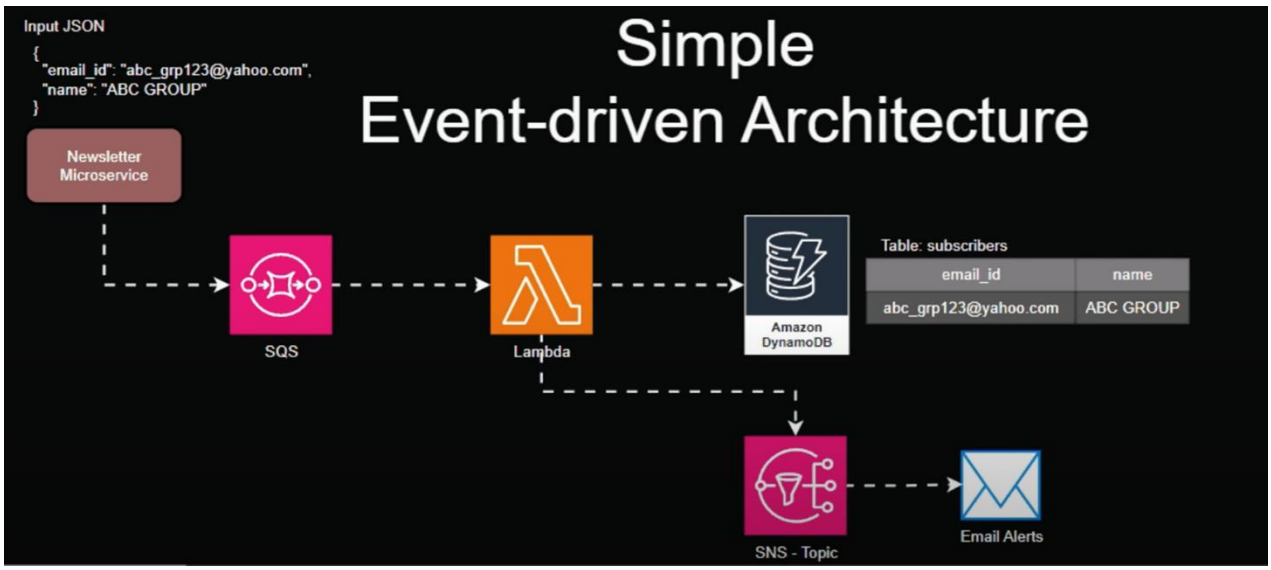
TITLE :SIMPLE EVENT-DRIVEN ARCHITECTURE



STEP 1:CREATE SQS

1.**Sign in to the AWS Management Console**:

- Open the AWS Management Console.
- Sign in with your AWS account credentials.

2.**Navigate to Amazon SQS**:

- In the search bar, type SQS and select Simple Queue Service from the results.

3. **Create a New Queue**:

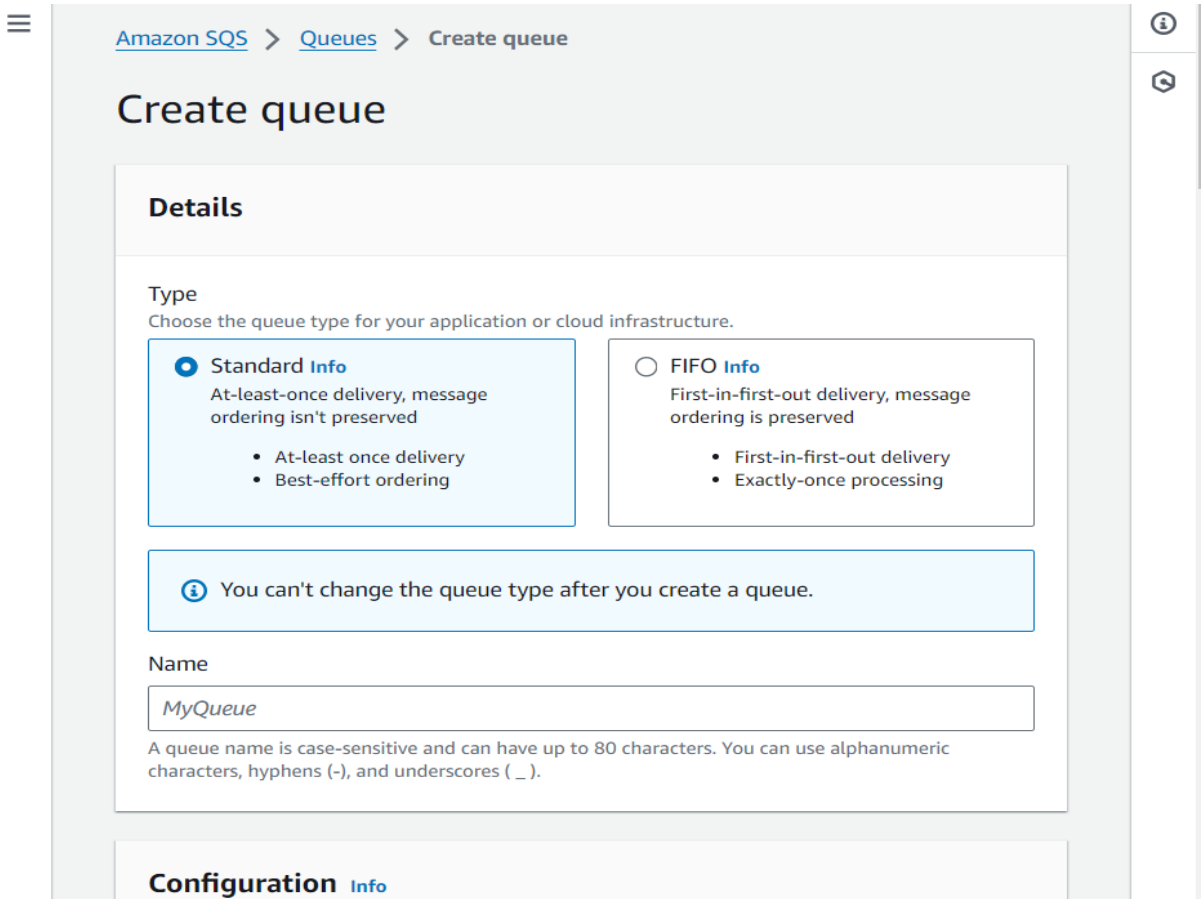
- Click on the Create queue button.

