

To connect to my EC2 instance, I ran the command ssh -i devops-keypair.pem ec2-user@3.109.158.189

This command required an IPv4 address

A server's IPV4 DNS is the public address for our EC2 server that the internet uses to find and connect to it. The local computer we're using to do this project will find and connect to our EC2 instance through this IPv4 DNS.

Abhishek Bhagat
NextWork Student

Maven & Java

Apache Maven is a powerful tool that automates the building of software.

Maven is required in this project because it helps in turning your code into a final product (like web apps) that is ready for virtual machines (like EC2 instances) to host.

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

Java is required in this project because we are going to host Java web app.

Create the Application

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

I installed Remote - SSH, which is an extension in VSCode. I installed it to connect directly via SSH to another computer securely on the internet.

Configuration details required to set up a remote connection include Host, HostName, IdentityFile, User.

Create the Application

Using VSCode's file explorer, I could see the project's Source File, Resources, WebApp and pom.xml which is Maven Project Object Model file. It stores information and configuration details that Maven will use to build the project.

Two of the project folders created by Maven are src and webapp: src holds all the source code files. src is further byfurcated into webapp which has web app's files.
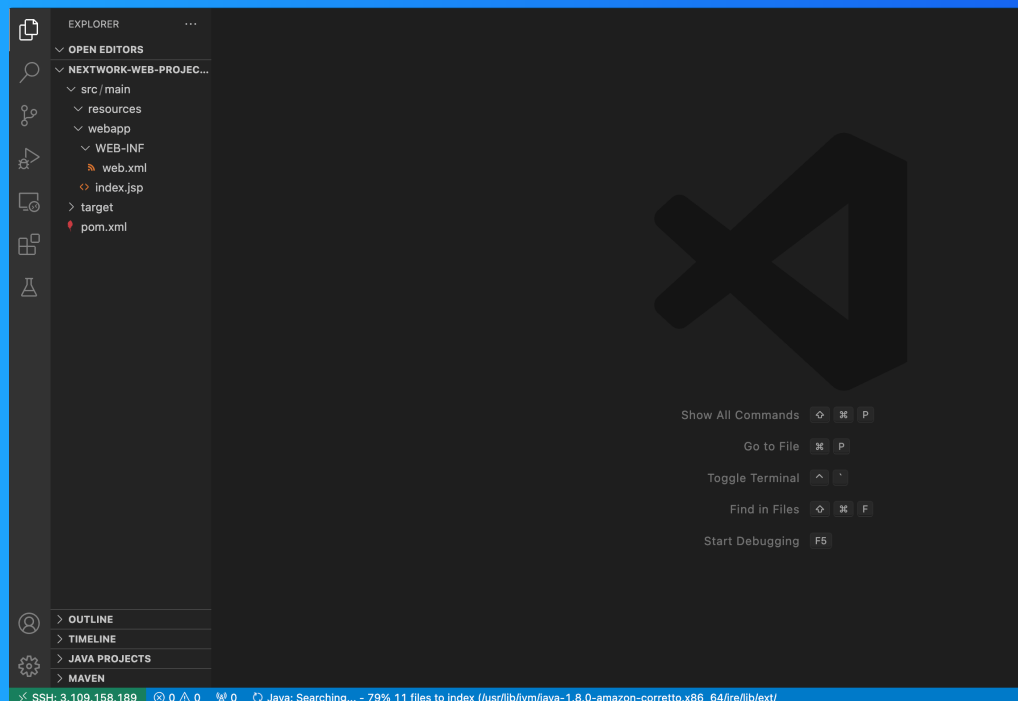
Using Remote - SSH

index.jsp is a file used in Java web apps.

I edited index.jsp by changing the placeholder code with another code.