

CLOUD SERVERLESS & COMPUTING

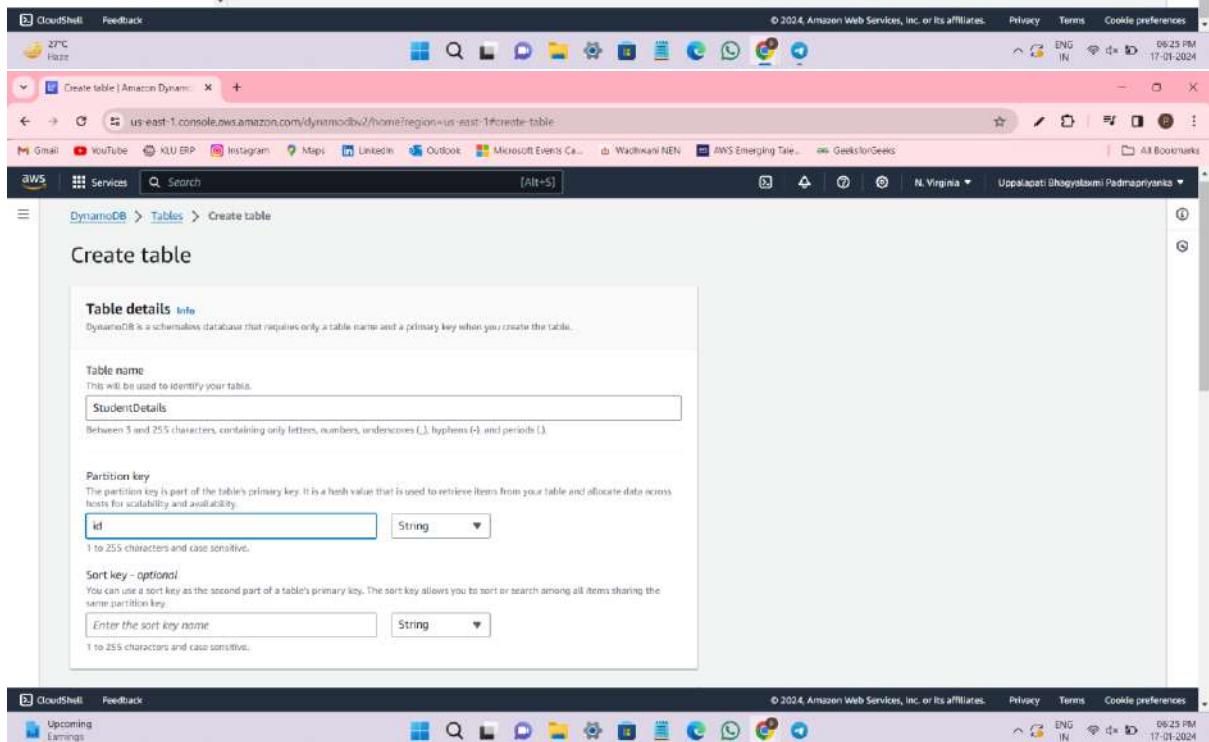
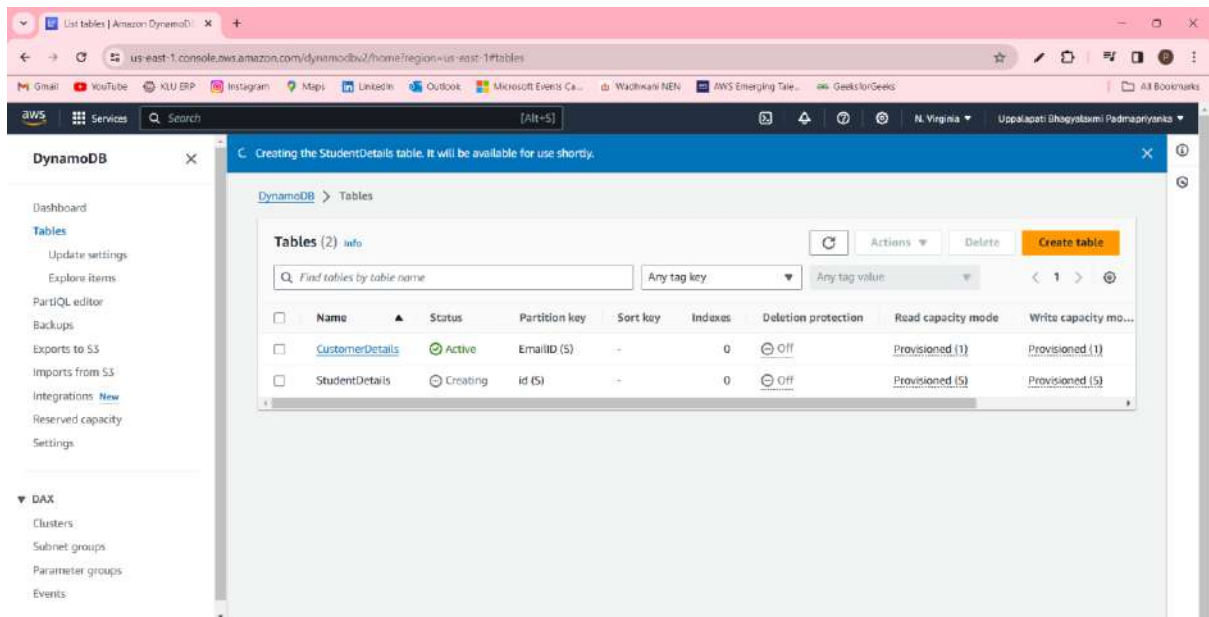
HOME ASSIGNMENT-2

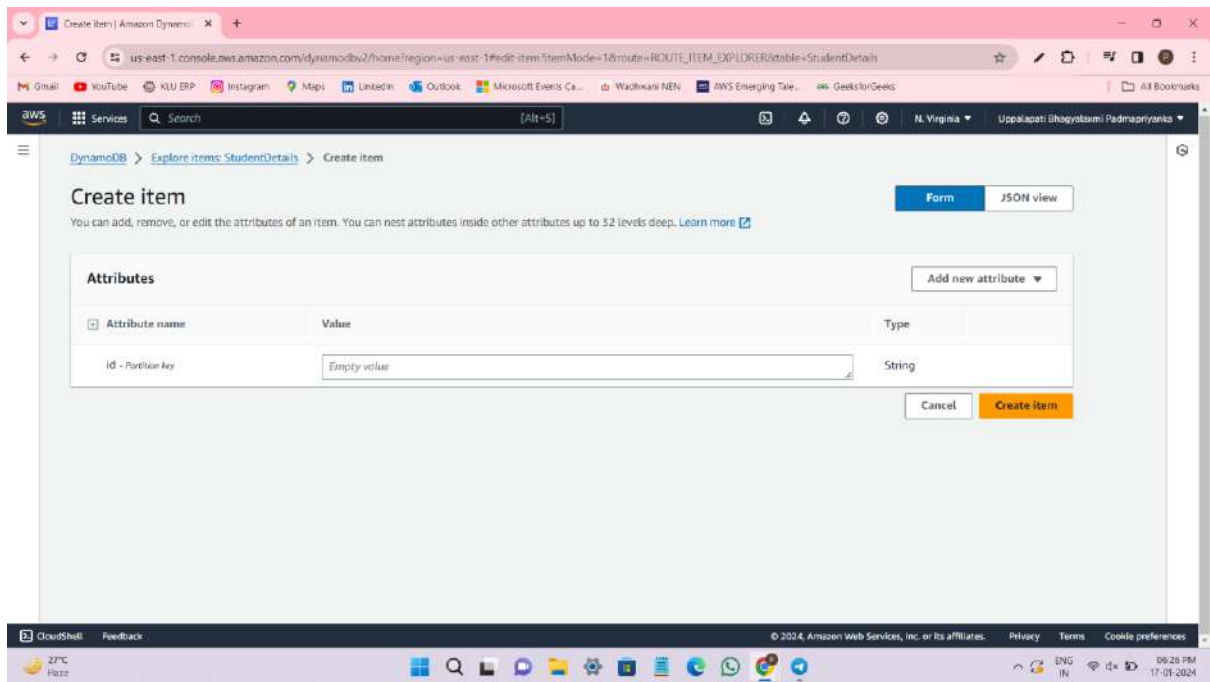
2100032567

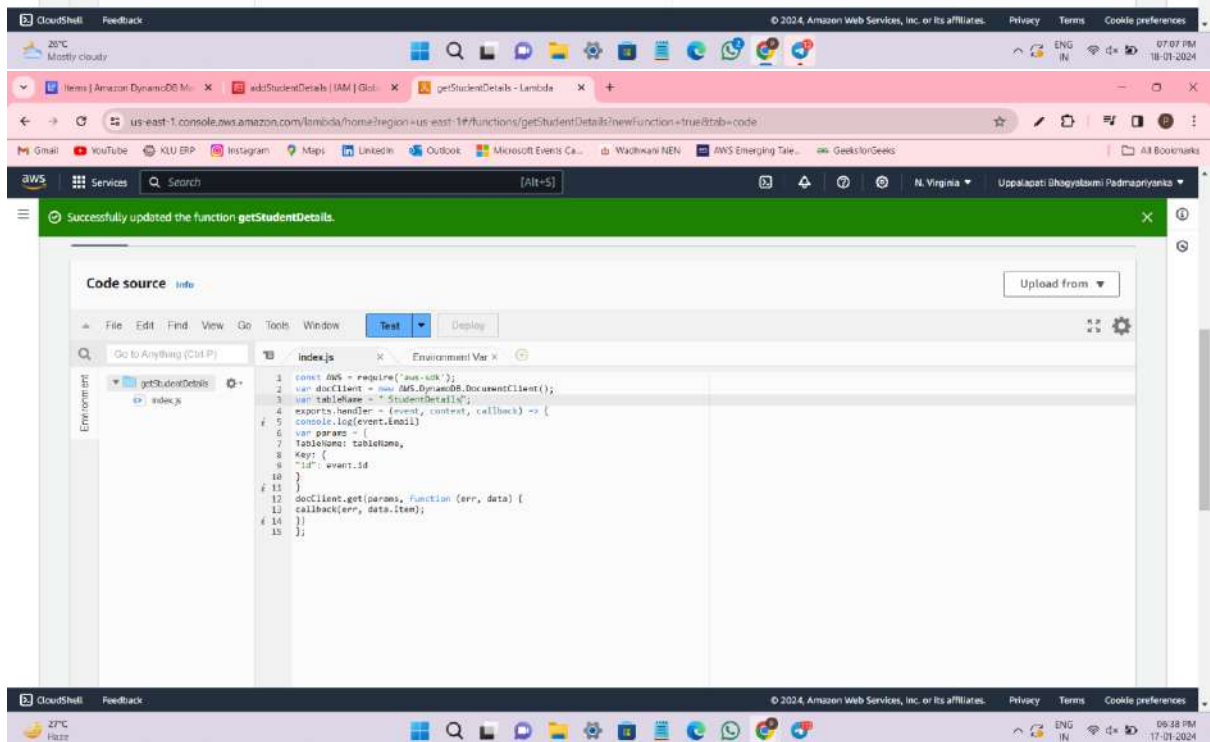
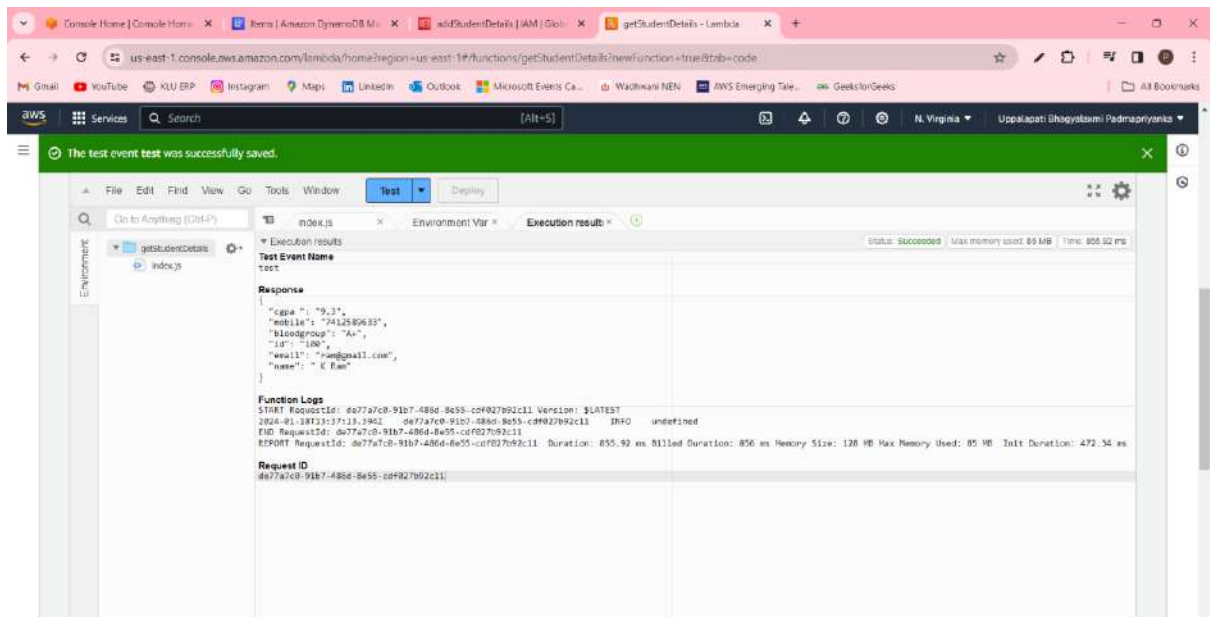
U.PRIYANKA

