



Set Up a Web App in the Cloud



Ivan Delgadillo Fernandez

```
↳ index.jsp  ●  RSS web.xml
src > main > webapp > ↳ index.jsp > ⚡ html > ⚡ body
1   <html>
2
3   <body>
4
5   <h2>Hello <YOUR NAME>!</h2>
6
7   <p>This is my web application working!</p>
8
9   </body>
10
11  </html>
12
```



Ivan Delgadillo Fernandez

NextWork Student

NextWork.org

Introducing Today's Project!

What is VSCode and why is it useful?

I use to connect VScode to EC2 instance and modified index.js

How I'm using VSCode in this project

I use to connect VScode to EC2 instance and modified index.js

One thing I didn't expect...

I didn't expect connect VScode with SSH to EC2 Instance

This project took me...

60 minutes



Ivan Delgadillo Fernandez

NextWork Student

NextWork.org

Launching an EC2 instance

I started this project by launching an EC2 instances because the web app needed a home for their files.

I also enabled SSH

SSH i.e. Secure Shell is a protocol used to make sure only authorized users can access a remote server.



Ivan Delgadillo Fernandez

NextWork Student

NextWork.org

Setting up a key pair

A Key Pair in AWS is used to authenticate and access resources, mainly EC2 instances (virtual servers).

Once I set up my key pair, AWS automatically downloaded a private key.



IvanDelgadillo-Keypair.pem



Ivan Delgadillo Fernandez

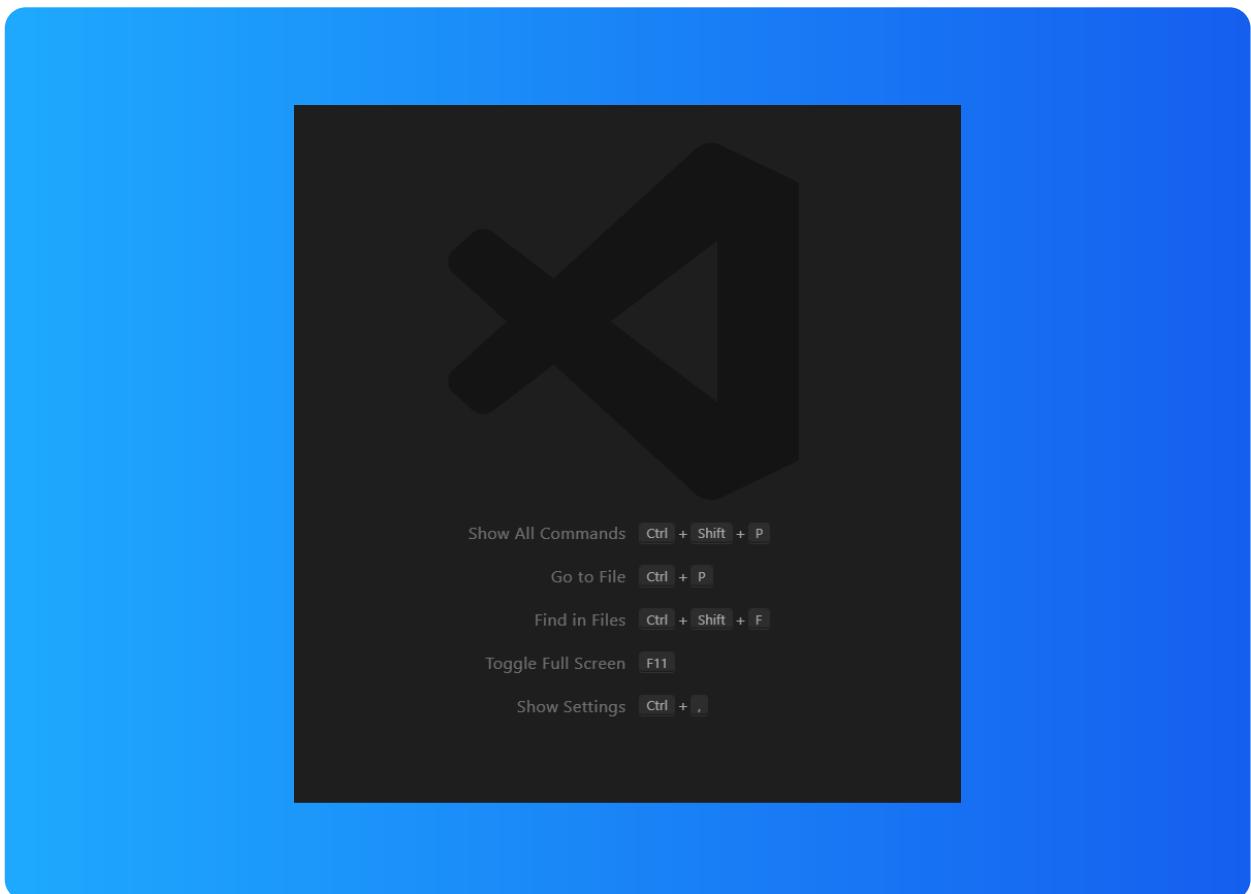
NextWork Student

NextWork.org

Set up VSCode

Visual Studio Code (VSCode) is one of the most popular tools for creating and managing coding projects.

VSCode also comes with extra tools that we'll use to connect to virtual servers like EC2 instances.