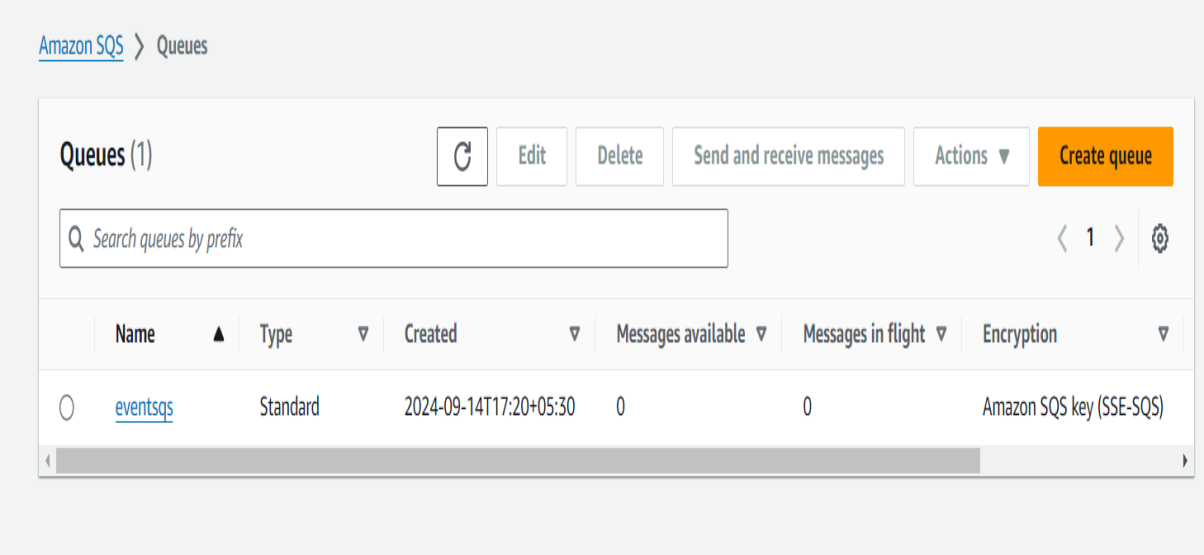
4.Configure Queue Settings:

- **Name**: Enter a name for your queue.
- **Queue Type**: Select the queue type (Standard or FIFO).
- **Standard**: Best-effort ordering, nearly unlimited number of transactions per second.

5.Create Queue:

- Click the Create queue button at the bottom of the page.


Amazon SQS > Queues > Create queue
Create queue
Details
Type
Choose the queue type for your application or cloud infrastructure.
Standard Info
At-least-once delivery, message ordering isn't preserved
At-least once delivery
Best-effort ordering
FIFO Info
First-in-first-out delivery, message ordering is preserved
First-in-first-out delivery
Exactly-once processing
You can't change the queue type after you create a queue.
Name
MyQueue
A queue name is case-sensitive and can have up to 80 characters. You can use alphanumeric characters, hyphens (-), and underscores (_).
Configuration Info


Amazon SQS > Queues
Queues (1)
Edit
Delete
Send and receive messages
Actions
Create queue
Search queues by prefix
1
Name
Type
Created
Messages available
Messages in flight
Encryption
eventsqs
Standard
2024-09-14T17:20+05:30
0
0
Amazon SQS key (SSE-SQS)

STEP 2:CREATE LAMBDA

1.**Sign in to the AWS Management Console**:

- Open the AWS Management Console.
- Sign in with your AWS account credentials.

2.**Navigate to AWS Lambda**:

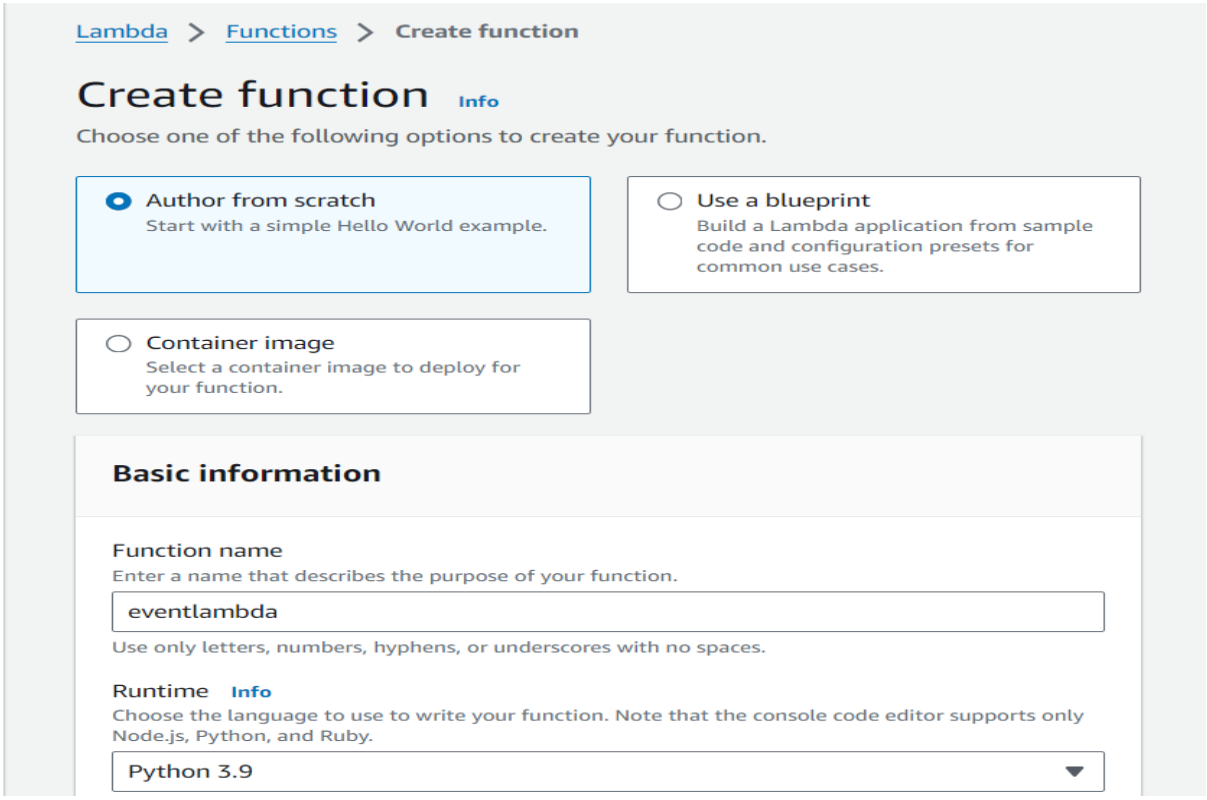
- In the search bar, type Lambda and select Lambda from the results.

3.**Create a New Function**:

- Click the Create function button.

4. **Configure the Function**:

- **Author from scratch**: Select this option to create a new Lambda function.
- **Function name**: Enter a name for your function.
- **Runtime**: Select the runtime for your code (e.g., Python, Node.js, Java, etc.).
- **Role**: Choose the execution role for your function.
- You can use an existing role or create a new role with basic Lambda permissions.