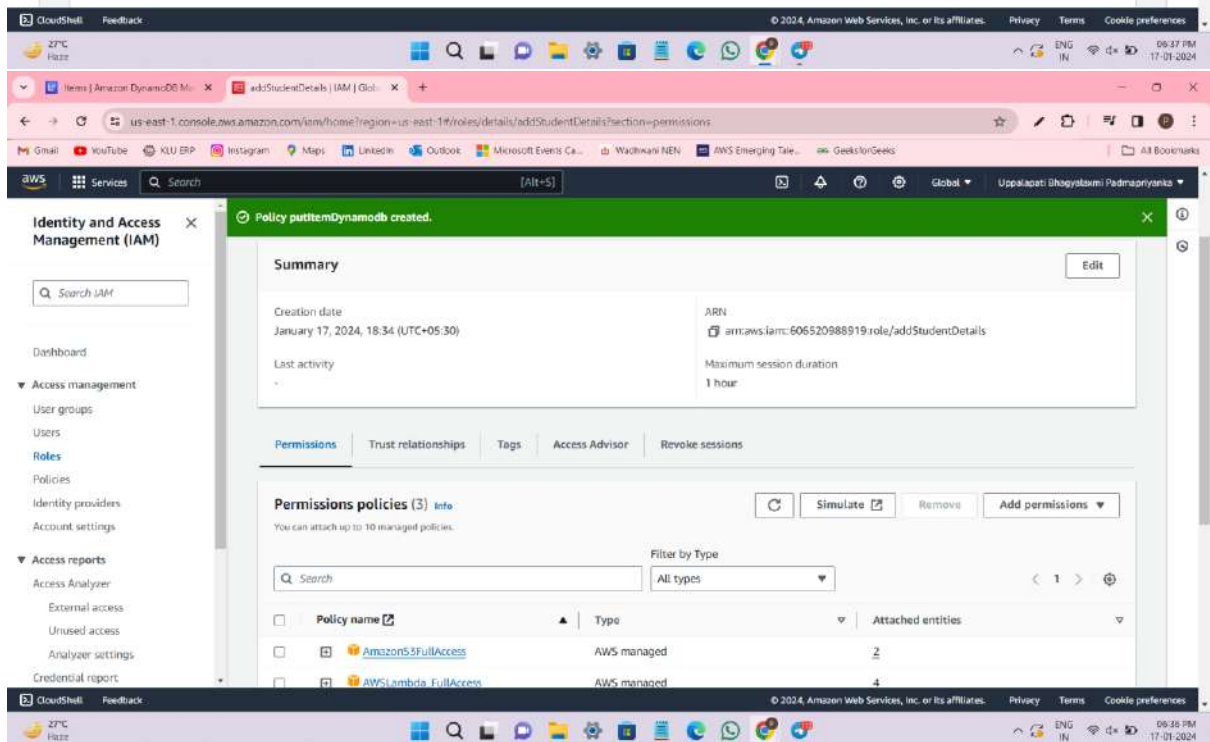
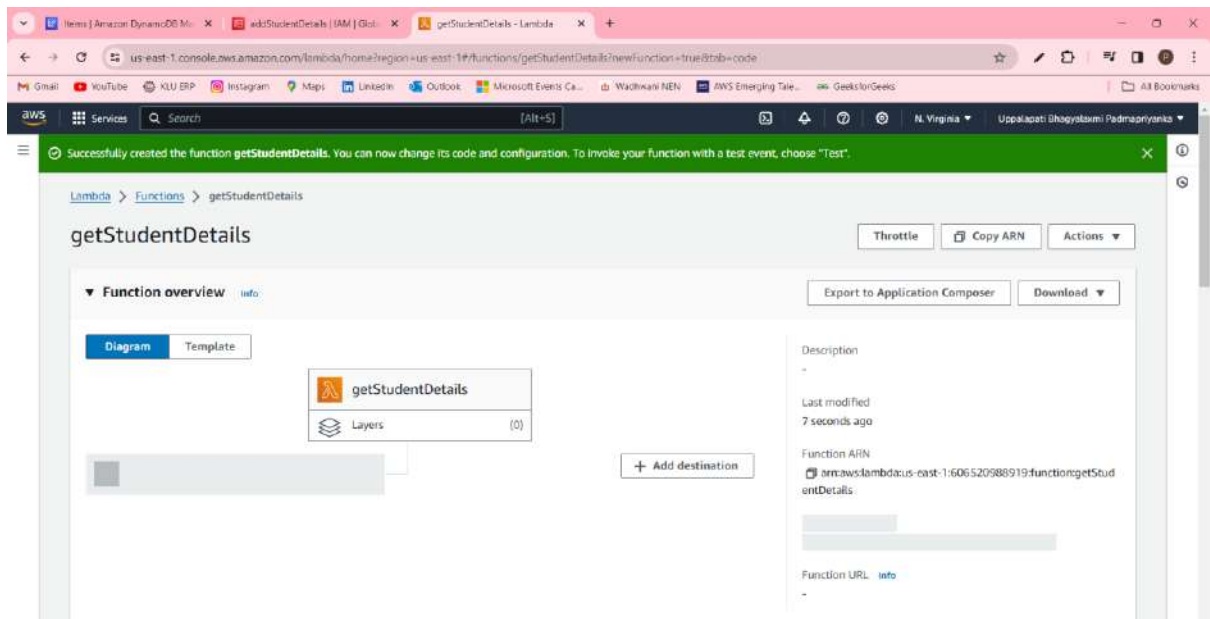
SEC-31

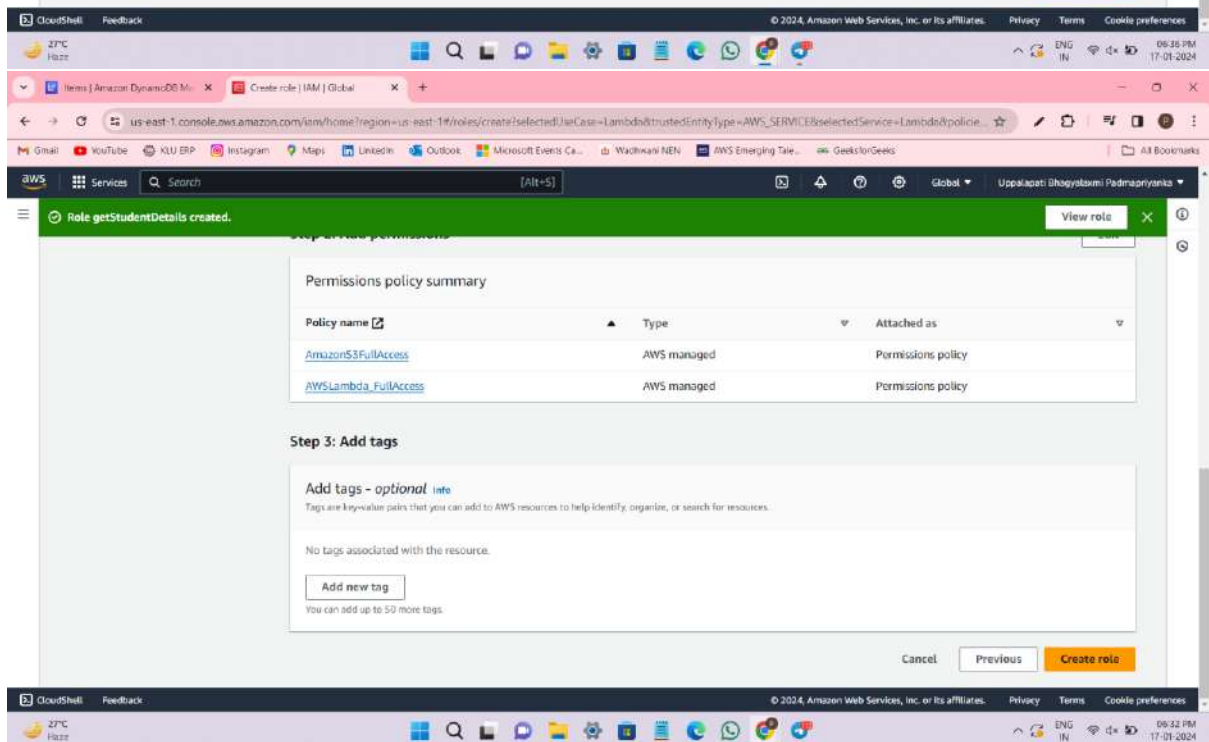
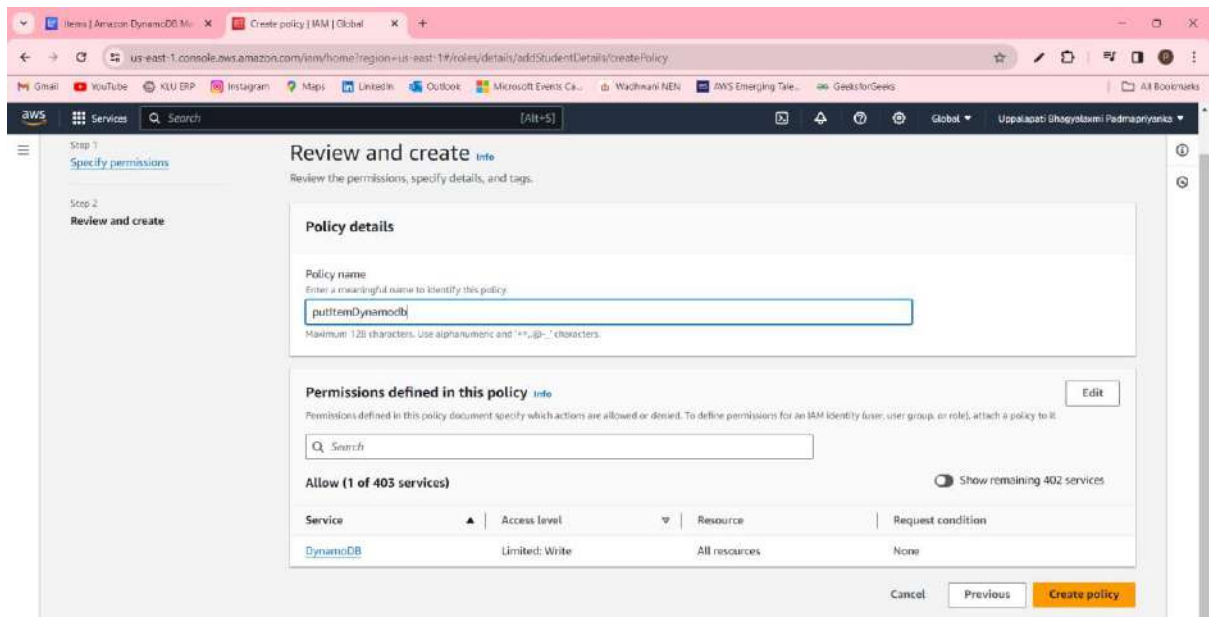
To create a comprehensive API in API Gateway, define both GET and POST methods for student details. In the POST method, handle student registration by accepting the fields (Id, name, cgpa, mobile, email, blood group) and storing them in DynamoDB using a Lambda function. For the GET method, configure it to retrieve student details based on the unique Student ID from DynamoDB, utilizing another Lambda function. Ensure the API Gateway is connected to the respective Lambda functions for seamless integration. This approach enables users to register new students using the POST method and retrieve student details using the GET method by specifying the unique Student ID, enhancing the API's functionality and usability.

