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Set up a Web App + IDE with Cloud9



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Introducing AWS Cloud9!

What it does & how it's useful

AWS Cloud9 is a specific type of IDE that's hosted on AWS. Developers and teams use AWS Cloud9 because it can be accessed through the browser without the need to install heavy software on your computer.

How I'm using it in today's project

I'm using AWS Cloud9 in this project to create a web application, i will be installing Maven and Java to build this web app, which would normally be done by installing an IDE onto my system. But with cloud9 i can just access the IDE via my browser.

This project took me...

This project took me 1 hour to complete. Documentation took me about 30 minutes to complete.



Set up an IAM User

- An IAM user is an additional user that gets access to my AWS account resources when creating a user I can specify in detail the level of access it has to my account resources or service.
- 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.


A new IAM user set up for my AWS Account

Retrieve password


You can view and download the user's password below or email users instructions for signing in to the AWS Management Console to download this password.

Console sign-in details


Console sign-in URL

 <https://nextwork-alias-sadeesha.signin.aws.amazon.com/console>

User name

 Sadeesha-IAM-Admin

Console password

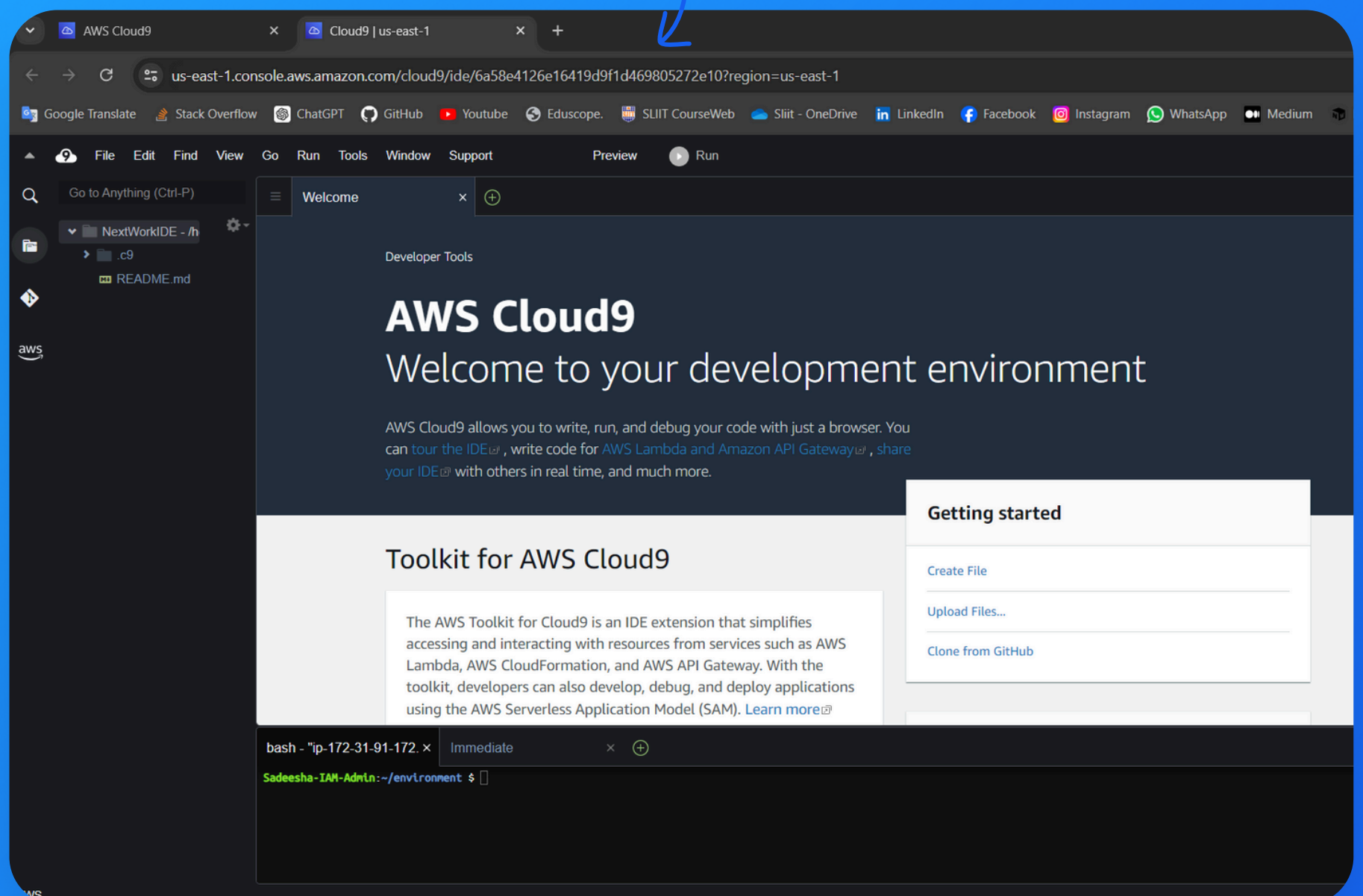
 ***** [Show](#)



