CSC PROJECT

2000031763

Veera Brahmam Ainala

Sec-14

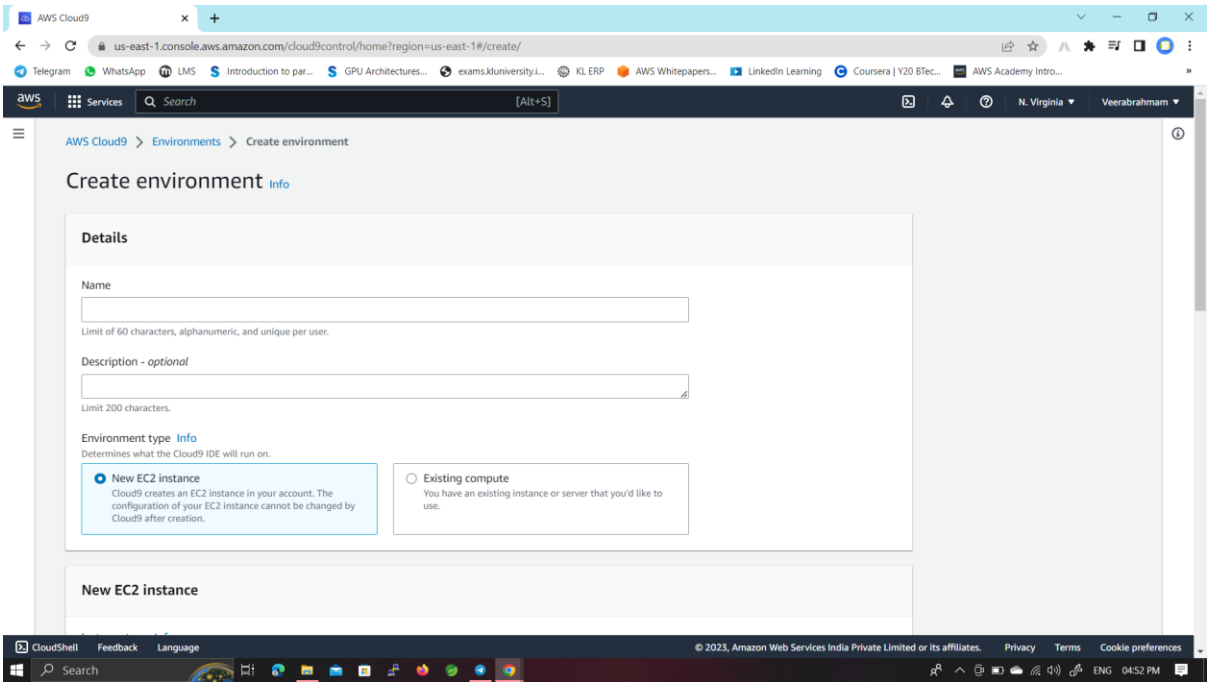
Faculty: Dr. S Kavitha

Project deployment link:

https://master.d36jxg476tsyu.amplifyapp.com/

Serverless web application and Serverless AWS Cognito Custom User Pool

This workshop shows you how to build a dynamic, serverless web application. You'll learn how to host static web resources with Amazon S3, how to use Amazon Cognito to manage users and authentication, and how to build a RESTful API for backend processing using Amazon API Gateway, AWS Lambda and Amazon DynamoDB. 1. Create the git repository The AWS Cloud9 development environment comes with AWS managed temporary credentials that are associated with your IAM user. You use these credentials with the AWS git-remote-codecommit tool (A Git Remote Helper that makes it easier to interact with AWS CodeCommit). This tool is installed in Cloud9 by default. You can install it on your own machine


AWS Cloud9
us-east-1.console.aws.amazon.com/cloud9control/home?region=us-east-1#/create/
Services
Search
[Alt+S]
N. Virginia
Veerabrahmam
AWS Cloud9 > Environments > Create environment
Create environment Info
Details
Name
Limit of 60 characters, alphanumeric, and unique per user.
Description - optional
Limit 200 characters.
Environment type Info
Determines what the Cloud9 IDE will run on.
New EC2 instance
Cloud9 creates an EC2 instance in your account. The configuration of your EC2 instance cannot be changed by Cloud9 after creation.
Existing compute
You have an existing instance or server that you'd like to use.
New EC2 instance
CloudShell
Feedback
Language
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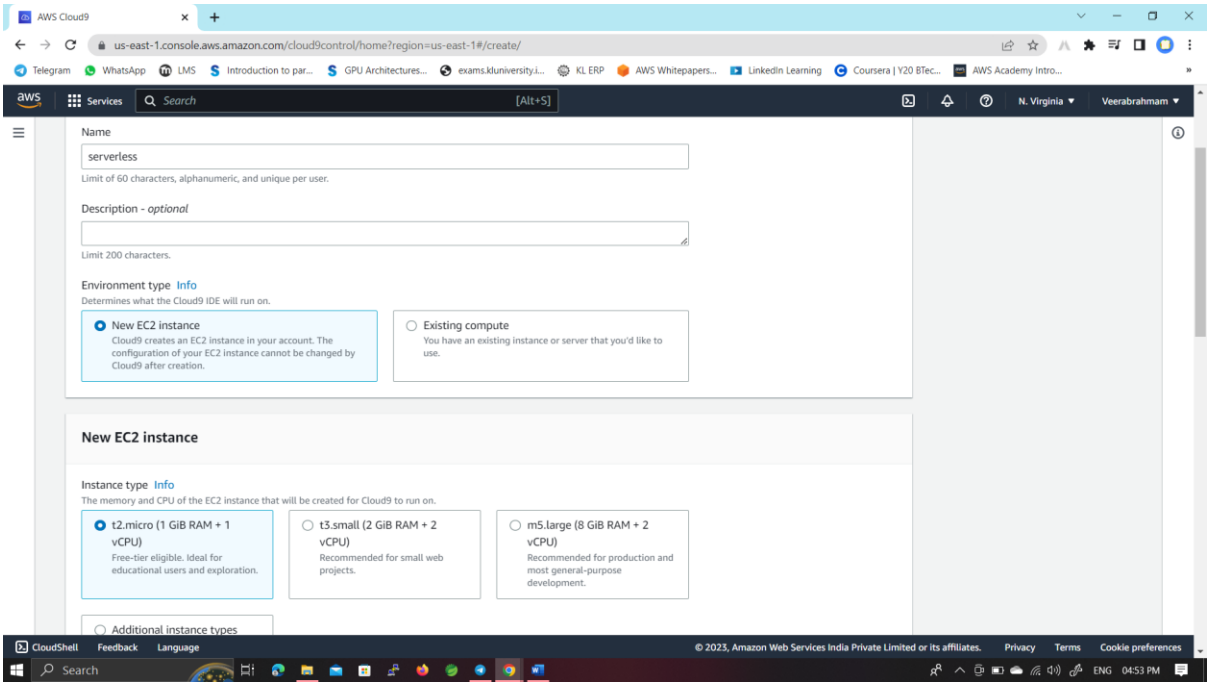
Privacy
Terms
Cookie preferences
Search
ENG
04:52 PM