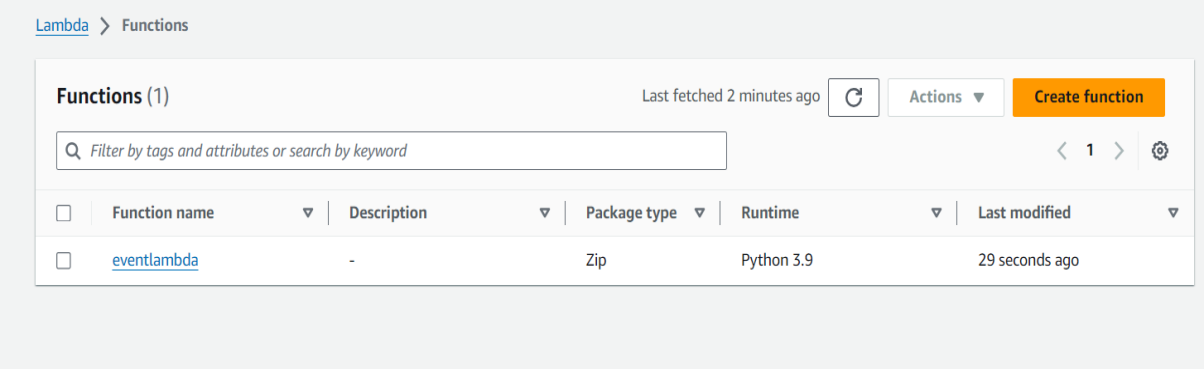


- **Create Function**:

  Click the Create function button at the bottom of the page.

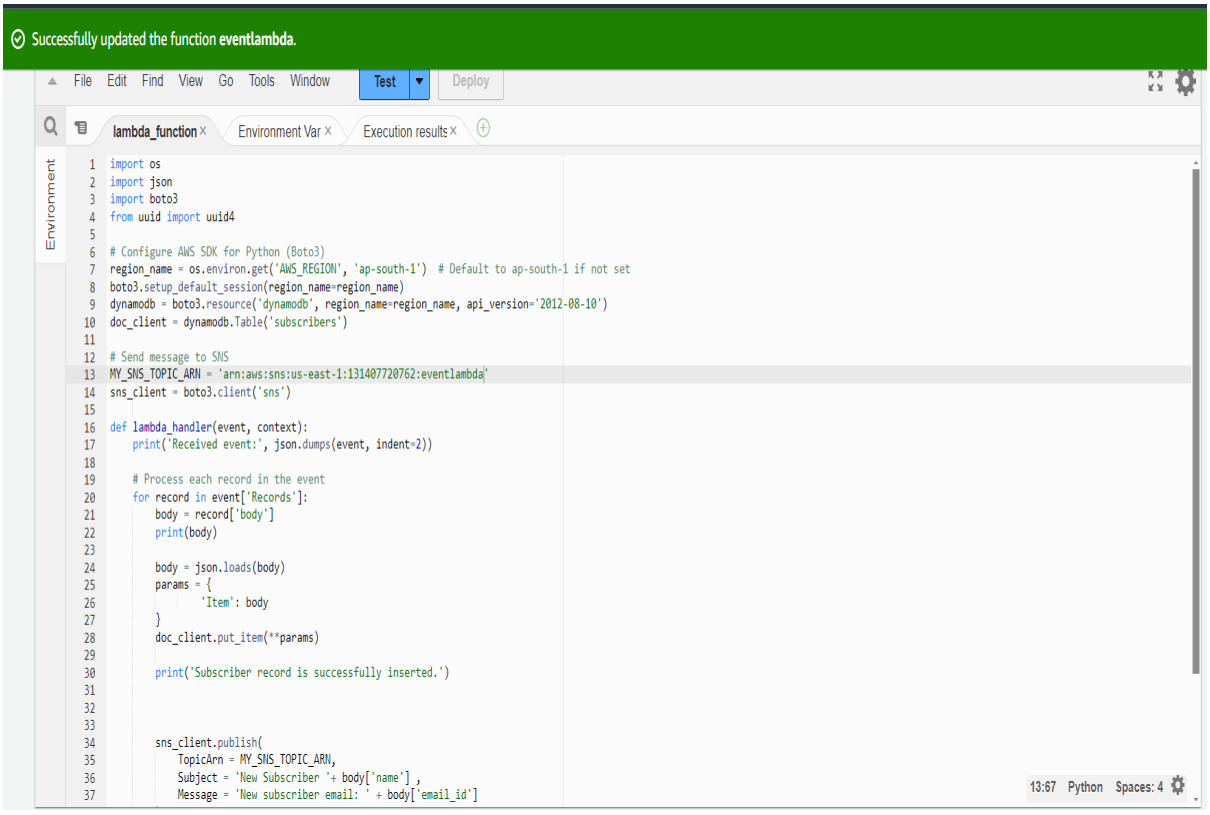
- **Your Lambda Function is Ready**:

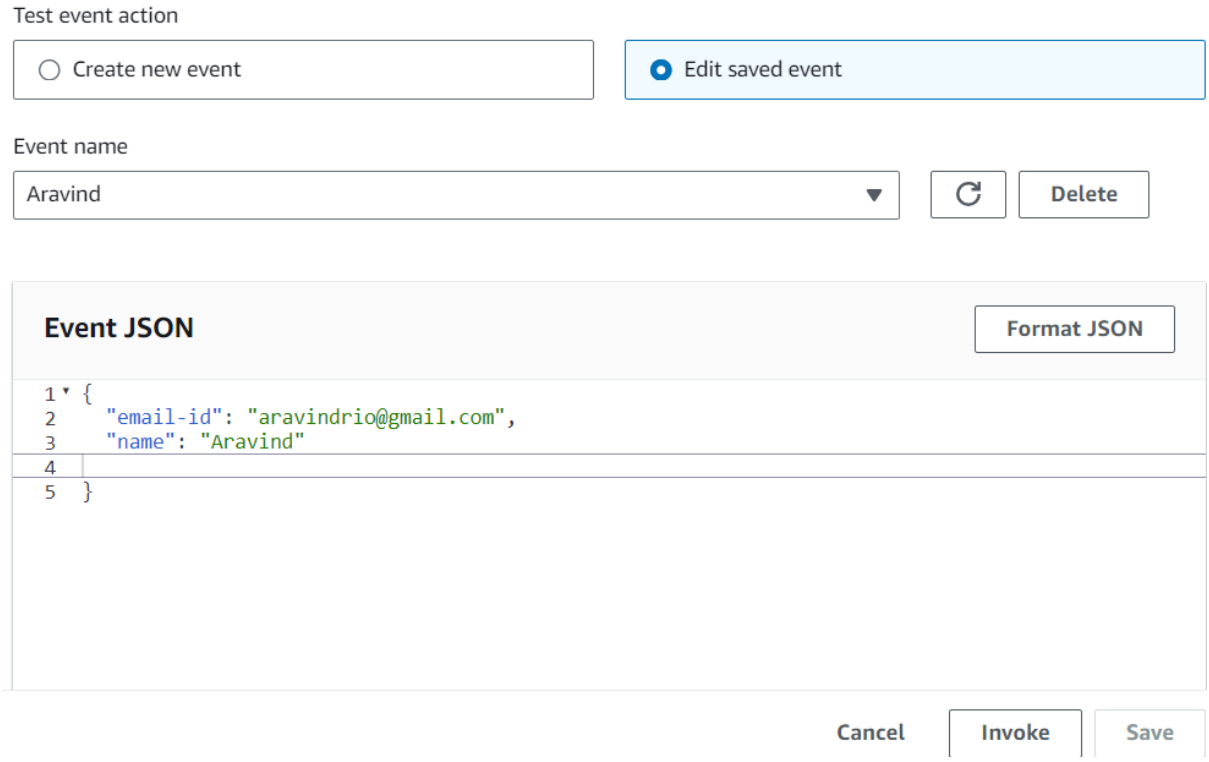
  You will be taken to the function's details page, where you can test, monitor, and manage your function.



