# D Y PATIL INTERNATIONAL UNIVERSITY
## AKURDI PUNE

## School of Computer Science, Engineering and Applications(SCSEA)
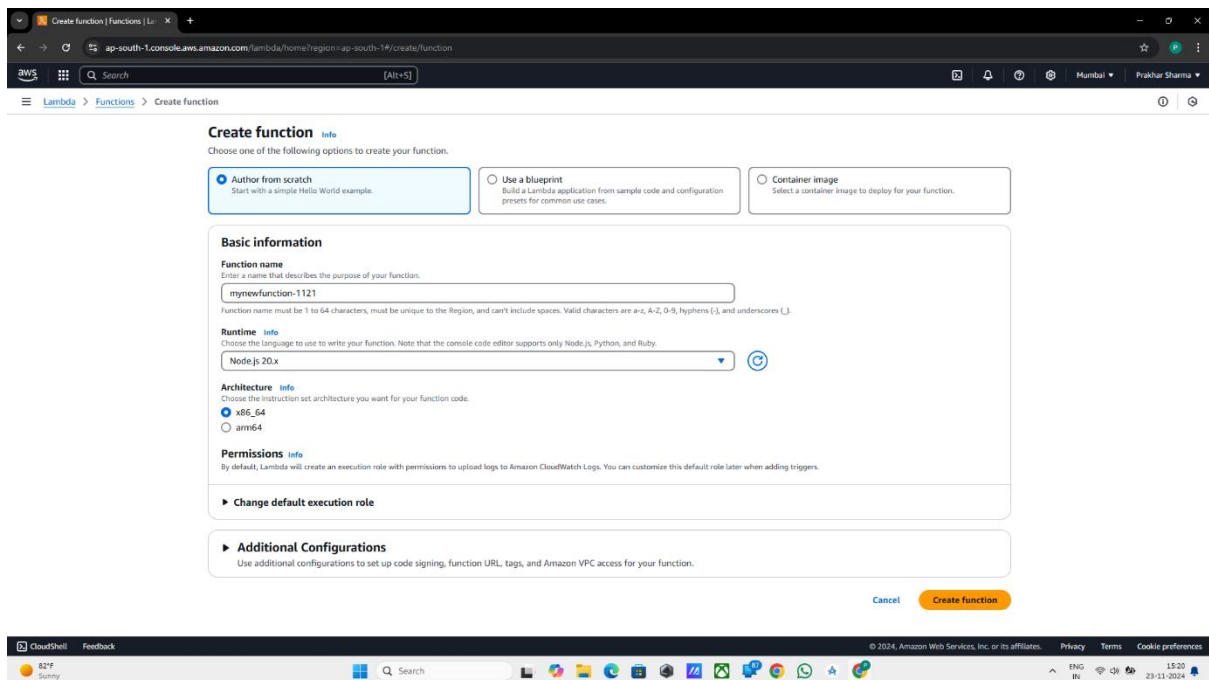## B.C.A. TY (CCSA)
## Subject : Advanced Cloud Computing (P)

**Name of the Student:** Prakhar Anil Sharma **PRN: 20220801121**

**Title of Practical :** **Configuring a Cloud Watch Alarm for Lambda Invocation Errors with SNS Notifications**

Step 1: Create a Lambda Function

- Go to the Lambda Service in the AWS Management Console.

- Click Create Function.

- Select Author from Scratch.

- Enter a function name.

- Set the runtime to Node.js 20.

- Click Create Function to finish.

