2. Creating a Serverless API

Objective: Develop a serverless API using AWS Lambda and API Gateway.

Approach:

● **Define API:** Design a simple RESTful API (e.g., for a todo list application).

● **Lambda Functions:** Create Lambda functions for each API method (GET, POST, PUT, DELETE).

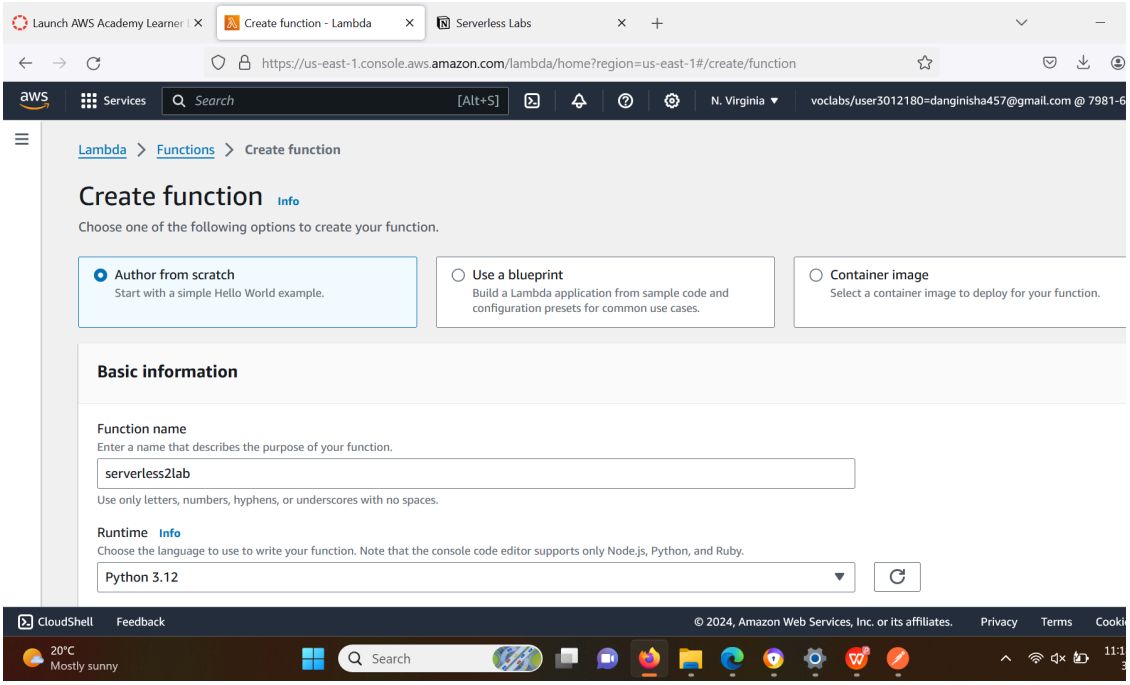
● **API Gateway Setup:** Use API Gateway to set up the API endpoints, connecting each endpoint to the corresponding Lambda function.

● **Testing:** Test the API using tools like Postman or AWS API Gateway test functionality.