Write Your Code:

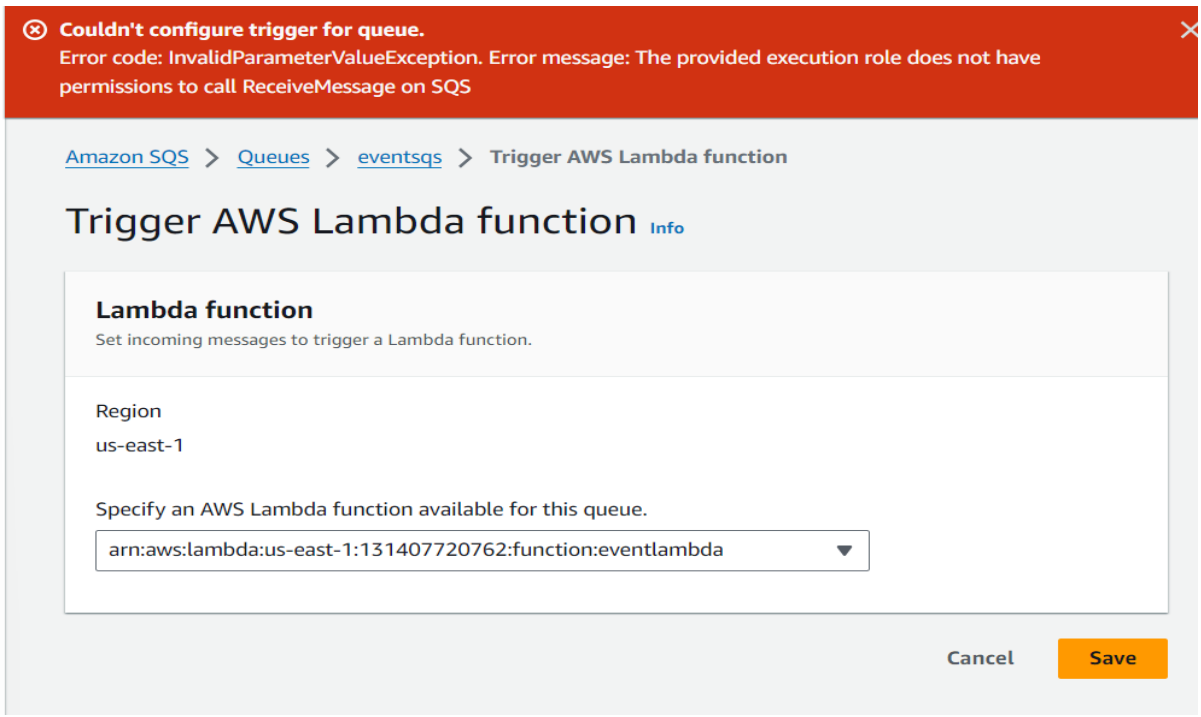
1. In the code editor, you can write or upload your code





STEP 3:

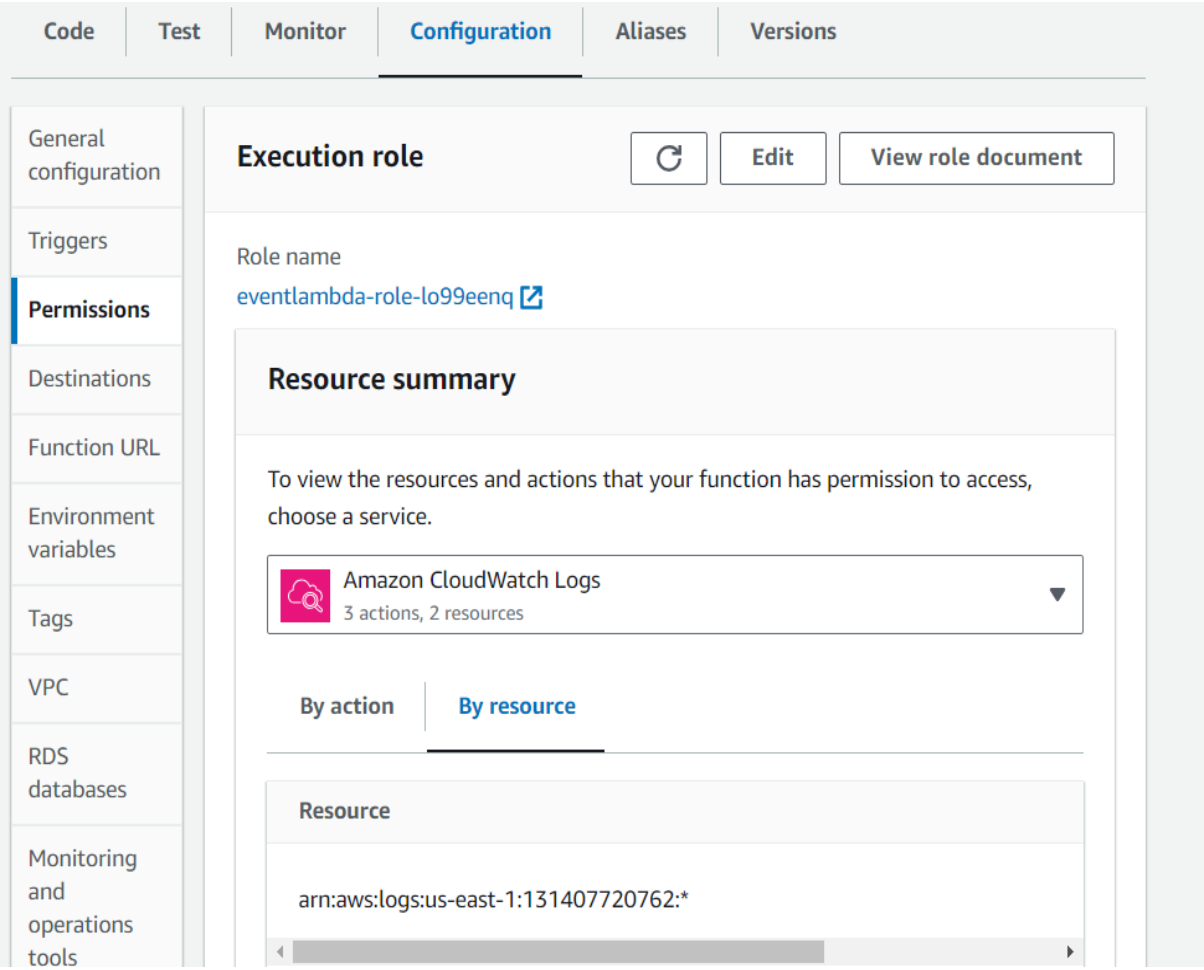
AWS Lambda to be triggered by an SQS (Simple Queue Service) message, but it's not working because the necessary policy isn't attached.