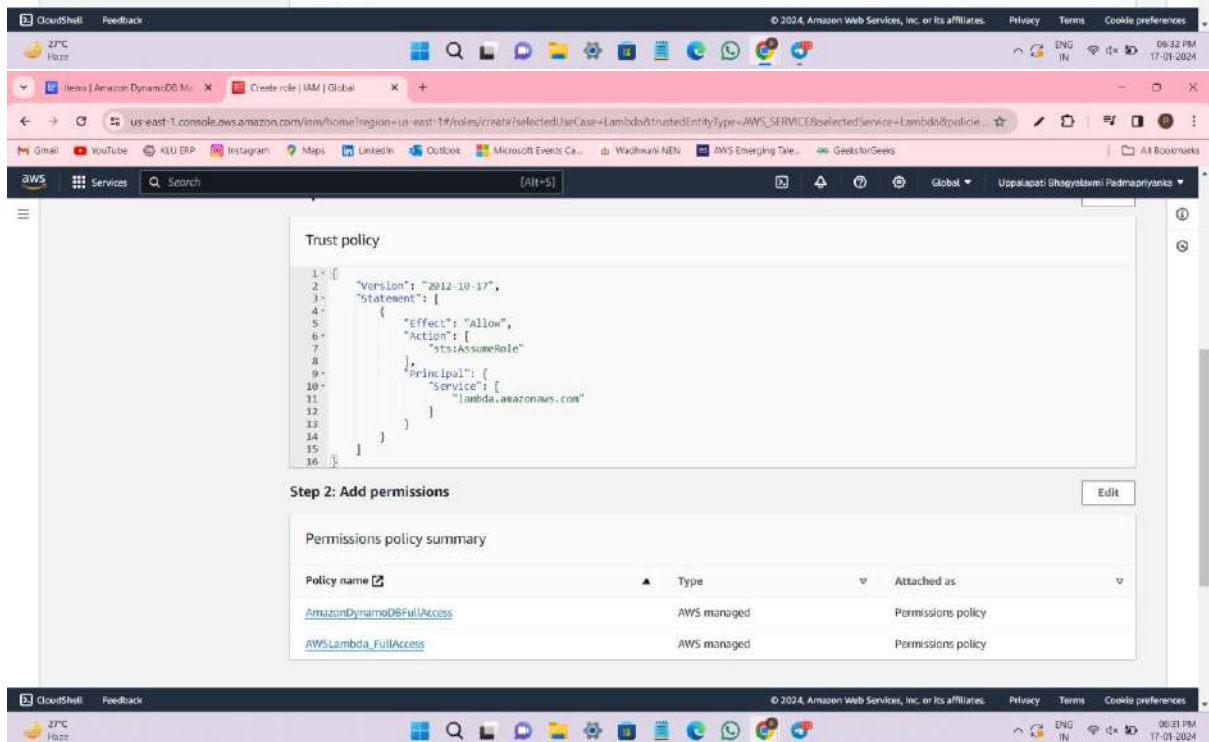
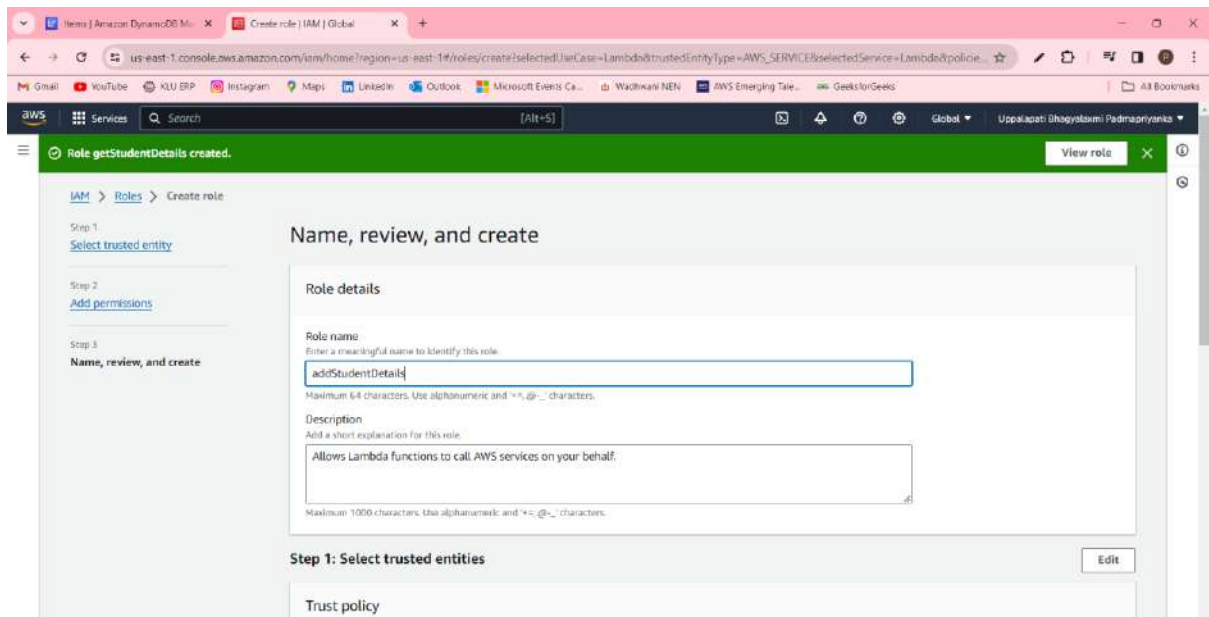


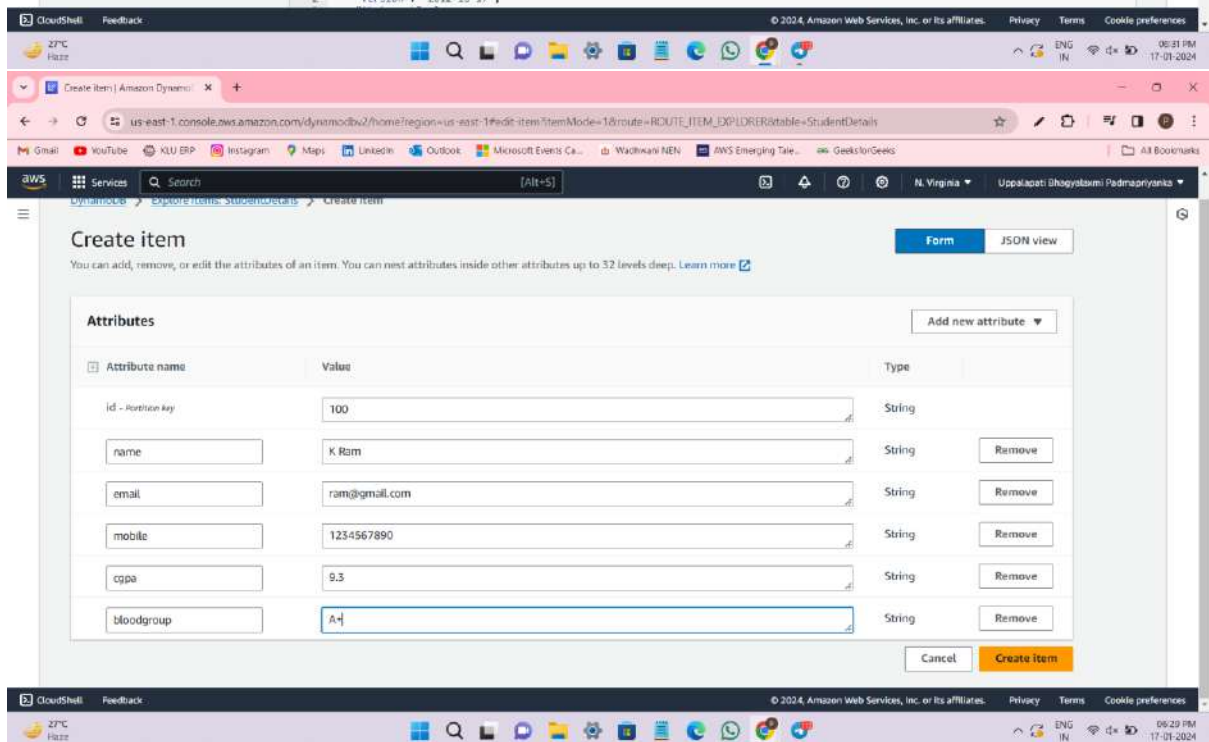
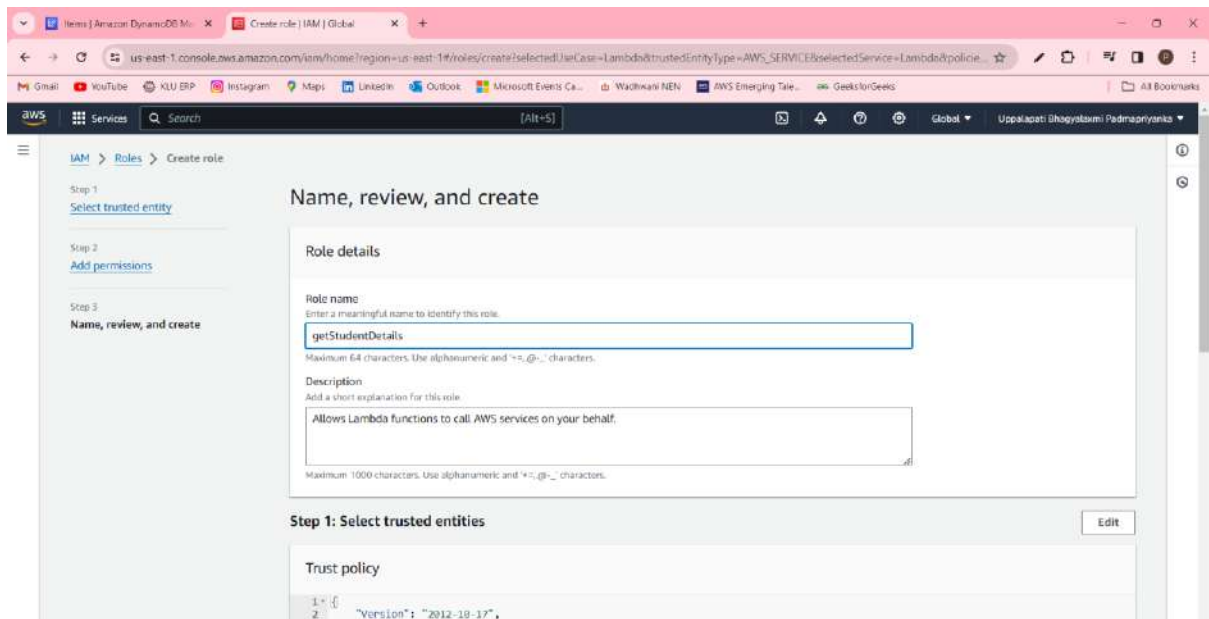