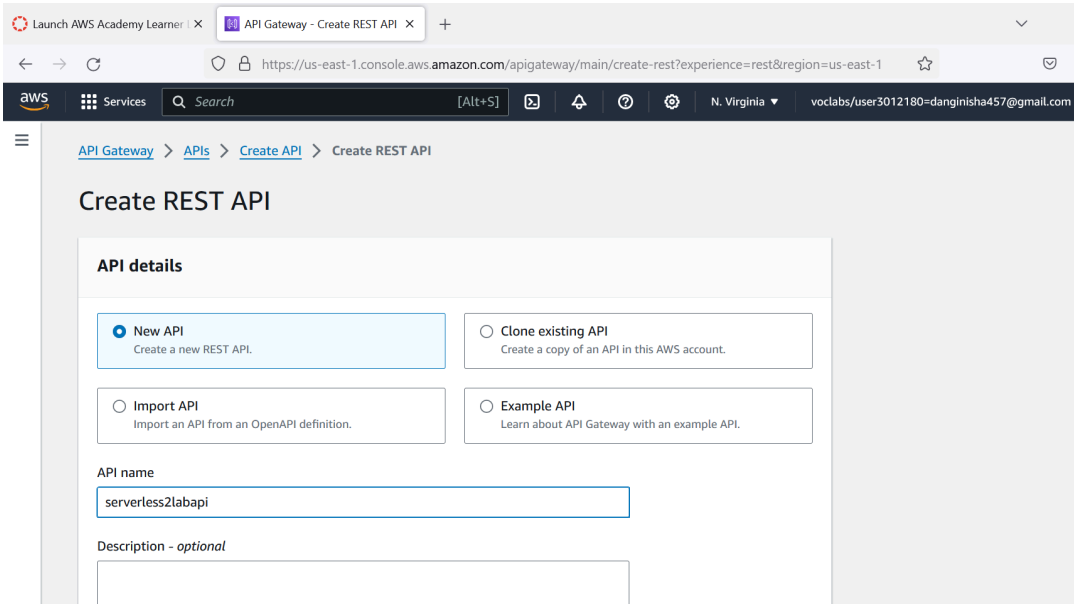
Goal: Gain hands-on experience in building and deploying a serverless API, understanding the integration between Lambda and API Gateway.

Solution:

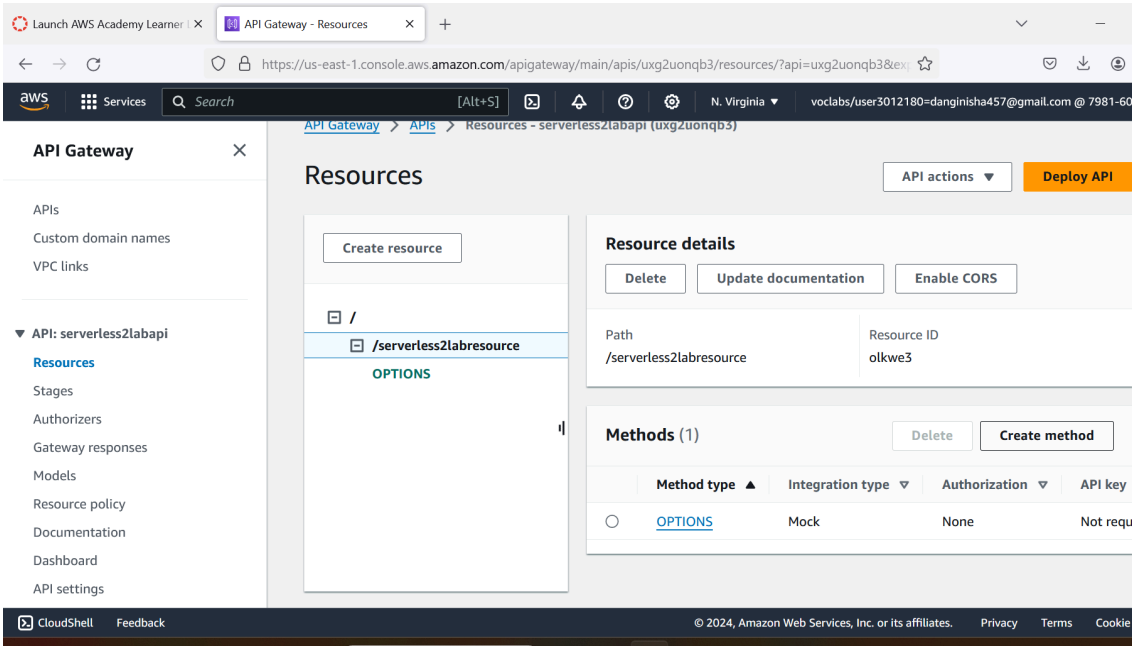
We start by creating a lambda function.

