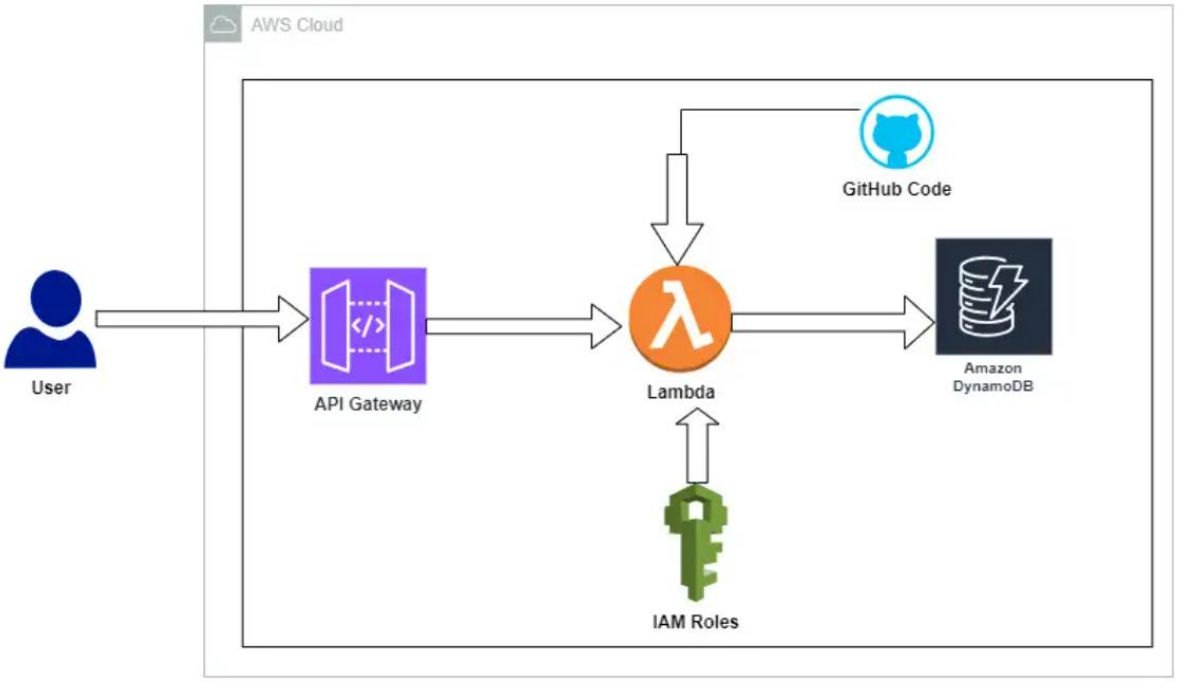
AWS Server-less Application



AIM

Deploying and Delivering a web application by using IAM, AWS Lambda, API Gateway and DynamoDB.

In this Project the API Gateway act as a front end, Dynamo DB act as a backend, AWS Lambda act as a web server and IAM roles is used to create AWS Lambda function.

Procedure

- Sign in to the AWS Console Management.
- Navigate to IAM. Create a role

Select Trusted entity :- **AWS Service**
Select Use Case :- **Lambda**
Select 2 Permission Policies :-

AWSLambdaBasicExecutionRole
AmazonDynamoDBFullAccess

- Click on NEXT and give a ROLE name without any spaces (ex :- **admin-lambda-role**) then click on create role.
- Step 1 :- Navigate to Lambda service to create a Lambda function. Click on create function.

