Task 2: Random Number Generator

Aim :- Create a serverless function using AWS Lambda, which allows you to run code without provisioning or managing servers. Develop a simple function (e.g., a function that generates random numbers) and trigger it through API Gateway. This project introduces you to serverless computing and event-driven architectures.

Step 1: Create the Lambda Function

1)Log in to your AWS Console: Log in to your AWS account console.

2)Open Lambda: Navigate to the Lambda service.

3}Create Function:

- Click the "Create function" button.
- Choose "Author from scratch".
- Fill in the function details:
- Function name: Enter a name for your Lambda function.
- Runtime: Choose the appropriate runtime, like "Python 3.8".
- Role: You can create a new role with basic Lambda permissions.
- Function Code:

Step 2 :-In the function code section, you can use the following Python code as an example to generate a random number:

```
import json
import random

def lambda_handler(event, context):
    random_number = random.randint(1, 100)
    response = {
        "statusCode": 200,
        "body": json.dumps({"random_number": random_number})
    }
    return response
Configure Triggers:
```

- Click "Add trigger".

- Choose "API Gateway" as the trigger type.
- Configure the API Gateway settings. You might need to create a new API or select an existing one.
- Deploy the Function:

- After setting up the trigger, click the "Deploy" button. This deploys the function and API Gateway configuration.

Step #: Set Up API Gateway

Create API:

- If you haven't created an API yet, navigate to the API Gateway service and create a new API.
- Create a Resource and Method:

- Create a resource (e.g., "/random-number") and a POST method under that resource.
- Choose integration type as "Lambda Function" and select the Lambda function you created earlier.
- Deploy the API:

- After configuring the method, you need to deploy the API to make it accessible. You can create a new stage (e.g., "prod") and deploy the API to that stage

Step 3: Test the Serverless Function

Access the Endpoint:

After deploying the API, you'll receive an endpoint URL. It will look something like: https://your-api-id.execute-api.your-region.amazonaws.com/prod/random-number. Invoke the Function:

You can use tools like curl or Postman to send a POST request to the endpoint. Sending a POST request to the endpoint will trigger the Lambda function, and you should receive a response with a random number.
Congratulations! You've created a simple serverless function using AWS Lambda and triggered it through API Gateway. This demonstrates the basics of serverless computing and event-driven architectures. Remember to manage your resources and configurations properly, and you can further enhance this project by adding error handling, authentication, and more features to the API.