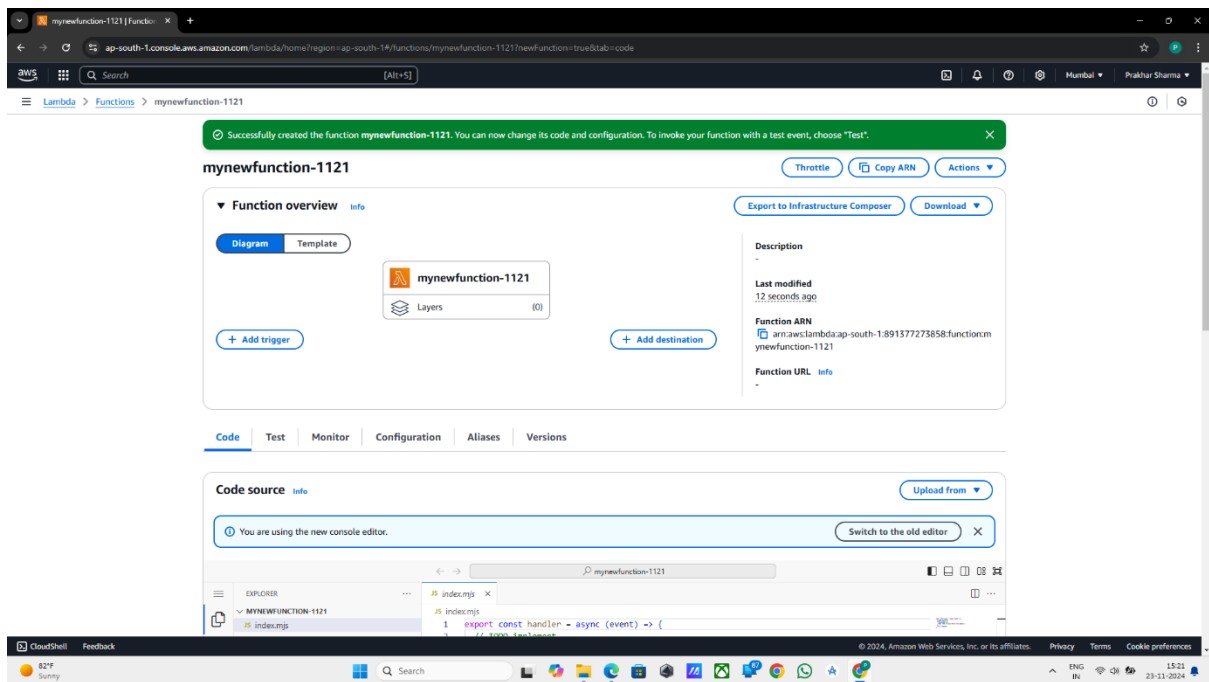# School of Computer Science, Engineering and Applications(SCSEA)
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Step 2: Monitor Lambda Metrics

- After the function is created, navigate to your Lambda function.

- Select the Monitor tab, then click on the Metrics sub-tab.

- You will see metrics like Error Count and Success Rate (%).

- These metrics will allow us to set up an alarm that triggers when the error count exceeds a certain threshold.