Items | Amazon DynamoDB M... x +

us-east-1.console.aws.amazon.com/dynamodbv2/home?region=us-east-1#item-explorer?operation=SCAN&table=StudentDetails

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aws Services Search [Alt+S] NL Virginia Uppalapati Bhagyashwami Padmaanyanka

DynamoDB

- Dashboard
- Tables
 - Update settings
 - Explore items
 - PartiQL editor
 - Backups
 - Exports to S3
 - Imports from S3
 - Integrations *New*
 - Reserved capacity
 - Settings
- DAX
 - Clusters
 - Subnet groups
 - Parameter groups
 - Events

Find tables by table name

< 1 > ⚙

☐ CustomerDetails

☒ StudentDetails

Scan ☐ Query

Select a table or index: Table - StudentDetails

Select attribute projection: All attributes

Filters

Run Reset

Completed. Read capacity units consumed: 0.5

Items returned (1)

⌂ Actions Create item

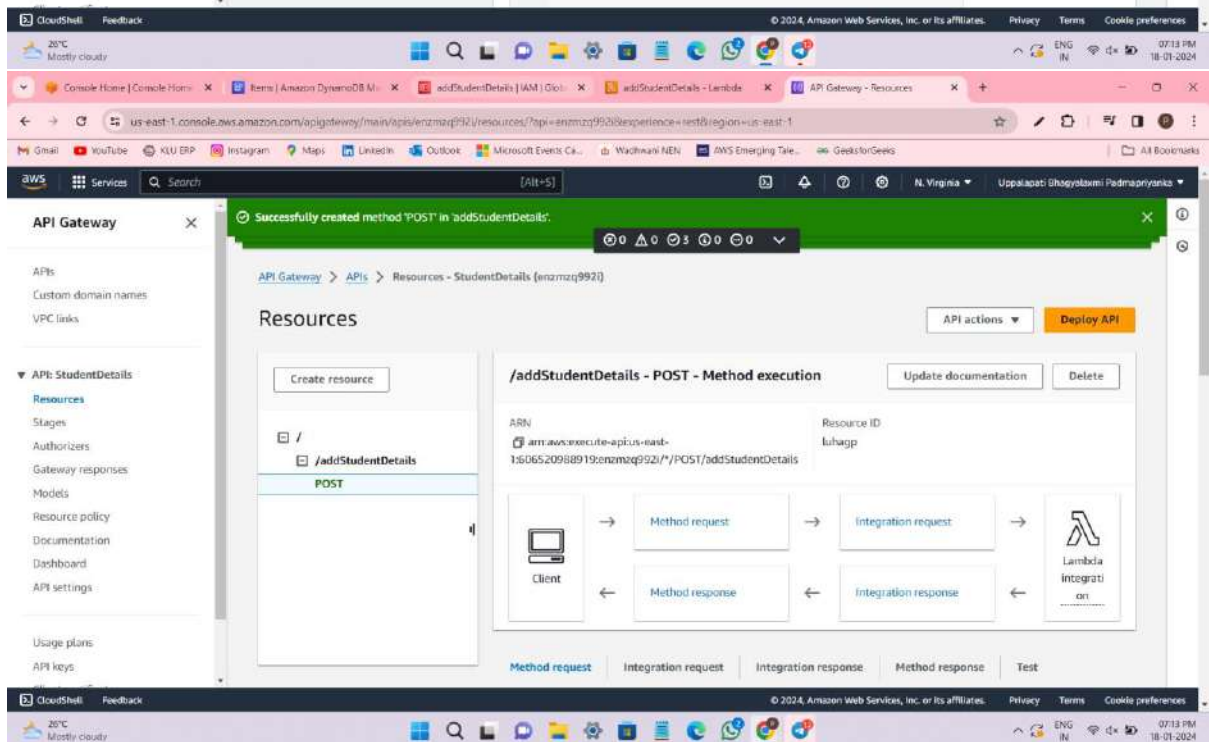
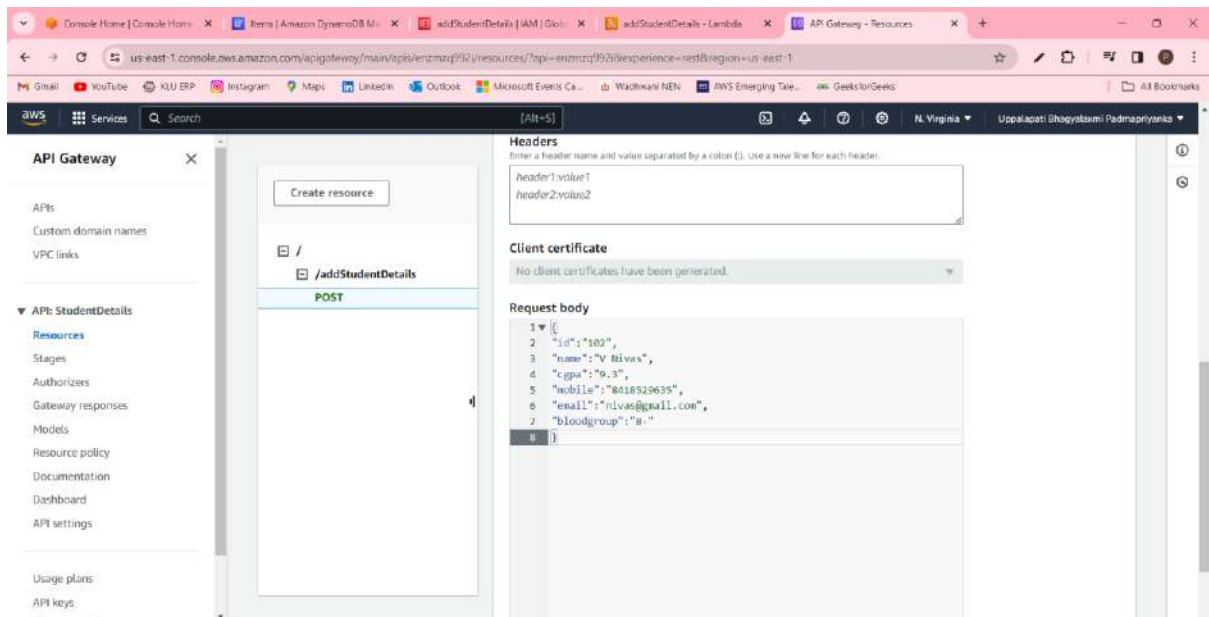
< 1 > ⚙

