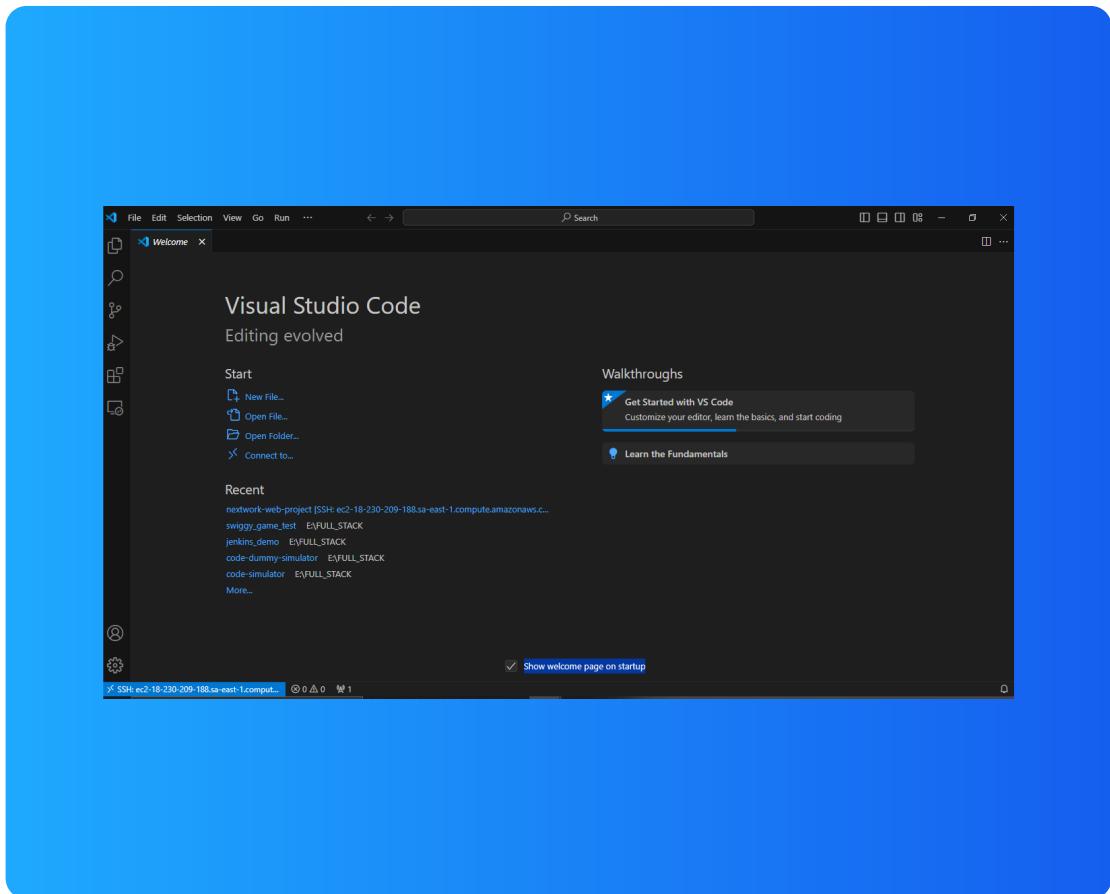




Build a Web App and IDE in AWS



Prerana P





Introducing Today's Project!

What is AWS Cloud9 and why is it useful?

AWS Cloud9 is a cloud-based integrated development environment (IDE) that enables developers to write, run, and debug code from any web browser. It is useful because it provides a collaborative coding environment, eliminates local setup, and integrates with AWS services.

How I'm using Cloud9 in this project

I used AWS Cloud9 to develop and test the web app directly in the cloud, leveraging its collaborative features and integration with AWS services for a streamlined development process.

One thing I didn't expect...

One thing I didn't expect in this project was that AWS Cloud9 wasn't available, so I had to set up an EC2 instance and perform the development steps there instead, which added extra configuration time.

This project took me...