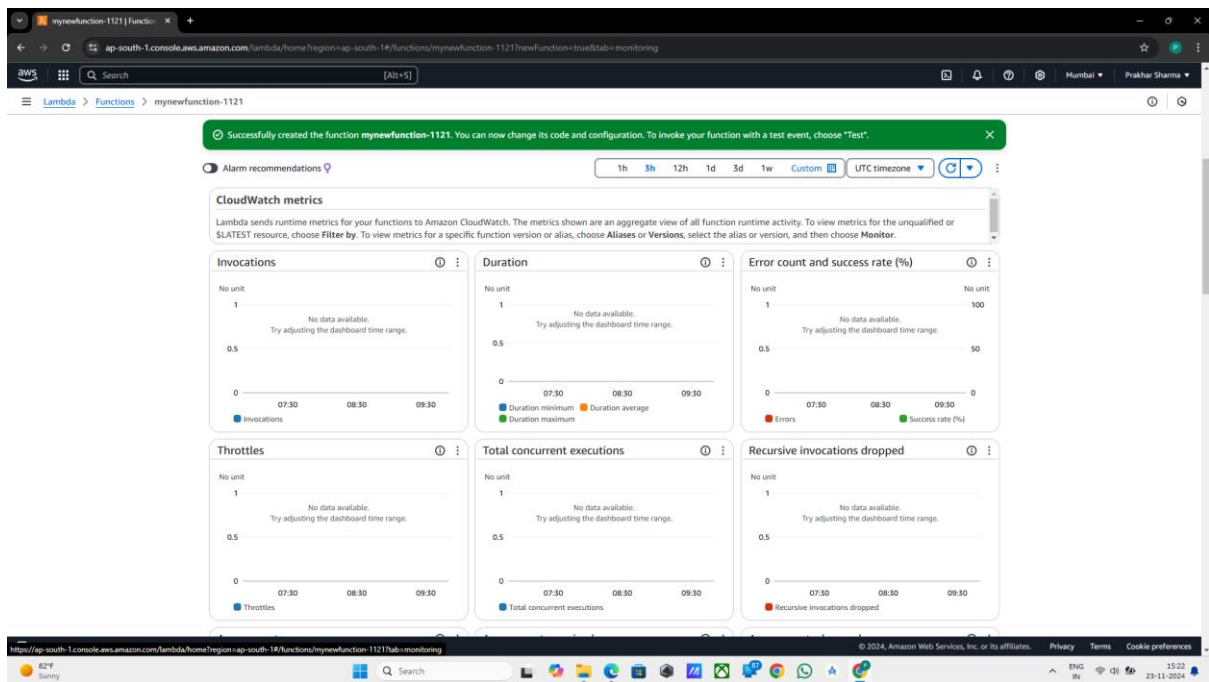**School of Computer Science, Engineering and Applications(SCSEA)**
