



# Build a Web App and IDE in AWS



Shikha Gupta

The screenshot shows the AWS Cloud9 IDE running in a web browser. The interface includes a top navigation bar with tabs like 'File', 'Edit', 'Find', 'View', 'Go', 'Run', 'Tools', 'Window', and 'Support'. Below the navigation is a 'Welcome' panel with the title 'AWS Cloud9' and the subtext 'Welcome to your development environment'. It also features a 'Getting started' section with options to 'Create File', 'Upload Files...', and 'Clone from GitHub'. A central workspace contains a terminal window titled 'bash - \*ip-172-31-1-127.a\*' with the command 'Shikha@IP-AWS-Adwin:~/environment \$'. To the left, there's a file browser showing a directory structure with files like 'c9', 'README.md', and 'aws'. The bottom of the screen shows a Windows taskbar with various icons and system status indicators.



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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 offers a complete development environment online. It's useful for remote coding, easy collaboration, and seamless integration with AWS services, removing the need for local setup.

## How I'm using Cloud9 in this project

I used AWS Cloud9 in today's project to create and manage a Maven web development project. It provided an online IDE with built-in tools for coding, building, and debugging, and seamless integration with AWS services, streamlining development.

## One thing I didn't expect...

One thing I didn't expect was how easily AWS Cloud9 integrated with Maven and AWS services, simplifying setup and deployment.

# This project took me...

It took 30 mins for the project and another 30 mins in documentation.



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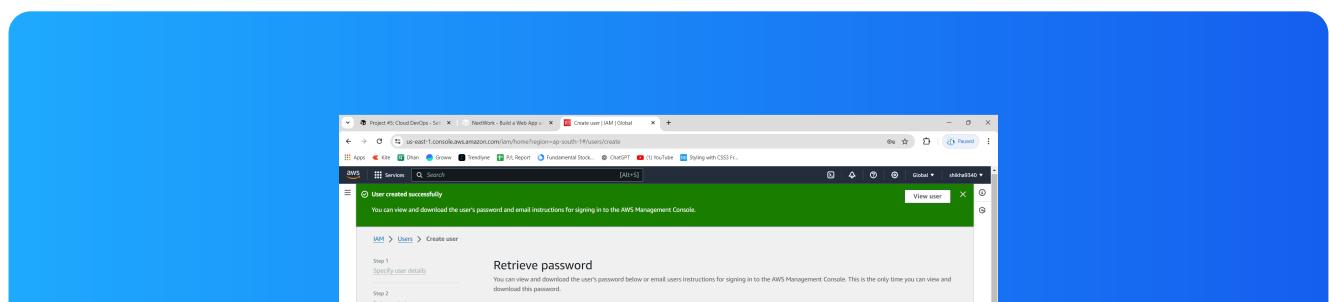
## Set up an IAM User

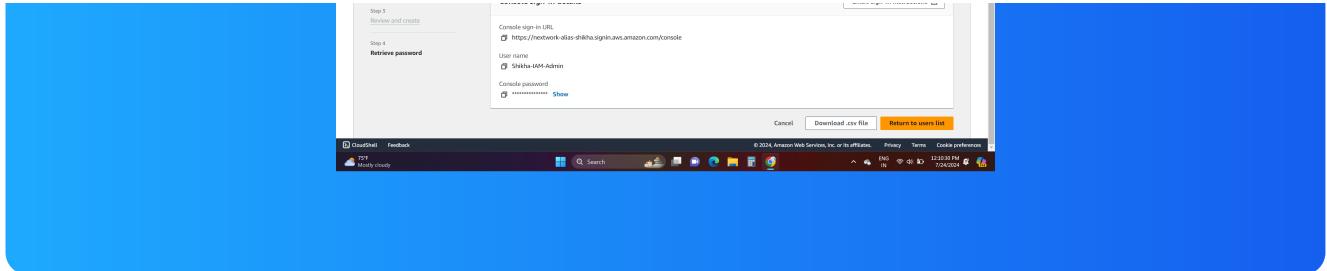
An IAM user is an individual or service that interacts with AWS resources through AWS Identity and Access Management. Each user has unique credentials and permissions, enabling controlled access and management of resources while ensuring security.

## The importance of IAM users

It's important to use IAM users because they enhance security by providing individual access credentials and permissions. This allows for controlled access to AWS resources, reducing risks and making it easier to manage and monitor actions.