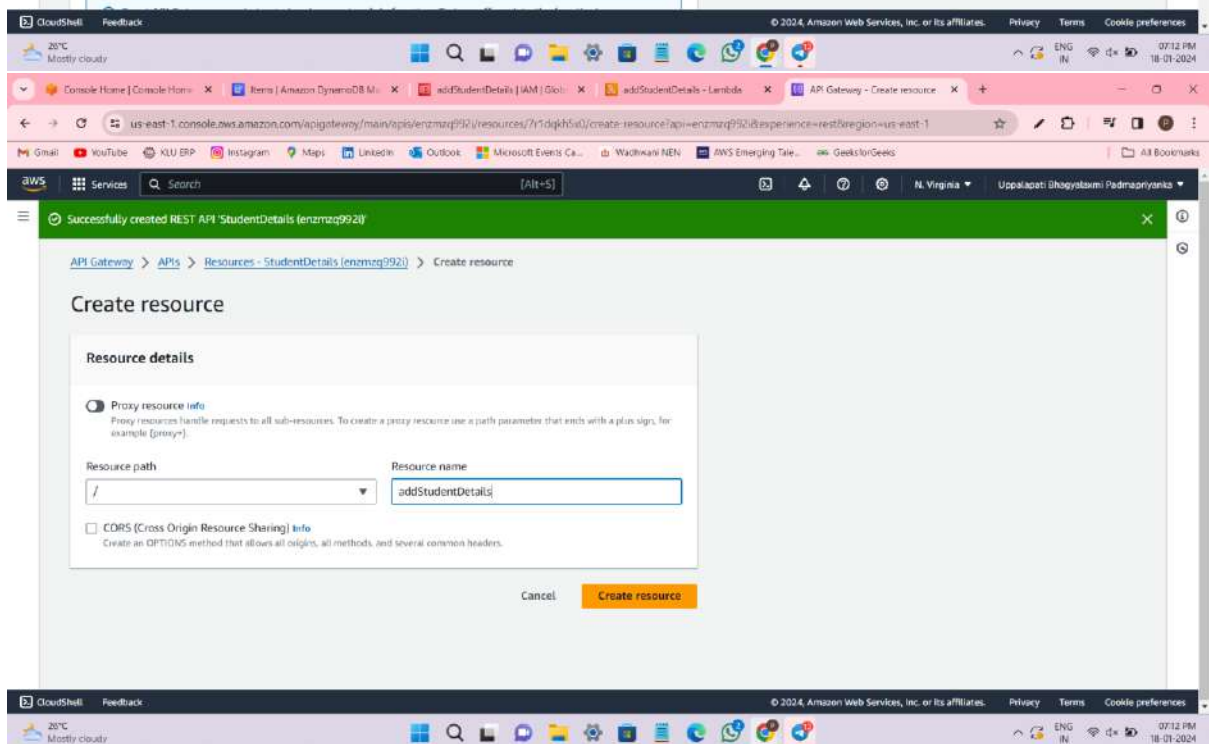
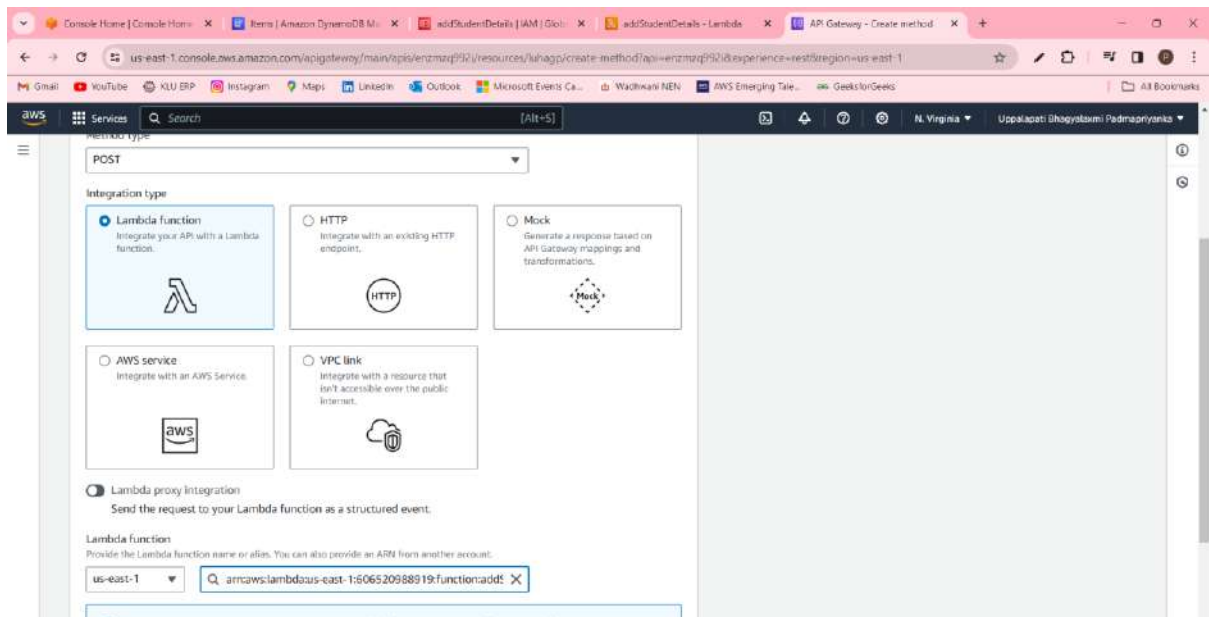
| | Id (String) | bloodgroup | cgpa | email | mobile | name |
|--------------------------|-------------|------------|------|--------------|------------|------|
| <input type="checkbox"/> | 100 | A+ | 9.3 | ram@gmail... | 1234567890 | K R |

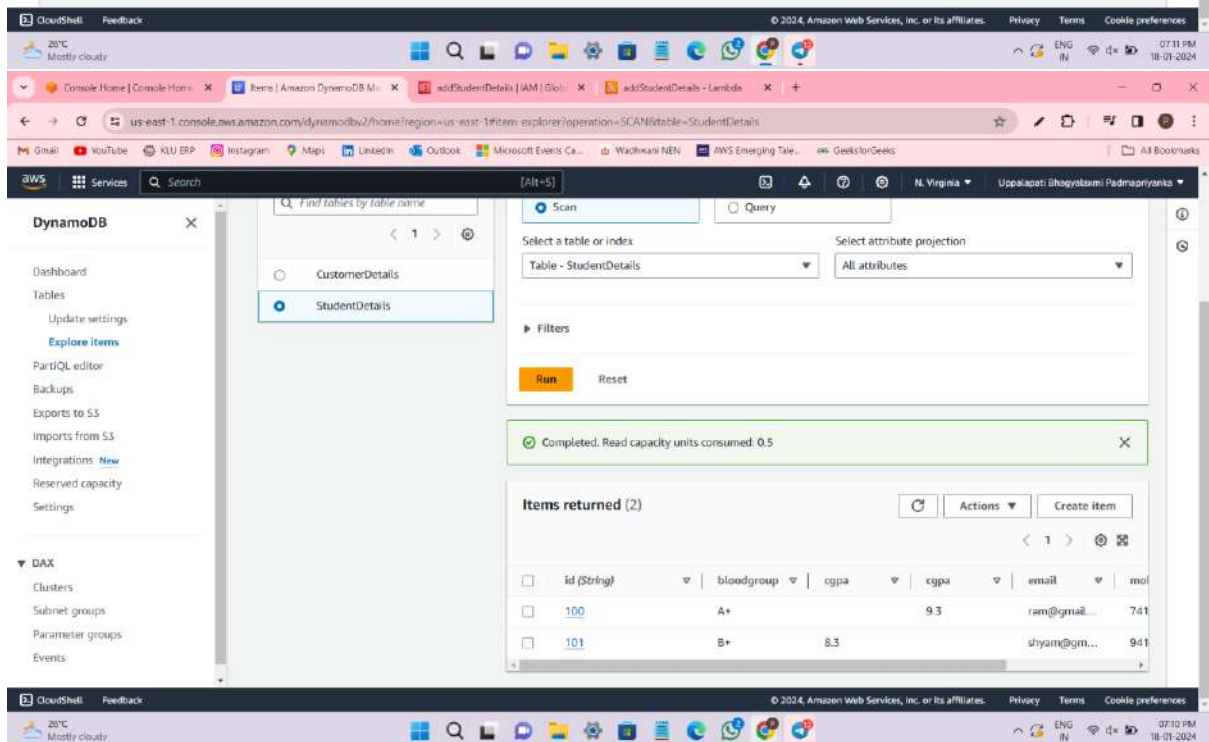
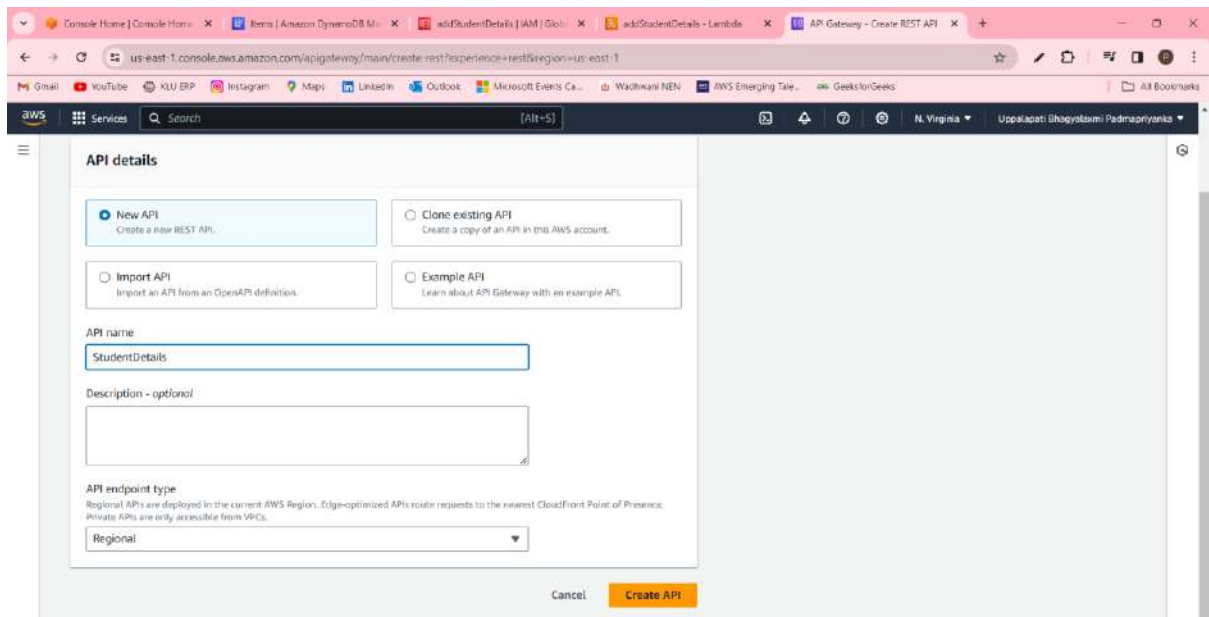
CloudShell Feedback

