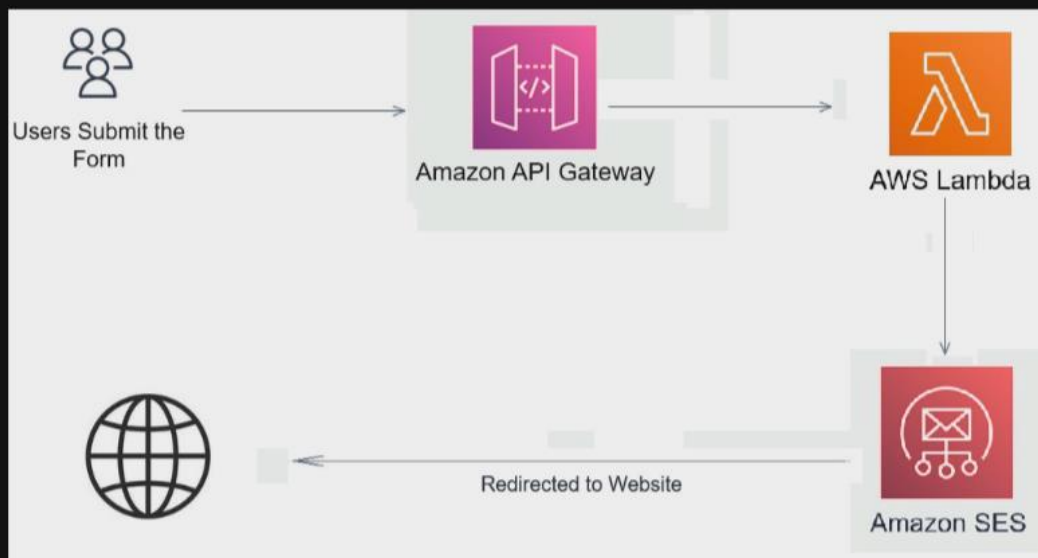


Exercise: Create a Lambda function that sends an email using AWS SES

### Pre-requisites:-

1. AWS Account
2. An S3 bucket where you will host the HTML form.
3. An email address for Amazon SES
4. Basic Knowledge About S3, Lambda Functions & Amazon SES

### Architectural Diagram



### Steps:

1. Create an AWS SES email address and also verified it.
2. Create an S3 bucket to host your form.
3. Create an AWS Lambda function.
4. Create a new API Gateway and connect to your Lambda Function.
5. Update the form action attribute to the API Gateway API endpoint URL.
6. Test the form submission by filling out the form fields and submitting the form.
7. Finally Check your recipient email box.

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### Step 1:

Let's Create an AWS SES email address and also verified it. Go to your AWS Console & Open Simple Email Service (SES) by searching.

Once Open Click on Create Identity

Identity Type = Email Address

Provide your Email Address & click on Create Identity.

Once your Identity is created you can see status as Verification Pending.

So Go to your mail & verify the Identity by opening AWS mail

Identity status	Amazon Resource Name (ARN)	AWS Region
✔ Verified	arn:aws:ses:us-east-1:011111111111:identity/ <a href="#">[Identity Name]</a>	US East (N. Virginia)

Once Verification is Done your Identity Status Should Changed to verified as you can see in above screenshot.

### Step 2:

Now Create an S3 Bucket & host your Website that contains the Form Page.

Use the Below Tutorial it contains all needed information like hosting a static website.

Follow the tutorial Step by Step:

[Click Here](#)

Click on the Above Link to open the tutorial.

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### Step 3:-

Now Let's Create a AWS Lambda Function

Go to Amazon Console Search for Lambda

Open the Lambda Service & click on Create Function

Give the Function Name Provide the Runtime Architecture

We are using Python Code you can also select python to get along with the tutorial.

After that click on Create Function

You can see a Function is Created Now you need to add the Python Code You can use the below code for tutorial



Once the Code is Successfully Pasted.  
Click on Deploy to Deploy the Code.  
Let's give access of SES to our Lambda Function.  
Go to IAM -> Roles  
Create a Role & Provide the following Policies

<input type="checkbox"/>	Policy name 	Type
<input type="checkbox"/>	 AWSLambdaBasicExecutionRole-548942e0-97b9-409c-8b7f-2bc73d89ff33	Customer managed
<input type="checkbox"/>	  AmazonSESFullAccess	AWS managed
<input type="checkbox"/>	  AWSLambdaBasicExecutionRole	AWS managed

Once the Role is created Open the lambda service and open the function that we have created  
After that Open -> Configuration -> Permissions  
In permissions you can see Execution Role click on Edit  
Let the all details as its is at the end give the role that we have created.