I created an IAM user with Administrator access





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# Environments & IDEs

## What is an environment?

An environment is a set of requirements/resources required to run and build your software application. A software environment provides all the necessary tools, libraries, and settings that developers need to build and run an application.

## What is an IDE?

An IDE is an Integrated Development Environment that combines tools like a code editor, compiler, and debugger to streamline software development in one interface.



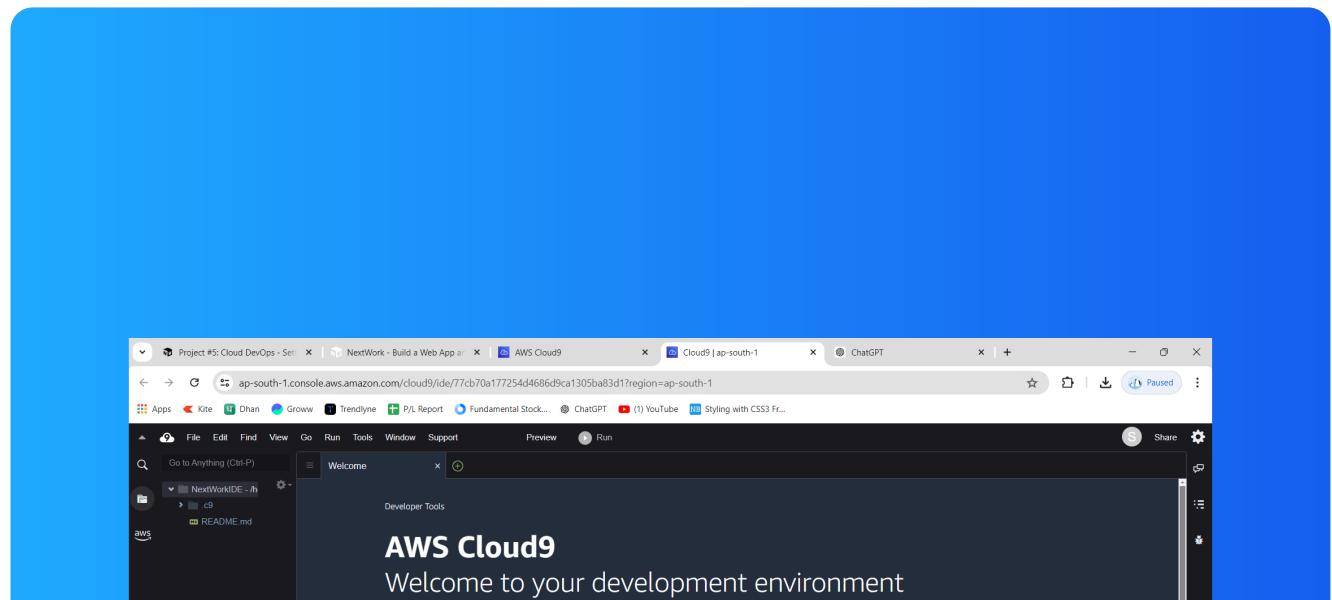
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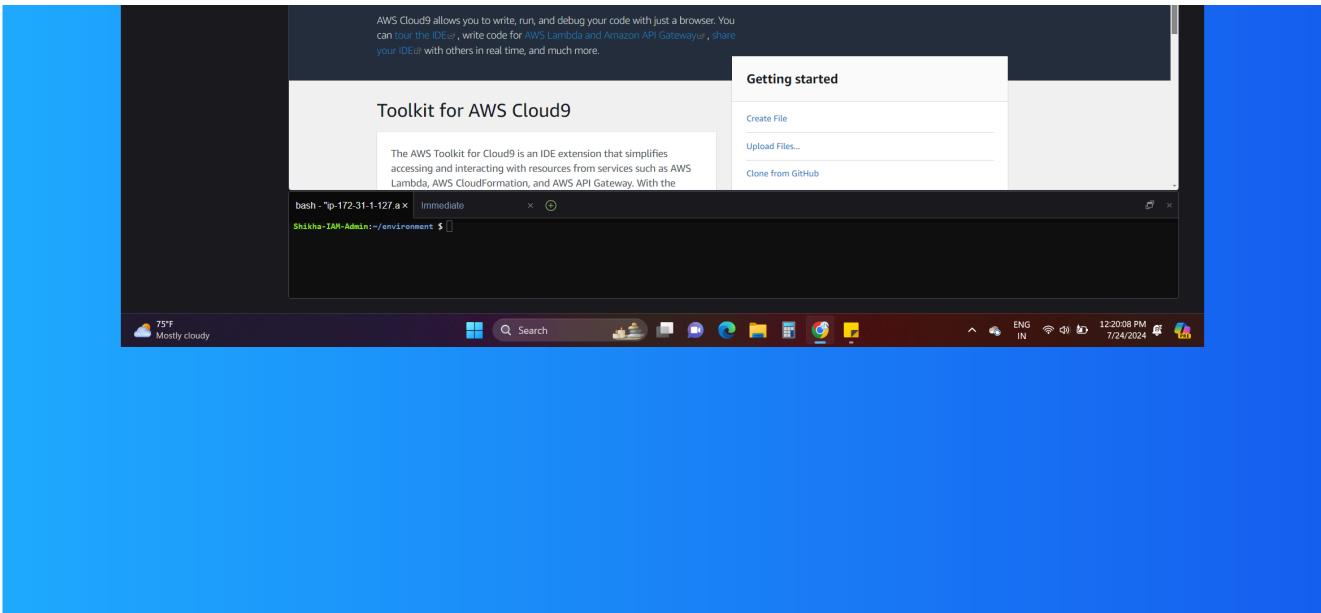
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# Launch a Cloud9 IDE