STEP 4: GOTO LAMBDA CONFIGURATION

Select the Lambda Execution Role:

- Find and select the role associated with your Lambda function.



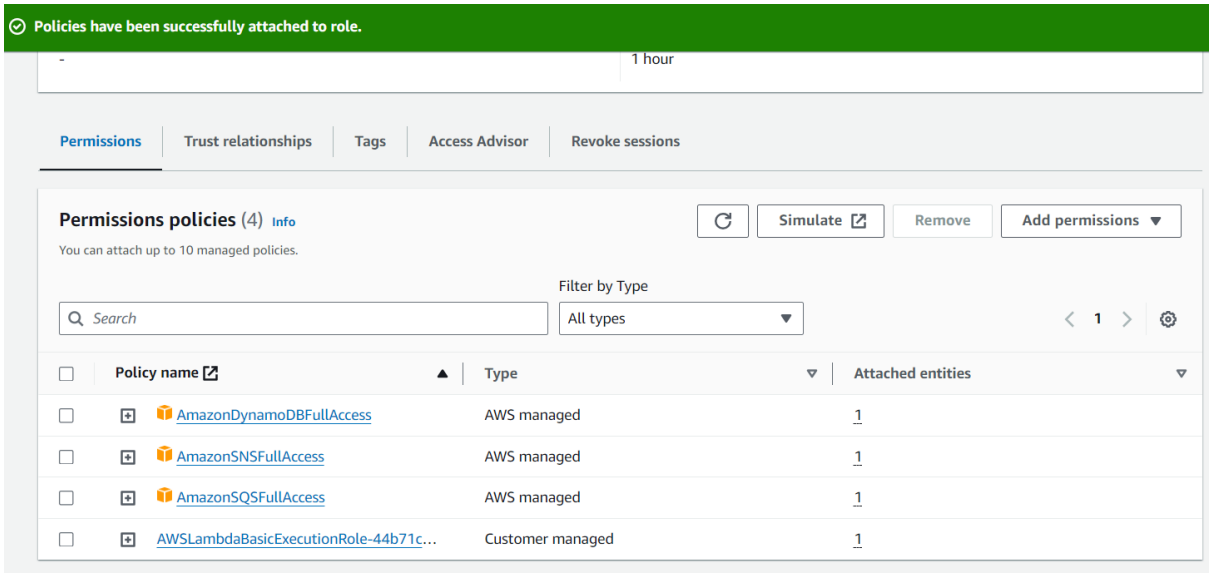
STEP 5: Attach the Policy:

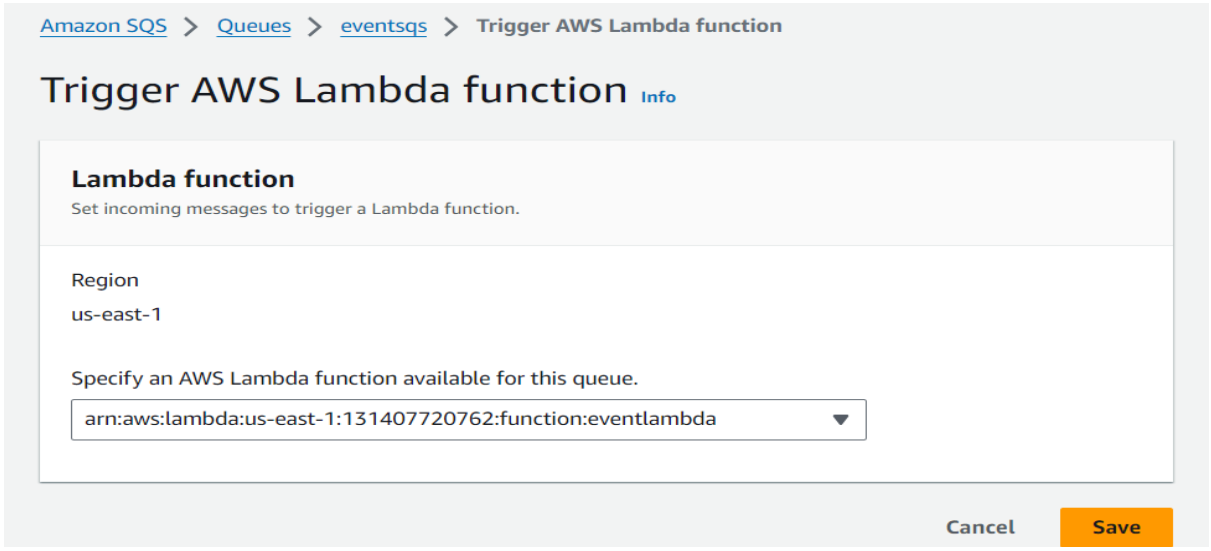
1.In the Permissions tab, click on Add permissions and then choose Attach policies.

2.After creating the policy, search for it in the "Attach policies" section.

