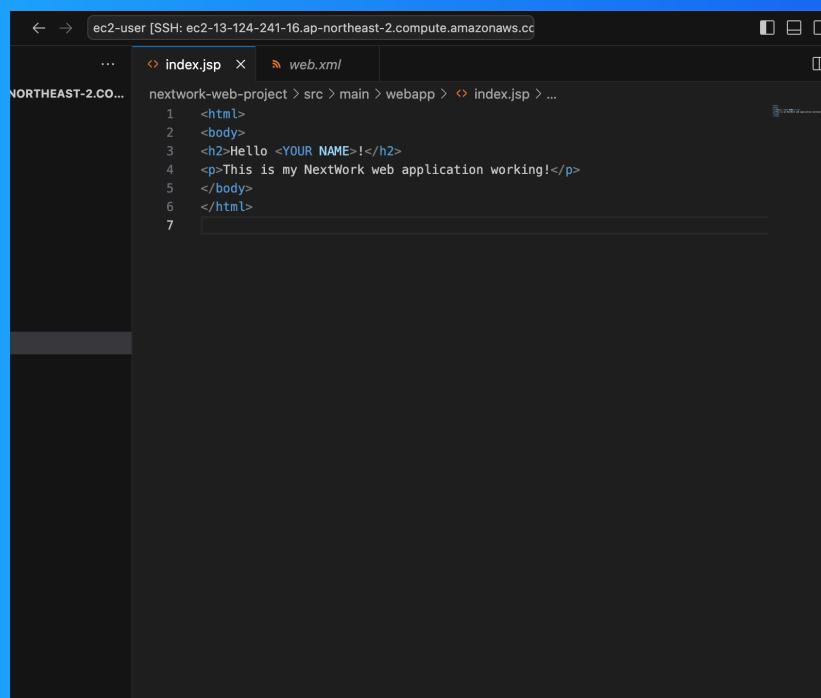




# Set Up a Web App in the Cloud



Maruhardik



```
ec2-user [SSH: ec2-13-124-241-16.ap-northeast-2.compute.amazonaws.cc]
index.jsp  x  web.xml
nextwork-web-project > src > main > webapp > index.jsp > ...
1  <html>
2  <body>
3  <h2>Hello <YOUR NAME>!</h2>
4  <p>This is my NextWork web application working!</p>
5  </body>
6  </html>
7
```



# Introducing Today's Project!

## What is VSCode and why is it useful?

Jut preparation for the practicle, it's amazing task.

## How I'm using VSCode in this project

Jut preparation for the practicle, it's amazing task.

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

Absolutely it's complete.

## This project took me...

120 minutes which included with dinner.



# Launching an EC2 instance

It allows me to deploy web application and host web app resource in cloud.