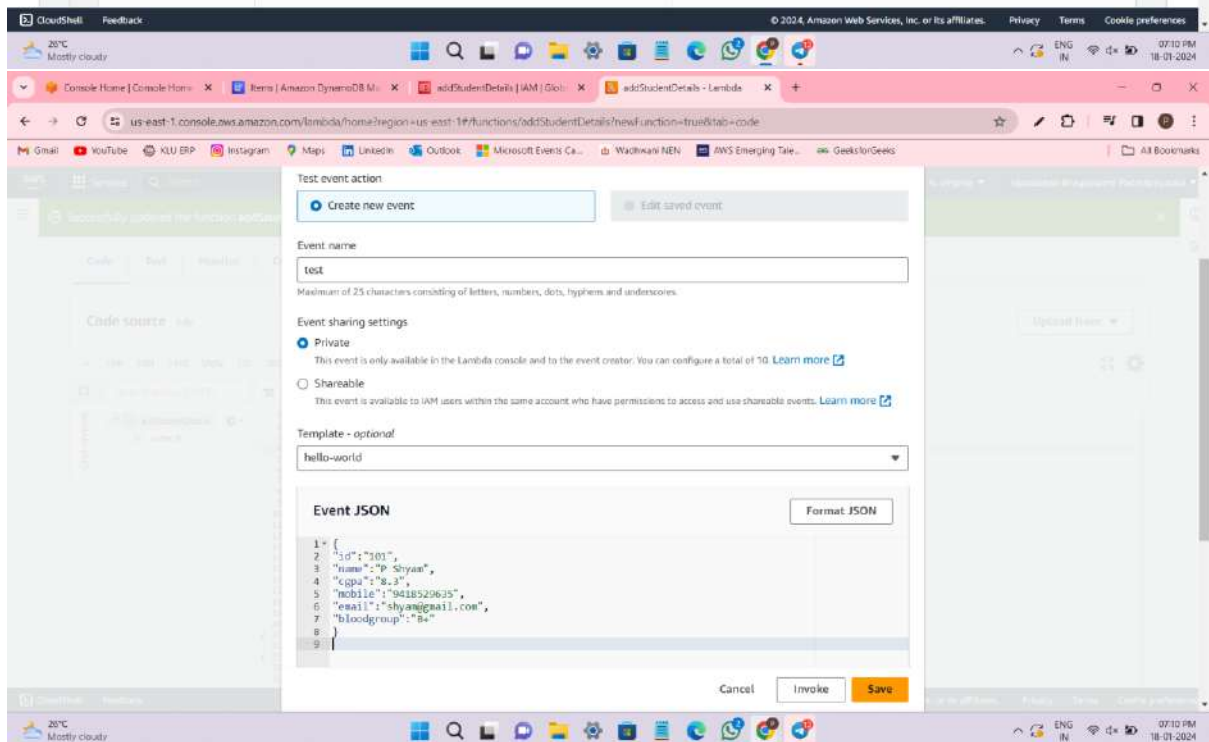
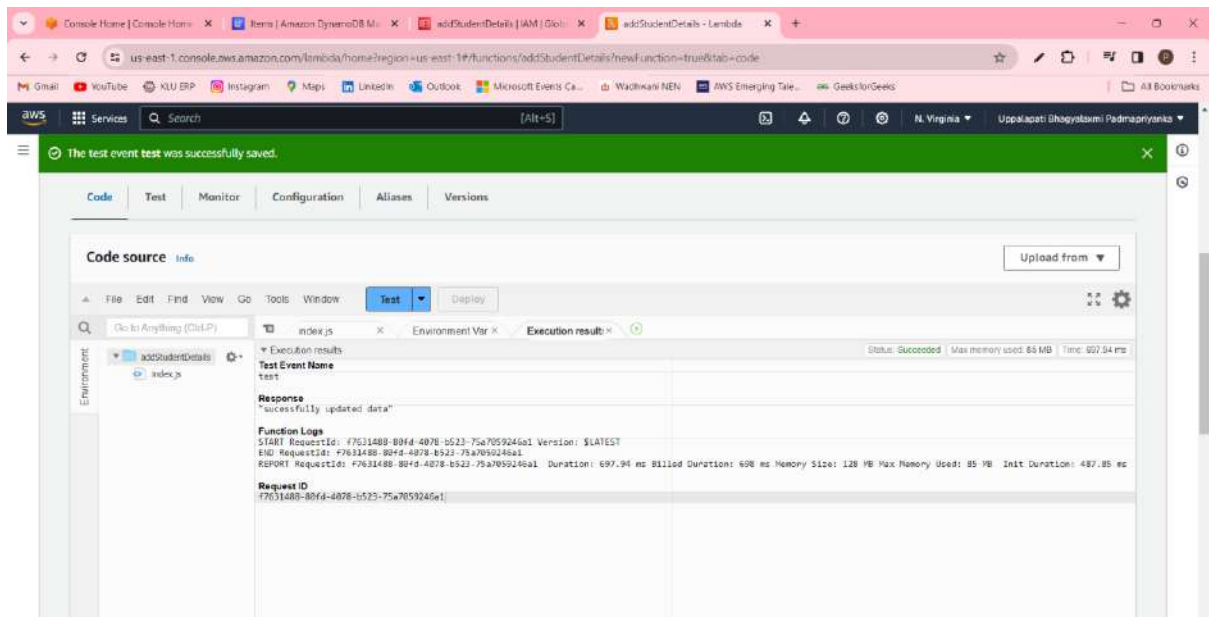
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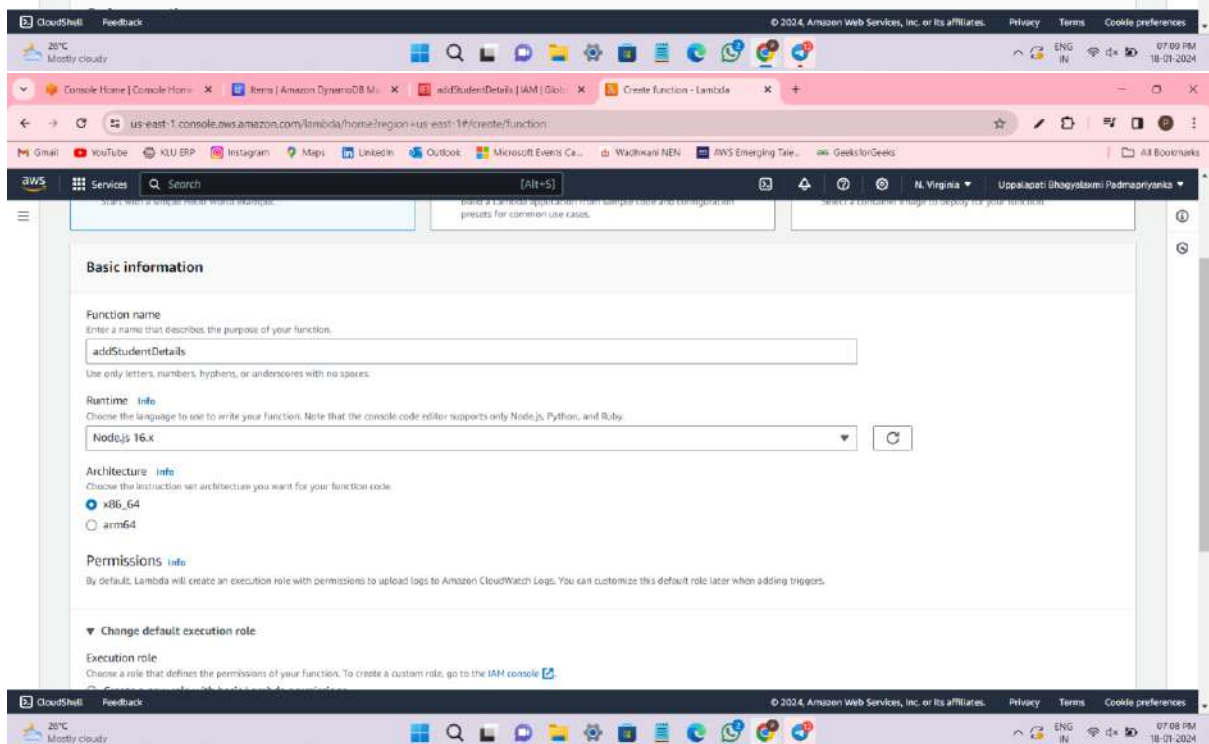
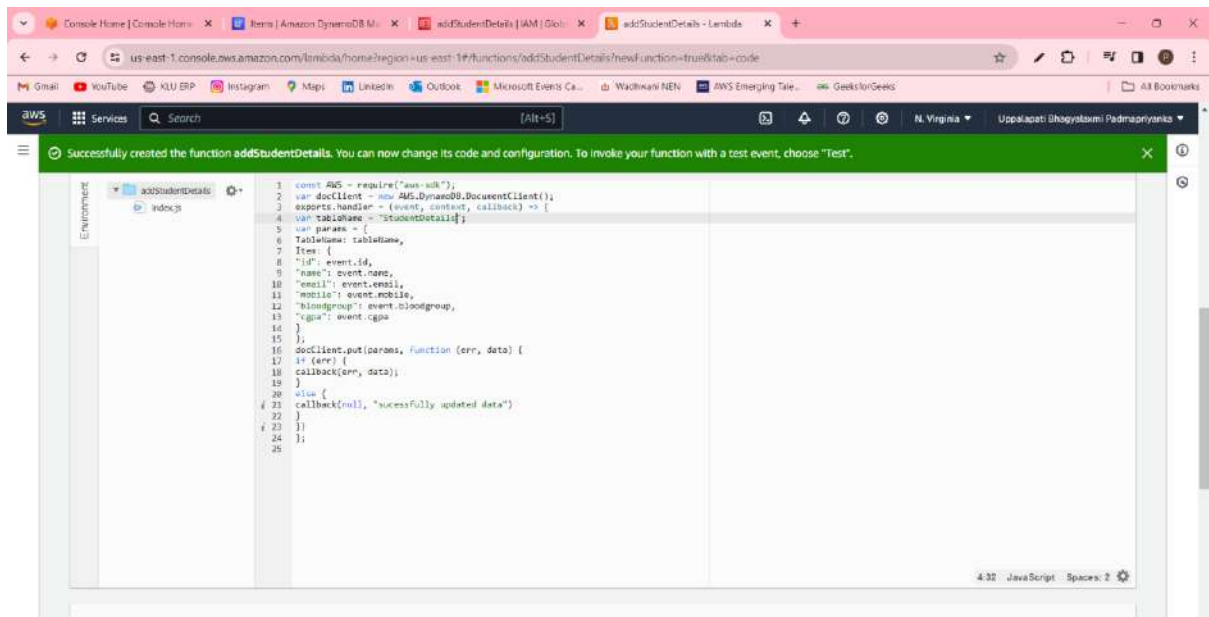
27°C Haze 06:29 PM 17-01-2024











Console Home | Console Home | Items | Amazon DynamoDB M... | addStudentDetails | IAM | Go | addStudentDetails - Lambda | API Gateway - Stages

us-east-1.console.aws.amazon.com/dynamodb2/home?region=us-east-1#item-explorer?operation=SCAN&table=StudentDetails

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aws Services Search [Alt+S]

DynamoDB

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 - Imports from S3
 - Integrations New
 - Reserved capacity
 - Settings
- DAX
 - Clusters
 - Subnet groups
 - Parameter groups
 - Events

CustomerDetails

StudentDetails

Table - StudentDetails

All attributes

Filters

Run Reset

Completed. Read capacity units consumed: 0.5

Items returned (4)

1 2 3 4

| <input type="checkbox"/> | id (String) | bloodgroup | cgpa | cgpa | email | mol |
|--------------------------|-------------|------------|------|------|--------------|-----|
| <input type="checkbox"/> | 103 | B- | 9.9 | | harsha@g... | 991 |
| <input type="checkbox"/> | 102 | B- | 9.3 | | nivas@gma... | 841 |
| <input type="checkbox"/> | 100 | A+ | 9.3 | | ram@gmail... | 741 |
| <input type="checkbox"/> | 101 | B+ | 8.3 | | shyam@gm... | 941 |

CloudShell Feedback

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Home Workspaces API Network

Search Postman

POST https://enzmzq992l.execute-api-us-east-1.amazonaws.com/dev/addStudentDetails

POST https://enzmzq992l.execute-api-us-east-1.amazonaws.com/dev/addStudentDetails

Params Authorization Headers (8) Body Pre-request Script Tests Settings

none form-data x-www-form-urlencoded raw binary GraphQL JSON

```
1 {
2   "id": "103",
3   "name": "K. Harsha",
4   "cgpa": "9.9",
5   "mobile": "9958629655",
6   "email": "harsha@gmail.com",
7   "bloodgroup": "B-"
8 }
9
```