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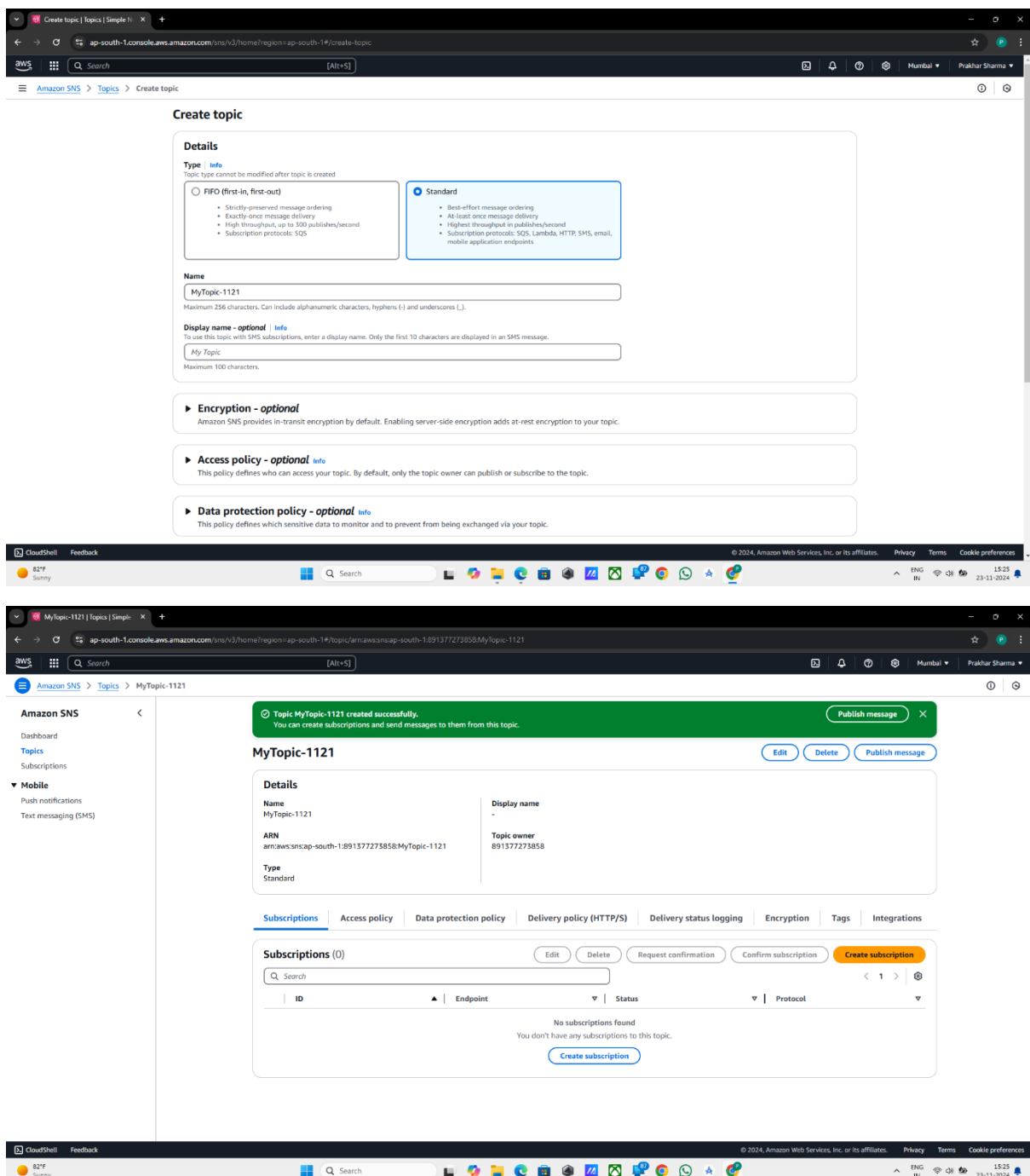Step 3: Create an SNS Topic for Notifications

