**Homework 3**

**AWS Lambda function with API gateway integration**

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**Course:** SDEV 400\_6380

**Professor:** Errol Waithe

## (80 points) Using your AWS Educate classroom environment, create a REST API with a Lambda backend service that provides the results of the last 5 games in a specific sport for a specific team entered by the user.

## I created an API connection sports\_data-API which connects to my Lambda function sports\_data. The API consists of a GET method which takes in keyword arguments and passes them to the function. (see screenshots below)

## Graphical user interface, application Description automatically generated

Figure . Showing Amazon API Gateway screen and the GET method. Shah, Hiren ©

Graphical user interface, text, application

Description automatically generated

Figure . Showing a snippet of code from Lambda function sports\_data() provided in zip file called ‘lambda\_fx’. Shah, Hiren ©

## (20 points) Describe the API including detailed descriptions and screen captures of your API Resources and Stage. Discuss how and show results of your testing the Lambda function and resulting API that uses the Lambda function backend. Include your API Endpoint URL to be run by the professor in your documentation.

Graphical user interface, text, application, email

Description automatically generated

Figure . Showing integration type Lambda Function. Shah, Hiren ©

Graphical user interface, text, application

Description automatically generated

Figure . Showing the stage test-stage

Professor, please use the following API endpoint that can be found at the URL:

<https://guf24ul8oj.execute-api.us-east-1.amazonaws.com/test-stage/>

To test the API, you can insert the team abbreviation and sport by adding it to the end of the URL. ?team=chi&sport=nba

The above added string will search for the team in the JSON NFL file which in this situation look for chicago bulls.

**Test Case Tables**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Case** | **Input** | **Expected Output** | **Actual Output** | **Screenshot of figure #** | **Pass/**  **Fail** |
| 1 | ?team=was&sport=nfl | Showing the last 5 games and who won and the scores as the resulted output of the program. | {"statusCode": 200, "message": "The team WAS for the sport NFL. RESULTS: In the last 5 games, Washington Football Team (WAS) beat Philadelphia Eagles (PHI) with 27 to 17 on 09/13/2020, Washington Football Team (WAS) lost to Arizona Cardinals (CRD) with 15 to 30 on 09/20/2020, Washington Football Team (WAS) lost to Cleveland Browns (CLE) with 20 to 34 on 09/27/2020, Washington Football Team (WAS) lost to Baltimore Ravens (RAV) with 17 to 31 on 10/04/2020, and Washington Football Team (WAS) lost to Los Angeles Rams (RAM) with 10 to 30 on 10/11/2020"} | 5 | Pass |
| 2 | ?team=lal&sport=nba | Showing the last 5 games for LAL for the sport NBA and the resulted win/losses and boxscores. | {"statusCode": 200, "message": "The team LAL for the sport NBA. RESULTS: In the last 5 games, LA Lakers (LAL) lost to LA Clippers (LAC) with 109 to 116 on 12/22/2020, LA Lakers (LAL) beat Dallas (DAL) with 138 to 115 on 12/25/2020, LA Lakers (LAL) beat Minnesota (MIN) with 127 to 91 on 12/27/2020, LA Lakers (LAL) lost to Portland (POR) with 107 to 115 on 12/28/2020, and LA Lakers (LAL) beat San Antonio (SAS) with 121 to 107 on 12/30/2020"} | 6 | Pass |
| 3 | ?team=&sport=xxds | A message that display missing a team name | {"message": "Missing required request parameters: [team]"} | 7 | Pass |
| 4 | ?sport= | A message stating that it is missing a team name and a sport name parameter. | {"message": "Missing required request parameters: [team, sport]"} | 8 | Pass |
| 5 | ?team=was&sport=nhl | A message that displays that the team wasn’t found and suggest other abbreviated names. | {"statusCode": 200, "message": "The team WAS for the sport NHL. RESULTS: Team WAS not found. Try one of the following teams: {'BUF', 'NYR', 'EDM', 'NSH', 'NYI', 'ANA', 'FLA', 'BOS', 'CGY', 'TBL', 'VAN', 'ARI', 'DAL', 'STL', 'PHI', 'WSH', 'PIT', 'MTL', 'COL', 'CAR', 'LAK', 'SJS', 'CBJ', 'TOR', 'WPG', 'CHI', 'NJD', 'VEG', 'OTT', 'DET', 'MIN'}"} | 9 | Pass |

Application

Description automatically generated

Figure . Showing the output for test case 1. Shah, Hiren ©.

Text

Description automatically generated with medium confidence

Figure . Showing the output for test case 2. Shah, Hiren ©.

Graphical user interface, text, application, email

Description automatically generated

Figure . Showing the output for test case 3. Shah, Hiren ©.

Graphical user interface, text, application, email

Description automatically generated

Figure . Showing output of test case 4. Shah, Hiren ©.

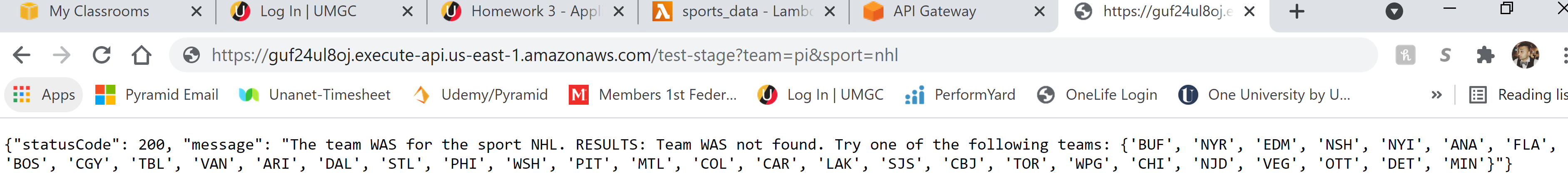


Figure . Showing output of test case 5. Shah, Hiren ©.

**References**

*AWS Documentation Lambda*. (2021). [Python code provided by UMGC that integrates lambda and API Gateway]. <https://docs.aws.amazon.com/lambda/latest/dg/lambda-python.html>