## The benefit of using Cloud9

Using Cloud9 has the benefit of being a cloud-based IDE, allowing access from anywhere and easy collaboration. It integrates with AWS services, simplifying development and deployment.





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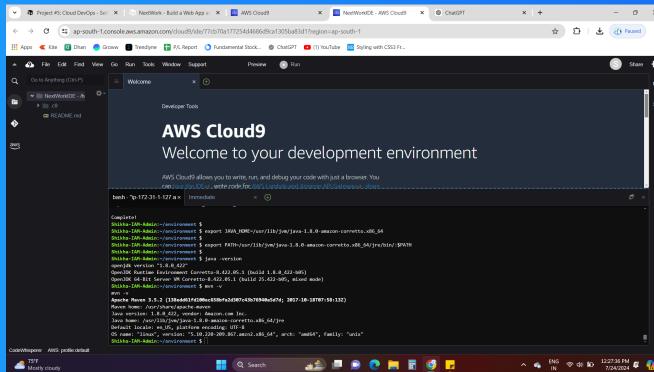
# Maven & Java

Apache Maven is a powerful tool that automates the building of software.

Maven is required in this project because it simplifies dependency management, automates builds, and provides a consistent project structure, enhancing efficiency and collaboration.

Java is a popular programming language that allows you to write code once and run it anywhere. It's used for building a variety of applications, from web apps to mobile apps, and is known for its simplicity and portability.

Java is required in this project because it provides platform independence, ensuring that code runs consistently across different systems.



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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 was populated with my project NextWorkIDE folder

To customise this web app's display, I updated my name in index.jsp file

The screenshot shows a terminal window titled "Project 4: Cloud DevOps - Sen" with the URL "app-south-1.console.aws.amazon.com/cloud9/index.html?region=ap-south-1". The terminal output is as follows:

```
bash: 'git@172-31-1-127: ~' [Immediate]
[downloaded from central] https://repo.maven.apache.org/maven2/org/liquibase/liquibase-archetype/1.8/liquibase-archetype-1.8.jar (3.9 kB at 404 kB/s)
[INFO] Using following parameters for creating project from Old (1.x) Archetype: liquibase-archetype-1.8
[INFO] 
[INFO] Parameter: basedir, Value: /home/ec2-user/environment/nextwork-web/project
[INFO] Parameter: groupId, Value: com.nextwork.app
[INFO] Parameter: package, Value: com.nextwork.app
[INFO] Parameter: packageParent, Value: com.nextwork.app
[INFO] Parameter: projectName, Value: nextwork-web
[INFO] project created from Old (1.x) Archetype in dir: /home/ec2-user/environment/nextwork-web/project
[INFO] 
[INFO] BUILD SUCCESS
[INFO] 
[INFO] Total time: 30s
[INFO] Finished at: 2024-07-24T08:42:49Z
[INFO] Final Memory: 349/936
[INFO] 
[INFO] See https://maven.apache.org/archetype/maven-archetype-bundle/1.4.5/maven-archetype-bundle.html for more information about Maven Archetypes
[INFO] 
[INFO] [Help 1] [Help 2] [Help 3] [Help 4] [Help 5]
```



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