You have Successfully Created the Lambda Function & your Function has all the necessary permission to work

#### Step 4:-

Now Lets Create an API Gateway to get the URL to use in our Form

Open the Lambda Service in AWS

Go to Configuration -> Triggers -> Add Trigger

After that provide the Details as:-

Source -> API Gateway

Intent -> Create a New API

API Type -> REST API

Security -> Open

Click on Add

After adding you will get and Endpoint URL Copy that & save

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### Step 5:-

Now we need to Update the Form Details Go to your S3 Bucket Download the Form HTML Page & modify the action in FORM by adding the Endpoint URL that we have copied



The screenshot shows a code editor with the following HTML code:

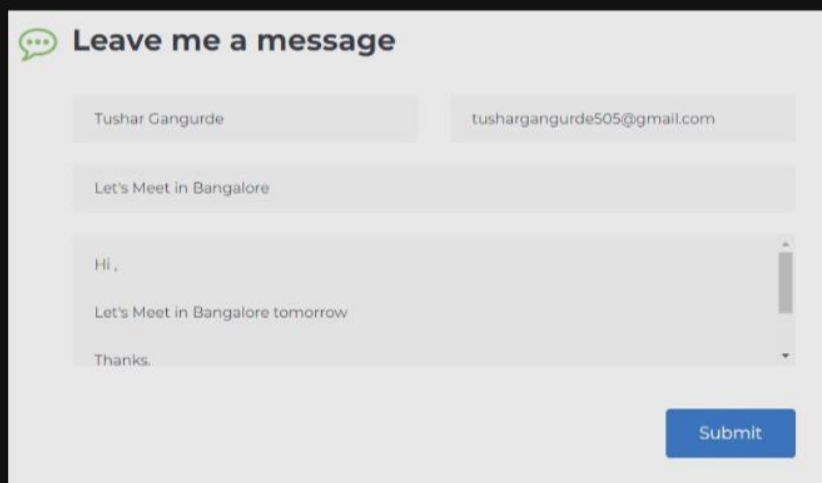
```
<form id="contact-form" class="contact-form" name="contact-form" method="post" action="EndPoint-URL">  
<input type="text" class="form-control" name="name" required="required" placeholder="Full Name">  
<button type="submit" class="btn btn-primary">Submit</button>  
</form>
```

Annotations in the image include a yellow box around the `action="EndPoint-URL"` attribute with an arrow pointing to it and the text "Update this to the API Gateway URL", and a red circle around the `EndPoint-URL` value.

This is the Sample example of FORM which contains one field as name after submitting it will invoke the endpoint URL so modify it our API Gateway Endpoint URL

### Step 6:-

We have completed All the necessary Steps Let's Test the Application by Filling The form,



The screenshot shows a web form titled "Leave me a message" with a speech bubble icon. The form contains the following fields:

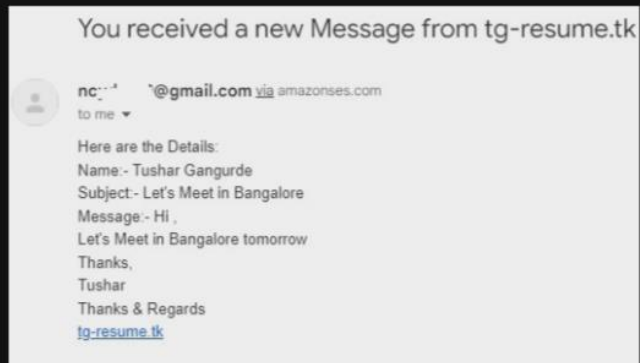
- Name: Tushar Gangurde
- Email: tushargangurde505@gmail.com
- Message: Let's Meet in Bangalore
- Text area: Hi ,  
Let's Meet in Bangalore tomorrow  
Thanks.
- Submit button

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As you can see i have provided some Sample Information  
In Next Step Let's check do we got in mail.

### Step 7:-

I Got the Following Response in my Mail



As you can see in the above Image our Lambda Function  
Successfully Parsed the all Information & Sent a mail through  
SES.

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