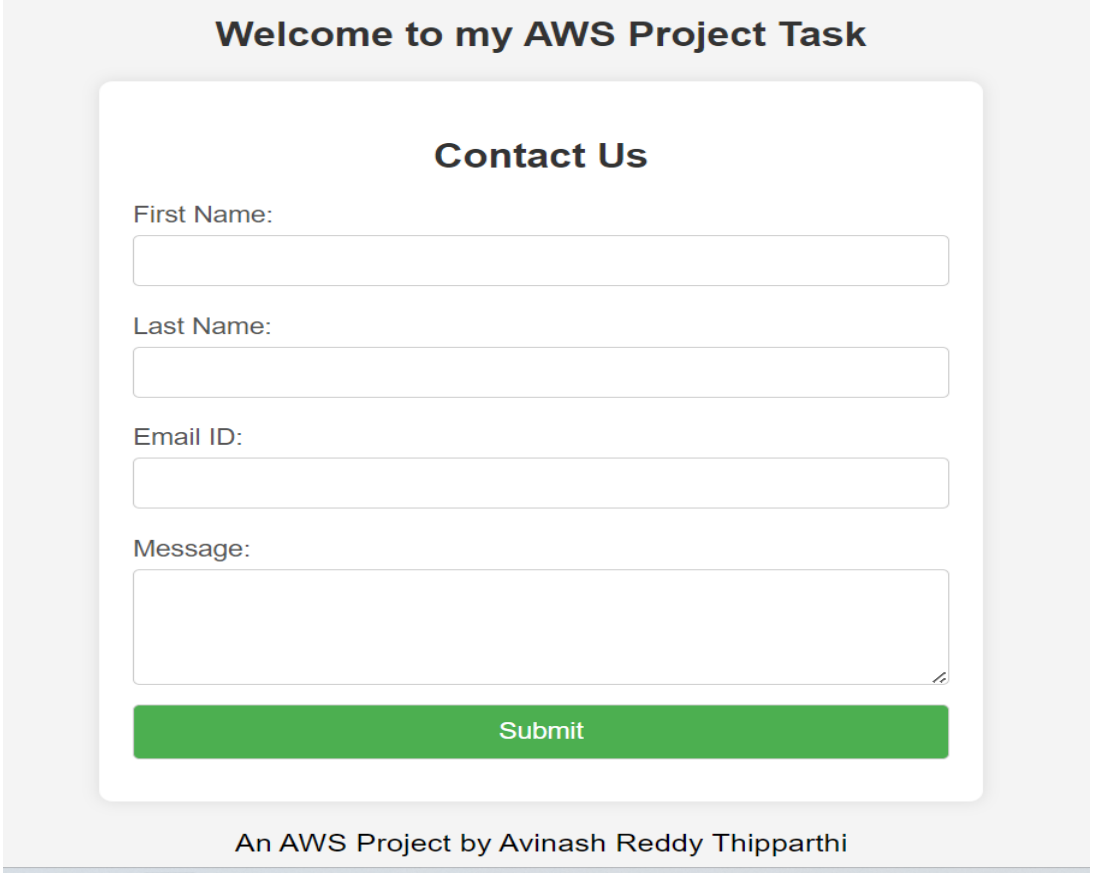
Select **Author from Scratch**
Function name :- Lambda-demo-1
Run time :- Python 3.8

- Click on **change default execution role** and select **use an existing role** then, it will displays our existing role which we created in earlier in IAM. Then click on create function.
- Step 2 :- We have to upload our code to Lambda function from API in zip format, for that enlarge the option **Upload from** and select .zip file (if we don't have zip file then we have to zip it before uploading) and next click on upload and save it. Here I got this code from some social media so that I forked it. Here is my GitHub repository link

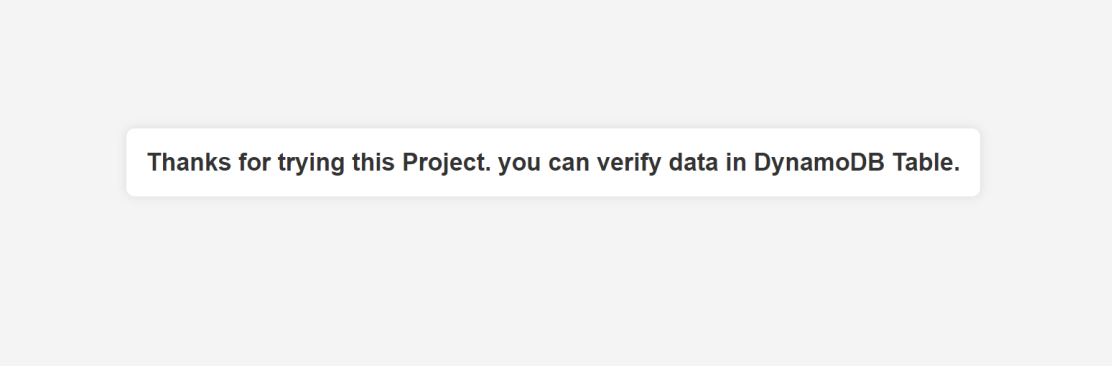
https://github.com/Mamatha7316/AWS-Lambda-2

- Step 3 :- Navigate to DynamoDB and click on Create table. Give a table name without any spaces (Note: make sure that table name should exactly match with name of the DB which is mentioned in Code) and enter partition key (ex :- email i.e. string) and Table settings should be **Default Settings,** then click on create table.
- Step 4 :- Now we have to configure API Gateway. Navigate to API Gateway service. Click on create API. Choose **Rest API** and click on build.
- Give respective details like API name, API Endpoint – **Regional** and click on create API.

- Step 5 :- After creating API now click on **create methods** (For our application we need GET and POST methods)
- Step 6 :- Give Method Type as GET and Integration Type as Lambda Function and Enable Lambda proxy integration (when we enable this it will show our API ARN, select that).
- Step 7 :- click on root symbol **(i.e. /)** and Follow the step 6 for creating a POST method.
- Step 8 :- Now click on Deploy API.
- Select State as new stage and give stage name as “dev” (This is a default name which we have to give). Then click on Deploy.
- Step 9 :- Now scroll down then we will get a **Invoke URL**, copy and paste it in browser. Then we get a application like this.



- Give the details and click on Submit. Then you’ll get a Thank you message like this



- Then go to DynamoDB and refresh the table. Then You observe whatever we have filled there, the first name, the last name, the message we can see here that all information is storing here in backend Dynamo DB. In same way we can fill multiple times but don’t give the same information every time.