Launch a Cloud9 IDE

- I used AWS Cloud9 to launch an environment. An environment means a set of resources that work together to help me build software or applications. Every application has its own needs such as dependencies, libraries tools etc
- Using Cloud9 meant there is no need to download this software in order to use an IDE.

My Cloud9 IDE!





Install Maven & Java

- Maven is a powerful tool that automates the building of software, automating the steps required for my application to become a final product that machines e.g. computers can actually run.
- Maven is required in this project because I am building a web app in a specific programming language which will not be able to be built on its own without the help of Maven.
- Java is the specific programming language being used to create my web application.
- Java is required in this project because it is a versatile tool for creating different applications, including web apps.
- The Java version I'm using for this project is Amazon Corretto 8.

I used terminal commands to install Maven and Java

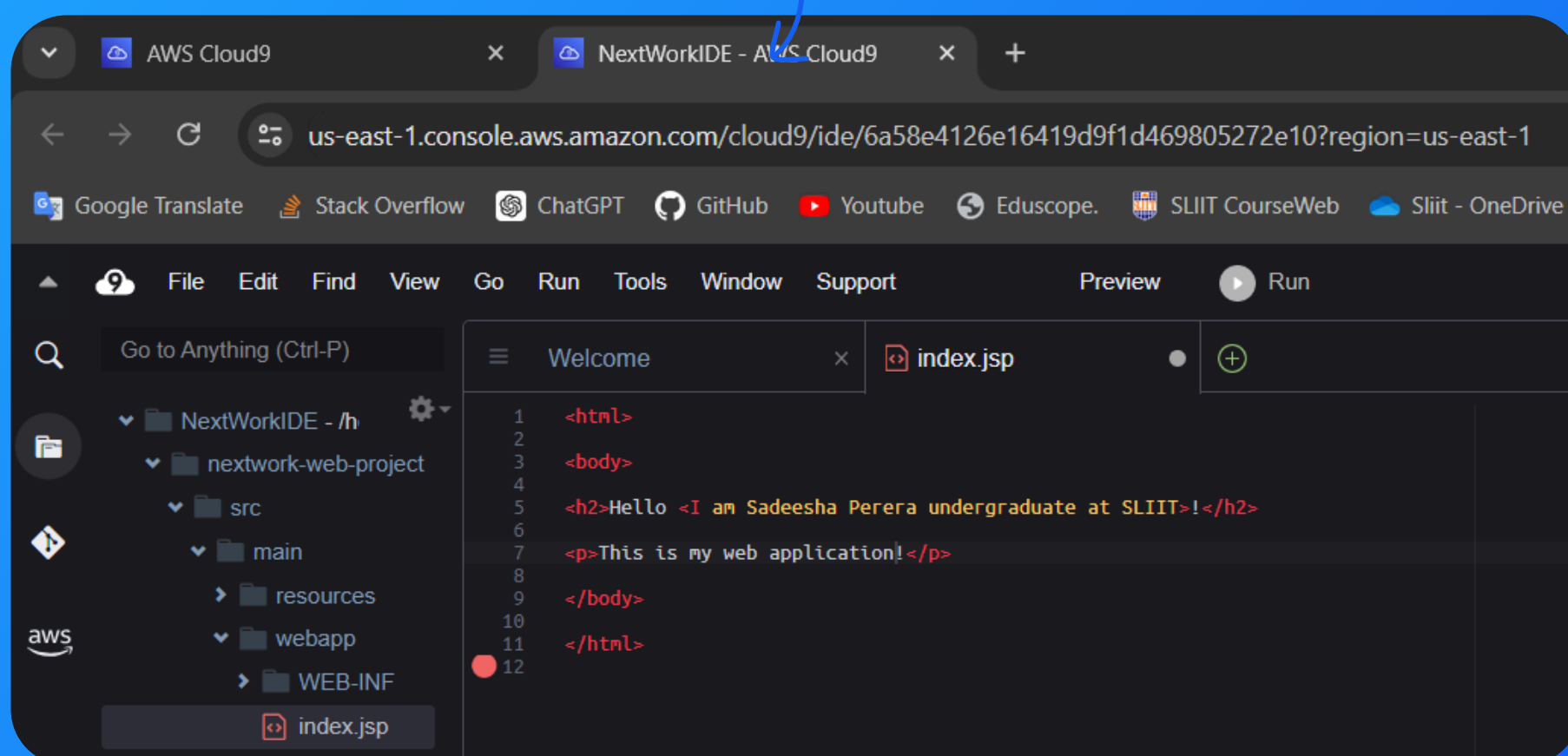
```
Sadeesha-IAM-Admin:~/environment $ sudo wget https://repos.fedorapeople.org/repos/dchen/apache-maven/epel-apache-maven.repo -O /etc/yum.repos.d/epel-apache-maven.repo
--2024-07-13 11:52:11-- https://repos.fedorapeople.org/repos/dchen/apache-maven/epel-apache-maven.repo
Resolving repos.fedorapeople.org (repos.fedorapeople.org)... 152.19.134.196, 2600:2701:4000:5211:dead:beef:a7:9475
Connecting to repos.fedorapeople.org (repos.fedorapeople.org)|152.19.134.196|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 445
---> Package lksctp-tools.x86_64 0:1.0.17-2.amzn2.0.2 will be installed