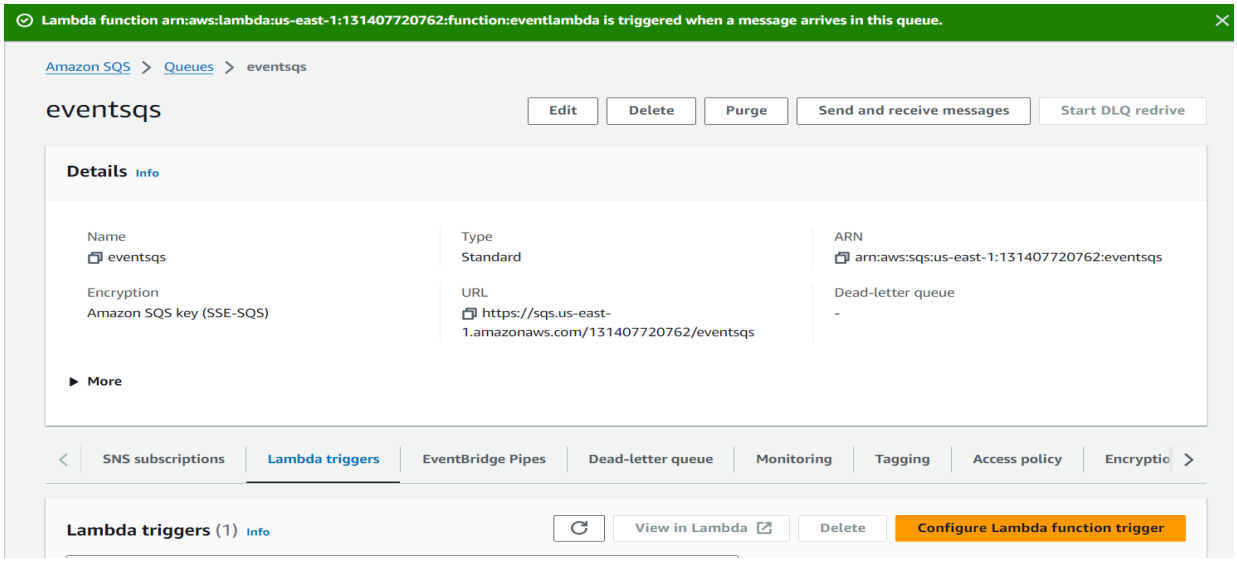
3.Select the policy and attach it to the role.

4.This will grant your Lambda function the necessary permissions to interact with SNS, SQS, and DynamoDB.





STEP 6:LAMBDA FUNCTION SUCCESSFULLY TRIGGERED IN THIS QUEUE



STEP 7: Create a Table:

1. Click on "Create table."

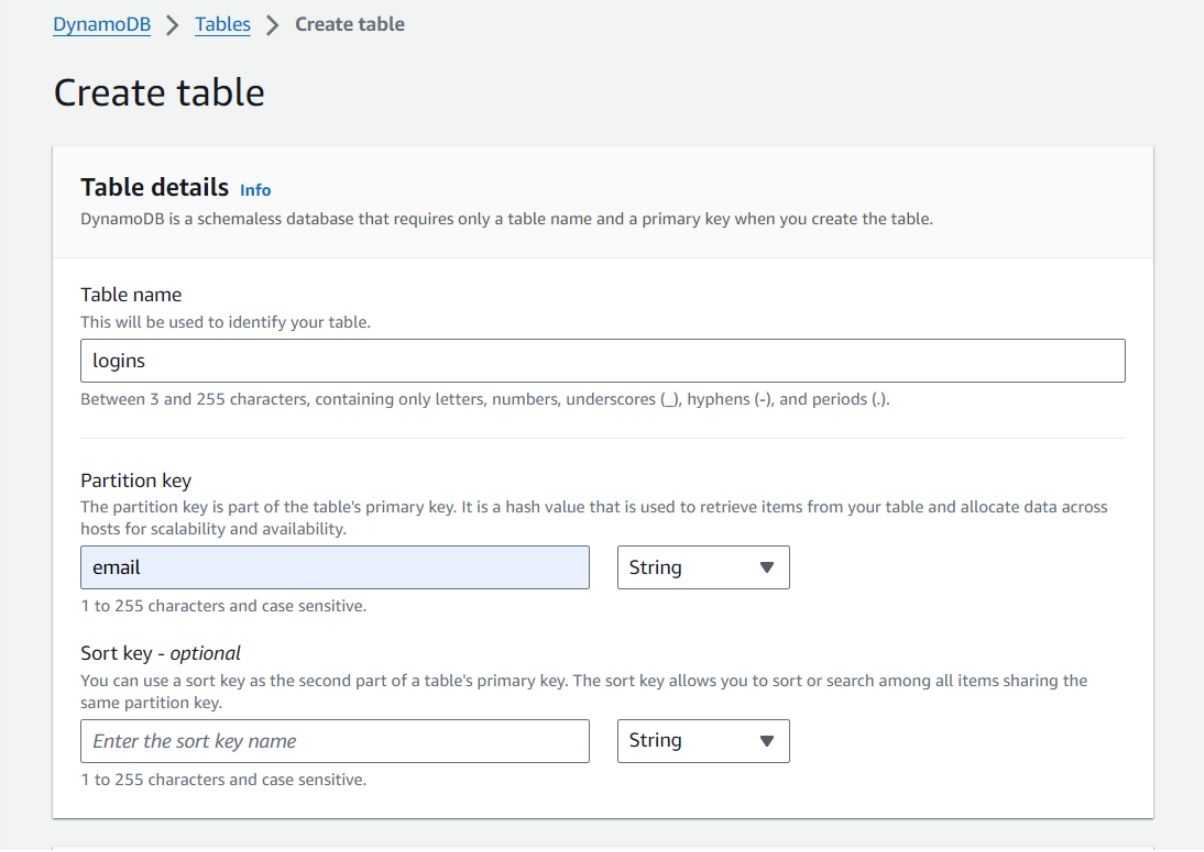
2.Enter the "Table name" and "Primary key" attributes.

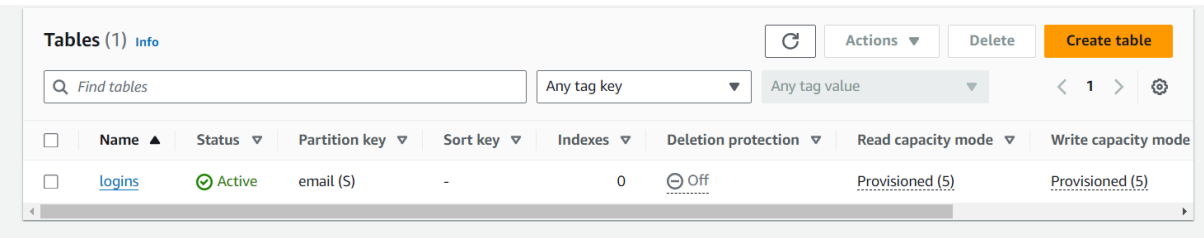
   - For example, let's create a table named ExampleTable with a primary key named Id of type String.

3.Configure additional settings if needed, such as read/write capacity mode, encryption, and secondary indexes.