AWS Cloud9
us-east-1.console.aws.amazon.com/cloud9control/home?region=us-east-1#/create/
Services
Search
[Alt+S]
N. Virginia
Veerabrahmam
Name
serverless
Limit of 60 characters, alphanumeric, and unique per user.
Description - optional
Limit 200 characters.
Environment type Info
Determines what the Cloud9 IDE will run on.
New EC2 instance
Cloud9 creates an EC2 instance in your account. The configuration of your EC2 instance cannot be changed by Cloud9 after creation.
Existing compute
You have an existing instance or server that you'd like to use.
New EC2 instance
Instance type Info
The memory and CPU of the EC2 instance that will be created for Cloud9 to run on.
t2.micro (1 GiB RAM + 1 vCPU)
Free-tier eligible. Ideal for educational users and exploration.
t3.small (2 GiB RAM + 2 vCPU)
Recommended for small web projects.
m5.large (8 GiB RAM + 2 vCPU)
Recommended for production and most general-purpose development.
Additional instance types
CloudShell
Feedback
Language
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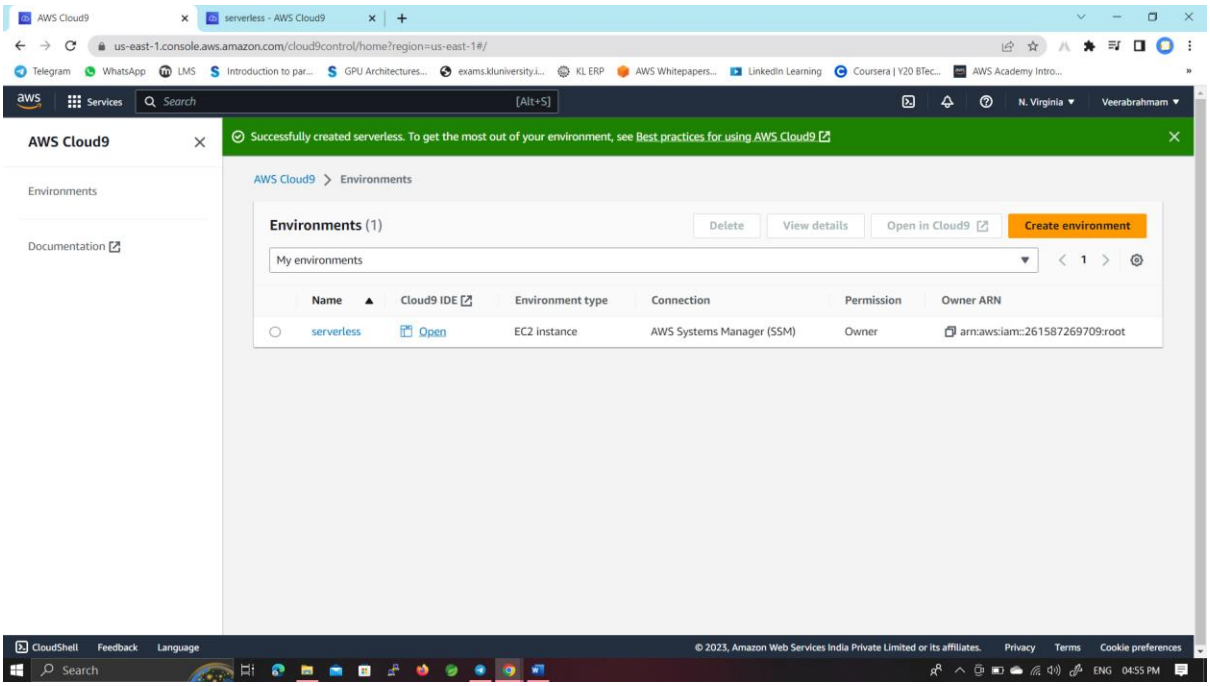
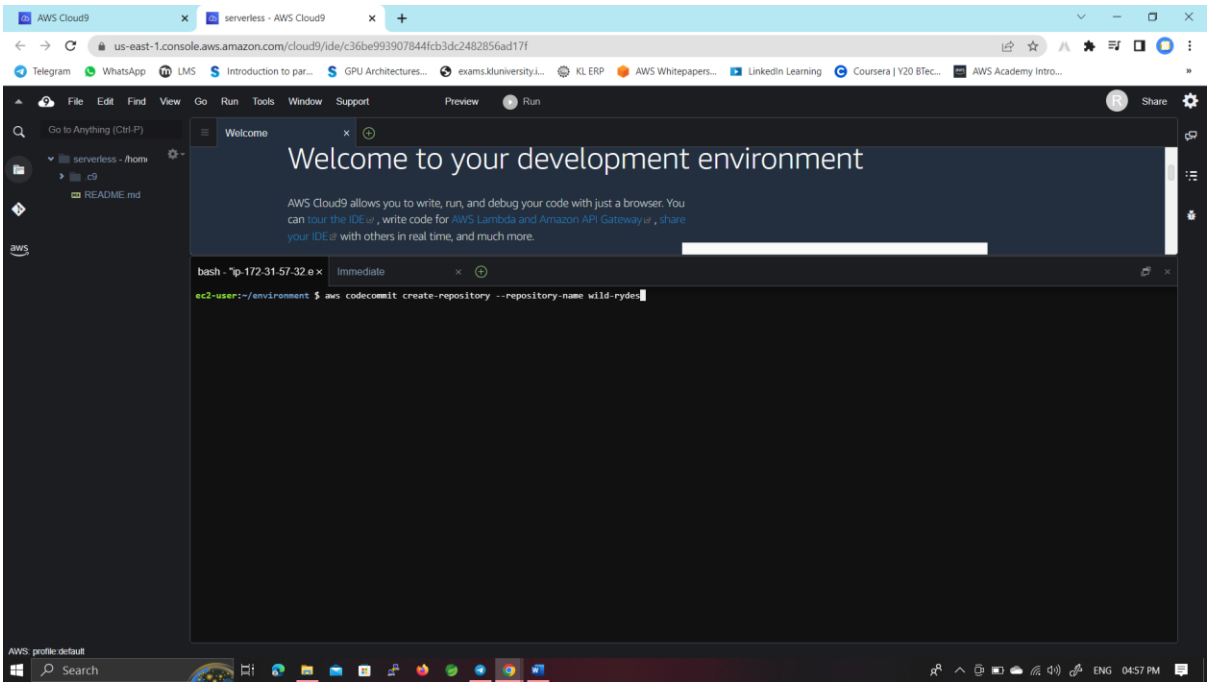
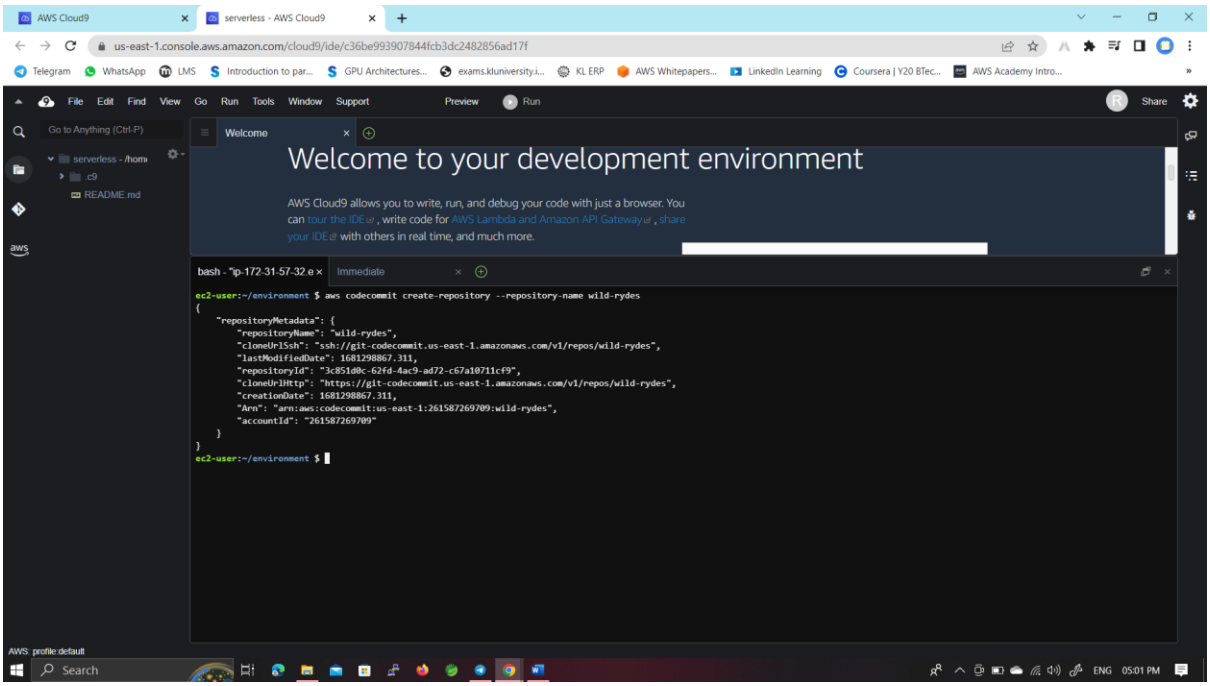
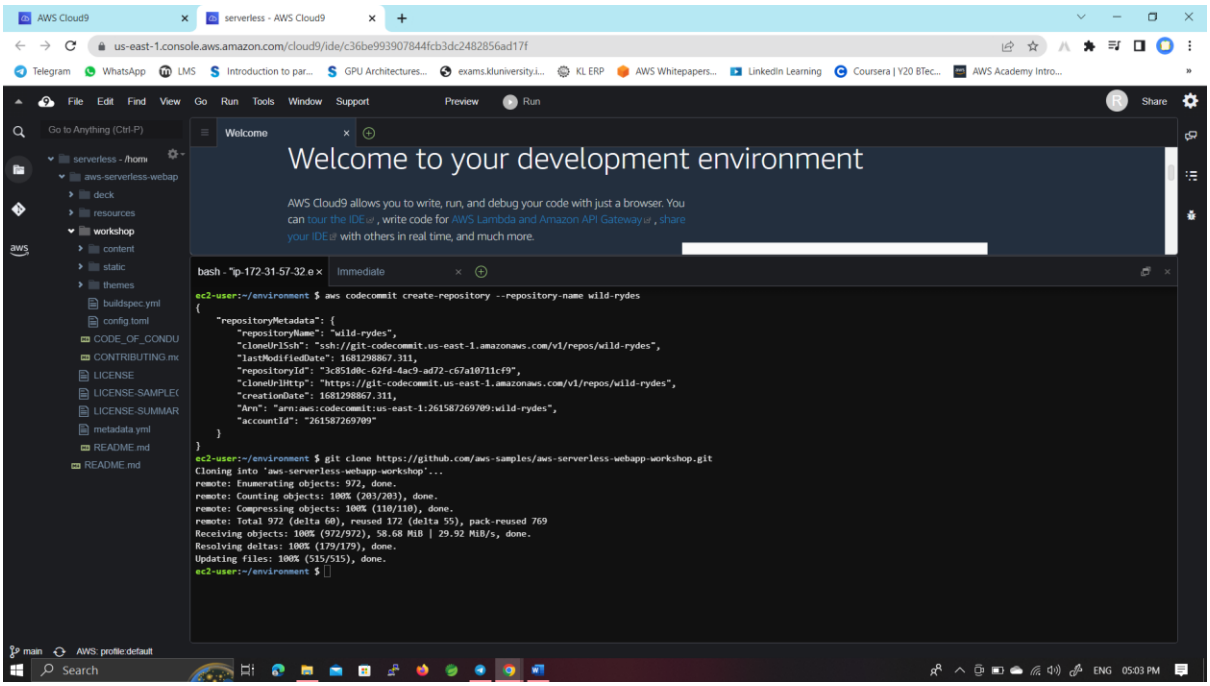


2. Deploy the site with the AWS Amplify Console

Next you'll use the AWS Amplify Console to deploy the website you've just commited to git. The Amplify Console takes care of the work of setting up a place to store your static web application code and provides a number of helpful capabilities to simplify both the lifecycle of that application as well as .


AWS Cloud9
serverless - AWS Cloud9
us-east-1.console.aws.amazon.com/cloud9/ide/c36be993907844fcb3dc2482856ad17f
File Edit Find View Go Run Tools Window Support Preview Run Share
Welcome
Welcome to your development environment
AWS Cloud9 allows you to write, run, and debug your code with just a browser. You can tour the IDE, write code for AWS Lambda and Amazon API Gateway, share your IDE with others in real time, and much more.
bash - "ip-172-31-57-32.e
Immediate
ec2-user:~/environment $ aws codecommit create-repository --repository-name wild-rydes
README.md
AWS: profile:default
Search
ENG 04:57 PM


AWS Cloud9
serverless - AWS Cloud9
us-east-1.console.aws.amazon.com/cloud9/ide/c36be993907844fcb3dc2482856ad17f
File Edit Find View Go Run Tools Window Support Preview Run Share
Welcome
Welcome to your development environment
AWS Cloud9 allows you to write, run, and debug your code with just a browser. You can tour the IDE, write code for AWS Lambda and Amazon API Gateway, share your IDE with others in real time, and much more.
bash - "ip-172-31-57-32.e
Immediate
ec2-user:~/environment $ aws codecommit create-repository --repository-name wild-rydes
{
"repositoryMetadata": {
"repositoryName": "wild-rydes",
"cloneUrlSsh": "ssh://git-codecommit.us-east-1.amazonaws.com/v1/repos/wild-rydes",
"lastModifiedDate": 1681298867.311,
"repositoryId": "3c851d0c-62fd-4ac9-ad72-c67a10711cf9",
"cloneUrlHttp": "https://git-codecommit.us-east-1.amazonaws.com/v1/repos/wild-rydes",
"creationDate": 1681298867.311,
"Arn": "arn:aws:codecommit:us-east-1:261587269709:wild-rydes",
"accountId": "261587269709"
}
}
ec2-user:~/environment $
README.md
AWS: profile:default
Search
ENG 05:01 PM