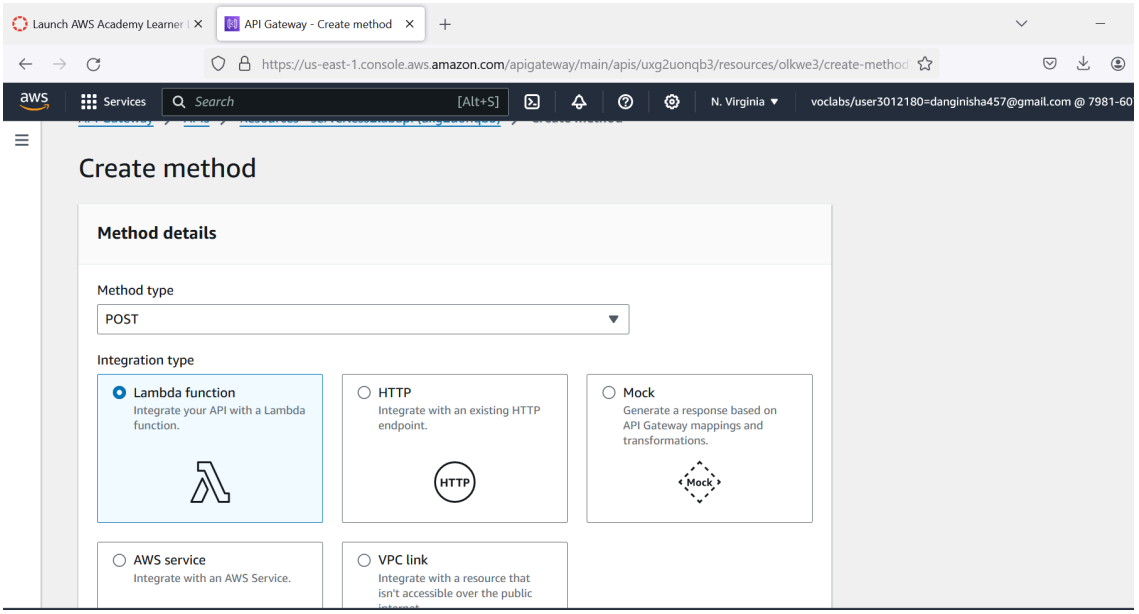


Then, we create a rest api

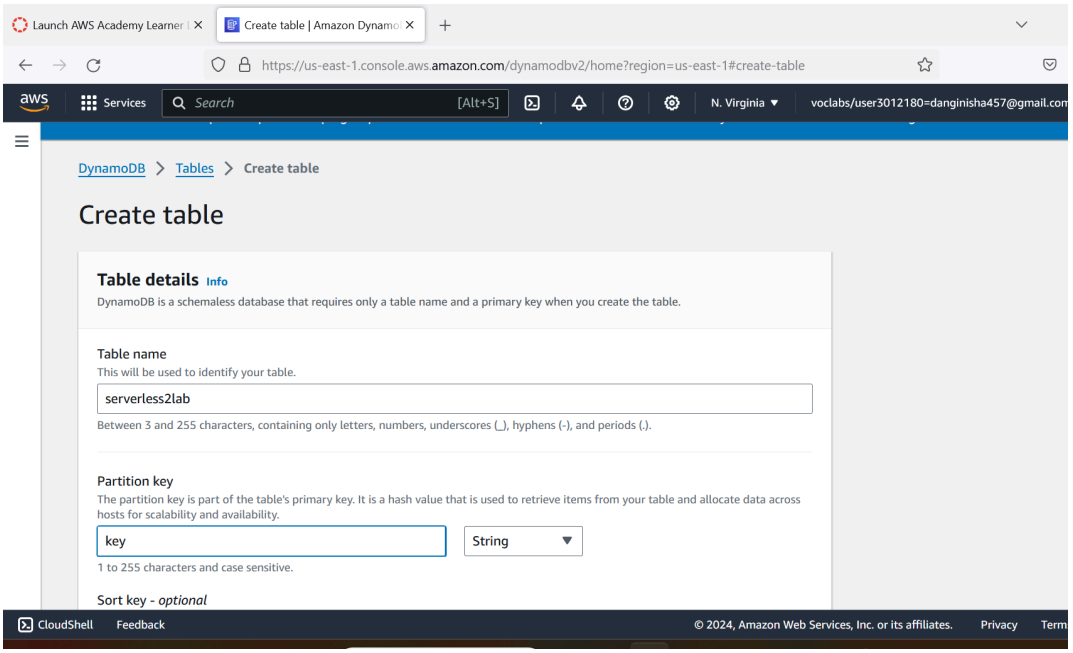


Then, we create a resource and then create a POST method. Likewise, we repeat the same step for POST, GET and PUT.

