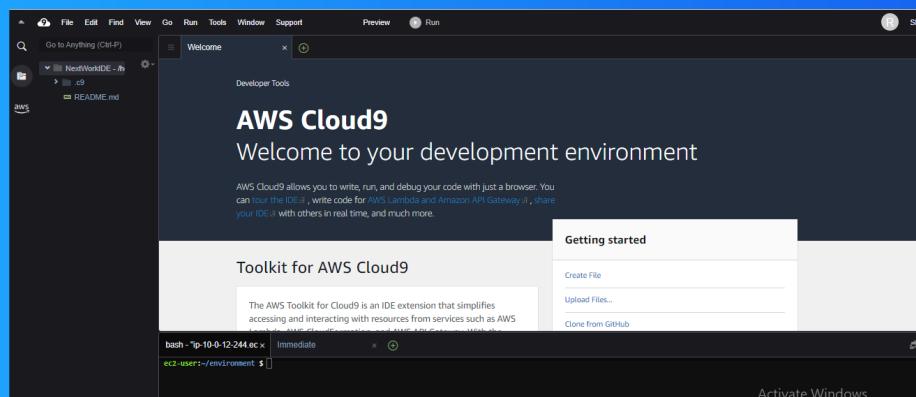




Build a Web App and IDE in AWS



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Introducing Today's Project!

What is AWS Cloud9 and why is it useful?

AWS Cloud9 is a cloud-based IDE that allows you to write, run, and debug code directly in your browser. It supports multiple programming languages, provides a preconfigured environment with essential tools, and integrates seamlessly with AWS services

How I'm using Cloud9 in this project

to launch the web app

One thing I didn't expect...

I initially got an error when creating an environment in Cloud9 and the way I resolved it is that I changed the connection from SSM to SSH

This project took me...

an hour

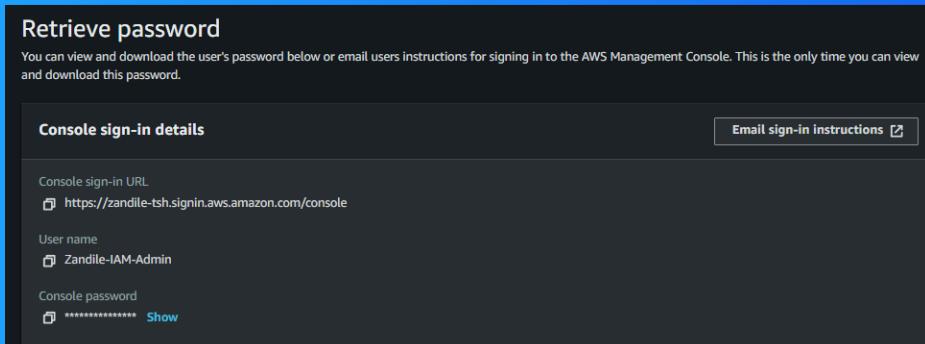
Set up an IAM User

An IAM user is an entity in AWS that represents a person or service that interacts with AWS resources. IAM users are used to control access and permissions within an AWS account.

The importance of IAM users

It's important to use IAM users to control access, manage security, track activity, separate roles, and enable multi-user environments in AWS, ensuring secure and organized access to resources.

I created an IAM user with AdministratorAccess



Environments & IDEs

What is an environment?

is a cloud-based workspace where you can develop and run your code. It provides a fully configured, isolated development environment that includes everything you need to write, test, and debug your code, such as: an IDE

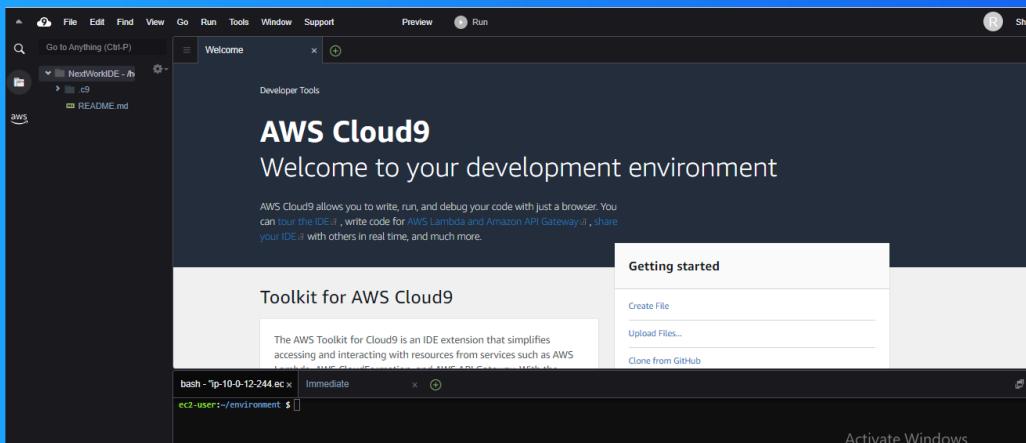
What is an IDE?

An IDE (Integrated Development Environment) is a software application that combines all the tools you need for coding, such as a code editor, debugger, and compiler, into one interface. It helps you write, test, and manage your code more efficiently.

Launch a Cloud9 IDE

The benefit of using Cloud9

Using Cloud9 has the benefit of providing a cloud-based development environment that is accessible from anywhere, with built-in integration for AWS services and no need for local setup or configuration.