---> Package pcsc-lite-libs.x86_64 0:1.8.8-7.amzn2 will be installed
---> Package pixman.x86_64 0:0.34.0-1.amzn2.0.2 will be installed
---> Package ttmkfdi.x86_64 0:3.0.9-42.amzn2.0.2 will be installed
```




Create the application

- To create the 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 Java web app structure - so I did not have to create one from scratch.
- To customise this web app's display, I updated the `index.jsp`. The difference between `index.jsp` and `index.html` is `index.jsp` can contain Java code, which is what could support the creation of a web application (and not a static web site).

Writing a basic web app in my Cloud9 IDE!





My key learnings

- 1 It's recommended to use an IAM user instead of the root user to do my projects because the IAM user account grants me all the access the root user would grant me, but I don't have to worry about any security breaches to my root user. The IAM user protects my root user.
- 2 IDEs are useful for building and editing code. Cloud 9 is even more useful due to it being readily available on AWS and can be accessed via a web browser.
- 3 Apache Maven is used in my project to help automat the steps required to build my web app with a programming language like java which wont be able to it on its own.
- 4 One thing I didn't expect was how easy it would be to install the web application on cloud 9, without the need to install any software on my system. AWS has streamlined the whole process and giving developers a tool that can cut the time of dev opps by a significant amount of time.



Everyone should be in a job they love. *yes!*

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