4. **Review and Create**:

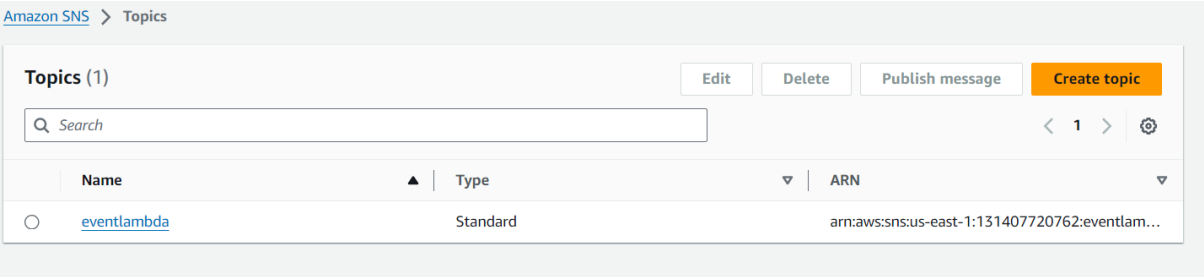
- Review the settings.
- Click on "Create table."





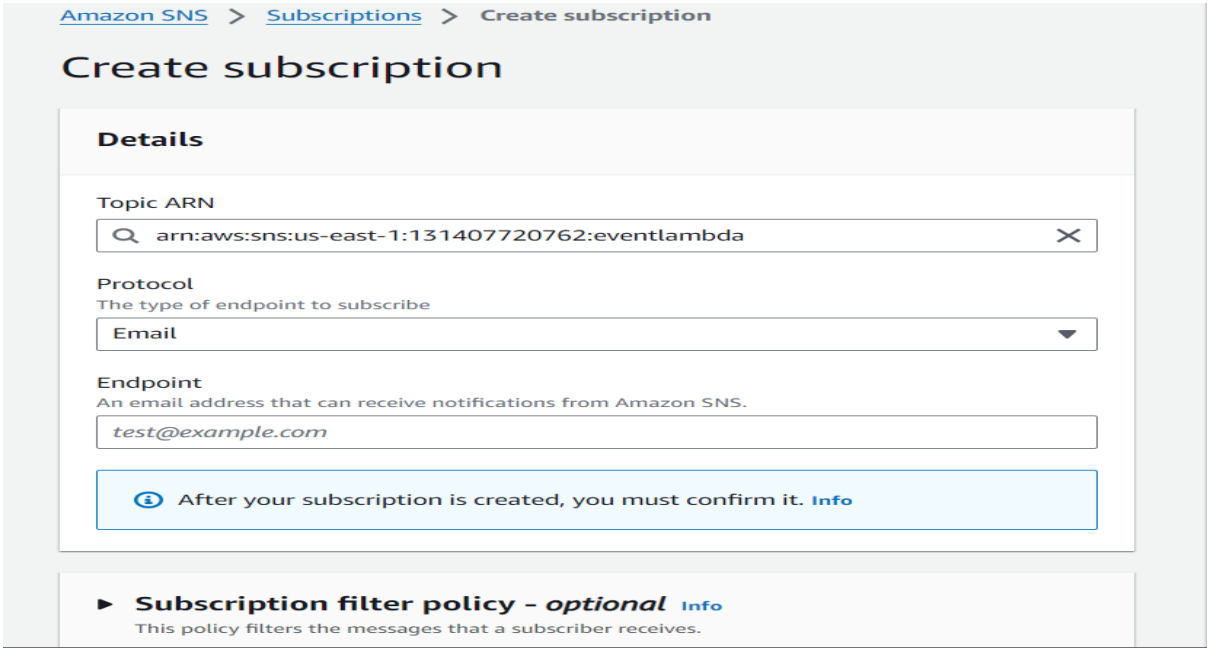
STEP 8: Create a Topic:

- In the left navigation pane, choose "Topics."
- Click on "Create topic."
- Select "Standard" for the topic type (or "FIFO" if you need first-in-first-out delivery).
- Enter a name for the topic,
- Click on "Create topic."



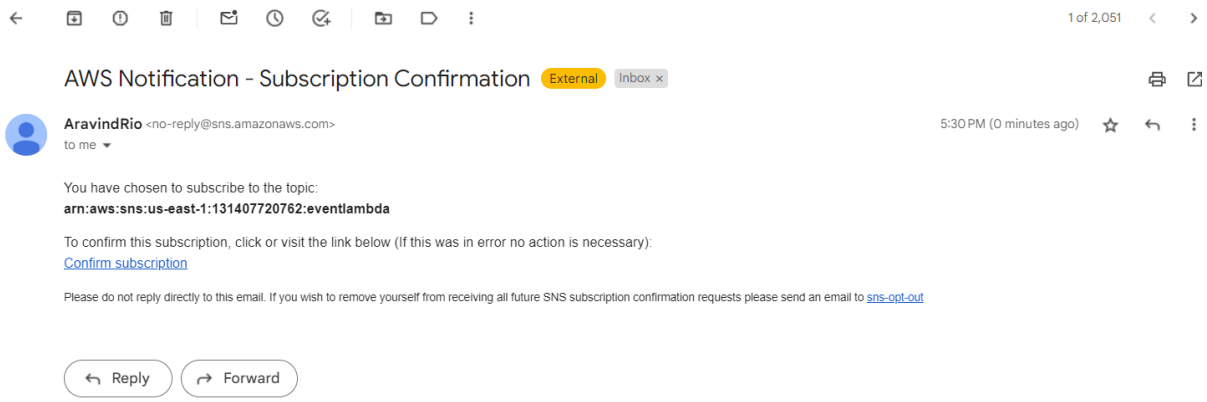
STEP 9: **Subscribe to the Topic**:

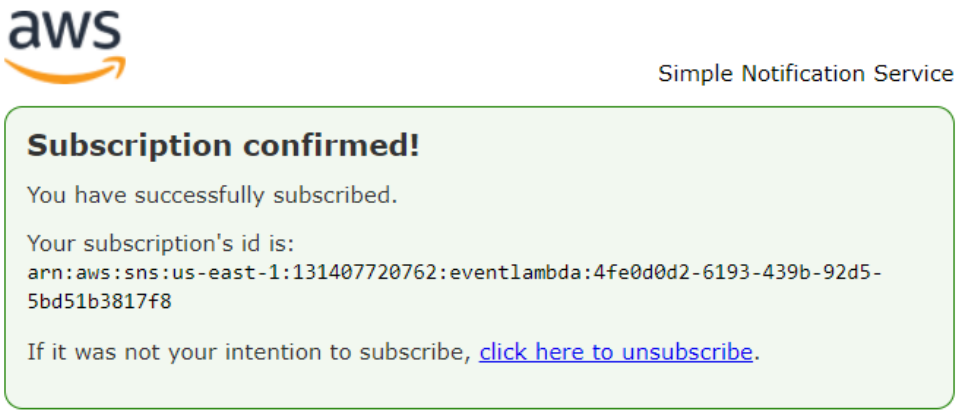
- After creating the topic, click on the topic ARN (Amazon Resource Name) to open the topic details.
- In the "Subscriptions" section, click on "Create subscription."
- Choose a protocol (e.g., Email, HTTP/S, Lambda, SQS).
- Enter the endpoint (e.g., email address if you chose the Email protocol).
- Click on "Create subscription."



