

Homework 5

Team: TeaDistribution

Repo Link:

<https://github.com/gtgan/cmpe207hw/tree/ksbains/hw5>

Description:

In this Homework we create a DynamoDB table called users. This table contains 3 fields; id, firstname, and lastname. We then create Lambda functions to be able to get, put, delete, and update the users in the DynamoDB table. Then we created an APIGateway that linked each of the routes to the Lambda functions. All of this was done in AWS. NOTE: may have to zoom in screenshots to get a better view, we wanted to make sure the full console view was available.

Screenshots:

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Get: This is the scan result. It is under /user

AWS Services ▾ cloud_user @ 2219-1632-08

API Gateway console - /user - GET - Method Test

	Resources	Actions ▶	Method Execution	/user - GET - Method Test
Custom Domain Names	▼ / ▼ /user GET POST			
VPC Links				
API: Users API				
Stages				
Authorizers				
Gateway Responses				
Models				
Resource Policy				
Documentation				
Settings				
Usage Plans				
API Keys				
Client Certificates				
Settings				

Path

No path parameters exist for this resource. You can define path parameters by using the syntax {myPathParam} in a resource path.

Query Strings

(user)

param1=value1¶m2=...value2

Headers

(user)

content-type: application/json

Stage Variables

No stage variables exist for this method.

Client Certificate

No client certificates have been generated.

Request Body

Request body is not supported for GET methods.

Test

Make a test call to your method with the provided input.

Response Body

```
{
  "Items": [
    {
      "firstName": "Karan",
      "id": "2",
      "lastName": "Bains"
    },
    {
      "firstName": "Bob",
      "id": "1",
      "lastName": "Smith"
    }
  ],
  "Count": 3,
  "ScannedCount": 3
}
```


Response Headers

```
{"myHeader":"test","X-Amzn-Trace-Id":"Root=1-5f9b2727-e2b298ddc1ea3f71ba386d;Sampled=0"}"
```


Logs

```
Execution log for request c383a7c2-7cba-4363-8bfa-de9fbdb20944
Thu Oct 29 20:33:43 UTC 2020 : Starting execution for request: c383a7c2-7cba-4363-8bfa-de9fbdb20944
Thu Oct 29 20:33:43 UTC 2020 : HTTP Method: GET, Resource Path: /user
Thu Oct 29 20:33:43 UTC 2020 : Method request path: {}
Thu Oct 29 20:33:43 UTC 2020 : Method request query string: {}
Thu Oct 29 20:33:43 UTC 2020 : Method request headers: {"content-type": "application/json"}
Thu Oct 29 20:33:43 UTC 2020 : Method request body before transformations: 
Thu Oct 29 20:33:43 UTC 2020 : Request validation succeeded for content type application/json
Thu Oct 29 20:33:43 UTC 2020 : Endpoint request URI: https://lambda.us-east-1.amazonaws.com/2015-03-31/functions/arm:aws:853:function:getAllUsersAPI/inocations
Thu Oct 29 20:33:43 UTC 2020 : Endpoint request headers: {"x-amzn-lambda-integration-tag:c383a7c2-7cba-4363-8bfa-de9fbdb20944"}
*****
*****28573c, X-Amz-Date=20201029T203343Z, x-amzn-apigateway-api-id=oSeeshSoyd, X-Amz-Source-Arn=arn:aws:execute-api::us-east-1:123456789012:stage/dev/test-invoke-stage/GET/user, Accept-application/json, User-Agent=AmazonAPIGateway_oSeeshSoyd, X-Amz-Security-Token=P//////////wEACXVZLWWhC3QTHSHWEUCICQCwMNVETXSrk+I2D8lHsvn50AARbc8ZYUUT6RnCqG1QIgPh/VAmssAbkIQbzPWHF9LYtGHKHJ2SEFNGBXXrYvNTAiDBmJyJGEQUqaokcfysgRA66N2RH8jEvIHFAHoQ+76DUOga7adU9agSJffmHgI+Qmc+rIQoPYQBnsnv4iz7UV/lafityAYofmpIfkKsl2zxYgoXLefesrfxbOIstT9XeRDOShb2qoi [TRUNCATED]
Thu Oct 29 20:33:43 UTC 2020 : Endpoint request body after transformations: {"resource":"/user","path":"","method":"httpMethod","contentType":"application/json"},"multiValueHeaders":{"content-type":["application/json"],"queryStringParameters":null,"multipleValues":null},"headers":{"Content-Type":"application/json"},"requestContext":{"resourceId":"bnikud","resourcePath":"/user","http"/>
```

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Get: This is the get by id result. It is under user/{id} or in this case user/3

The screenshot shows the AWS Lambda console interface for the 'Users API (o5eesh5qyd)' function. The 'Method Execution' page for the '/user/{id} - GET - Method Test' is active. The left sidebar shows the function's resources, with '/user/3' selected under the 'GET' method.

