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

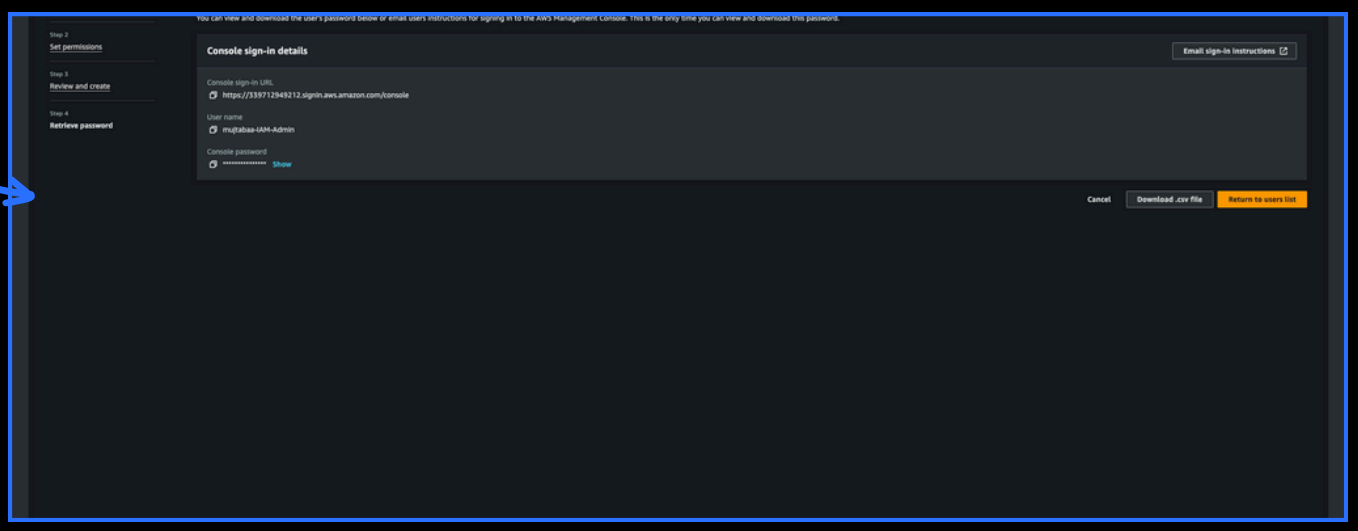
SET UP AN IAM USER

- An IAM user is a person/computer who can do things on the AWS cloud using their computer. These are team members of the AWS account with unique usernames and passwords with limited access to account resources.

- It's important to create IAM users because it is recommended to create an IAM user since the root user has more privileged access to security protected services.

- I created an IAM user with Administration Access to login instead of using the root.

A new IAM user set up for my AWS Account



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LAUNCH A CLOUD9 IDE

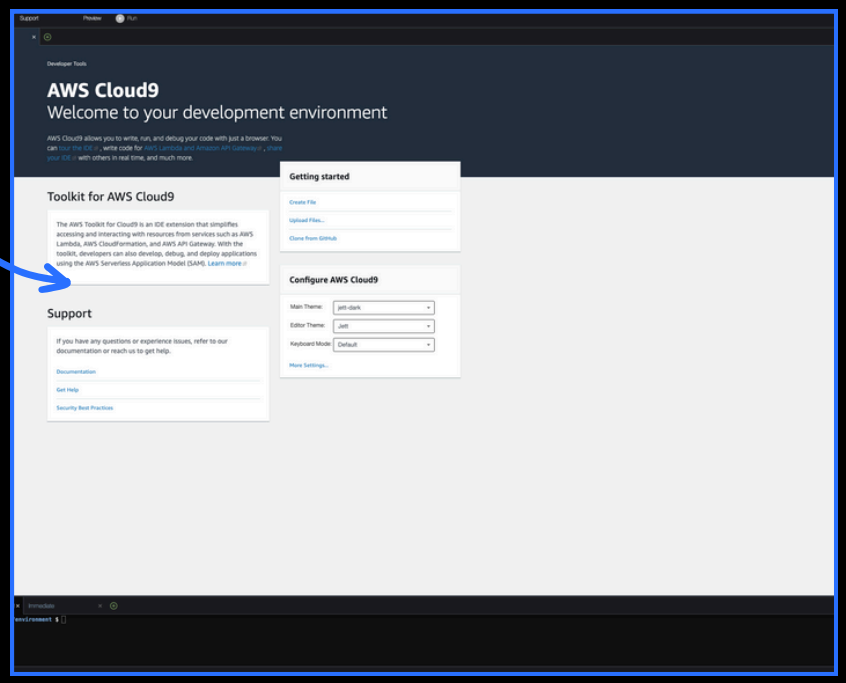
02

- An IDE is software that helps developers debug and write code for programs. This is like a toolkit for building software, such as an editor, running code and testing code.