It took me around an hour



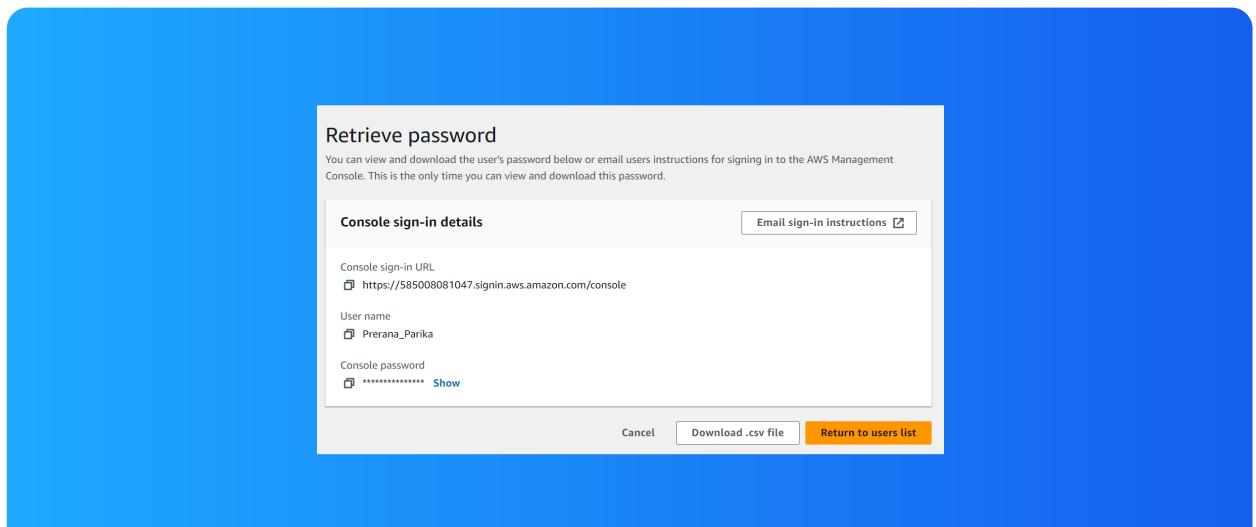
Set up an IAM User

An IAM user is an identity created in AWS Identity and Access Management for managing access to AWS resources. It represents a person or application and each user has unique credentials and permissions allowing controlled and secure access to service

The importance of IAM users

It's important to use IAM users because they provide controlled and secure access to AWS resources. By assigning specific permissions to each user, you can ensure that only authorized individuals or applications can perform certain actions, improving

I created an IAM user with the "AmazonS3FullAccess" permission policy. This policy granted the user full control over S3, allowing them to create, delete, and manage S3 buckets and objects, essential for managing website hosting.





Environments & IDEs

What is an environment?

An environment is the setting in which a system or application operates, including hardware, software, and configurations. It influences performance and behavior, and can be categorized into development, testing, staging, or production in the sdl

What is an IDE?

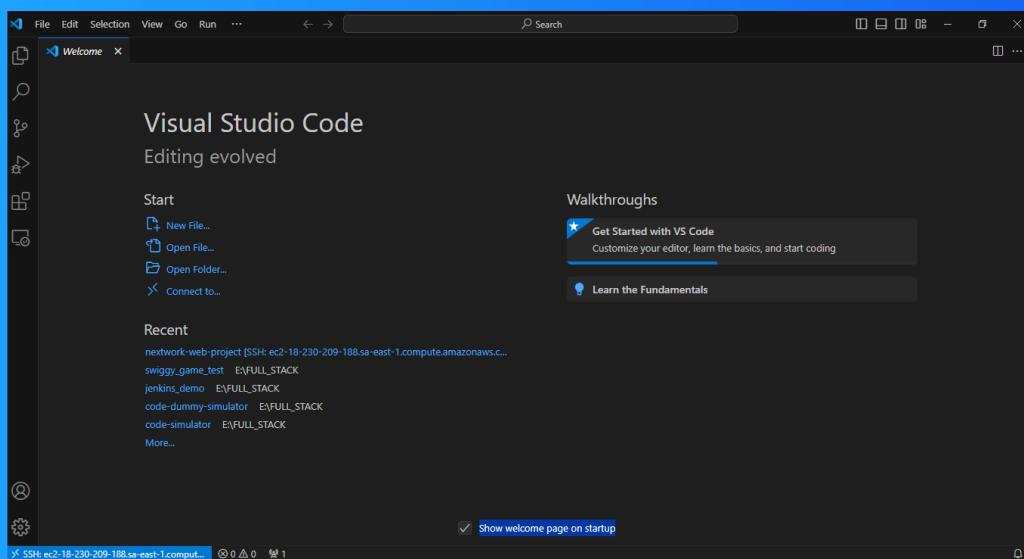
An IDE is an Integrated Development Environment, a software tool that combines code editor, compiler, debugger, and other features to streamline the development process. It helps developers write, test, and manage code efficiently in one platform.



