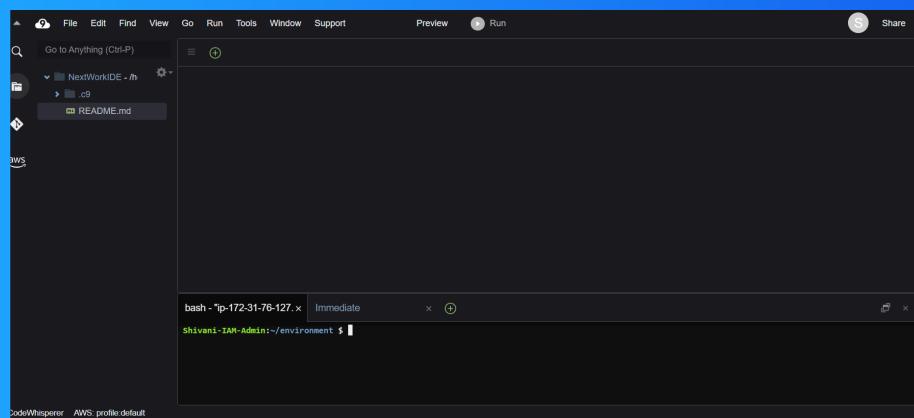




Build a Web App and IDE in AWS



shivani gondi



Introducing Today's Project!

What is AWS Cloud9 and why is it useful?

AWS cloud9 is very useful to run your applications for codecommit, codebuild, code execute and can access from browser even in the mobile phones.

How I'm using Cloud9 in this project

I have created a web app , created the cloud9 environment setup the IAM user with certain permission polices.

One thing I didn't expect...

Creating the web app using the mvn commands , very easily with just one command.

This project took me...

Its great hands on. Loved it!

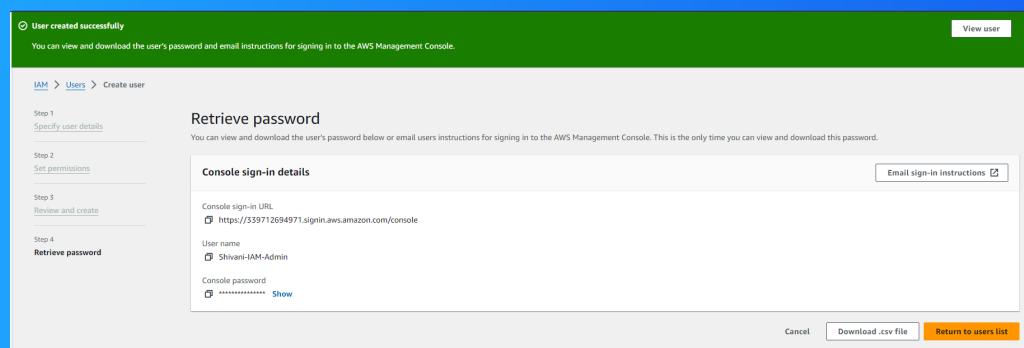
Set up an IAM User

An IAM user is an additional user that gets access to my AWS Account's resources. When creating a User, I can specify in detail the level of access it has to my account's resources and services.

The importance of IAM users

It's important to create IAM users because the root user is Vulnerable to security breaches that could result in my billing information being accessed without my permission.

I created an IAM user with Administrator Access. This means my IAM user is allowed to perform all possible actions to all the resources in my account.



Environments & IDEs

What is an environment?

An environment is, we're meaning a set of requirements/resources required to run and build your software application. Just as a chef needs kitchen tools, ingredients, and appliances set up to cook a meal.

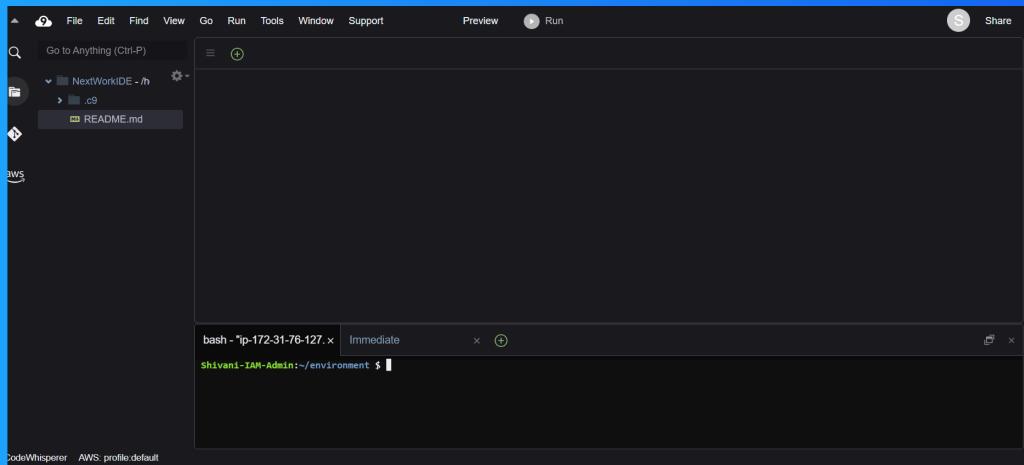
What is an IDE?