- I used AWS Cloud9 to launch an environment. An environment means resources/requirements needed to build and test software applications.

- Using Cloud9 meant that creating an EC2 environment was done automatically. With this IDE, it allows for different environments to be created to test different software applications.

My Cloud9 IDE!



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INSTALL MAVEN & JAVA

- Maven is a tool that automates the building of software.
- Maven is required in this project because it is used for compiling, linking, packaging, and testing.

- Java is a programming language used in varies applications for large and small enterprise systems.
- Java is required in this project because it will be the coding language that is most commonly used in most applications.
- The Java version I'm using for this project is Amazon Corretto 8.

03

I used terminal commands to install Maven and Java

```
 -X,--debug                          Produce execution debug output
mujtabaa-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: "5.10.217-205.860.amzn2.x86_64", arch: "amd64", family: "unix"
mujtabaa-IAM-Admin:~/environment $ 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)
mujtabaa-IAM-Admin:~/environment $
```

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CREATE THE APPLICATION

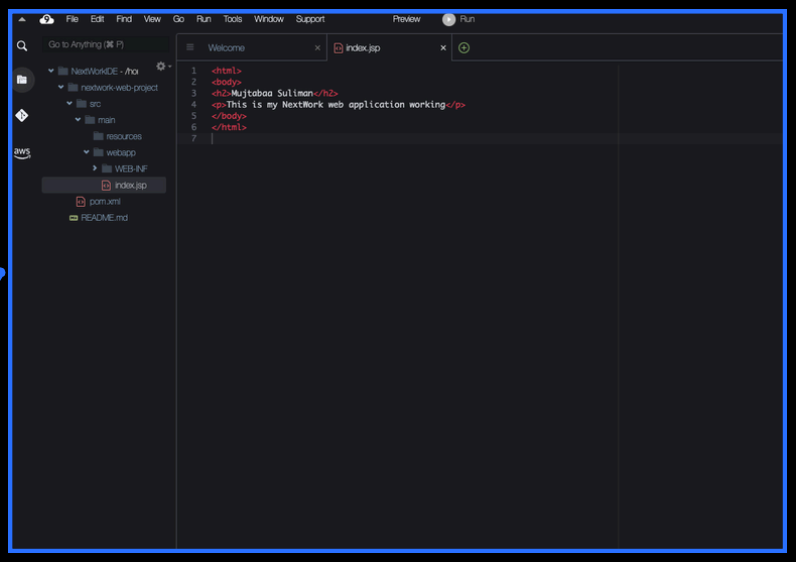
- To create a simple Java web app, I ran the command

```
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 is populated with my nextwork-web-project that contains src folder, which contains the main folder contains the resource folder and webapp folder, the webapp folder contained the WEB-INF folder and index.jsp file. The .jsp file is used for the webapp.
- To customise this web app's display, I updated the index.jsp file that contained code of HTML with the header saying, "Hello World", I changed this to my name and added in another paragraph as bellow.

04

Web App structure set up by Maven



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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 the user does not have access to sensitive information that the root user has, this is done for safety and security.

02

IDEs are useful for building and testing code for applications and programs.

03

The service I used to set up an IDE was Cloud9. The benefit of using this service over traditional IDEs is that it allows you to build your application and programs on the web browser without install the software.

04

Apache Maven is used in my project to setup. the environment without having to do so manually. This also helps in compiling, linking, packaging, and testing code.

05

Was there anything else you've learnt from this project? Yes, I leant that webapps use the file .jsp because its like HTML files except HTML cannot take in Java code, however .jsp files allow you to use java code inside HTML.

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FINAL THOUGHTS...

- This project took me 1 hour. Documentation took me 20 minutes to complete.

- Delete **EVERYTHING** at the end! Let's keep this project free :)

- One thing I didn't expect was that Cloud9 is an IDE, i was not expecting to use AWS to build but rather to deploy webapps.

- 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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