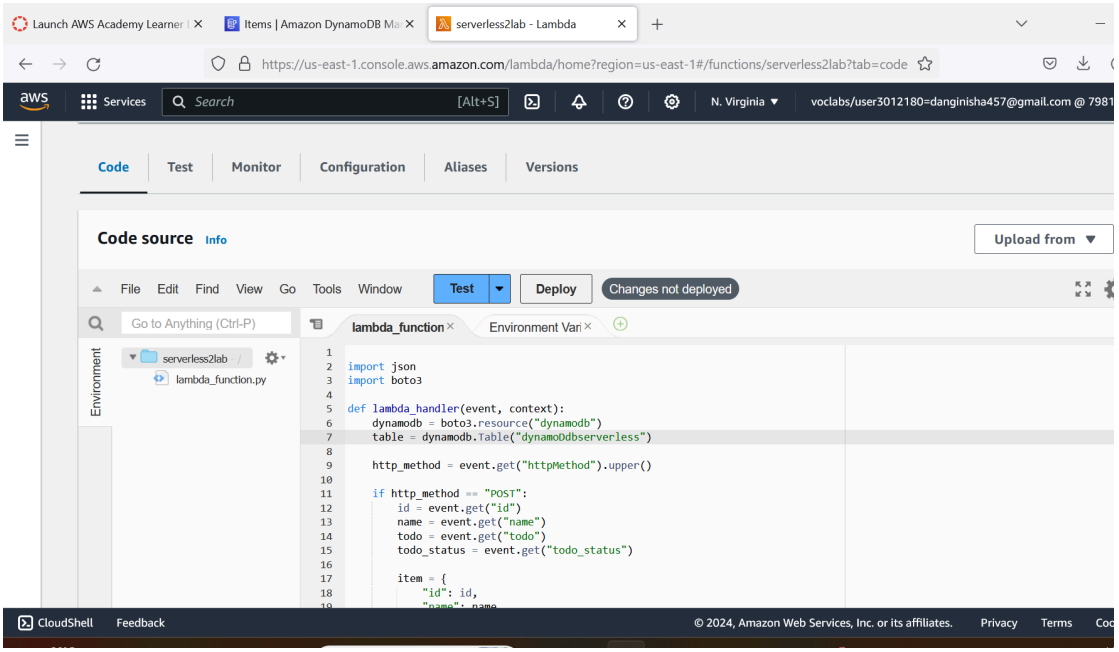




Then, we create a dynamoDB table.



We add a code in the lambda that we created earlier and add trigger to it.