An IDE is a file explorer - you'll use this to navigate through folders of files that will make up your web app.

Launch a Cloud9 IDE

The benefit of using Cloud9

The Cloud9 environment already has tools like Git installed, saving you the time to set this up.



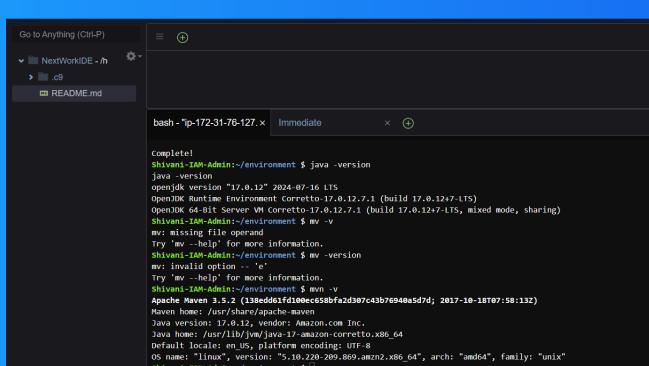
Maven & Java

Apache Maven is a powerful tool that automates the building of software. Building is an important multi-step process that transforms code written by developers (like you!) into a final product that is ready for computers to run.

Maven is required in this project because compiling , testing ,linking, packaging. This helps install the apps easily in various environments.

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

Java is required as of part of building your web app's backend.



```
Go to Anything (Command-P)
v NextWorkIDE - /h
> .c9
 README.md

bash - *ip-172-31-76-127.x Immediate × (i)

complete!
Shivani-iMac-Admin:~/environment $ java -version
java version "11.0.11" 2024-07-16 LTS
OpenJDK 64-Bit Server VM Corretto-17.0.12.7.1 (build 17.0.12+7-LTS)
Shivani-iMac-Admin:~/environment $ mv -v
mv: missing file operand
Try 'mv --help' for more information.
Shivani-iMac-Admin:~/environment $ mv -version
mv: invalid option `v'
Try 'mv --help' for more information.
Shivani-iMac-Admin:~/environment $ mvn -v
Apache Maven 3.9.10 (13beddd1fd10e0cc658bf2a2d307c43b76948e5d7d; 2017-10-18T07:58:13Z)
Powered by Apache Maven 3.9.10
Java version: 11.0.12, vendor: Amazon.com Inc.
Java home: /usr/lib/jvm/java-17-amazon-corretto.x86_64
Default locale: en_US, platform encoding: UTF-8
OS name: "linux", version: "5.10.220-209.869.amzn2.x86_64", arch: "amd64", family: "unix"

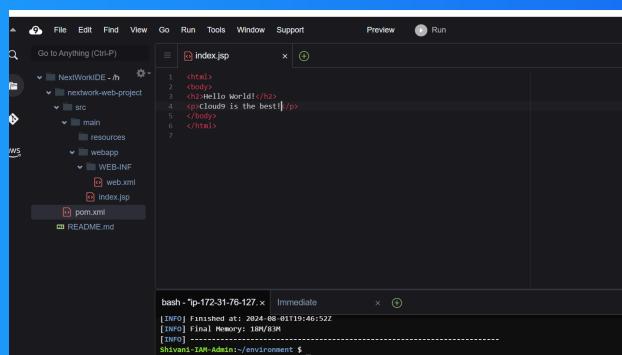
```

Create the Application

To create a simle java web app , i ran the below mvn command mvn archetype:generate \ -DgroupId=com.nextwork.app \ -DartifactId=nextwork-web-project \ -DarchetypeArtifactId=maven-archetype-webapp \ -DinteractiveMode=false

Once the web app was created, my IDE's file explorer was populated with the project name and src folders under it.

To customise this web app's display, I updated the index.jsp file, its like the HTML file or you can add java code as well.



The screenshot shows a Java IDE interface. On the left, the file explorer displays a project structure with a 'src' folder containing 'main' and 'resources' subfolders, and a 'WEB-INF' folder containing 'web.xml' and 'index.jsp'. Other files visible include 'pom.xml' and 'README.md'. The central area shows the content of 'index.jsp':

```
<!DOCTYPE html>
<html>
  <head>
    <title>Hello World!</title>
  </head>
  <body>
    <h2>Cloud9 is the best!</h2>
  </body>
</html>
```

At the bottom, a terminal window titled 'bash *ip-172-31-76-127 x Immediate' shows the output of a command:

```
[Info] Finalized at: 2024-08-01T19:46:52Z
[Info] Final Version: 0.0.1-SNAPSHOT
[Info] -----
shivani-IAW-Admin:/environment $
```



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