Body Cookies Headers (8) Test Results

Static 200 OK Time: 2/16 s Size: 398 B Save as example

Pretty Raw Preview Visualize JSON

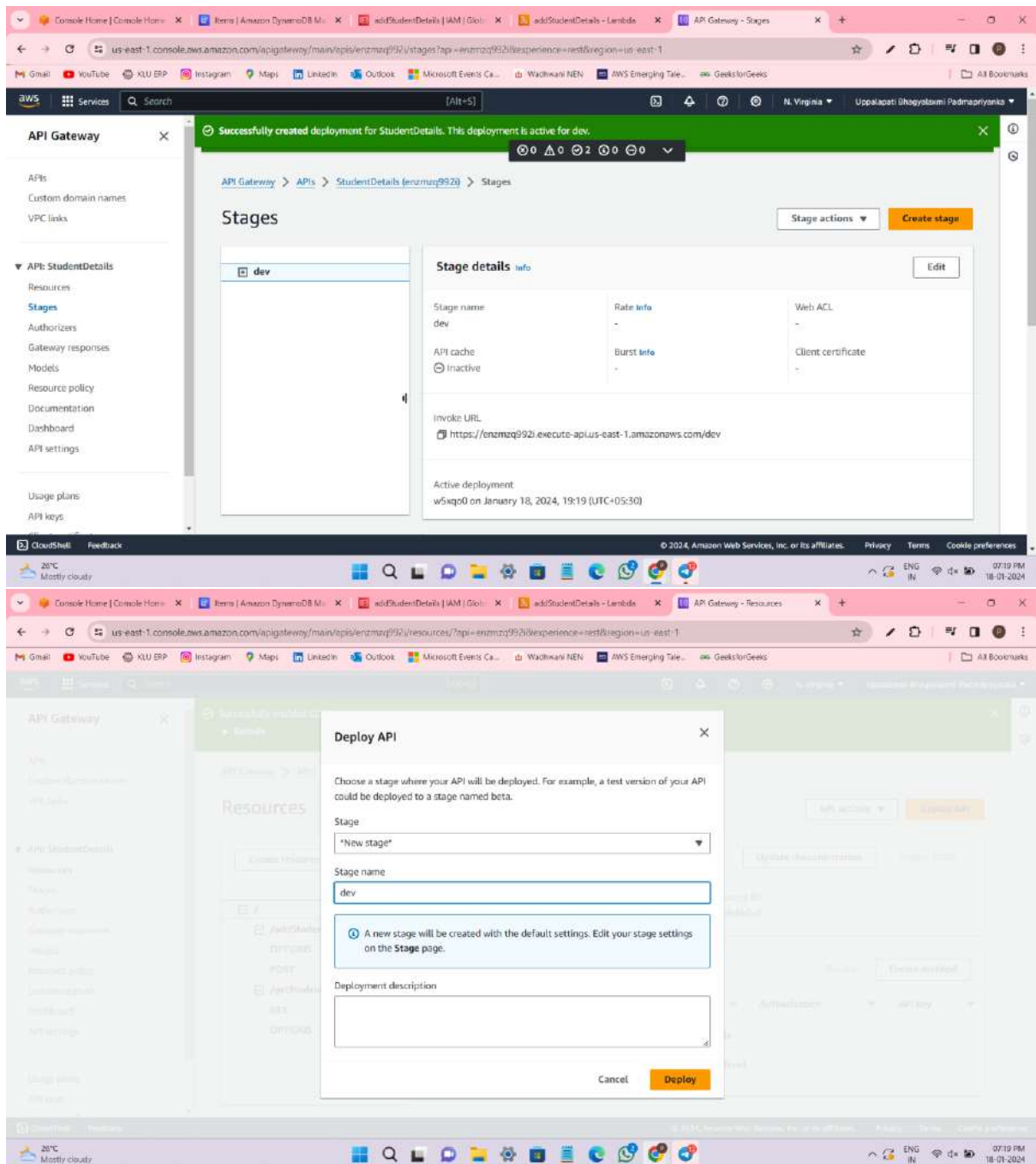
```
1 "successfully updated data"
```

Online Find and replace Console

Postman Runner Start Proxy Cookies Trash

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us-east-1.console.aws.amazon.com/apigateway/main/apis/enzmzq992/resources/uhagp/enable-cors?api=enzmzq992&experience=rest®ion=us-east-1

API Gateway - Enable CORS

Enable CORS

CORS settings Info

To allow requests from scripts running in the browser, configure cross-origin resource sharing (CORS) for your API.

Gateway responses
API Gateway will configure CORS for the selected gateway responses.

☒ Default 4XX
☒ Default 5XX

Access-Control-Allow-Methods
OPTIONS

☒ POST

Access-Control-Allow-Headers
API Gateway will configure CORS for the selected gateway responses.

Content-Type,X-Amz-Date,Authorization,X-Api-Key,X-Amz-Security-Token

Access-Control-Allow-Origin
Enter an origin that can access the resource. Use a wildcard "*" to allow any origin to access the resource.

*

API Gateway

APIs

Resources - StudentDetails (enzmzq992)

Enable CORS

CloudShell

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us-east-1.console.aws.amazon.com/apigateway/main/apis/enzmzq992/resources/uhagp/enable-cors?api=enzmzq992&experience=rest®ion=us-east-1

API Gateway - Resources

Resources

Successfully enabled CORS

Details

API Gateway > APIs > Resources - StudentDetails (enzmzq992)

Resources

Create resource

/

/addStudentDetails POST

/getStudentDetails GET OPTIONS

Resource details

Path: /getStudentDetails Resource ID: z9uonrm

Methods (2)

| Method type | Integration type | Authorization | API key |
|-------------------------------|------------------|---------------|--------------|
| <input type="radio"/> GET | Lambda | None | Not required |
| <input type="radio"/> OPTIONS | Mock | None | Not required |

API Gateway

Create resource

/addStudentDetails
POST
/getStudentDetails
GET

header1:value1
header2:value2

Client certificate
No client certificates have been generated.

Test

/getStudentDetails - GET method test results

| Request | Latency | Status |
|---------------------------|---------|--------|
| /getStudentDetails?id=100 | 1508 | 200 |

Response body

```
{ "cgpa": "0.8", "mobile": "7412389633", "bloodgroup": "A+", "id": "100", "email": "ran@gmail.com", "name": "K Ron" }
```

Response headers

```
{ "Content-Type": "application/json", "X-Amzn-Trace-Id": "Root=1-65d92c21-310c78bae3d9cfabe555562;Sampled=0;lineage=c63c7a7b:e" }
```

Method request passthrough

Template body

```
1 {  
2   "id": "${input.params('id')}"  
3 }  
4
```

Use VTL templates to create your mapping template. [Learn more](#)

Add mapping template

API Gateway

Create resource

- /
- /addStudentDetails POST
- /getStudentDetails GET

Request validator: None

SDK operation name: Generated based on method and path

Request paths (0)

| Name | Caching |
|--------------------------|---------|
| No request paths | |
| No request paths defined | |

URL query string parameters (1)

| Name | Required | Caching |
|------|----------|----------|
| id | True | Inactive |

HTTP request headers (0)

| Name | Required | Caching |
|---------------------------------|----------|---------|
| No HTTP request headers | | |
| No HTTP request headers defined | | |

CloudShell Feedback

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Console Home | Console Home | Items | Amazon DynamoDB M... | addStudentDetails | IAM | Go... | addStudentDetails - Lambda | API Gateway - Resources

us-east-1.console.aws.amazon.com/apigateway/main/apis/enzmzq992/resources?api=enzmzq992&experience=rest®ion=us-east-1

API Gateway

APIs

Custom domain names

VPC links

▼ API: StudentDetails

Resources

Stages

Authorizers

Gateway responses

Models

Resource policy

Documentation

Dashboard

API settings

Usage plans

API keys

Successfully created method 'GET' in 'getStudentDetails'.

API Gateway > APIs > Resources - StudentDetails (enzmzq992)

Resources

Create resource

- /
- /addStudentDetails POST
- /getStudentDetails GET

API actions

Deploy API

Update documentation

Delete

/getStudentDetails - GET - Method execution

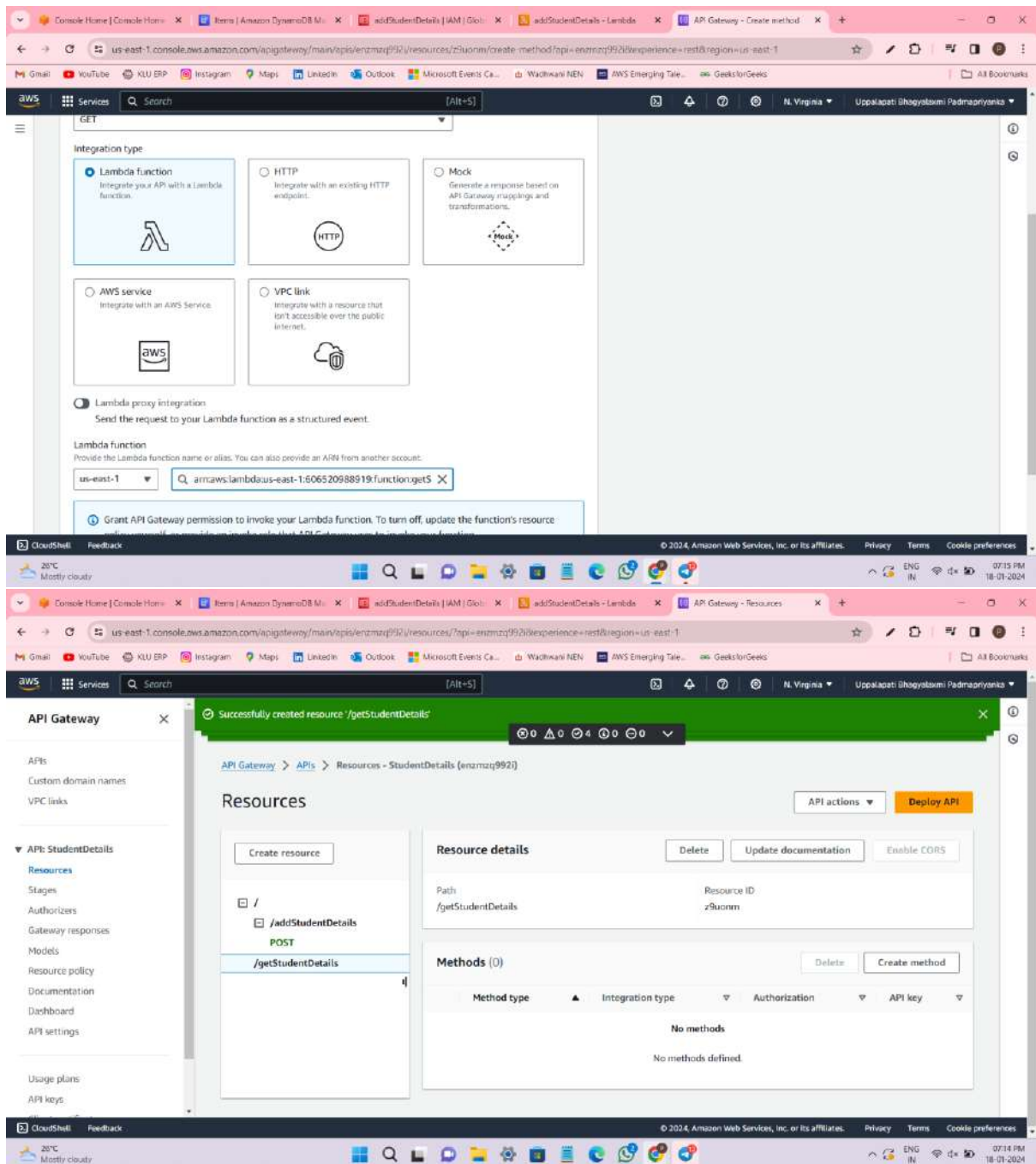
ARN: am:aws:execute-api:us-east-1:606520988919:enzmzq992/*/*GET/getStudentDetails