Architecture Overview:

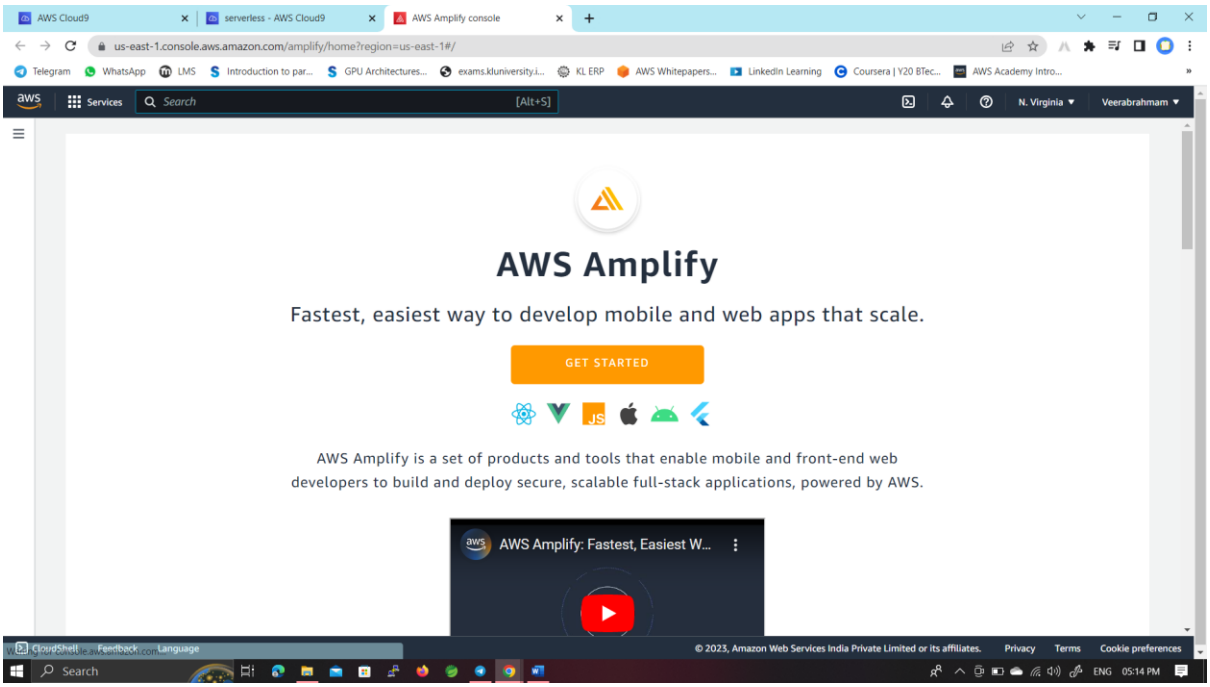
4. Create an Amazon Cognito User Pool using AWS Amplify CLI

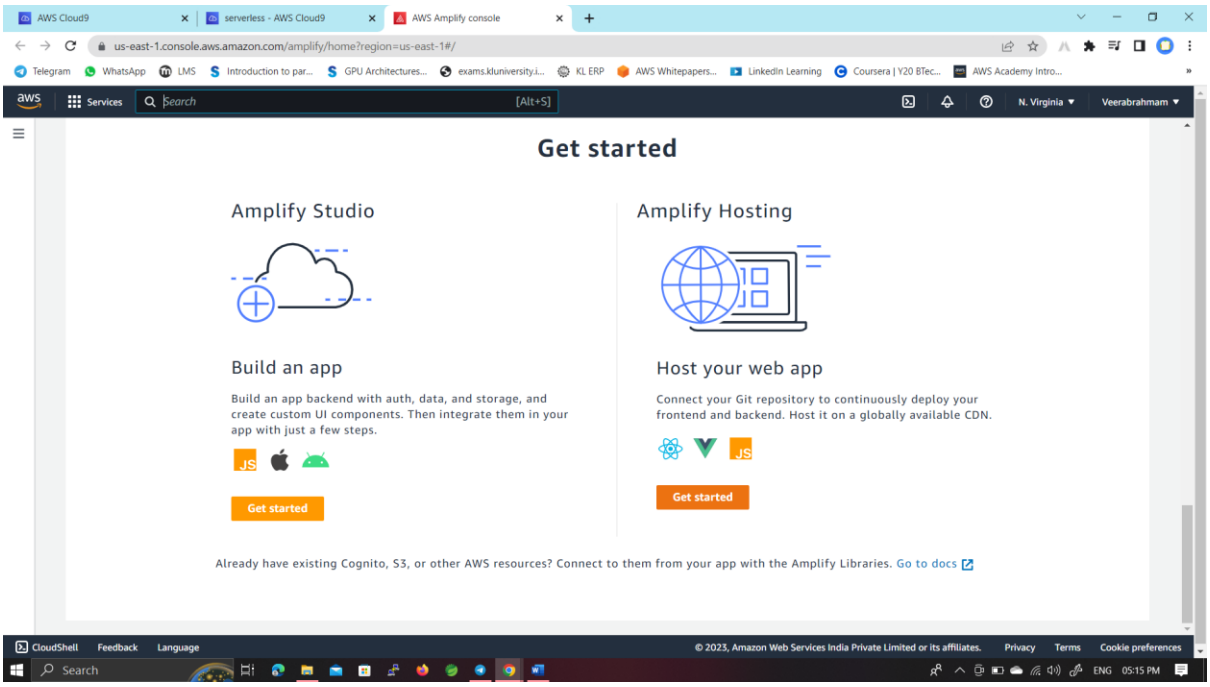
The AWS Amplify Authentication module provides Authentication APIs and building blocks for developers who want to create user authentication experiences.

Amazon Cognito User Pools is a full-featured user directory service to handle user registration, authentication, and account recovery. Amazon Cognito Federated Identities on the other hand, is a way to authorize your users to use AWS services.

Amplify interfaces with User Pools to store your user information. This includes federation with other OpenID providers like Facebook & Google. Amplify also uses Federated Identities to manage user access to AWS Resources, like allowing a user to upload a file to an S3 bucket.

The Amplify CLI automates the access control policies for these AWS resources and provides fine grained access controls via GraphQL for protecting data in your APIs. In this section you use the Amplify CLI to create a new Cognito User Pool with the default settings. Then you use the Amazon Cognito Console to manage the new User Pool.




AWS Cloud9
serverless - AWS Cloud9
AWS Amplify console
us-east-1.console.aws.amazon.com/amplify/home?region=us-east-1#/
Services
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Get started
Amplify Studio
Build an app
Build an app backend with auth, data, and storage, and create custom UI components. Then integrate them in your app with just a few steps.
Get started
Amplify Hosting
Host your web app
Connect your Git repository to continuously deploy your frontend and backend. Host it on a globally available CDN.
Get started
Already have existing Cognito, S3, or other AWS resources? Connect to them from your app with the Amplify Libraries. Go to docs
CloudShell
Feedback
Language
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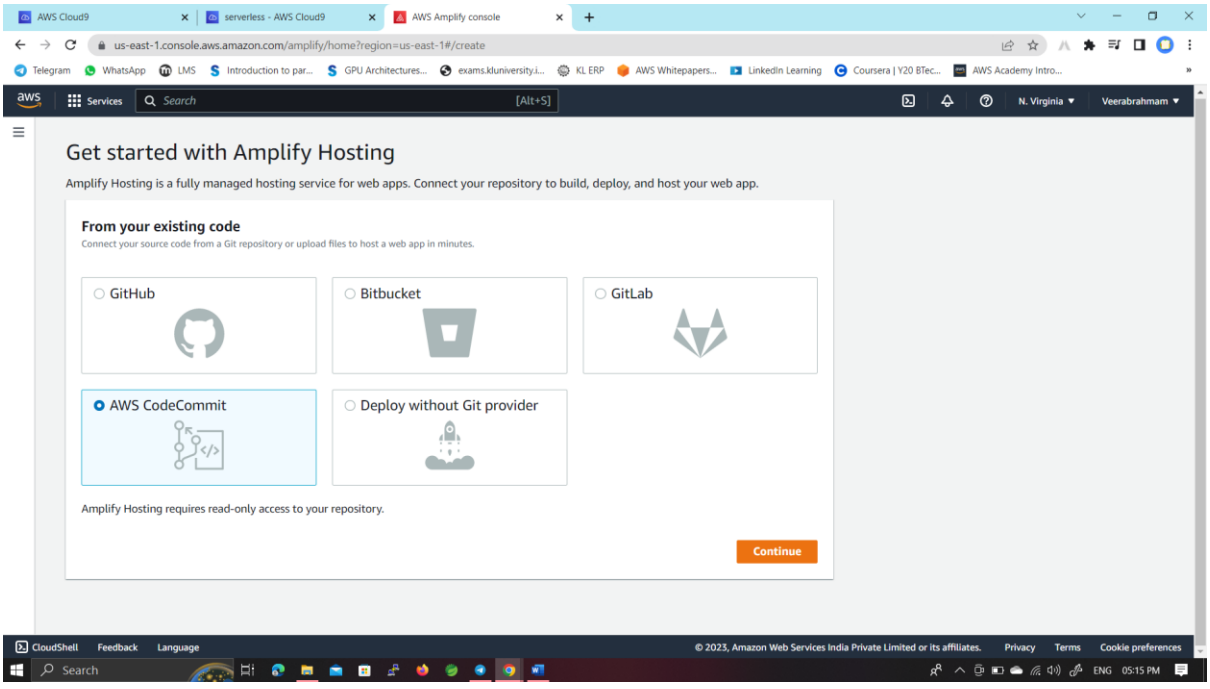
AWS Cloud9
serverless - AWS Cloud9
AWS Amplify console
us-east-1.console.aws.amazon.com/amplify/home?region=us-east-1#/create
Services
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Get started with Amplify Hosting
Amplify Hosting is a fully managed hosting service for web apps. Connect your repository to build, deploy, and host your web app.
From your existing code
Connect your source code from a Git repository or upload files to host a web app in minutes.
GitHub
Bitbucket
GitLab
AWS CodeCommit
Deploy without Git provider
Amplify Hosting requires read-only access to your repository.
Continue
CloudShell
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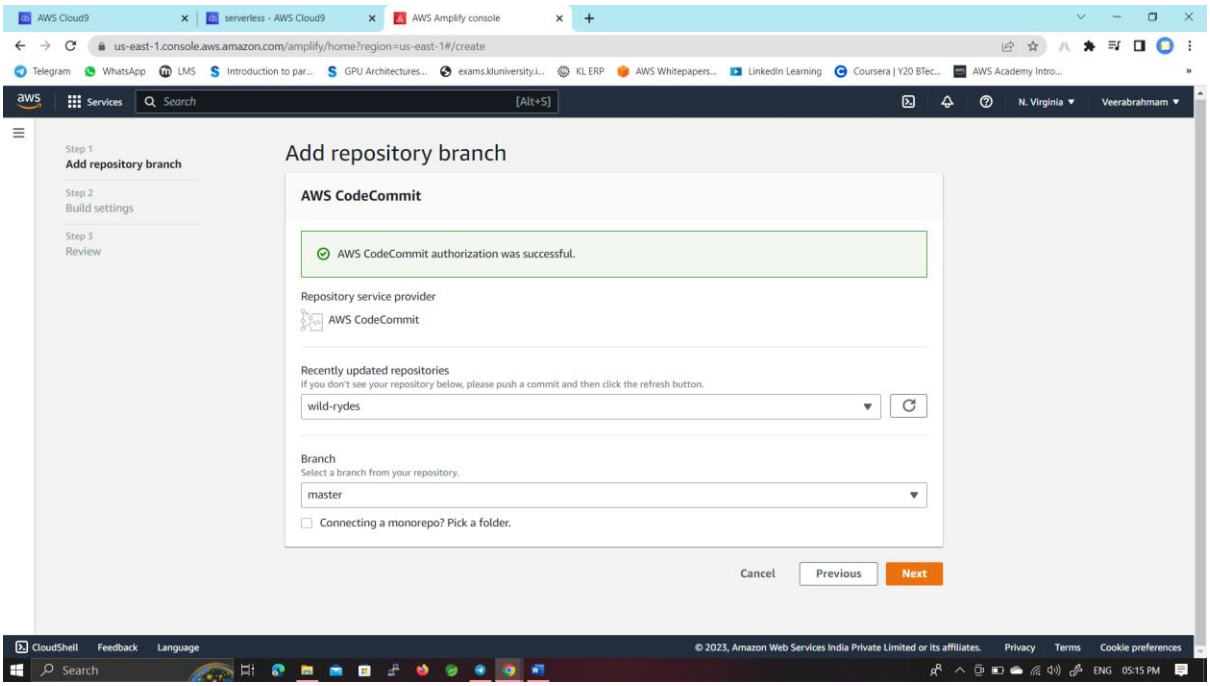
AWS Cloud9
serverless - AWS Cloud9
AWS Amplify console
us-east-1.console.aws.amazon.com/amplify/home?region=us-east-1#/create
Services
Search
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Step 1
Add repository branch
Step 2
Build settings
Step 3
Review
Add repository branch
AWS CodeCommit
AWS CodeCommit authorization was successful.
Repository service provider
AWS CodeCommit
Recently updated repositories
If you don't see your repository below, please push a commit and then click the refresh button.
wild-rydes
Branch
Select a branch from your repository.
master
Connecting a monorepo? Pick a folder.
Cancel
Previous
Next
CloudShell
Feedback
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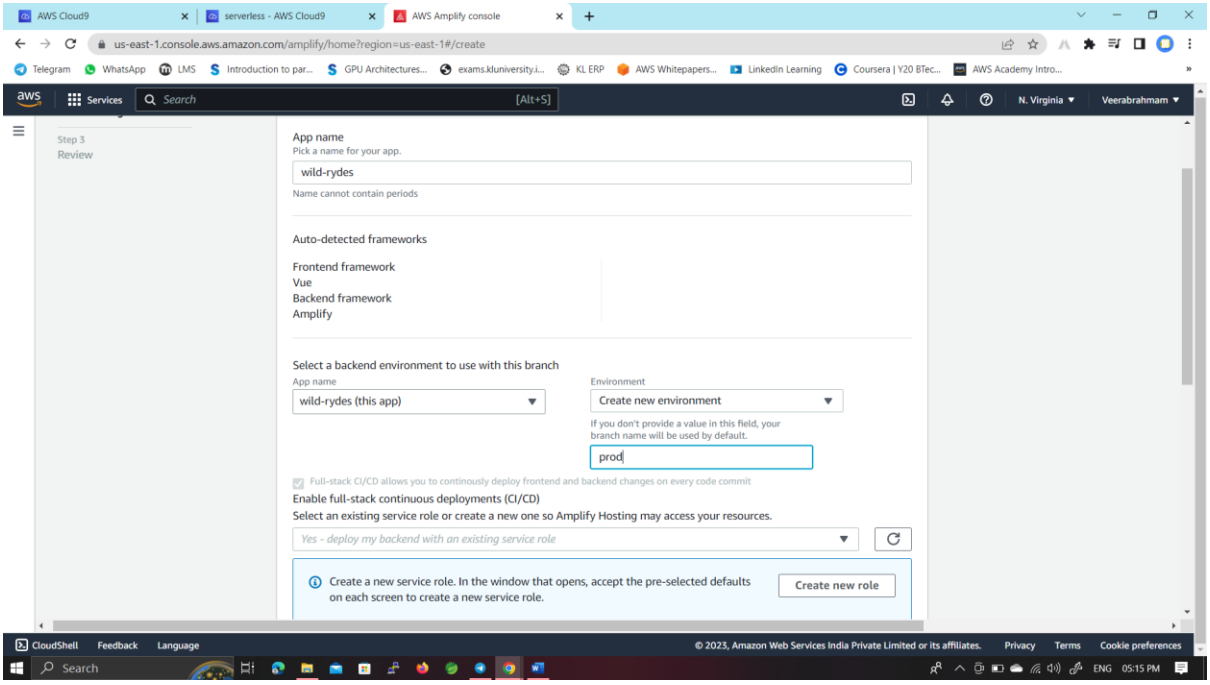
AWS Cloud9
serverless - AWS Cloud9
AWS Amplify console
us-east-1.console.aws.amazon.com/amplify/home?region=us-east-1#/create
Services
Search
[Alt+S]
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Step 3
Review
App name
Pick a name for your app.
wild-rydes
Name cannot contain periods
Auto-detected frameworks
Frontend framework
Vue
Backend framework
Amplify
Select a backend environment to use with this branch
App name
wild-rydes (this app)
Environment
Create new environment
If you don't provide a value in this field, your branch name will be used by default.