Launch a Cloud9 IDE

The benefit of using Cloud9

Using Cloud9 has the benefit of providing a cloud-based development environment, accessible from any device with an internet connection. It offers real-time collaboration, eliminates setup time, and integrates seamlessly with AWS services.





Maven & Java

Maven is a project management and build automation tool primarily for Java projects. It simplifies dependency management, automates builds, and provides a structured way to manage project lifecycles and configurations.

Maven is required in this project because it manages dependencies, automates the build process, and ensures consistent project structure, making it easier to compile, test, and deploy code efficiently across different environments.

Java is a versatile, object-oriented programming language used for building platform-independent applications. Known for its "write once, run anywhere" capability, it's widely used in web, mobile, and enterprise-level development.

Java is required in this project because of its platform independence, robust performance, and extensive libraries, making it ideal for building scalable, secure applications that can run across various environments with minimal modification.

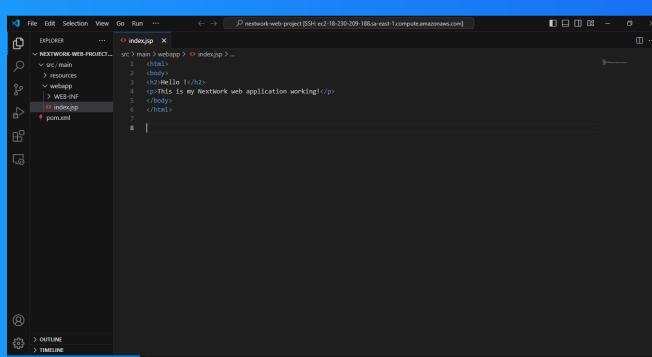
```
[ec2-user@ip-172-31-33-126 ~]$ java -version
openjdk version "22.0.2" 2024-07-16
OpenJDK Runtime Environment Corretto-22.0.2.9.1 (build 22.0.2+9-FR)
OpenJDK 64-Bit Server VM Corretto-22.0.2.9.1 (build 22.0.2+9-FR, mixed mode, sharing)
[ec2-user@ip-172-31-33-126 ~]$ mvn -version
Apache Maven 3.2.5 (12a6b3acb947671f09b81f49094c53f426d8cea1; 2014-12-14T17:29:23+00:00)
Maven home: /usr/share/apache-maven
Java version: 22.0.2, vendor: Amazon.com Inc.
Java home: /usr/lib/jvm/java-22-amazon-corretto.x86_64
Default locale: en, platform encoding: UTF-8
OS name: "linux", version: "6.1.109-118.189.amzn2023.x86_64", arch: "amd64", family: "unix"
[ec2-user@ip-172-31-33-126 ~]$
```

Create the Application

To create a simple Java web app, I ran the command: `codemvn archetype:generate \ -DgroupId=com.nextwork.app \ -DartifactId=nextwork-web-project \ -DarchetypeArtifactId=maven-archetype-webapp \ -DinteractiveMode=false` This initializes a basic

Once the web app was created, my IDE's file explorer was populated with a `src` folder, containing `main/webapp` for web resources, along with the `pom.xml` file for managing dependencies and project configuration.

To customize this web app's display, I updated the `index.jsp` file by modifying a `<p>` tag to change the welcome message, ensuring it reflected the app's purpose and provided a user-friendly introduction.





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