Ivan Delgadillo Fernandez

NextWork Student

NextWork.org

My first terminal commands

A terminal is where you send instructions to your computer using text instead of clicks

cd, change of directory

I also updated my private key's permissions by chmod

```
drwxrwxrwx 1 id id 4096 Oct 17 07:56 .
drwxrwxrwx 1 id id 4096 Oct 17 08:15 .
-r--xr--r--x 1 id id 1678 Oct 17 07:55 IvanDelgadillo-Keypair.pem
```



Ivan Delgadillo Fernandez

NextWork Student

NextWork.org

SSH connection to EC2 instance

to connect to my EC2 Instance, I ran the command "ssh -i"

This command required an IPv4 address

A Public IPv4 DNS (which stands for Domain Name System) is the public address for your EC2 server that the internet uses to find and connect to it.

```
# ssh -i .\IvanDelgadillo-Keypair.pem ec2-user@3.92.26.239
, #_
~\###_ Amazon Linux 2
~~ \###\ AL2 End of Life is 2025-06-30.
~~ \|/ \
~~ V~' '-->
~~ / A newer version of Amazon Linux is available!
~~ . / Amazon Linux 2023, GA and supported until 2028-03-15.
~/m/ https://aws.amazon.com/linux/amazon-linux-2023/

[ec2-user@ip-172-31-40-107 ~]$ ls
```



Ivan Delgadillo Fernandez

NextWork Student

NextWork.org

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.

I will use Maven later on to help us set up all the necessary web files to create a web app structure, so we can jump straight into the fun part of developing the web app soon!

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

because it'll need to know Java's location to run Java commands! The last command is a time saver - you're saving Java's location so you can run Java commands from anywhere in your EC2 instance without needing to type out full location each time.



Ivan Delgadillo Fernandez

NextWork Student

NextWork.org

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

```
[INFO] -----
[INFO] Using following parameters for creating project from Old (1.x) Archetype: maven-archetype-webapp:1.0
[INFO] -----
[INFO] Parameter: basedir, Value: /home/ec2-user
[INFO] Parameter: package, Value: com.nextwork.app
[INFO] Parameter: groupId, Value: com.nextwork.app
[INFO] Parameter: artifactId, Value: nextwork-web-project
[INFO] Parameter: packageName, Value: com.nextwork.app
[INFO] Parameter: version, Value: 1.0-SNAPSHOT
[INFO] project created from Old (1.x) Archetype in dir: /home/ec2-user/nextwork-web-project
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 9.074 s
[INFO] Finished at: 2024-10-17T13:56:18Z
[INFO] Final Memory: 17M/80M
[INFO] -----
```



Ivan Delgadillo Fernandez

NextWork Student

NextWork.org

Connecting VSCode with EC2

I installed Remote - SSH, which is SSH to another computer securely over the internet

Configuration details required to set up a remote connection include host, user and Keypair.



Ivan Delgadillo Fernandez

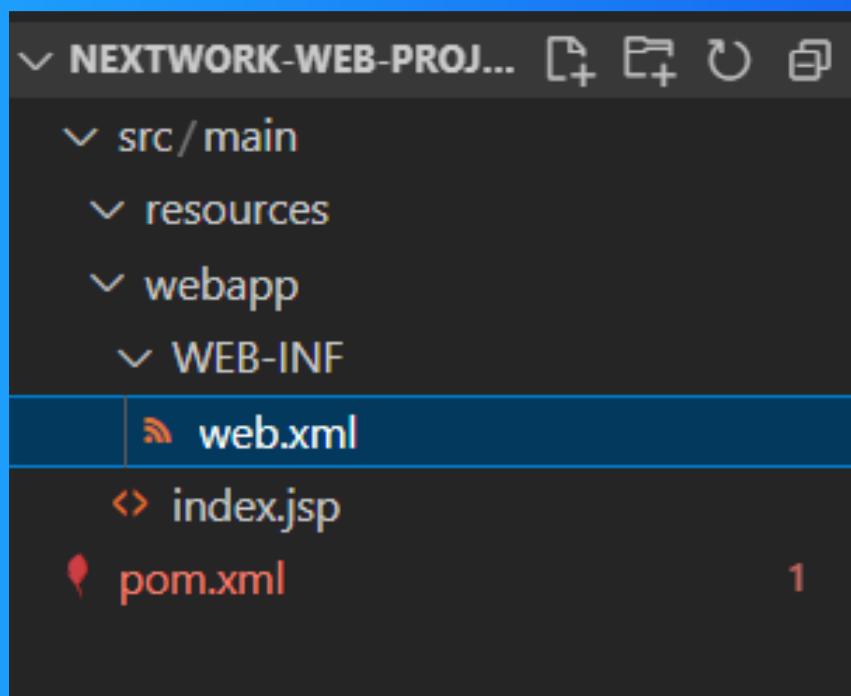
NextWork Student

NextWork.org

Create the Application

Using VSCode's file explorer, I could see differents folders

Two of the project folders created by Maven are src and webapp, which SRC folder hold all de source code files





Ivan Delgadillo Fernandez

NextWork Student

NextWork.org

Create the Application

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 VSCode

```
↳ index.jsp  ●  ⚡ web.xml
src > main > webapp > ↳ index.jsp > ⚡ html > ⚡ body
1   <html>
2
3   <body>
4
5   <h2>Hello <YOUR NAME>!</h2>
6
7   <p>This is my web application working!</p>
8
9   </body>
10
11  </html>
12
```



NextWork.org

Everyone should be in a job they love.

Check out nextwork.org for
more projects