prod
Full-stack CI/CD allows you to continously deploy frontend and backend changes on every code commit
Enable full-stack continuous deployments (CI/CD)
Select an existing service role or create a new one so Amplify Hosting may access your resources.
Yes - deploy my backend with an existing service role
Create a new service role. In the window that opens, accept the pre-selected defaults on each screen to create a new service role.
Create new role
CloudShell
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Language
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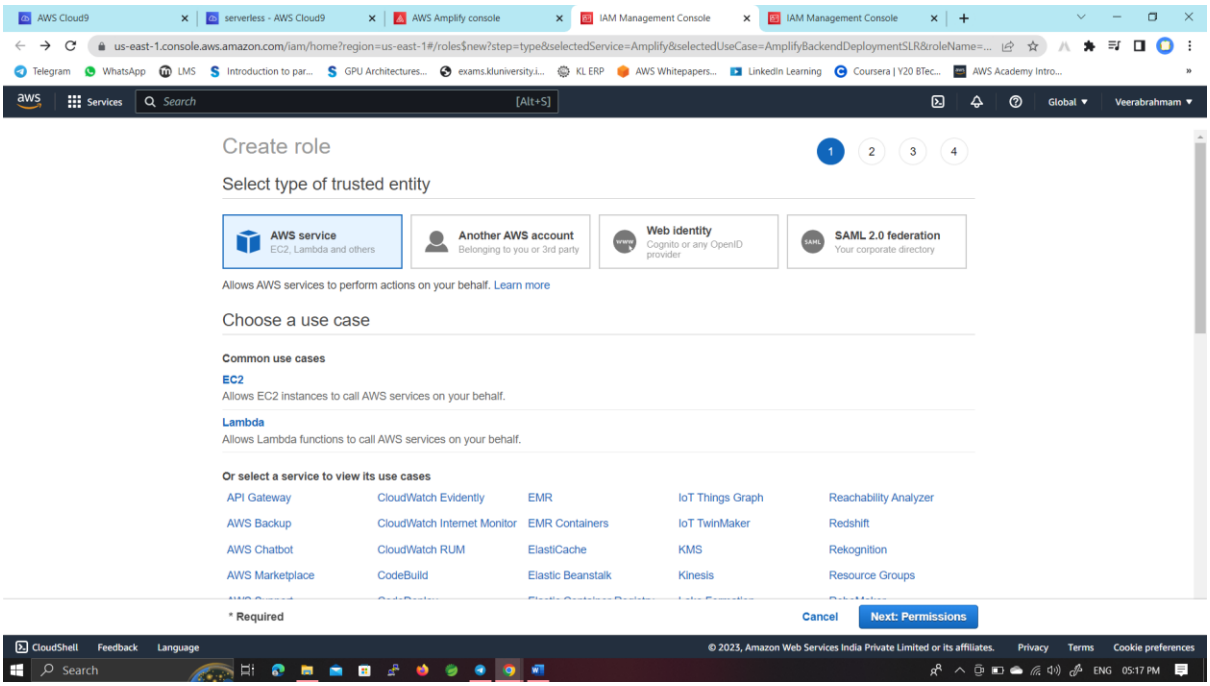
AWS Cloud9
serverless - AWS Cloud9
AWS Amplify console
IAM Management Console
IAM Management Console
us-east-1.console.aws.amazon.com/iam/home?region=us-east-1#/roles$new?step=type&selectedService=Amplify&selectedUseCase=AmplifyBackendDeploymentSLR&roleName=...
Telegram
WhatsApp
LMS
Introduction to par...
GPU Architectures...
exams.kluniversity.i...
KL ERP
AWS Whitepapers...
LinkedIn Learning
Coursera | Y20 BTec...
AWS Academy Intro...
aws
Services
Search
[Alt+S]
Global
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Create role
1
2
3
4
Select type of trusted entity
AWS service
EC2, Lambda and others
Another AWS account
Belonging to you or 3rd party
Web identity
Cognito or any OpenID provider
SAML 2.0 federation
Your corporate directory
Allows AWS services to perform actions on your behalf. Learn more
Choose a use case
Common use cases
EC2
Allows EC2 instances to call AWS services on your behalf.
Lambda
Allows Lambda functions to call AWS services on your behalf.
Or select a service to view its use cases
API Gateway
AWS Backup
AWS Chatbot
AWS Marketplace
CloudWatch Evidently
CloudWatch Internet Monitor
CloudWatch RUM
CodeBuild
EMR
EMR Containers
ElastiCache
Elastic Beanstalk
IoT Things Graph
IoT TwinMaker
KMS
Kinesis
Reachability Analyzer
Redshift
Rekognition
Resource Groups
* Required
Cancel
Next: Permissions
CloudShell
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ENG
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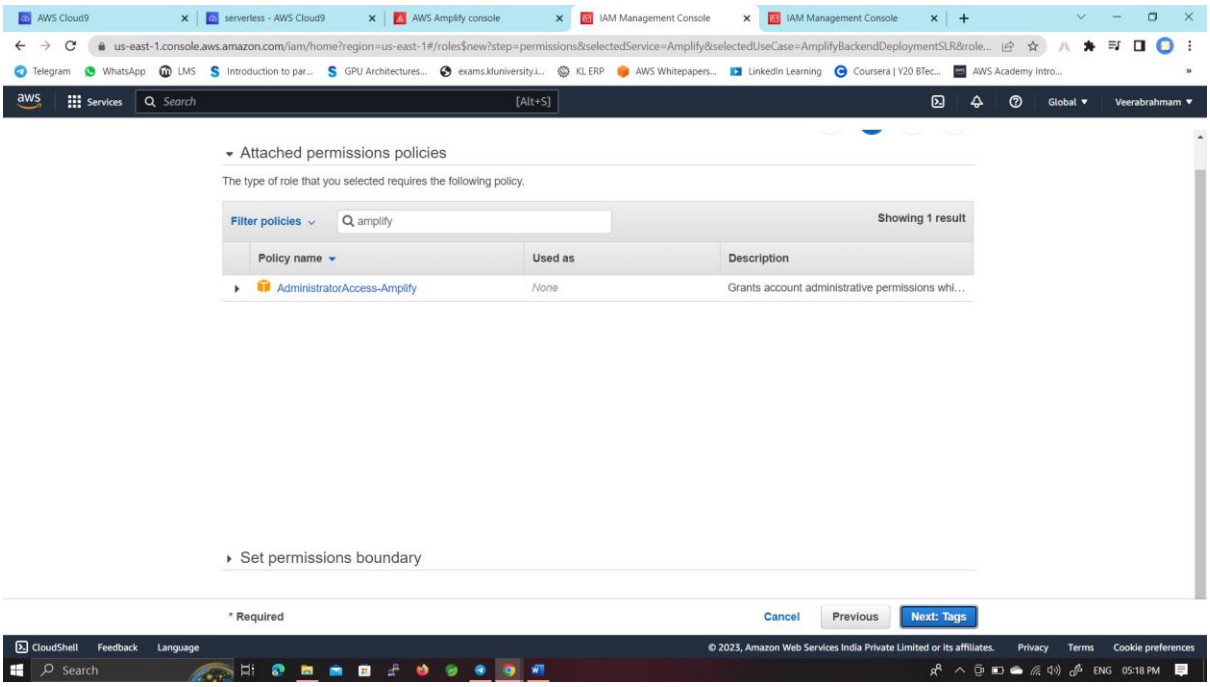
AWS Cloud9
serverless - AWS Cloud9
AWS Amplify console
IAM Management Console
IAM Management Console
us-east-1.console.aws.amazon.com/iam/home?region=us-east-1#/roles$new?step=permissions&selectedService=Amplify&selectedUseCase=AmplifyBackendDeploymentSLR&role...
Telegram
WhatsApp
LMS
Introduction to par...
GPU Architectures...
exams.kluniversity.i...
KL ERP
AWS Whitepapers...
LinkedIn Learning
Coursera | Y20 BTec...
AWS Academy Intro...
aws
Services
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Attached permissions policies
The type of role that you selected requires the following policy.
Filter policies
amplify
Showing 1 result
Policy name
Used as
Description
AdministratorAccess-Amplify
None
Grants account administrative permissions whi...
Set permissions boundary
* Required
Cancel
Previous
Next: Tags
CloudShell
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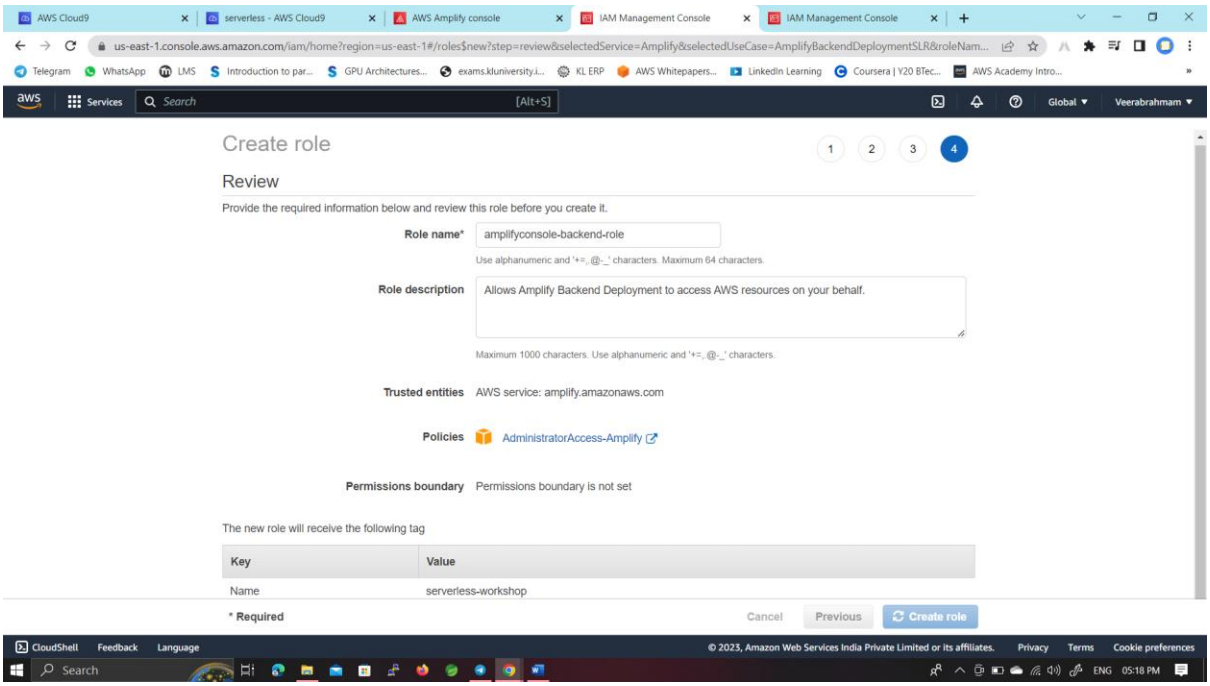
AWS Cloud9
serverless - AWS Cloud9
AWS Amplify console
IAM Management Console
IAM Management Console
us-east-1.console.aws.amazon.com/iam/home?region=us-east-1#/roles$new?step=review&selectedService=Amplify&selectedUseCase=AmplifyBackendDeploymentSLR&roleNam...
Telegram
WhatsApp
LMS
Introduction to par...
GPU Architectures...
exams.kluniversity.i...
KL ERP
AWS Whitepapers...
LinkedIn Learning
Coursera | Y20 BTec...
AWS Academy Intro...
aws
Services
Search
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Create role
1
2
3
4
Review
Provide the required information below and review this role before you create it.
Role name*
amplifyconsole-backend-role
Use alphanumeric and '+=,.@-_' characters. Maximum 64 characters.
Role description
Allows Amplify Backend Deployment to access AWS resources on your behalf.
Maximum 1000 characters. Use alphanumeric and '+=,.@-_' characters.
Trusted entities
AWS service: amplify.amazonaws.com
Policies
AdministratorAccess-Amplify
Permissions boundary
Permissions boundary is not set
The new role will receive the following tag
Key
Value
Name
serverless-workshop
* Required
Cancel
Previous
Create role
CloudShell
Feedback
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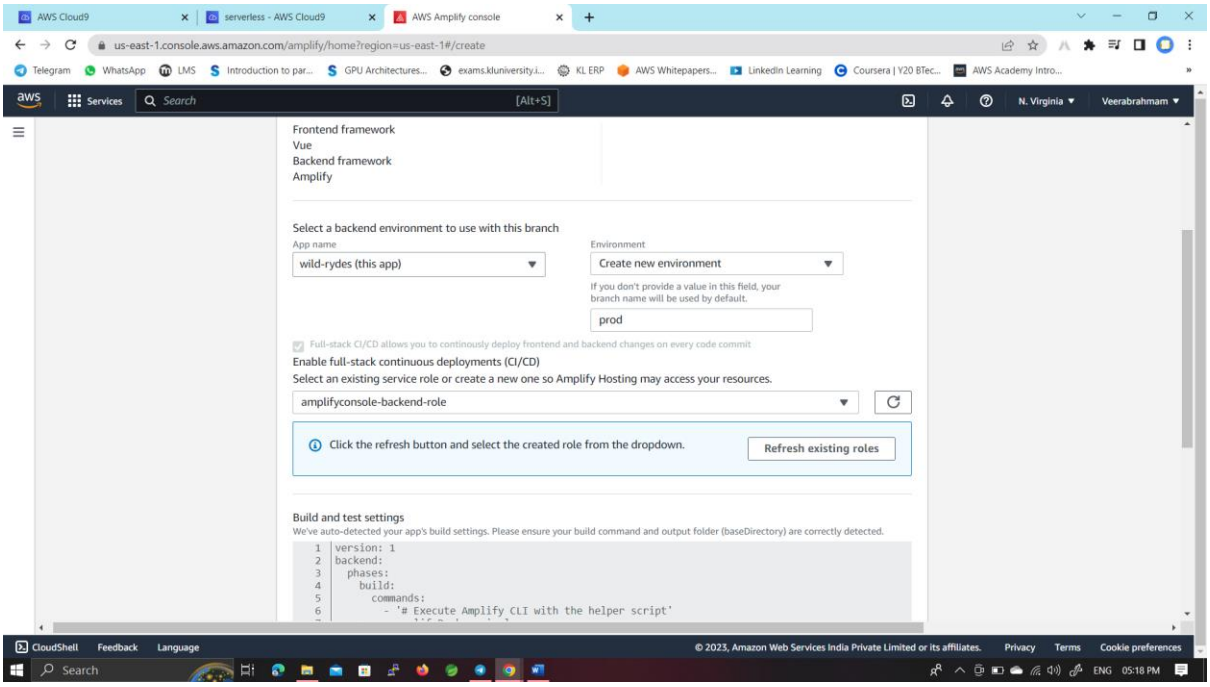
AWS Cloud9
serverless - AWS Cloud9
AWS Amplify console
us-east-1.console.aws.amazon.com/amplify/home?region=us-east-1#/create
Telegram
WhatsApp
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AWS Academy Intro...
aws
Services
Search
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Frontend framework
Vue
Backend framework
Amplify
Select a backend environment to use with this branch
App name
wild-rydes (this app)
Environment
Create new environment
If you don't provide a value in this field, your branch name will be used by default.
prod
Full-stack CI/CD allows you to continously deploy frontend and backend changes on every code commit
Enable full-stack continuous deployments (CI/CD)
Select an existing service role or create a new one so Amplify Hosting may access your resources.
amplifyconsole-backend-role
Click the refresh button and select the created role from the dropdown.
Refresh existing roles
Build and test settings
We've auto-detected your app's build settings. Please ensure your build command and output folder (baseDirectory) are correctly detected.
1 version: 1
2 backend:
3 phases:
4 build:
5 commands:
6 - '# Execute Amplify CLI with the helper script'
CloudShell
Feedback
Language
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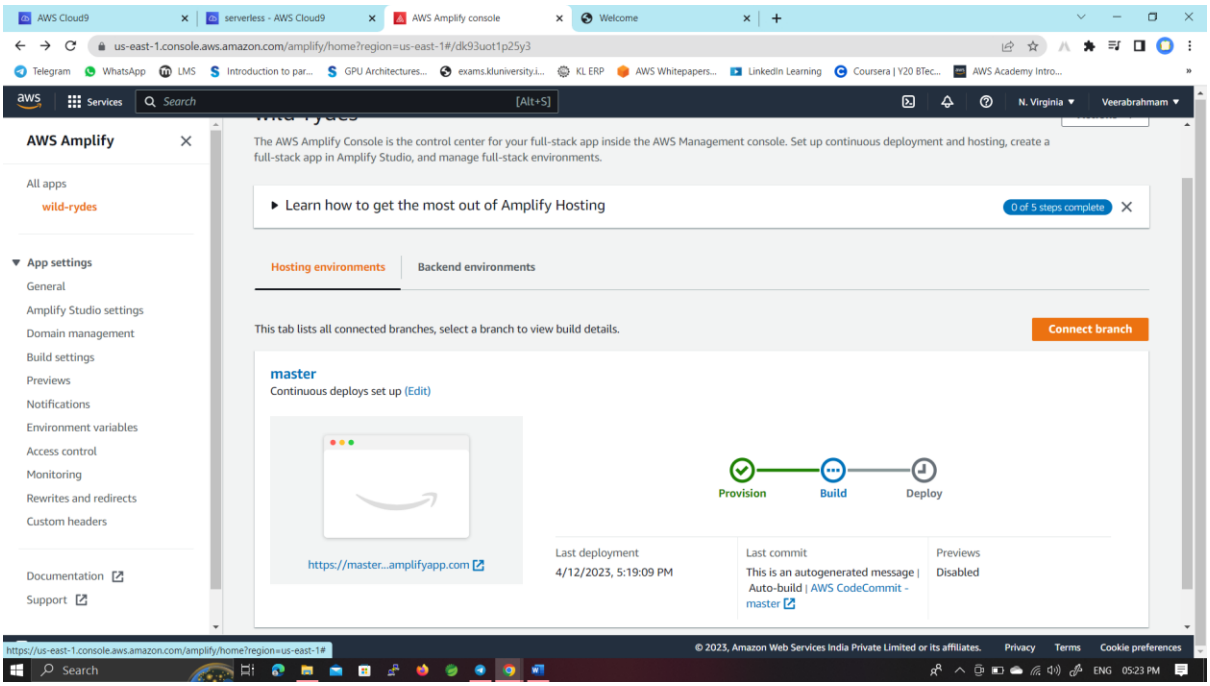
AWS Cloud9
serverless - AWS Cloud9
AWS Amplify console
Welcome
us-east-1.console.aws.amazon.com/amplify/home?region=us-east-1#/dk93uot1p25y3
Telegram
WhatsApp
LMS
Introduction to par...
GPU Architectures...
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AWS Whitepapers...
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AWS Academy Intro...
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AWS Amplify
All apps
wild-rydes
App settings
General
Amplify Studio settings
Domain management
Build settings
Previews
Notifications
Environment variables
Access control
Monitoring
Rewrites and redirects
Custom headers
Documentation
Support
The AWS Amplify Console is the control center for your full-stack app inside the AWS Management console. Set up continuous deployment and hosting, create a full-stack app in Amplify Studio, and manage full-stack environments.
Learn how to get the most out of Amplify Hosting
0 of 5 steps complete
Hosting environments
Backend environments
This tab lists all connected branches, select a branch to view build details.
Connect branch
master
Continuous deploys set up (Edit)
https://master...amplifyapp.com
Provision
Build
Deploy
Last deployment
4/12/2023, 5:19:09 PM
Last commit
This is an autogenerated message | Auto-build | AWS CodeCommit - master
Previews
Disabled
https://us-east-1.console.aws.amazon.com/amplify/home?region=us-east-1#
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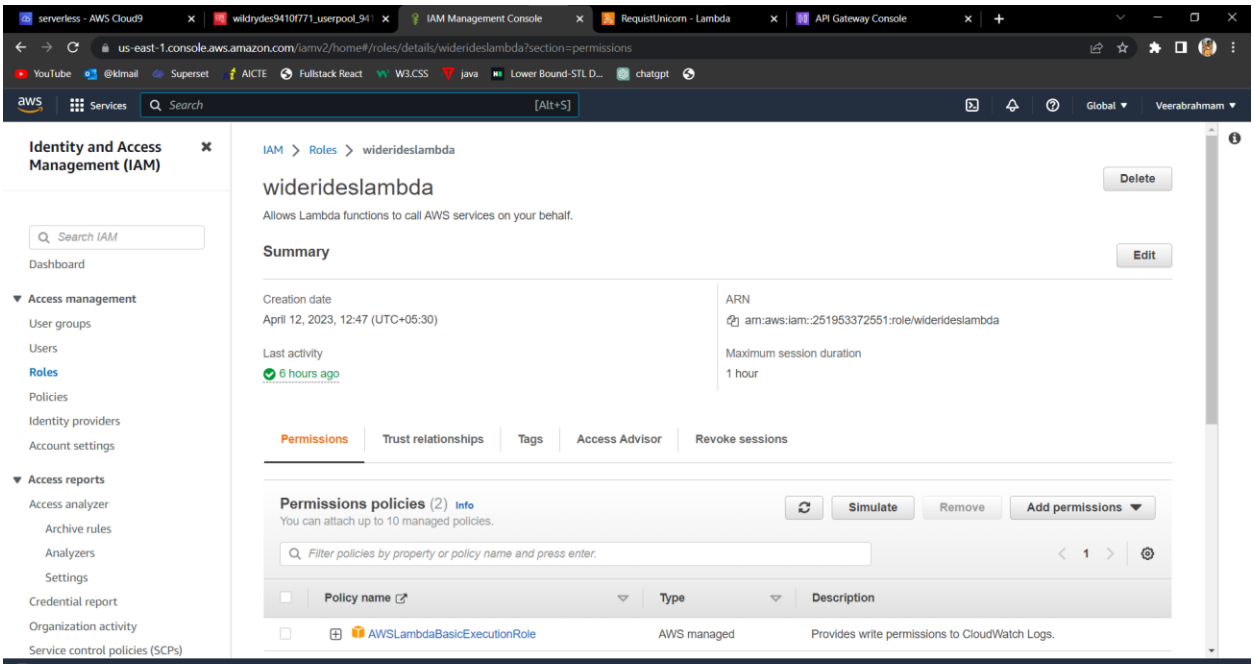
serverless - AWS Cloud9
wildrydes9410f771_userpool_94
IAM Management Console
RequistUnicorn - Lambda
API Gateway Console
us-east-1.console.aws.amazon.com/iamv2/home#/roles/details/wideridesslambda?section=permissions
Identity and Access Management (IAM)
Search IAM
Dashboard
Access management
User groups
Users
Roles
Policies
Identity providers
Account settings
Access reports
Access analyzer
Archive rules
Analyzers
Settings
Credential report
Organization activity
Service control policies (SCPs)
IAM > Roles > wideridesslambda
wideridesslambda
Delete
Allows Lambda functions to call AWS services on your behalf.
Summary
Edit
Creation date
April 12, 2023, 12:47 (UTC+05:30)
ARN
arn:aws:iam::251953372551:role/wideridesslambda
Last activity
6 hours ago
Maximum session duration
1 hour
Permissions
Trust relationships
Tags
Access Advisor
Revoke sessions
Permissions policies (2) Info
You can attach up to 10 managed policies.
Simulate
Remove
Add permissions
Filter policies by property or policy name and press enter.
Policy name
Type
Description
AWSLambdaBasicExecutionRole
AWS managed
Provides write permissions to CloudWatch Logs.
CloudShell
Feedback
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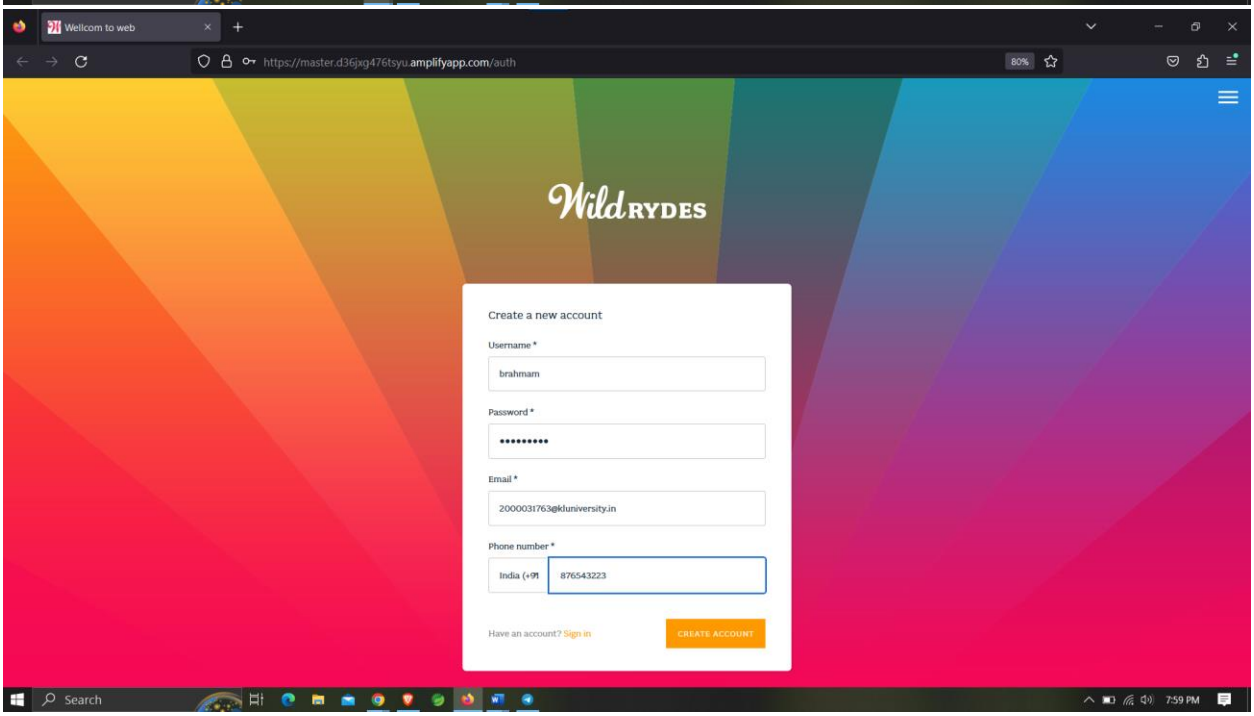
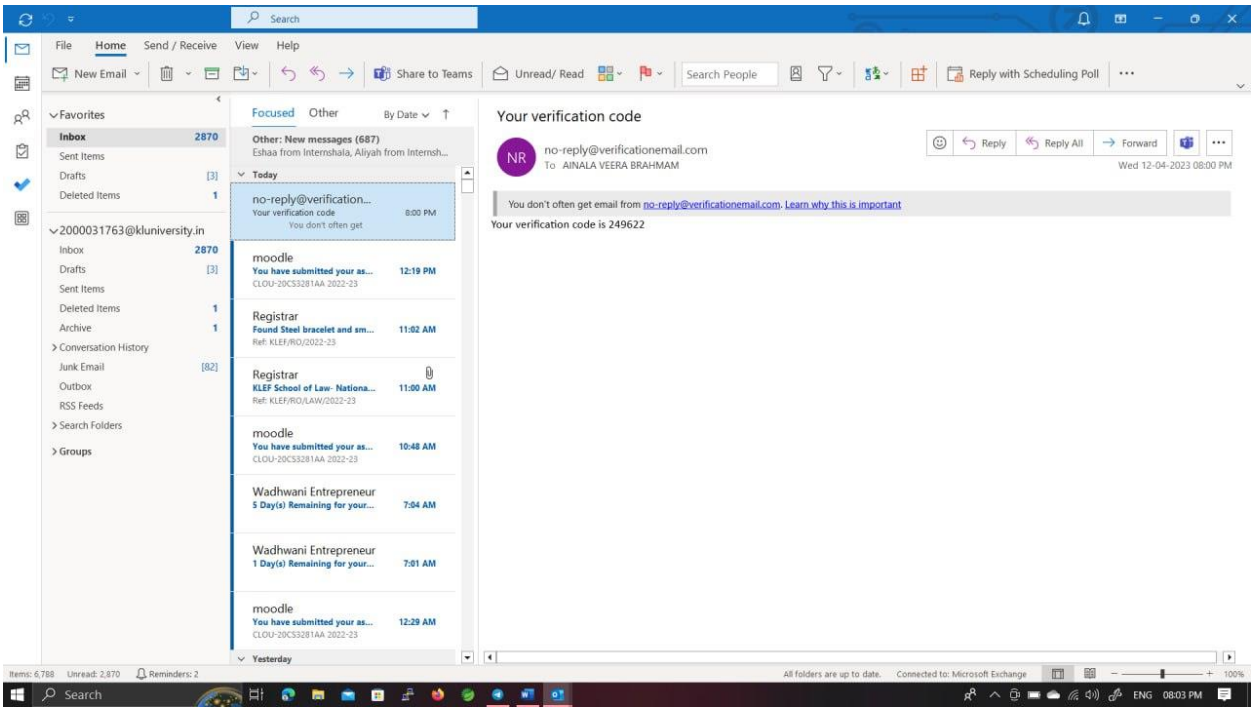
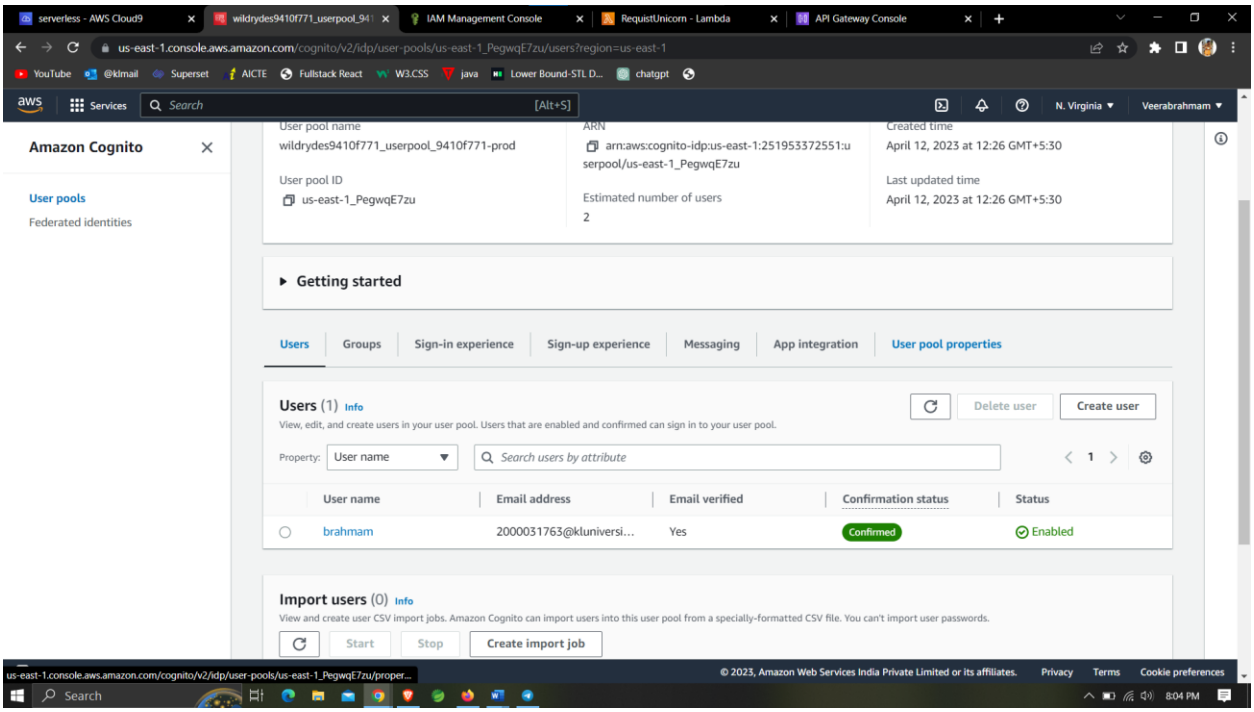
7:53 PM