Path: /user/{id}

Query Strings: param1=value1¶m2=value2

Headers: (empty)

Stage Variables: No stage variables exist for this method.

Client Certificate: No client certificates have been generated.

Request Body: Request Body is not supported for GET methods.

Request: /user/3
Status: 200
Latency: 1446 ms

Response Body:

```
{
  "firstName": "Karanbir",
  "id": "3",
  "lastName": "Bains"
}
```

Response Headers:

```
{
  "myHeader": "test",
  "X-Amzn-Trace-Id": "Root=1-5f9b27c8-23966241df74e208efdc2f;Sampled=0"
}
```

Logs:

```
Execution log for request 3103e058-39a6-455f-803a-f288f02b0e02
Thu Oct 29 20:36:24 UTC 2020 : Starting execution for request: 3103e058-39a6-455f-803a-f288f02b0e02
Thu Oct 29 20:36:24 UTC 2020 : HTTP Method: GET, Resource Path: /user/3
Thu Oct 29 20:36:24 UTC 2020 : Method request path: {id=3}
Thu Oct 29 20:36:24 UTC 2020 : Method request query string: {}
Thu Oct 29 20:36:24 UTC 2020 : Method request headers: {}
Thu Oct 29 20:36:24 UTC 2020 : Method request body before transformations:
Thu Oct 29 20:36:24 UTC 2020 : Request validation succeeded for content type application/json
Thu Oct 29 20:36:24 UTC 2020 : Endpoint request URI: https://lambda.us-east-1.amazonaws.com/2015-03-31/functions/arn:aws:lambda:us-east-1:221916320853:function:getUserDataAPI/invocations
Thu Oct 29 20:36:24 UTC 2020 : Endpoint request headers: {x-amzn-lambda-integration-tag=3103e058-39a6-455f-803a-f288f02b0e02, Authorization=*****}
*****43bd07, X-Amz-Date=20201029T203624Z, x-amzn-apigateway-api-id=o5eesh5qyd, X-Amz-Source-Arn=arn:aws:execute-api:us-east-1:221916320853:o5eesh5qyd/test-invoke-stage/get/user/{id}, Accept-application/json, User-Agent=AmazonAPIGateway-o5eesh5qyd, X-Amz-Security-Token=IQo7b3p2L2k2YjEJP...
Thu Oct 29 20:36:24 UTC 2020 : Endpoint request body after transformations: {"resource":"/user/{id}", "path":"/user/3", "httpMethod":"GET", "headers":null, "multiValueHeaders":null, "queryStringParameters":null, "multiValueQueryStringParameters":null, "pathParameters":{"id":"3"}, "stageVariables":null, "requestContext":{"resourceId":"fzdkv4", "resourcePath":"/user/{id}", "httpMethod":"GET", "extendedRequestId":"V9HnWQVZIANF1UA-", "requestTime":"29/Oct/2020:20:36:24 +0000", "path":"/user/{id}", "accountId":"221916320853", "protocol":"HTTP/1.1", "stage":"test-invoke-stage", "domainPrefix":"testPrefix", "requestTimeEpoch":1604003784586, "requestId":"3103e058-39a6-455f-803a-f288f02b0e02", "identity":{"cognitoIdentityPoolId":null, "cognitoIdentityId":null, "apiKey":"test-invoke-api-key", "principalOrgId":null, "cognitoAuthenticationType":null, "userArn":"arn:aws:iam::221916320853:user/cloud_user", "apiKeyId":"test-invoke-api-key-id", "userAgent":"aws-internal/3 aws-sdk-java/1.11.848 Linux/4.9.217-0.3.ac.206.84.332.metal1.x86_64 OpenJDK_64-Bit_Server_VM/25.262-b10 java/1.8 [TRUNCATED]
Thu Oct 29 20:36:24 UTC 2020 : Sending request to https://lambda.us-east-1.amazonaws.com/2015-03-31/functions/arn:aws:lambda:us-east-1:221916320853:function:getUserDataAPI/invocations
Thu Oct 29 20:36:26 UTC 2020 : Received response. Status: 200, Integration latency: 1441 ms
Thu Oct 29 20:36:26 UTC 2020 : Endpoint response headers: {Date=Thu, 29 Oct 2020 20:36:26 GMT, Content-Type=application/json, Content-Length=122, Connection=keep-alive, x-amzn-RequestId=7e0d1187-7023-41cf-a1b5-dd157aff3eb2, x-amzn-Renapped-Content-Length=0, X-Amz-Executed-Version=$LATEST, X-Amzn-Trace-Id=Root=1-5f9b27c8-23966241df74e208efdc2f;Sampled=0}
Thu Oct 29 20:36:26 UTC 2020 : Endpoint response body before transformations: {"statusCode":200,"headers":{"myHeader":"test"},"body":{"firstName":"Karanbir","id":"3","lastName":"Bains"}}
```