- Navigate to the Simple Notification Service (SNS) in the AWS console.

- In the left panel, click Topics.

- Click Create Topic.

- Select Standard as the type of the topic.

- Enter a name for the topic.

- Click Create Topic.

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Step 4: Subscribe to the SNS Topic

 - After the topic is created, go to the Subscriptions tab for that topic.

- Click Create Subscription.

 - In the Create Subscription section:

❖ Select Email as the protocol.

❖ Enter your email address where you want to receive notifications.

 - Click Create Subscription.



❖    The status of the subscription will be Pending. Go to your email and confirm the subscription.

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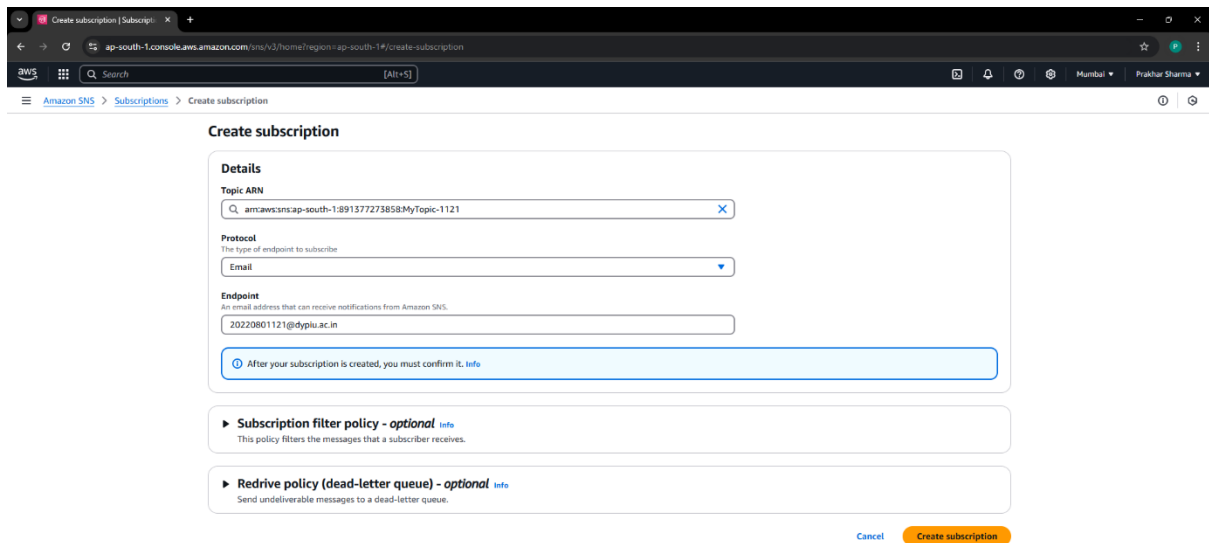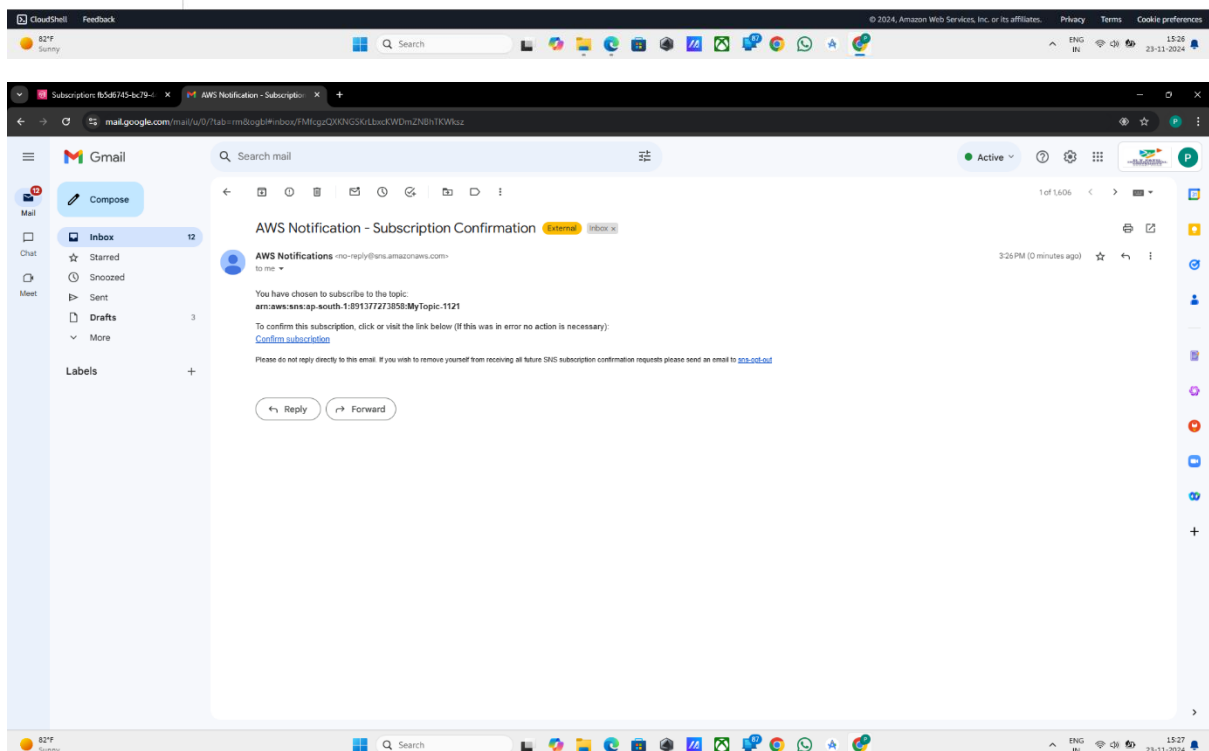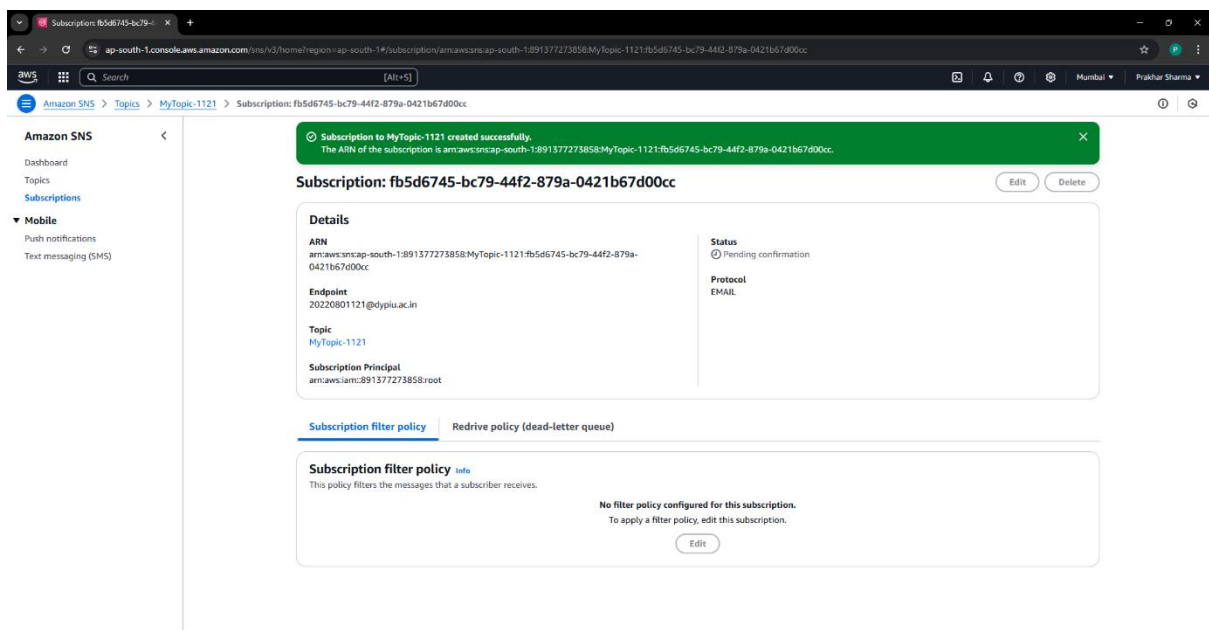## Subject : Advanced Cloud Computing (P)