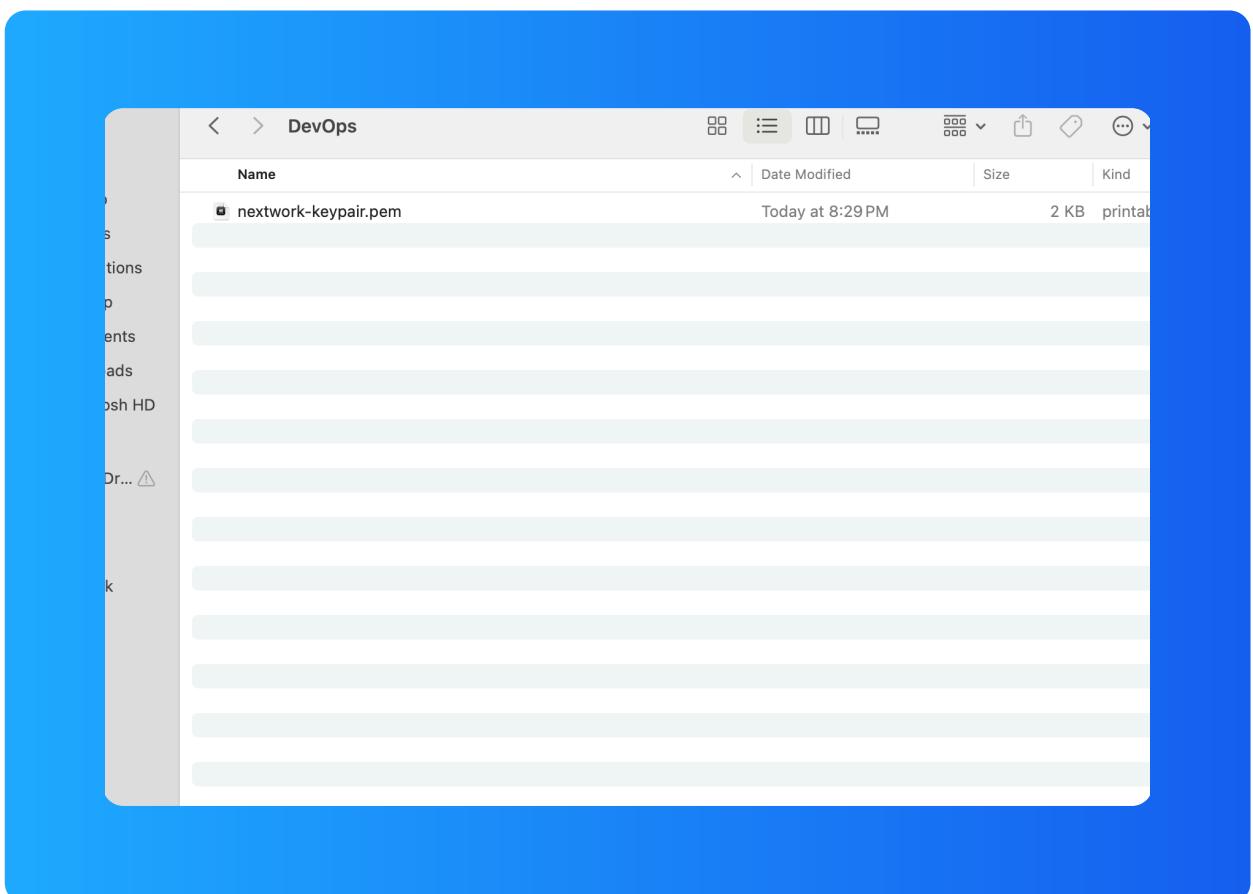
## I also enabled SSH

In the past, when I needed to deploy resources in the cloud, I used SSH, which stands for Secure Shell.

# Setting up a key pair

It's having private key and public key runs on server combination. It is similar like handshake.

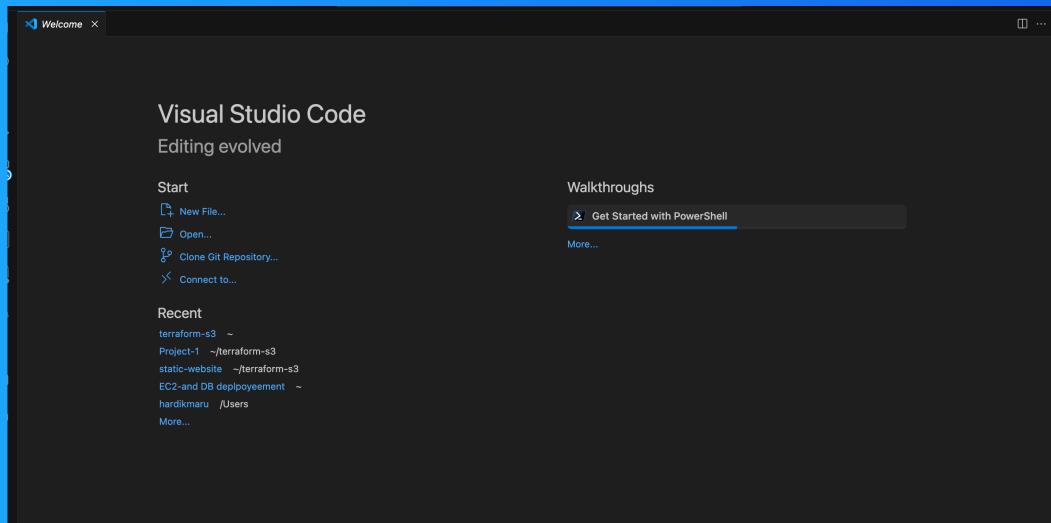
It download the private key.



# Set up VSCode

This tool is designed for DevOps engineers to facilitate the development and deployment of web applications.

To set up the webserver and deploy the application.



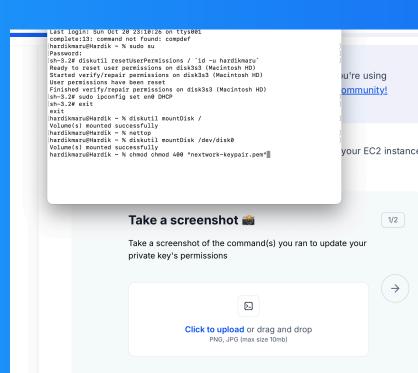


# My first terminal commands

The terminal serves as the shell that receives user input and executes shell scripts containing programming logic.

