

MANAGING A CI/CD PIPELINE WITH AWS CODE FAMILY

PROJECT 1 / 6

SETTING UP A **WEB APP** AND **IDE** IN THE CLOUD



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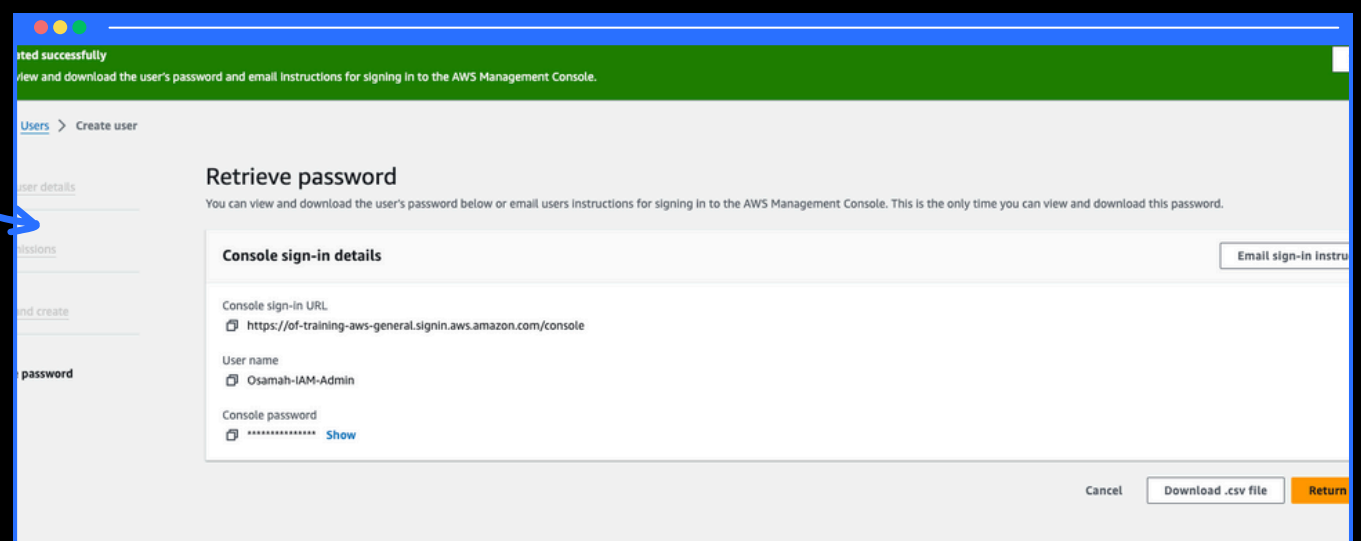


01

SET UP AN IAM USER

- An IAM user is a person who needs to work on the AWS cloud.
- It's important to create IAM users because root users should not be used in AWS.
- I created an IAM user with admin permission to manage AWS resources for this project.

A new IAM user set up for my AWS Account



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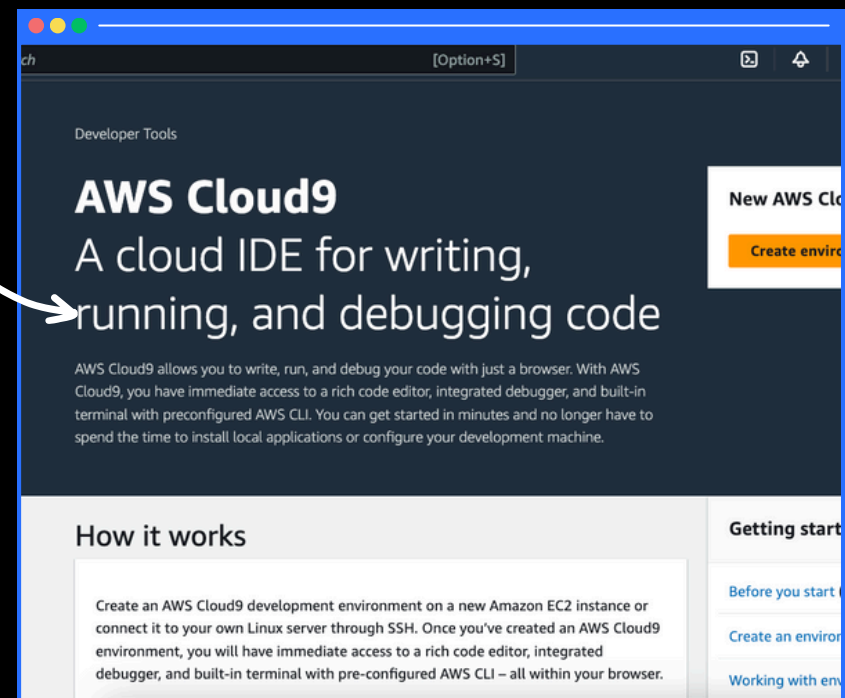


02

LAUNCH A CLOUD9 IDE

- An IDE is a general term for software that help developers write, debug, and manage code efficiently.
- I used AWS Cloud9 to launch an environment. An environment means a set of requirements/resources required to run and build your software application.
- Using Cloud9 is a specific type of IDE that's hosted on AWS. You can access it through a web browser from anywhere, without needing to install heavy software on your computer

My Cloud9 IDE!