Launch AWS Academy Learner
Items | Amazon DynamoDB
serverless2lab - Lambda
https://us-east-1.console.aws.amazon.com/lambda/home?region=us-east-1#/functions/serverless2lab?tab=code
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Deploy
Changes not deployed
Go to Anything (Ctrl-P)
lambda_function
Environment Vari
Environment
serverless2lab
lambda_function.py
import json
import boto3
def lambda_handler(event, context):
dynamodb = boto3.resource("dynamodb")
table = dynamodb.Table("dynamoDdbserverless")
http_method = event.get("httpMethod").upper()
if http_method == "POST":
id = event.get("id")
name = event.get("name")
todo = event.get("todo")
todo_status = event.get("todo_status")
item = {
"id": id,
CloudShell
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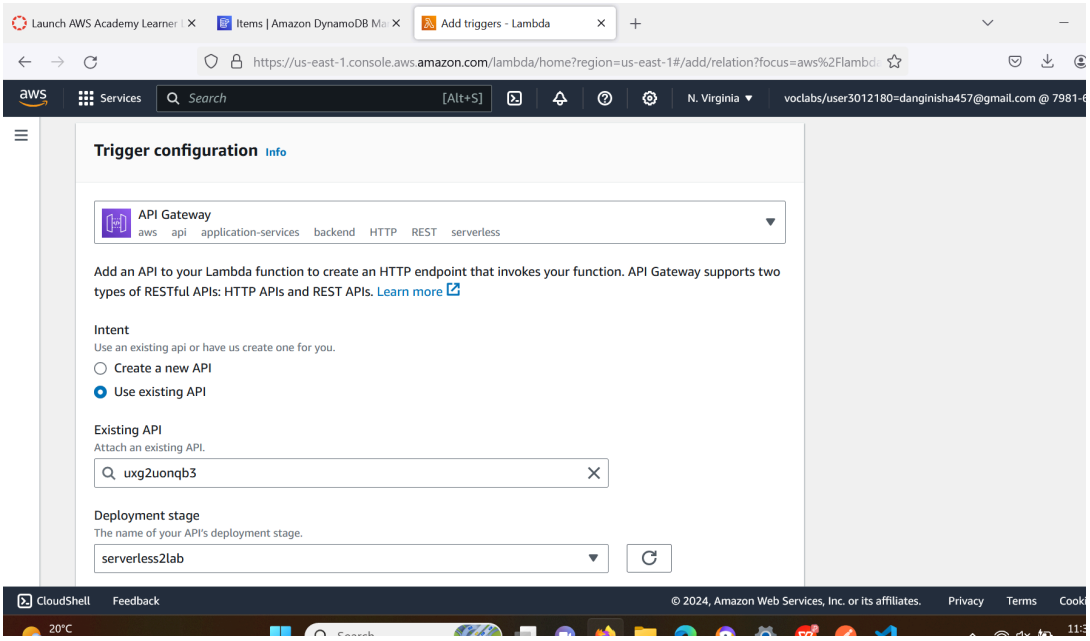
Launch AWS Academy Learner
Items | Amazon DynamoDB
Add triggers - Lambda