**LS -ll to check file and directory permissions.**

Yes, Owner has full access group and everyone has no access to that private key.

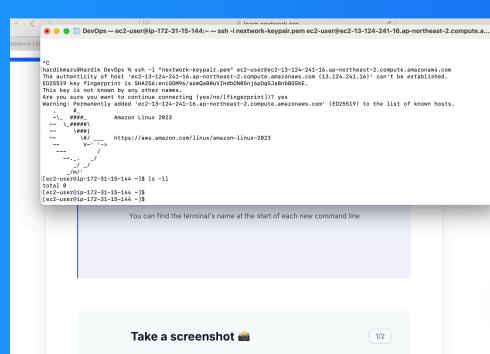


# SSH connection to EC2 instance

It's combination of the Public DNS and keypair. `ssh -i nextwork-keyp.pem ec2-user@ec2-12-121-231-11.ap-us-west.compute.amazonaws.com`

## This command required an IPv4 address

IP V4 means intenet protocol version-4 for the DNS. It always filter traffic from the outside network.



A screenshot of a terminal window titled "DevOps" on a Mac OS X desktop. The terminal shows a successful SSH session to an EC2 instance. The session starts with:

```
* hasurkar@Maru-MacBook-Pro ~ % ssh -i nextwork-keyp.pem ec2-user@ec2-13-124-241-16.ap-northeast-2.compute.amazonaws.com
```

The message continues with the host key fingerprint and asks if the user wants to add it to the known hosts file. The user responds "yes". The terminal then displays the AWS Linux 2023 welcome message and a directory listing for the root directory. At the bottom of the terminal, there is a button labeled "Take a screenshot" with a camera icon.



# Maven & Java

It's Apache is the web server and Maven is the dependency package.

We use maven to install dependency and configurations.

Java is the Programming language it's pure object oriented programming language. It allows developers to develop internet and intranet applications.

Java allows you to develop web-based applications, where developers utilize advanced packages to effectively manage web UI, middleware, or any other MVC patterns and application architectures.

# Create the Application

The following command creates a project structure using Maven archetype:

```
mvn archetype:generate | Structure -DgroupId=com.nextwork.app | Groupid - DartifactId=nextwork-web-project | artifact id -DinteractiveMode=false. | interactive mode
```

```
mvn archetype:generate | Structure -DgroupId=com.nextwork.app | Groupid - DartifactId=nextwork-web-project | artifact id -DinteractiveMode=false. | interactive mode
```

```
[INFO] Downloading: https://repo.maven.apache.org/maven2/org/apache/rmashell/rmashell/3.0.0-RC1/rmashell-3.0.0-RC1.jar
[INFO] Downloading: https://repo.maven.apache.org/maven2/org/apache/rmashell/rmashell/3.0.0-RC1/rmashell-3.0.0-RC1.jar (0.4 kB at 381 kB/s)
[INFO] Downloading: https://repo.maven.apache.org/maven2/org/apache/maven/archetypes/maven-archetype-wsapp/1.8/maven-archetype-wsapp-1.8.pom
[INFO] Downloading: https://repo.maven.apache.org/maven2/org/apache/maven/archetypes/maven-archetype-wsapp/1.8/maven-archetype-wsapp-1.8.pom (19.4 kB at 395 kB/s)
[INFO] Using following parameters for creating project from Old (1.x) Archetype: maven-archetype-wsapp:1.0
[INFO] Parameter: basedir, Value: /home/ec2-user
[INFO] Parameter: groupId, Value: com.nextwork.app
[INFO] Parameter: groupId, Value: com.nextwork.app
[INFO] Parameter: package, Value: com.nextwork.app
[INFO] Parameter: packagePath, Value: com.nextwork.app
[INFO] project created from Old (1.x) Archetype in dir: /home/ec2-user/network-web-project
[INFO] 
[INFO] BUILD SUCCESS
[INFO] 
[INFO] Total time: 18.423 s
[INFO] Finished at: 2017-02-28T17:28:52Z
[INFO] Final Memory: 1M/83M
[INFO] 
[INFO] [ec2-user@ip-172-31-15-144 ~]$
```

Build success.



