# Crud Operation with Dynamo DB

Create a table **CUSTOMER\_PROFILE\_MGMT**

Graphical user interface, text, application

Description automatically generated

# Create Lambda Functions

## 2.1 [getAllCustomersStatusDB](https://us-west-1.console.aws.amazon.com/lambda/home?region=us-west-1#/functions/getAllCustomersStatusDB)

## [getStatusByCustomerIdDB](https://us-west-1.console.aws.amazon.com/lambda/home?region=us-west-1#/functions/getStatusByCustomerIdDB)

## [createCustomerStatusDB](https://us-west-1.console.aws.amazon.com/lambda/home?region=us-west-1#/functions/createCustomerStatusDB)

## [deleteCustomerStatusDB](https://us-west-1.console.aws.amazon.com/lambda/home?region=us-west-1#/functions/deleteCustomerStatusDB)

## [UpdateCustomerStatusDB](https://us-west-1.console.aws.amazon.com/lambda/home?region=us-west-1#/functions/deleteCustomerStatusDB)

## Create IAM role for Lamnda functions to Access Dynamo DB

For each of the above Lambda Function roles, Attach the Policy “[AmazonDynamoDBFullAccess](https://us-east-1.console.aws.amazon.com/iam/home" \l "/policies/arn:aws:iam::aws:policy/AmazonDynamoDBFullAccess" \t "_blank)”

# Create Step Functions

Create step function of type “Express” of the name “DynamoDBCrudDemoExpress”

|  |
| --- |
| {  "Comment": "A description of my state machine",  "StartAt": "Choice",  "States": {  "Choice": {  "Type": "Choice",  "Choices": [  {  "Variable": "$.action",  "StringMatches": "Put",  "Next": "AddCustomer"  },  {  "Variable": "$.action",  "StringMatches": "Delete",  "Next": "DeleteCustomer"  },  {  "Variable": "$.action",  "StringMatches": "Update",  "Next": "UpdateCustomer"  },  {  "Variable": "$.action",  "StringMatches": "GetByCustId",  "Next": "GetByCustId"  }  ],  "Default": "GetAllCustId"  },  "AddCustomer": {  "Type": "Task",  "Resource": "arn:aws:states:::lambda:invoke",  "OutputPath": "$.Payload",  "Parameters": {  "Payload.$": "$",  "FunctionName": "arn:aws:lambda:us-west-1:644032760753:function:createCustomerStatusDB:$LATEST"  },  "Retry": [  {  "ErrorEquals": [  "Lambda.ServiceException",  "Lambda.AWSLambdaException",  "Lambda.SdkClientException"  ],  "IntervalSeconds": 2,  "MaxAttempts": 2,  "BackoffRate": 2  }  ],  "End": true  },  "GetByCustId": {  "Type": "Task",  "Resource": "arn:aws:states:::lambda:invoke",  "OutputPath": "$.Payload",  "Parameters": {  "Payload.$": "$",  "FunctionName": "arn:aws:lambda:us-west-1:644032760753:function:getStatusByCustomerIdDB:$LATEST"  },  "Retry": [  {  "ErrorEquals": [  "Lambda.ServiceException",  "Lambda.AWSLambdaException",  "Lambda.SdkClientException"  ],  "IntervalSeconds": 2,  "MaxAttempts": 2,  "BackoffRate": 2  }  ],  "End": true  },  "GetAllCustId": {  "Type": "Task",  "Resource": "arn:aws:states:::lambda:invoke",  "OutputPath": "$.Payload",  "Parameters": {  "Payload.$": "$",  "FunctionName": "arn:aws:lambda:us-west-1:644032760753:function:getAllCustomersStatusDB:$LATEST"  },  "Retry": [  {  "ErrorEquals": [  "Lambda.ServiceException",  "Lambda.AWSLambdaException",  "Lambda.SdkClientException"  ],  "IntervalSeconds": 2,  "MaxAttempts": 2,  "BackoffRate": 2  }  ],  "End": true  },  "DeleteCustomer": {  "Type": "Task",  "Resource": "arn:aws:states:::lambda:invoke",  "OutputPath": "$.Payload",  "Parameters": {  "Payload.$": "$",  "FunctionName": "arn:aws:lambda:us-west-1:644032760753:function:deleteCustomerStatusDB:$LATEST"  },  "Retry": [  {  "ErrorEquals": [  "Lambda.ServiceException",  "Lambda.AWSLambdaException",  "Lambda.SdkClientException"  ],  "IntervalSeconds": 2,  "MaxAttempts": 2,  "BackoffRate": 2  }  ],  "End": true  },  "UpdateCustomer": {  "Type": "Task",  "Resource": "arn:aws:states:::lambda:invoke",  "OutputPath": "$.Payload",  "Parameters": {  "Payload.$": "$",  "FunctionName": "arn:aws:lambda:us-west-1:644032760753:function:updateCustomerStatusDB:$LATEST"  },  "Retry": [  {  "ErrorEquals": [  "Lambda.ServiceException",  "Lambda.AWSLambdaException",  "Lambda.SdkClientException"  ],  "IntervalSeconds": 2,  "MaxAttempts": 2,  "BackoffRate": 2  }  ],  "End": true  }  }  } |

## 3.1 Screenshot

Graphical user interface, application

Description automatically generated

## 3.2 Create IAM Role for Step Function to access lambda

Graphical user interface, text, application, email

Description automatically generated

# Create API Gateway

Create **HTTP** protocol Gateway by the name “**DynamoDBCrudDemoHTTP\_API”**

A screenshot of a computer

Description automatically generated

## 4.1 Routes:

Graphical user interface, application, Word

Description automatically generated

## 4.2 Integrations:

Graphical user interface, application

Description automatically generated

Invocation role

arn:aws:iam::644032760753:role/APIGatewayToStepFunctions

# Testing

## 5.1 Create Customer

Graphical user interface, text, application, email

Description automatically generated

{

"input" : "{  \"action\": \"Put\",  \"customer\_id\": \"URN123\",  \"customer\_name\": \"URN\",  \"customer\_status\": \"Inactive\"}"

}

## 5.2 Update Customer

Graphical user interface, text, application, email

Description automatically generated

{

"input" : "{\"action\": \"Update\", \"customer\_id\": \"URN123\", \"customer\_name\": \"URN\", \"customer\_status\": \"Active\"}"

}

## 5.3 Delete Customer

Graphical user interface, text, application, email

Description automatically generated

{

   "input": "{ \"action\": \"Delete\",\"customer\_id\": \"John12345\" }"

}

## 5.4 Get by CustId

Graphical user interface, text, application, email

Description automatically generated

{

   "input": "{ \"action\": \"GetByCustId\",\"customer\_id\": \"John12345\" }"

}

## 5.5 Get All CustIds

Graphical user interface, text, application, email

Description automatically generated

{

   "input": "{\"action\": \"GetAllCustId\"}"

}