STEP 10: **Confirm the Subscription** (if using Email):

- Check the email inbox of the address you provided.
- Confirm the subscription by clicking on the link in the email.



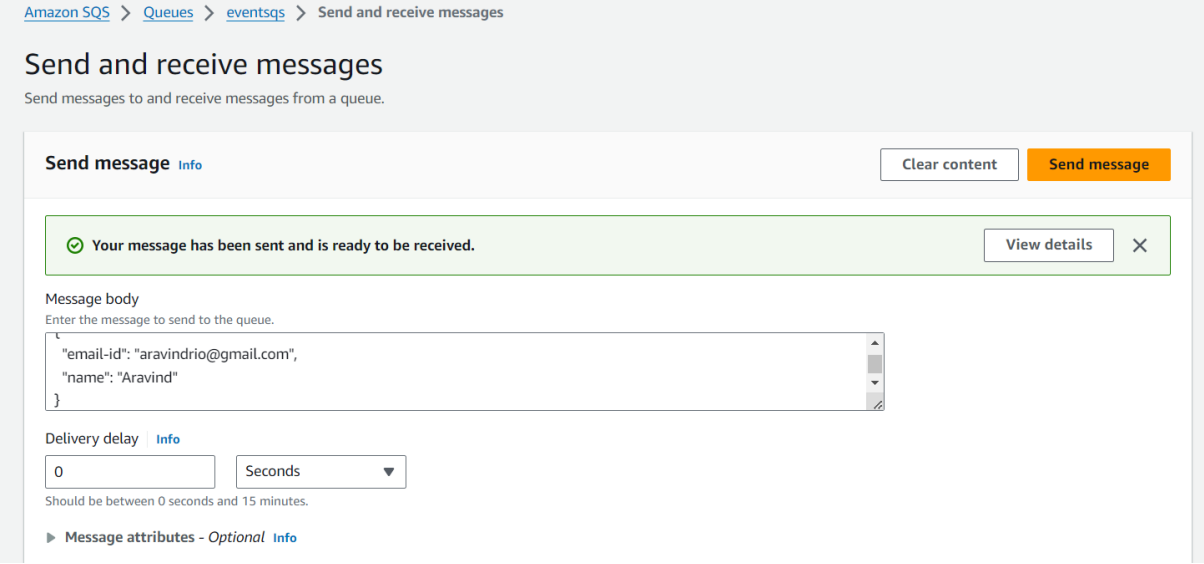


STEP 11: **Send a Message to a Queue**:

- In the left navigation pane, choose "Queues."
- Select the queue to which you want to send a message.
- Click on the "Send and receive messages" button.
- In the "Message body" section, enter the message you want to send.
- (Optional) You can add message attributes if needed.
- Click on "Send message."

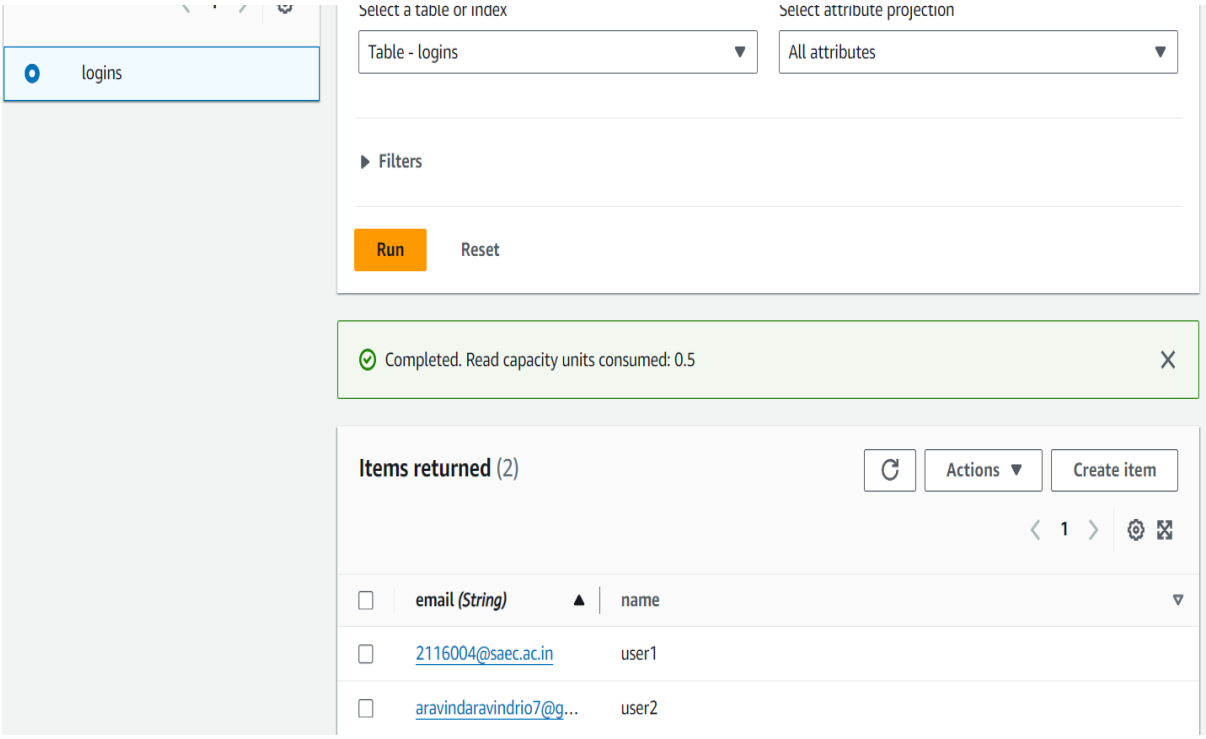
STEP 12: **Send a Message to SQS**:

- Use the AWS Management Console or CLI to send a message to the SQS queue.



OUTPUT: **Check DynamoDB**:

- Verify that the message appears in your DynamoDB table.



OUTPUT: Check Email:

1.Verify that an email notification is sent to the subscribed email address.

By following these steps, you create a complete workflow where messages sent to an SQS queue are processed by a Lambda function, stored in DynamoDB, and trigger email notifications via SNS.