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INSTALL MAVEN & JAVA

03

- Maven is a powerful tool that automate building a program.
- Maven is required in this project because we are building a web app in AWS.
- Java is a programming language I am using to build the web app
- Java is required in this project because it the language that I am using to build this app
- The Java version I'm using for this project is Amazon Corretto8

I used terminal
commands to install
Maven and Java

```
Osamah-IAM-Admin:~/environment $ export JAVA_HOME=/usr/lib/jvm/java-1.8.0-amazon-corretto.x86_64
Osamah-IAM-Admin:~/environment $ export PATH=/usr/lib/jvm/java-1.8.0-amazon-corretto.x86_64/jre/bin:$PATH
Osamah-IAM-Admin:~/environment $ java -version
java -version
openjdk version "1.8.0_412"

OpenJDK Runtime Environment Corretto-8.412.08.1 (build 1.8.0_412-b08)
OpenJDK 64-Bit Server VM Corretto-8.412.08.1 (build 25.412-b08, mixed mode)
Osamah-IAM-Admin:~/environment $
bash: : command not found
Osamah-IAM-Admin:~/environment $ mvn -v
Apache Maven 3.5.2 (138edd61fd100ec658bfa2d307c43b76940a5d7d; 2017-10-18T07:58:13Z)
Maven home: /usr/share/apache-maven
Java version: 1.8.0_412, vendor: Amazon.com Inc.
Java home: /usr/lib/jvm/java-1.8.0-amazon-corretto.x86_64/jre
Default locale: en_US, platform encoding: UTF-8
OS name: "linux", version: "5.10.216-204.855.amzn2.x86_64", arch: "amd64", family: "unix"
Osamah-IAM-Admin:~/environment $
```



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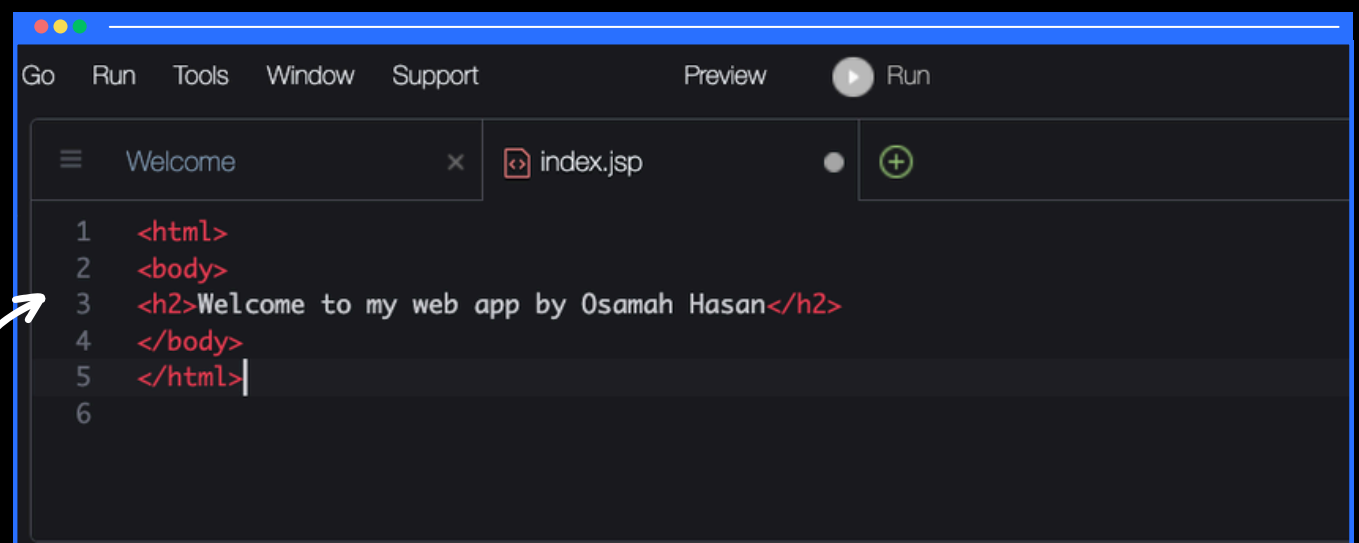


CREATE THE APPLICATION

- 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 web app structure.
- To customise this web app's display, I updated `index.jsp` that contain java code for my web app and not just a static HTML page
-

04

Web App
structure set
up by Maven



The screenshot shows an IDE window with a menu bar (Go, Run, Tools, Window, Support) and a toolbar (Preview, Run). The file explorer on the left shows a 'Welcome' tab and an 'index.jsp' file. The code editor displays the following HTML code:

```
1 <html>
2 <body>
3 <h2>Welcome to my web app by Osamah Hasan</h2>
4 </body>
5 </html>
6
```



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MY KEY LEARNINGS

01

It's recommended to use an IAM user instead of the root user to do my projects because it is not recommended to use a root user in a daily work

02

IDEs are useful for creating an environment to develop a programs using programming languages.

03

The service I used to set up an IDE was Cloud9 in AWS

04


The benefit of using this service over traditional IDEs is no download is required, it is in the cloud
Apache Maven is used in my project to build the code in Java for the web app

05

Was there anything else you've learnt from this project? how to develop a cloud environment in AWS and use Java to write the web app.



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FINAL THOUGHTS...

- This project took me around 2 hours
- One thing I didn't expect was how easy it was to deploy a cloud environment for the web app project
- In the next project of this DevOps series, I will use **AWS CodeCommit** to set up a repository for my web app's code.



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