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After:

The screenshot displays the AWS DynamoDB console interface. On the left, the navigation pane shows the 'DynamoDB' service with options like 'Dashboard', 'Tables', 'Backups', 'Reserved capacity', 'Preferences', 'DAX', 'Dashboard', 'Clusters', 'Subnet groups', 'Parameter groups', and 'Events'. The 'Tables' section is active, showing a list of tables with 'Users' selected. The main panel shows the 'Users' table details, including tabs for 'Overview', 'Items', 'Metrics', 'Alarms', 'Capacity', 'Indexes', 'Global Tables', 'Backups', 'Contributor Insights', 'Triggers', 'Access control', and 'Tags'. The 'Items' tab is selected, displaying a table with 4 items. The table has columns for 'id', 'firstname', and 'lastname'. The items are: 1 (Bob Smith), 2 (Karan Bains), 3 (Karanbir Bains), and 4 (Larry David).

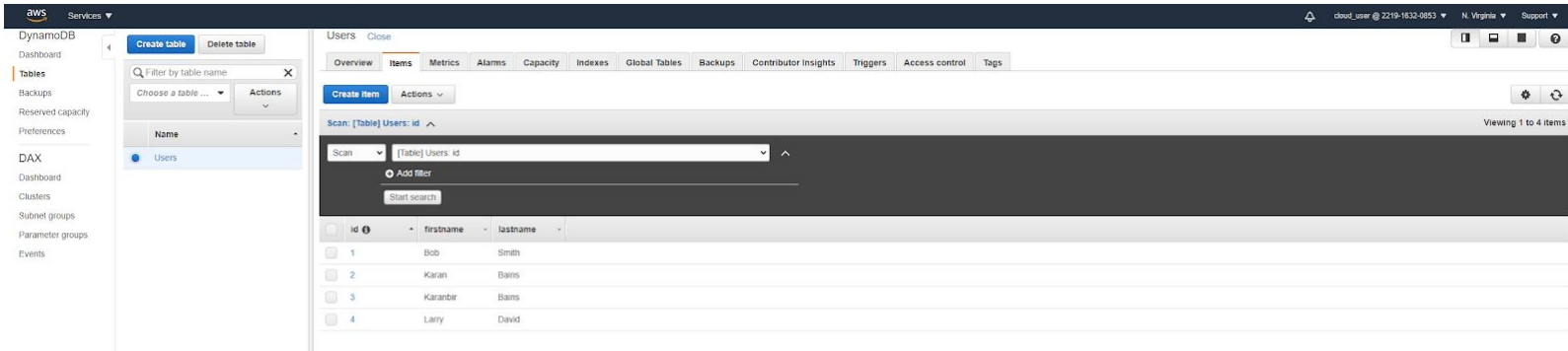
id	firstname	lastname
1	Bob	Smith
2	Karan	Bains
3	Karanbir	Bains
4	Larry	David