https://us-east-1.console.aws.amazon.com/lambda/home?region=us-east-1#/add/relation?focus=aws%2Flambda
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Trigger configuration Info
API Gateway
aws api application-services backend HTTP REST serverless
Add an API to your Lambda function to create an HTTP endpoint that invokes your function. API Gateway supports two types of RESTful APIs: HTTP APIs and REST APIs. Learn more
Intent
Use an existing api or have us create one for you.
Create a new API
Use existing API
Existing API
Attach an existing API.
uxg2uonqb3
Deployment stage
The name of your API's deployment stage.
serverless2lab
CloudShell
Feedback
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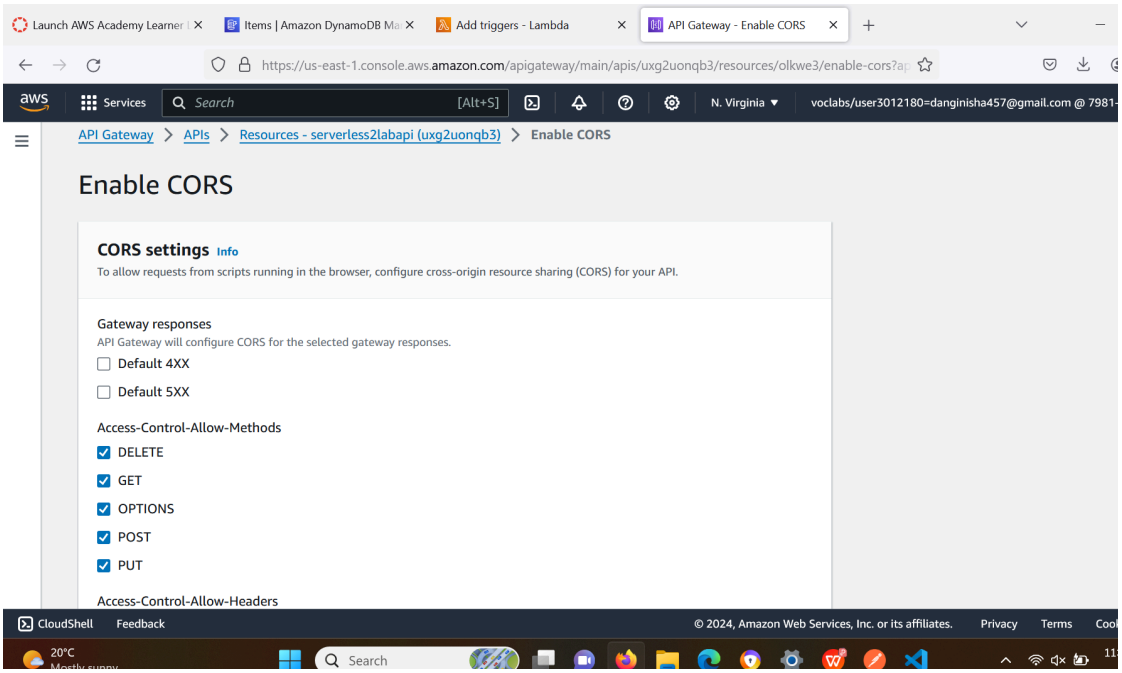
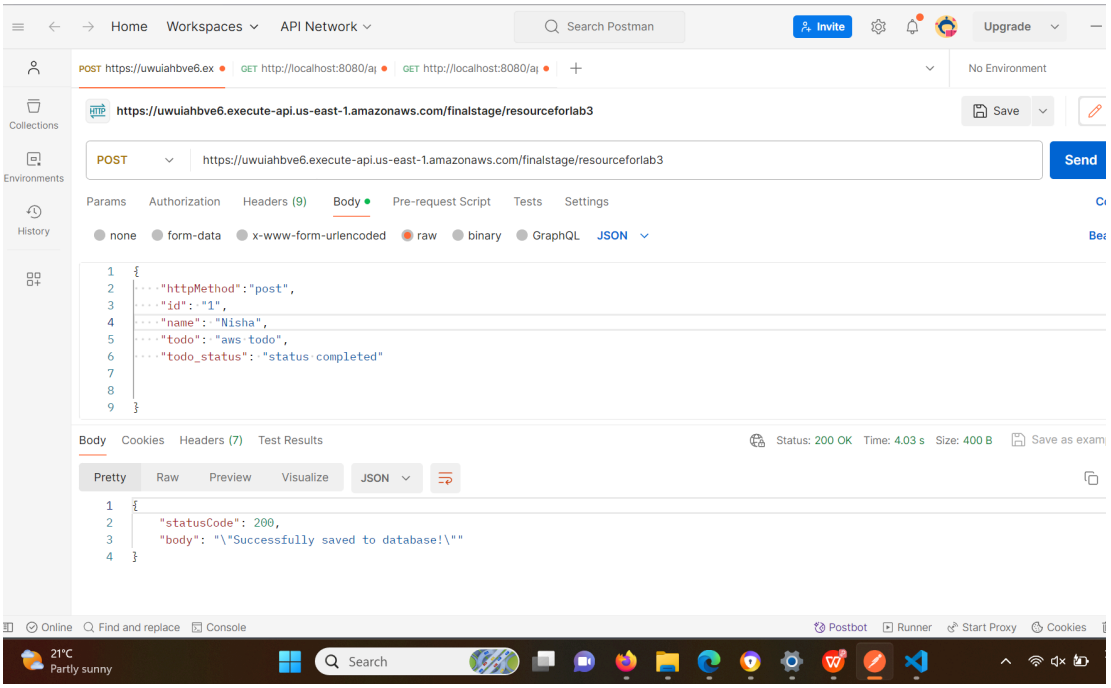
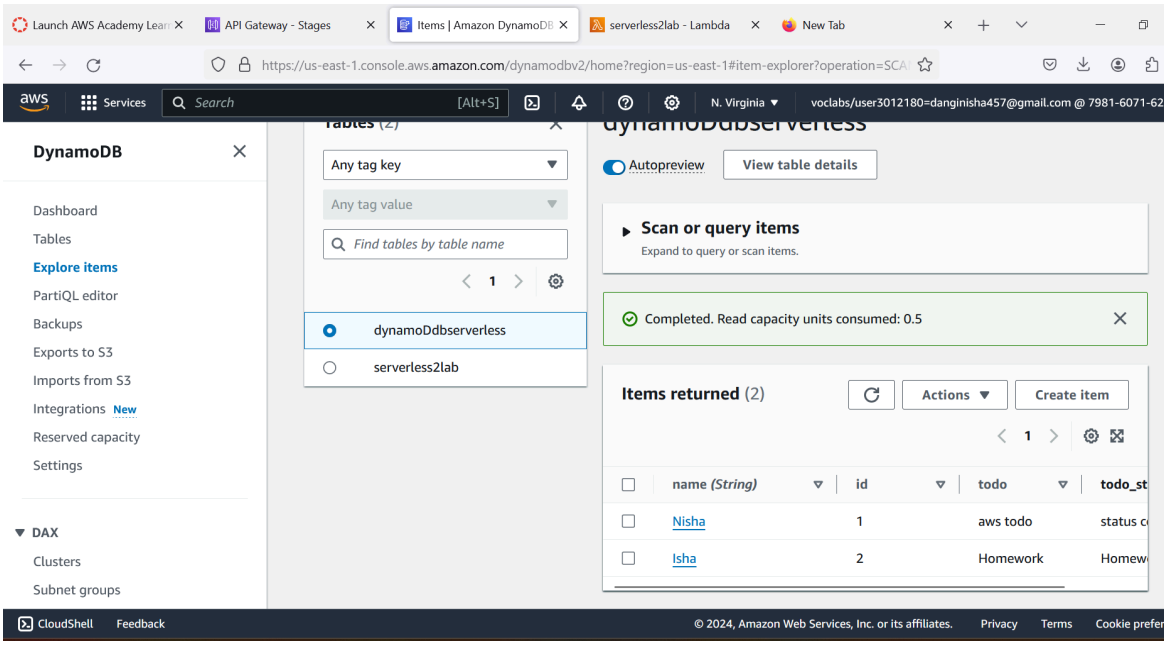
We enable CORS for all the methods.