Resource ID: z9uonm

Client → Method request → Integration request → Lambda integration

← Method response ← Integration response

Method request Integration request Integration response Method response Test



Console Home | Items | Amazon | addStudentDetails | addStudentDetails | API Gateway - S | student-details | Student Register | AWS Policy Gen | +

← → Not secure student-details19.s3-website-us-east-1.amazonaws.com/addStudentDetails.html

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Student Details Form

ID:

2100032567

Name:

Uppalapati Bhagyalaxmi Padmapriyanka

CGPA:

9.41

Mobile:

+916300990097

Email:

2100032567cseh@gmail.com

Blood Group:

A+

Submit

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Windows Taskbar

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Console Home | Con | Items | Amazon Dyn | addStudentDetails | addStudentDetails | API Gateway - S | student-details19 | AWS Policy Genera | +

← → s3.console.aws.amazon.com/s3/buckets/student-details19?region=us-east-1&bucketType=general&tab=properties

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Successfully edited static website hosting

Requester pays

When enabled, the requester pays for requests and data transfer costs, and anonymous access to this bucket is disabled. [Learn more](#)

Requester pays

Disabled

Edit

Static website hosting

Use this bucket to host a website or redirect requests. [Learn more](#)

Static website hosting

Enabled

Hosting type

Bucket hosting

Bucket website endpoint

When you configure your bucket as a static website, the website is available at the AWS Region-specific website endpoint of the bucket. [Learn more](#)

<http://student-details19.s3-website-us-east-1.amazonaws.com>

Edit

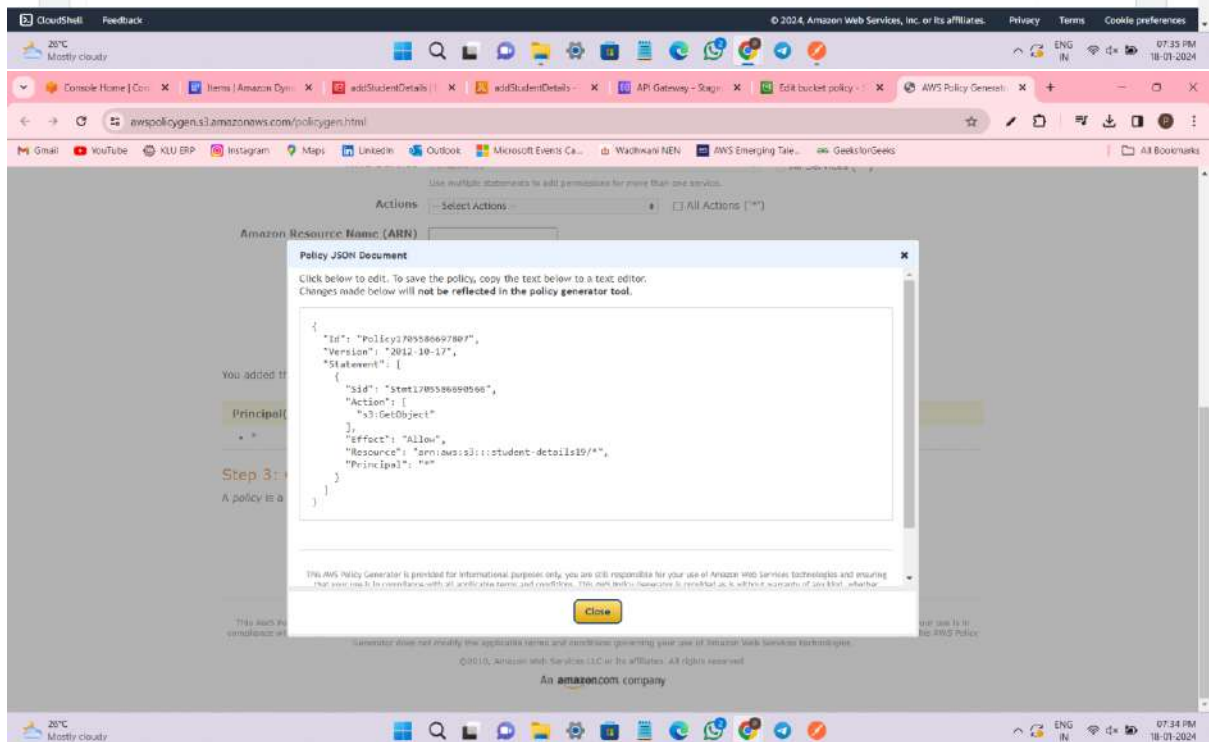
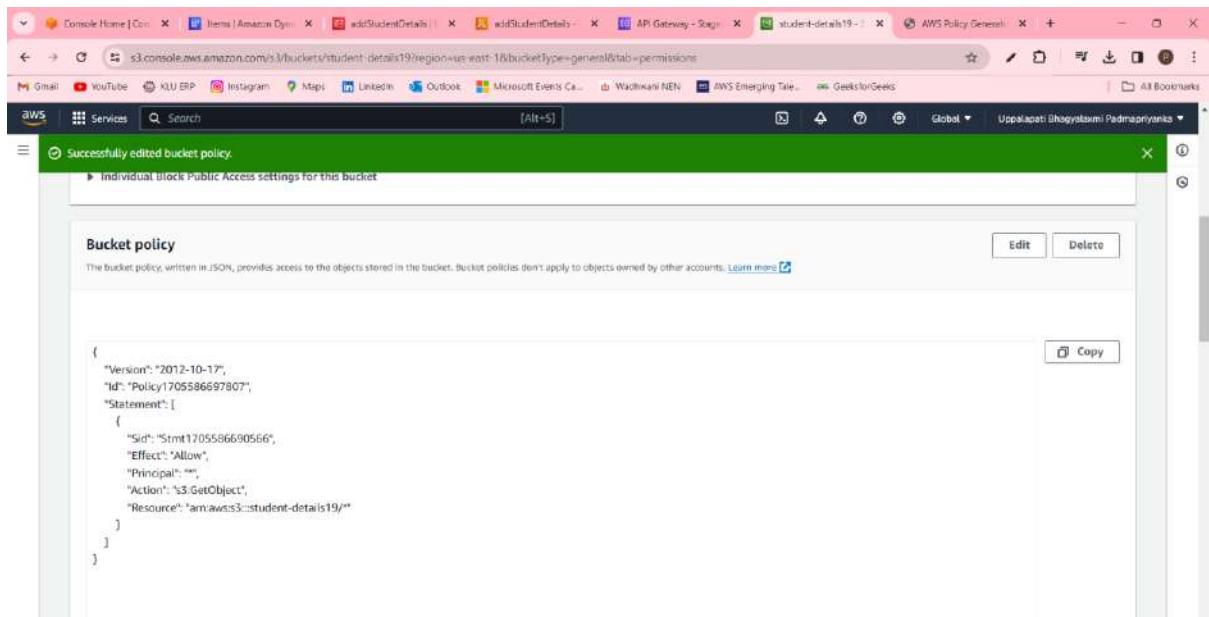
CloudShell Feedback

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Upload succeeded
View details below.

Summary

| | | |
|---------------------------------------|--|-----------------------------|
| Destination s3://student-details19 | Succeeded 3 files, 7.6 KB (100.00%) | Failed 0 files, 0 B (0%) |
|---------------------------------------|--|-----------------------------|

Files and folders

Files and folders (3 Total, 7.6 KB)

Find by name

| Name | Folder | Type | Size | Status | Error |
|--------------|--------|-----------|--------|--------------|-------|
| getStuden... | - | text/html | 2.5 KB | Succeeded... | - |
| addStude... | - | text/html | 3.9 KB | Succeeded... | - |
| index.html | - | text/html | 1.3 KB | Succeeded... | - |

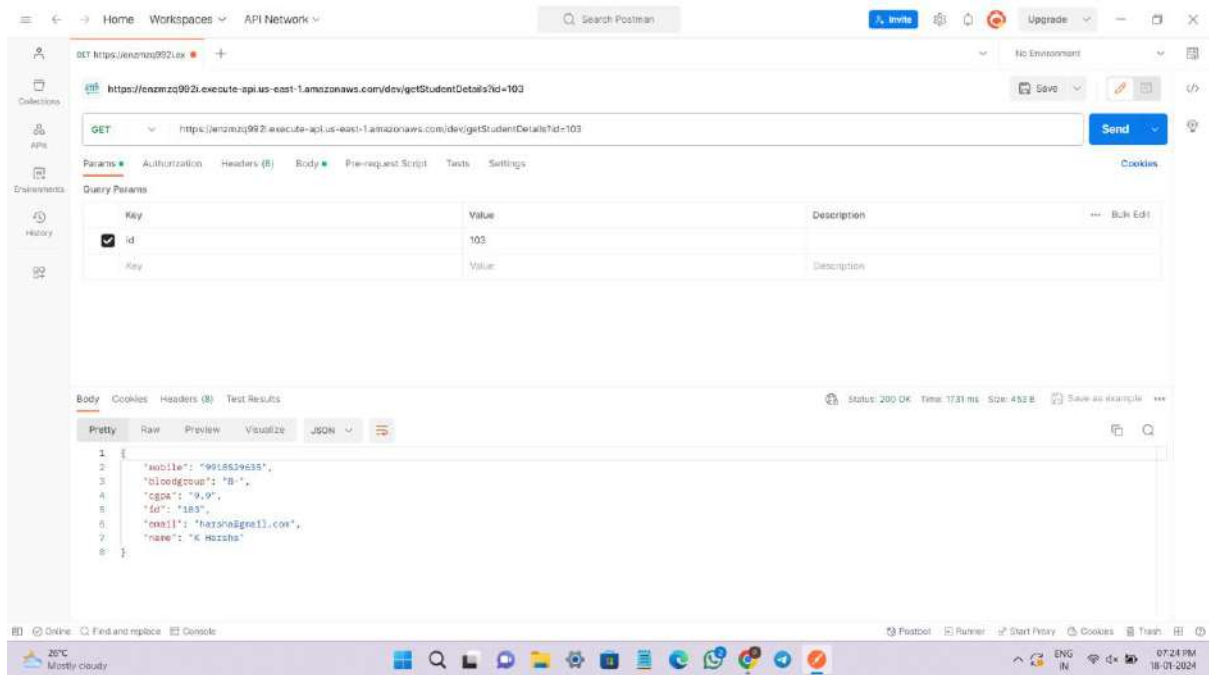
Successfully created bucket "student-details19"
To upload files and folders, or to configure additional bucket settings, choose [View details](#).

General purpose buckets (5)

Buckets are containers for data stored in S3. [Learn more](#)

Find buckets by name

| Name | AWS Region | Access | Creation date |
|-------------------|---------------------------------|-----------------------|--|
| codewithpriyanka | US East (N. Virginia) us-east-1 | Public | January 4, 2024, 12:24:16 (UTC+05:30) |
| priyanka-05012024 | US East (N. Virginia) us-east-1 | Public | January 5, 2024, 23:30:40 (UTC+05:30) |
| priyankabucket123 | US East (N. Virginia) us-east-1 | Objects can be public | January 11, 2024, 11:39:35 (UTC+05:30) |
| student-details19 | US East (N. Virginia) us-east-1 | Objects can be public | January 18, 2024, 19:31:50 (UTC+05:30) |



OUTPUT:

