

Assignment 12 – API Gateway

No late and **no email** submission. Even if you have done it, if there no submission, it is 0.

Forums – If you have trouble understanding the concept, do some research. Still, confused? write how much progress you have made so far then ask a question in the Forums section. **Plus 2** scores on the exam if you asked a good question or answered correctly.

Bonus

- Store the event payload in S3.

Hands-on lab

1. AWS Academy doesn't support API Gateway. Create your own AWS account. And setup the billing alarm for you. Create the lambda and dynamodb table. Copy and paste the code in lambda from AWS academy account to your account.
2. Create a **"CourseAPI"** API on API Gateway in front of the **"CourseLambda"**
 - a. Search on the top bar and go to the **API Gateway** on AWS Console.
 - b. **REST API** (Not REST API private!!)-> click on the orange **Build** button.
 - c. On the popup, press **OK**.
 - d. In **Create new API**, select **New API** radio button.
 - e. In **Settings**, **API name** is **CourseAPI**. Hit **Create API**.

Amazon API Gateway APIs > Create Show all hints ?

APIs
Custom Domain Names
VPC Links

Choose the protocol
Select whether you would like to create a REST API or a WebSocket API.

☒ REST ☐ WebSocket

Create new API
In Amazon API Gateway, a REST API refers to a collection of resources and methods that can be invoked through HTTPS endpoints.

☒ New API ☐ Clone from existing API ☐ Import from Swagger or Open API 3 ☐ Example API

Settings
Choose a friendly name and description for your API.

API name* CourseAPI
Description
Endpoint Type Regional ⓘ

* Required Create API

- f. Click on **Actions** dropdown and hit **Create Resource**.
- g. Resource Name is **course**. check **Enable API Gateway CORS**. Hit **Create Resource**.

APIs > CourseAPI (2xd1gtaou8) > Resources > / (4fb5giwi1k) > Create

Show all hints ?

Resources Actions ▾ **New Child Resource**

Use this page to create a new child resource for your resource.

Configure as [proxy resource](#) ☐ ⓘ

Resource Name*

Resource Path*

You can add path parameters using brackets. For example, the resource path {username} represents a path parameter called 'username'. Configuring /(proxy+) as a proxy resource catches all requests to its sub-resources. For example, it works for a GET request to /foo. To handle requests to /, add a new ANY method on the / resource.

Enable API Gateway CORS ☒ ⓘ

* Required

Cancel **Create Resource**

- h. Click on **Actions** dropdown and hit **Create Method**. Select **POST** in the small dropdown under the resource. Click on the small OK icon.

▾ /

▾ /course

OPTIONS

POST ▾ ✓ ✕

OPTIONS

Mock Endpoint

Authorization None

API Key Not required

- i. Check **Use Lambda Proxy integration**
- j. Type the lambda name **CourseLambda** as Lambda Function. Click **Save**.
- k. There will be a popup. Read that and hit **OK**.

Resources Actions ▾ **/course - POST - Setup**

Choose the integration point for your new method.

Integration type ☒ Lambda Function ⓘ

☐ HTTP ⓘ

☐ Mock ⓘ

☐ AWS Service ⓘ

☐ VPC Link ⓘ

Use Lambda Proxy integration ☒ ⓘ

Lambda Region

Lambda Function ⓘ

Use Default Timeout ☒ ⓘ

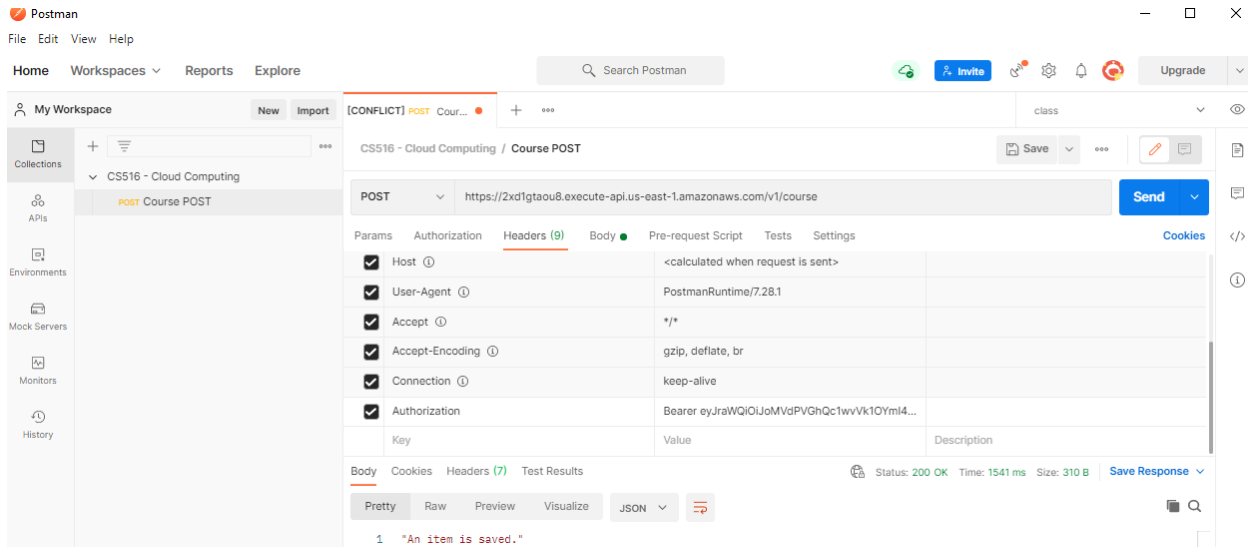
Save

- l. Click on the **Actions** dropdown and hit **Deploy API**
- m. On the popup, Deployment stage is **[New Stage]**. Stage name is v1. Hit **Deploy**.
2. Test your API with Postman.

- Click on **Stages** in left sidebar. Click on **v1**. Grab the **Invoke URL**.
- Create a new **POST** request in postman. Provide the URL. Append the **course** resource. It will look like this: <https://2xd1gtaou8.execute-api.us-east-1.amazonaws.com/v1/course>
- The body is below. Feel free to change the value. Body tab -> Select Raw -> Select JSON in the dropdown

```
{
  "courseCode": "CS100",
  "courseName": "My Course",
  "teacherName": "My Teacher",
  "monthYear": "Apr, 2021",
  "students": [
    "Student 1",
    "Student 2"
  ]
}
```

- You should see the success response below.



- Update your lambda to store the body we passed instead of hard-coded values.
 - Go to Lambda -> Configuration -> Permission. In **Resource-based policy**, You will see a new statement. Explain what that is.
 - Go to Lambda -> Monitor -> View logs in CloudWatch. Click on the orange **Search log group** button. Select **30m** in the top right corner. That will show the latest logs.
 - We are logging the entire **event** object coming. Like this `.log("Request received: " + JSON.stringify(event));`. It shows you what was sent from API Gateway to the Lambda.