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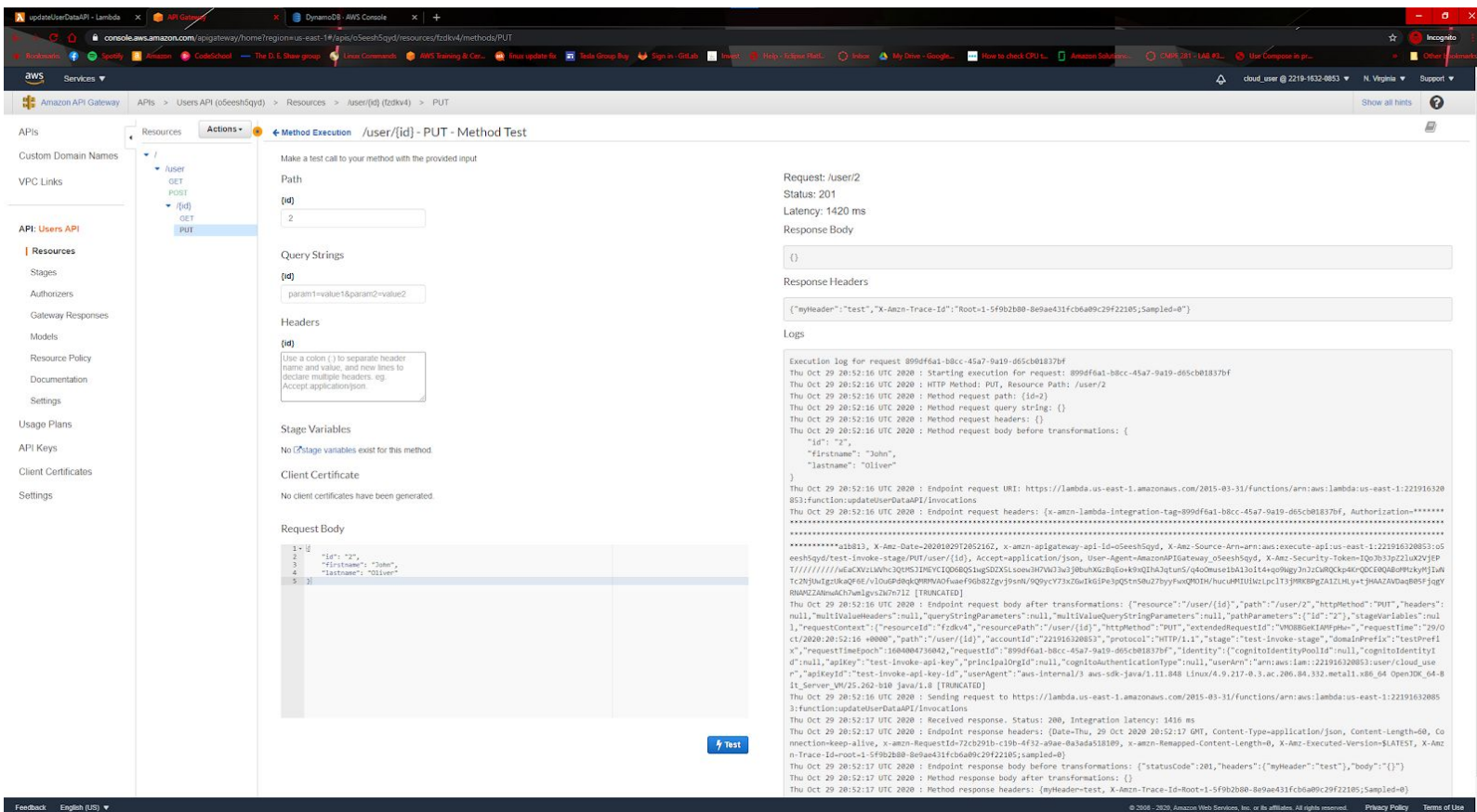
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Put: Update an Item

Before:



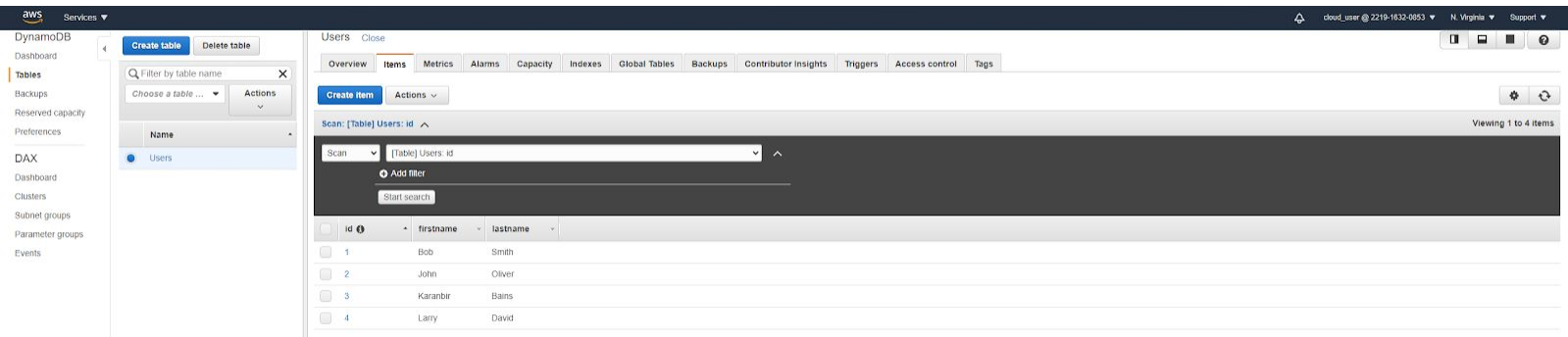
Lambda Test:



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After:

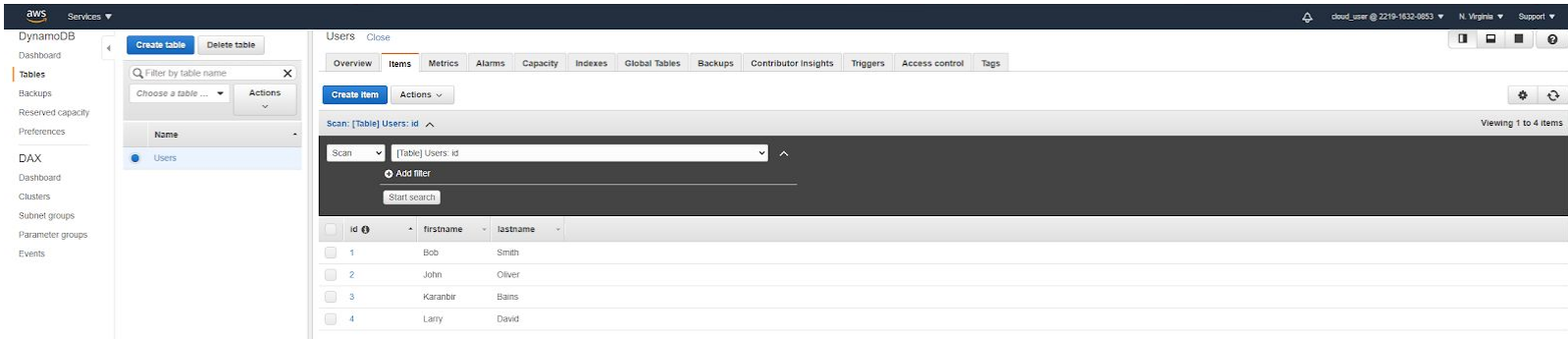


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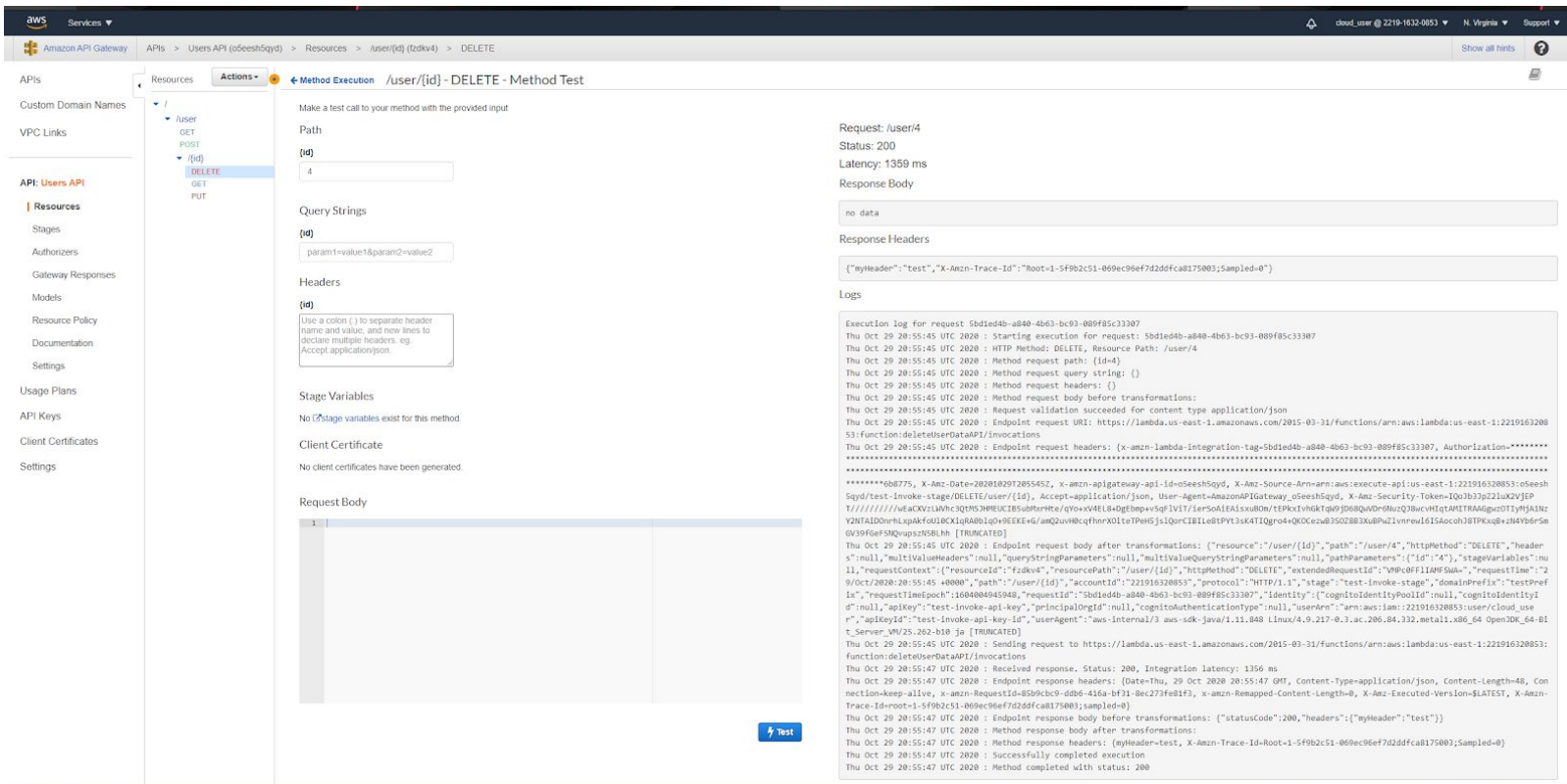
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Delete

Before:



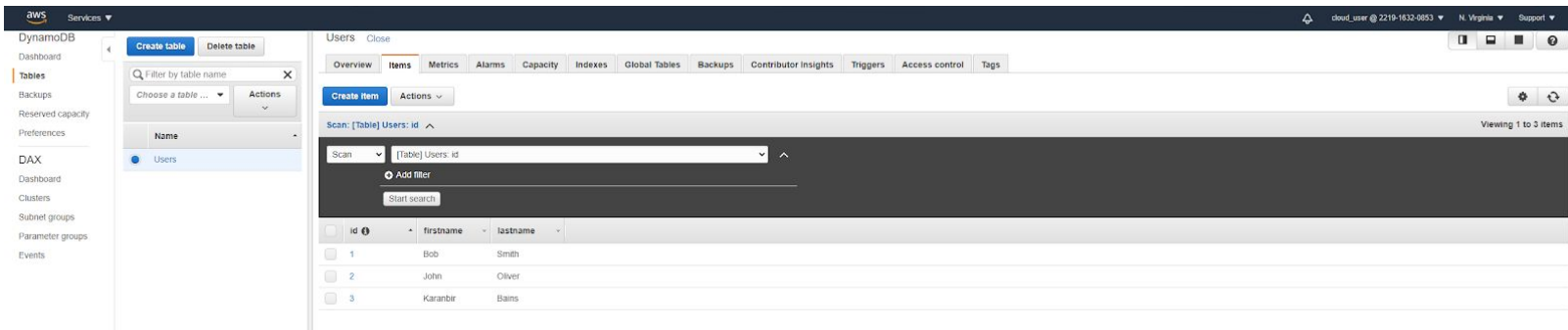
Lambda Test:



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After:



The screenshot displays the AWS DynamoDB console interface. On the left, the navigation pane shows the 'DynamoDB' section with options like 'Tables', 'Backups', and 'DAX'. The main area is titled 'Users' and shows the 'Items' tab. A table with 3 items is visible, with columns 'id', 'firstname', and 'lastname'. The items are: 1 (Bob Smith), 2 (John Oliver), and 3 (Karanbir Bains).

id	firstname	lastname
1	Bob	Smith
2	John	Oliver
3	Karanbir	Bains