# Connecting VSCode with EC2

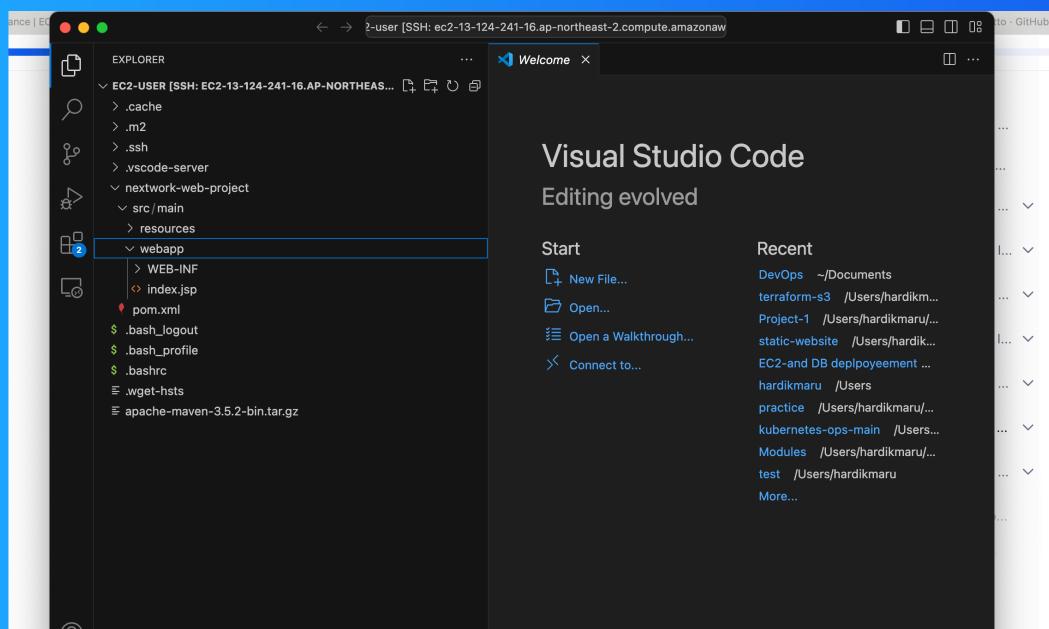
Here we define the host instance information and private key path and instance type to get SSH connection.

HOST instance public DNS, host name, private key file name and instance user type.

# Create the Application

To develop the webapp in the VS CODE

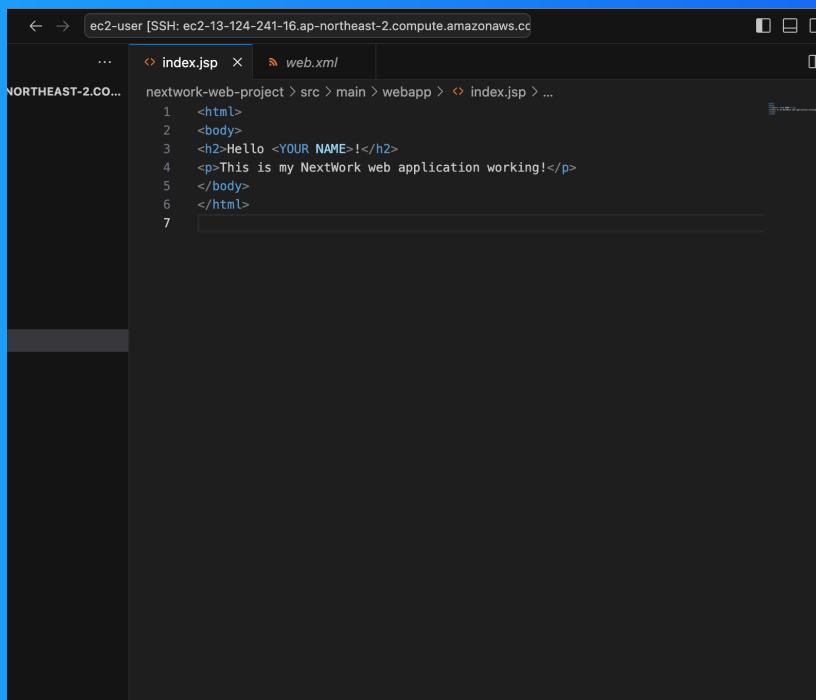
SRC and WEBAPP folders are the website folders. WEBAPP contains the JSP server-side scripting and the host file.



# Create the Application

"JSP, a server-side scripting language, is provided with robust security features. It efficiently renders web elements in a manner similar to index.HTML."

Using microsoft visual studio code.



A screenshot of the Microsoft Visual Studio Code interface, showing an SSH terminal window titled "ec2-user [SSH: ec2-13-124-241-16.ap-northeast-2.compute.amazonaws.cc]". The terminal shows the file structure: "nextwork-web-project > src > main > webapp > index.jsp". The content of the "index.jsp" file is displayed:

```
1  <html>
2  <body>
3  <h2>Hello <YOUR NAME>!</h2>
4  <p>This is my NextWork web application working!</p>
5  </body>
6  </html>
7 
```



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