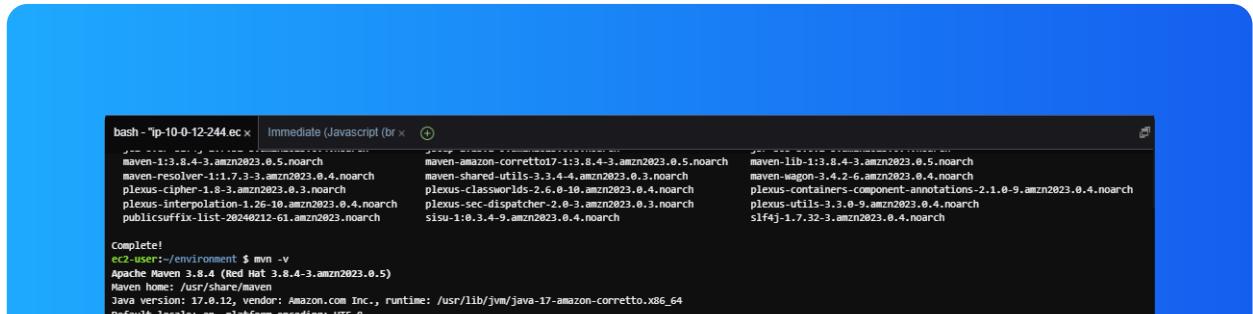
Maven & Java

Maven is a build automation tool used primarily for Java projects. It manages project dependencies, builds code, and automates tasks like testing and packaging. Maven uses XML configuration files (pom.xml) to define project structure, dependencies, a

Maven is required in this project because it automates the build process, manages dependencies, ensures consistency, integrates with tools, and generates useful documentation, making development and deployment more efficient and reliable.

Java is programming language used to create software applications. It's known for being versatile, meaning you can run Java programs on different types of computers and devices without changing the code. It's widely used for building web applications

Java is required in this project because it offers platform independence, robust frameworks, scalability, strong performance, and extensive community support, making it ideal for building reliable and scalable applications.



A screenshot of a terminal window with a blue header. The title bar says "bash - *ip-10-0-12-244.ec x Immediate (Javascript (br x)". The terminal displays a list of Maven dependencies. At the bottom, it shows the Maven version and Java runtime information.

```
maven-1.13.8.4-3.amzn2023.0.5.noarch
maven-resolver-1.11.7.3-3.amzn2023.0.4.noarch
plexus-cipher-1.8-3.amzn2023.0.3.noarch
plexus-interpolation-1.26-10.amzn2023.0.4.noarch
publicsuffix-list-20240212-61.amzn2023.noarch
maven-amazon-corretto17-1.13.8.4-3.amzn2023.0.5.noarch
maven-shared-utils-3.3.4-4.amzn2023.0.3.noarch
plexus-classworlds-2.6.0-10.amzn2023.0.4.noarch
plexus-sec-dispatcher-2.0-3.amzn2023.0.3.noarch
sisu-1.0.3-4-9.amzn2023.0.4.noarch
maven-1.1b-1.3.8.4-3.amzn2023.0.5.noarch
maven-wagon-3.4.2-6.amzn2023.0.4.noarch
plexus-containers-component-annotations-2.1.0-9.amzn2023.0.4.noarch
plexus-utils-3.3.0-9.amzn2023.0.4.noarch
slf4j-1.7.32-3.amzn2023.0.4.noarch

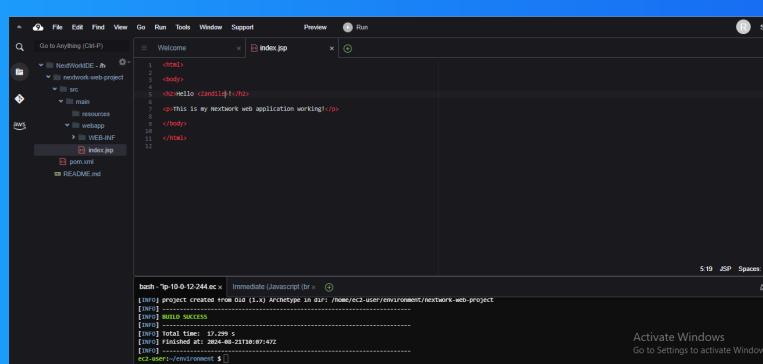
Complete!
ec2-user:~/environment $ mvn -v
Apache Maven 3.8.4 (Red Hat 3.8.4-3.amzn2023.0.5)
Maven home: /usr/share/maven
Java version: 17.0.12, vendor: Amazon.com Inc., runtime: /usr/lib/jvm/java-17-amazon-corretto.x86_64
default locale: en_platform encoding: UTF-8
```

Create the Application

To create a simple Java web app, I ran the command mvn archetype:generate

Once the web app was created, my IDE's file explorer was populated with a basic structure for the, a folder called projectnextwork-web-project

To customise this web app's display, I updated the index.jsp file to customize the HTML code.



The screenshot shows a Java IDE interface with a blue header bar. The main area displays the project structure and the content of the index.jsp file. The project structure includes a 'src' folder, a 'WEB-INF' folder, and files like 'pom.xml' and 'README.md'. The index.jsp file contains the following HTML code:

```
<html>
<head>
<body>
<h1>Hello NextWork</h1>
<p>This is my NextWork web application working!</p>
</body>
</html>
```

Below the code, the terminal window shows the output of the 'mvn archetype:generate' command, indicating a successful build:

```
[INFO] project created from old (1.x) Archetype in dir: /home/ec2-user/environment/projectnextwork-web-project
[INFO] BUILD SUCCESS
[INFO] Total time: 17.299 s
[INFO] Finished at: 2024-08-21T08:07:47Z
[INFO] ---
```



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