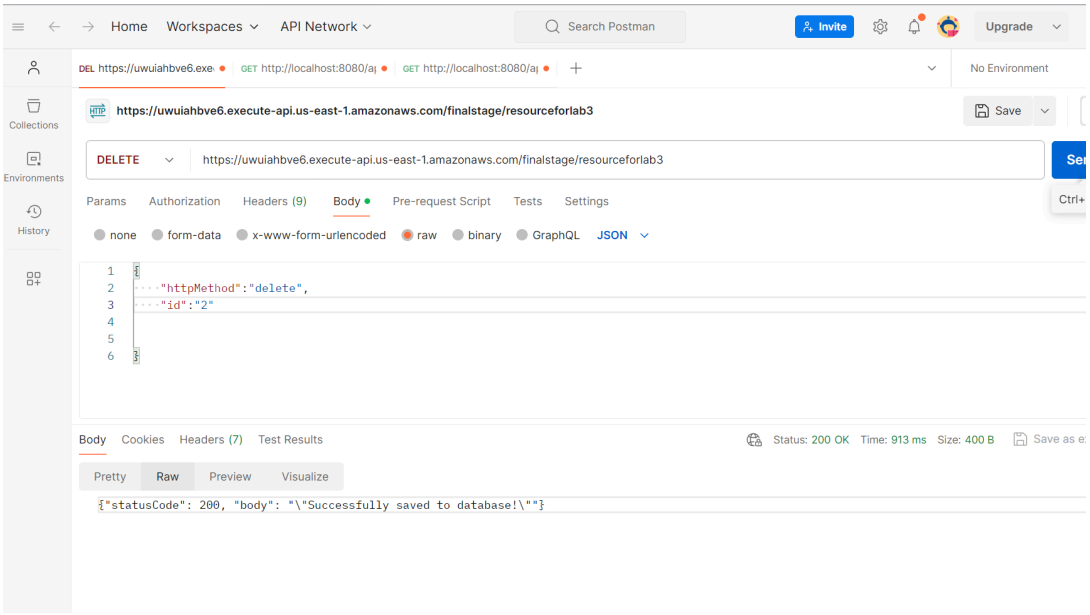
In postman api we make a post request



We can see that two items have been added in dynamoDB.



We send DELETE request



Item with id =2 has been removed.