Wellcom to web
https://master.d36jxg476tsyu.amplifyapp.com/auth
WildRYDES
Create a new account
Username *
brahmam
Password *
Email *
2000031763@kluniversity.in
Phone number *
India (+91
876543223
Have an account? Sign in
CREATE ACCOUNT
7:59 PM

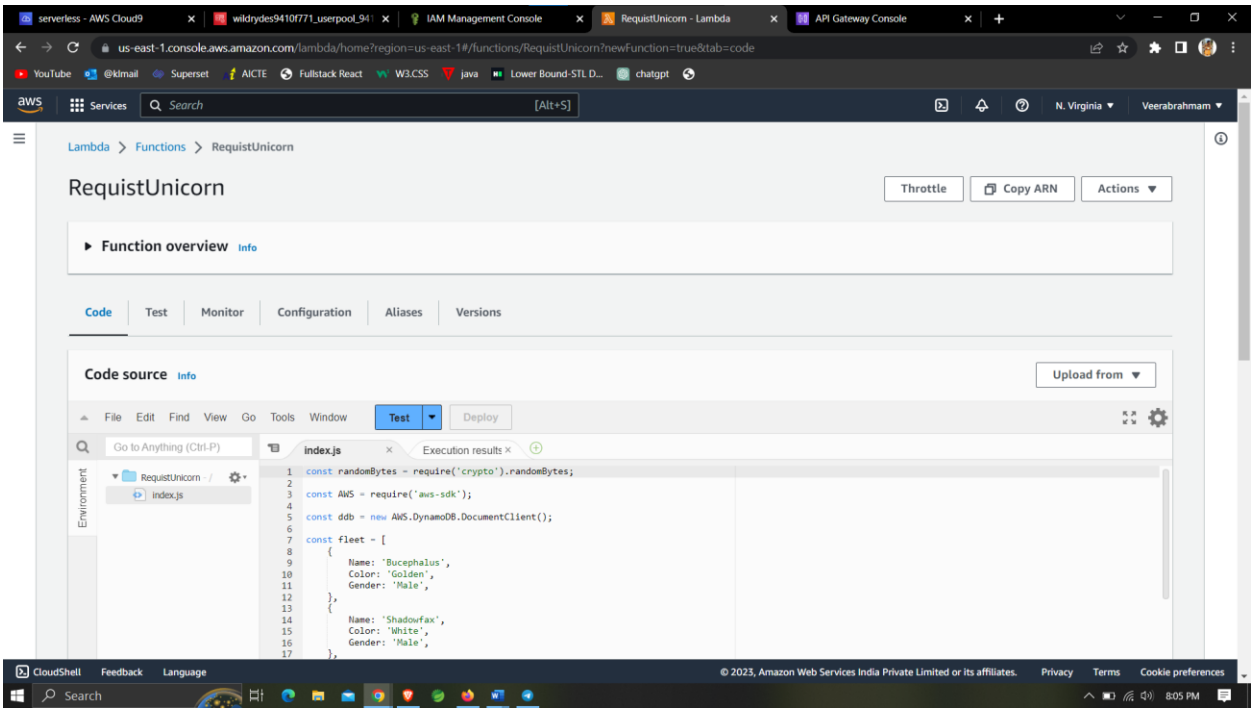


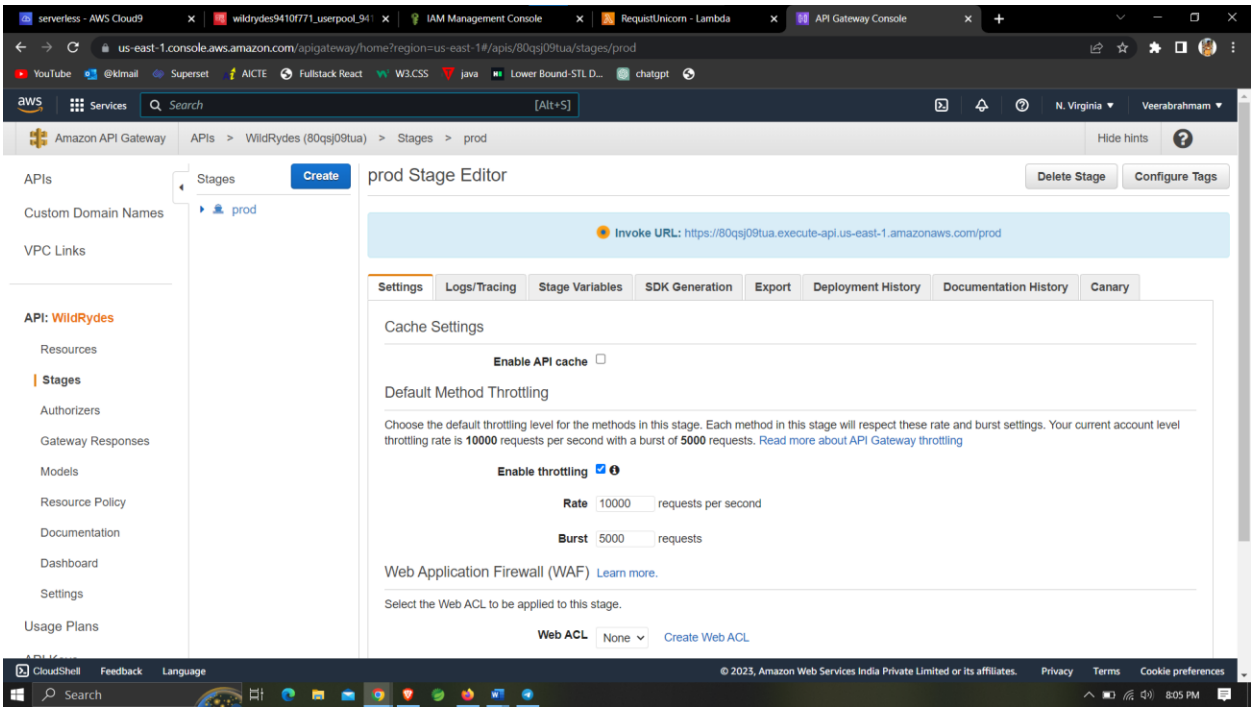
5. Create a new user for your user pool Note:

Instead of having you write the browser-side code for managing the registration, verification, and sign in flows, we provide a working implementation in the assets you deployed in the first module by using the AWS Amplify Authentication UI component.



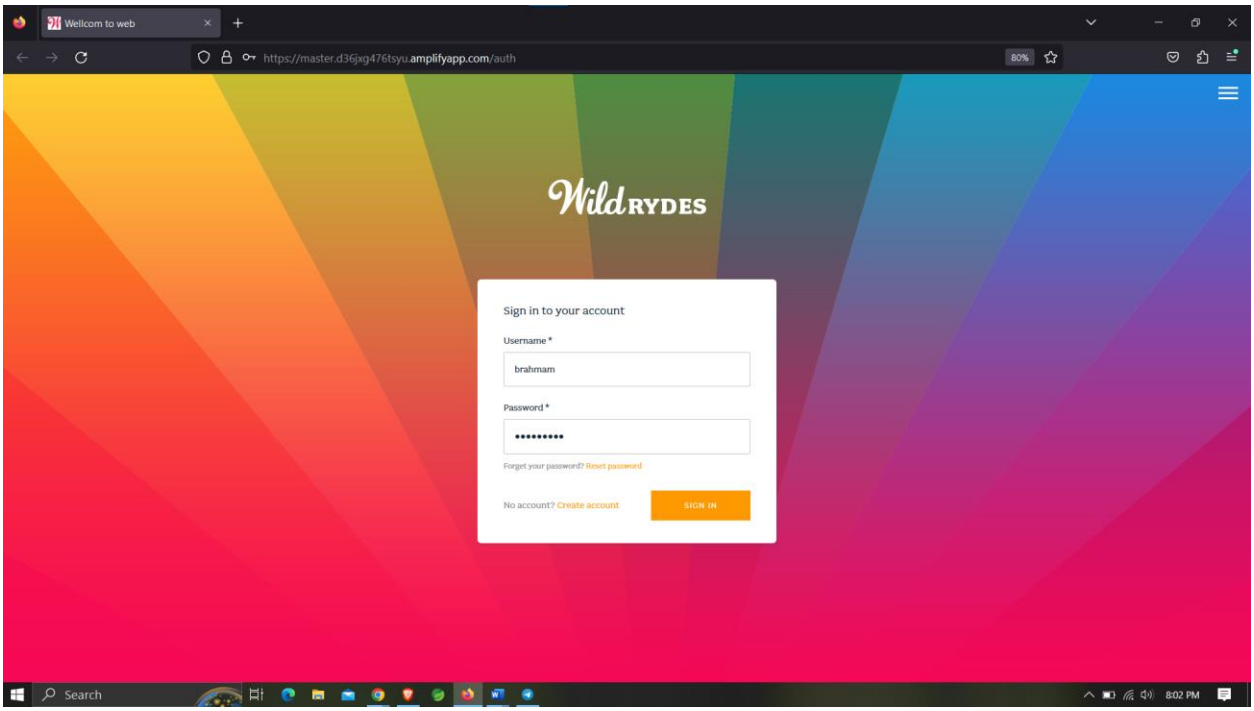
Serveless Backend Overivew:





Update the website Config:

Update the /src/config.js file in your website deployment to include the invoke URL of the stage you just created. You should copy the invoke URL directly from the top of the stage editor page on the Amazon API Gateway console and paste it into the _config.api.invokeUrl key of your site's /src/config.js file. Make sure when you update the config file it still contains the updates you made in the previous module for your Cognito user pool.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https://master.d36jxg476tsyu.amplifyapp.com/auth
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WildRYDES
Sign in to your account
Username *
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Password *
Forget your password? Reset password
No account? Create account
SIGN IN
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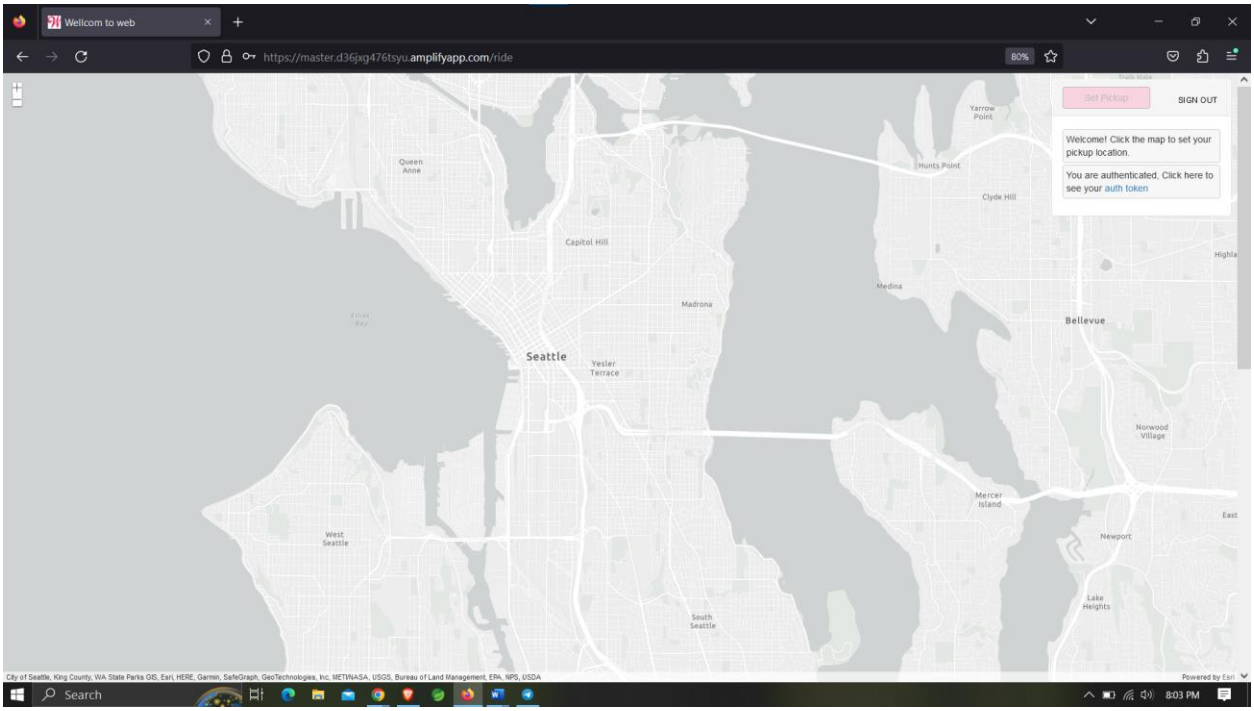
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80%
Set Pickup
SIGN OUT
Welcome! Click the map to set your pickup location.
You are authenticated, Click here to see your auth token
Queen Anne
Capitol Hill
Seattle
Madrona
Yesler Terrace
Yarrow Point
Hunts Point
Clyde Hill
Medina
Bellevue
Norwood Village
Mercer Island
Newport
West Seattle
South Seattle
Lake Heights
City of Seattle, King County, WA State Parks GIS, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
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