

Project Development:

Step 1: Set Up Amazon Work Mail

1. Create Amazon Work Mail Account

- Create a new organization: your-org-name.
- Once the organization is created, add users to receive emails:
 - User Email: user@your-org-name.awsapps.com

Step 2: Domain Verification with Amazon SES

1. Go to Amazon SES

- Verify the custom domain created for Amazon Work Mail.
- If required, create an identity for the domain and verify it using the following DNS records:
 - MX
 - TXT
 - CNAME

Step 3: Set Up S3 Bucket for Email Storage

1. Create S3 Bucket

- Bucket Name: your-email-storage-bucket-name.
- Add necessary IAM roles and permissions.

2. Set Bucket Policy

- Implement the following bucket policy to allow SES to put objects:

json

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Principal": {
        "Service": "ses.amazonaws.com"
      },
      "Action": "s3:PutObject",
      "Resource": "arn:aws:s3:::your-email-storage-bucket-name/*",
```

```

    "Condition": {
      "StringEquals": {
        "aws:SourceAccount": "your-account-id"
      }
    }
  }
}
]
}

```

- Save the changes after adding the permissions.

3. Create SES Rule

- Rule Name: your-inbound-rule-name.
- Invoke Lambda function: InvokeLambdaFunctionAIClassifier.
- Choose the bucket and set a prefix for emails.

Step 4: Create SNS Topic for Notifications

1. Create SNS Topic

- Topic ARN: arn:aws:sns:us-west-2:your-account-id:your-topic-name.

2. Set SNS Access Policy

- Implement the following access policy for the SNS topic:

json

```

{
  "Version": "2008-10-17",
  "Statement": [
    {
      "Sid": "stmt-your-statement-id",
      "Effect": "Allow",
      "Principal": {
        "Service": "ses.amazonaws.com"
      },
      "Action": "SNS:Publish",
      "Resource": "arn:aws:sns:us-west-2:your-account-id:your-topic-name",
      "Condition": {

```

```

    "StringEquals": {
        "AWS:SourceAccount": "your-account-id"
    },
    "StringLike": {
        "AWS:SourceArn": "arn:aws:ses:*"
    }
}
}
]
}

```

3. Save the SNS Rule and Activate

- Ensure that the rule for inbound emails is saved and activated.

Step 5: OpenAI Setup for Email Classification

1. Sign Up for OpenAI

- Create a project separate from the default one for chat completion usage in email classification.
- Note down the API keys securely.

2. Select GPT Version

- In the limits section, select the desired GPT version (e.g., gpt-4).

Step 6: Lambda Function and Permissions

1. Update Lambda Function

- Once the lambda function is created, update it with the correct bucket name.

2. IAM Role Access

- After deploying the function, go to IAM to provide the role access to S3 buckets.

Additional Setup

1. Install Required Tools

- Install AWS CLI and SAM installer for your operating system.