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❖ After confirmation, the status will change to Confirmed.

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Step 5: Test the Lambda Function

- Return to your Lambda function, and go to the Code tab.

 - Click the dropdown next to the Test button, then select Configure Test Event.

❖ Enter an event name.

❖ Click Save.

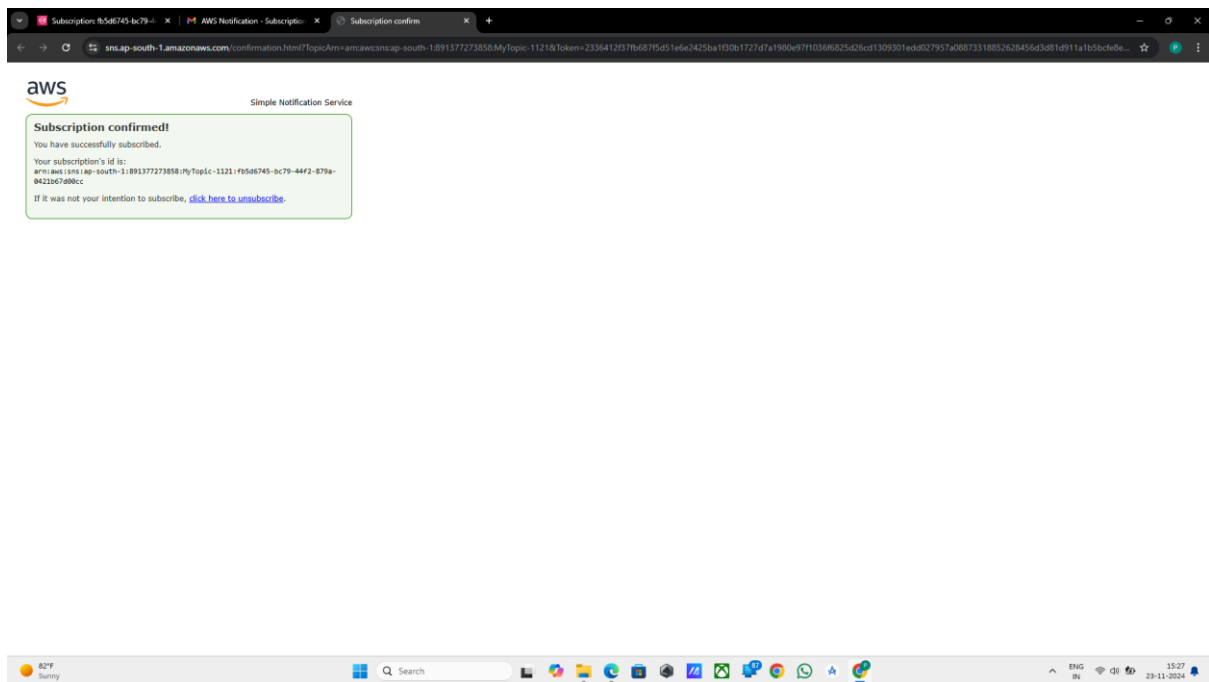# School of Computer Science, Engineering and Applications(SCSEA)
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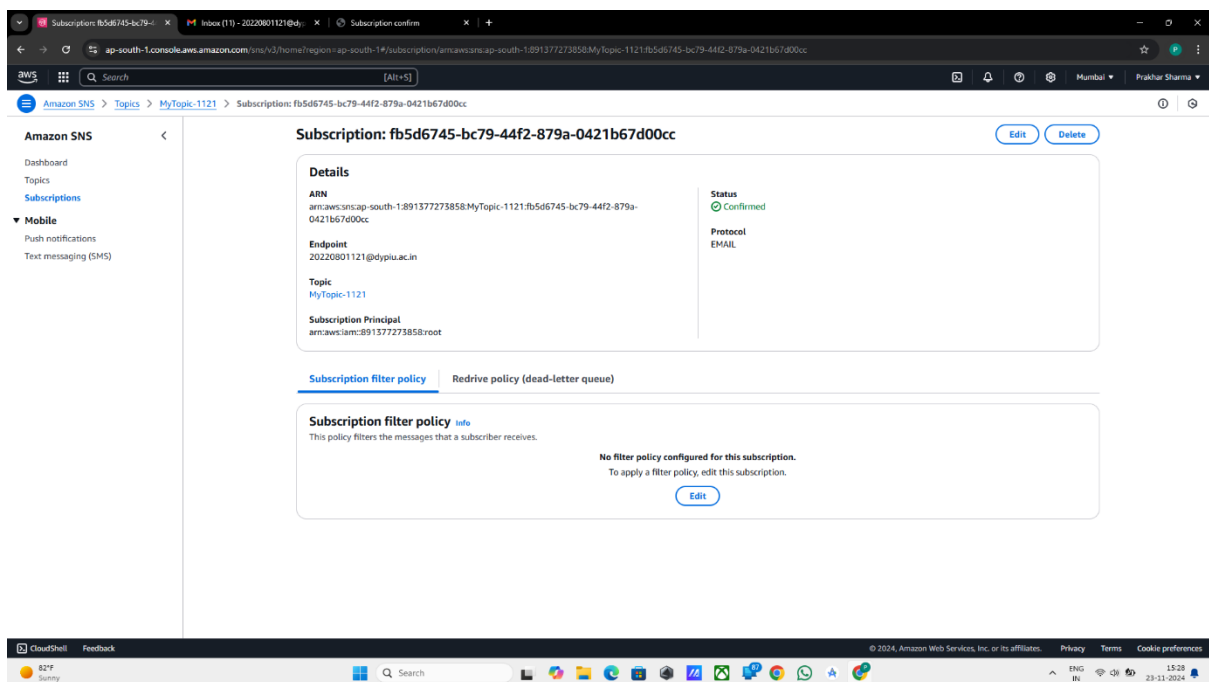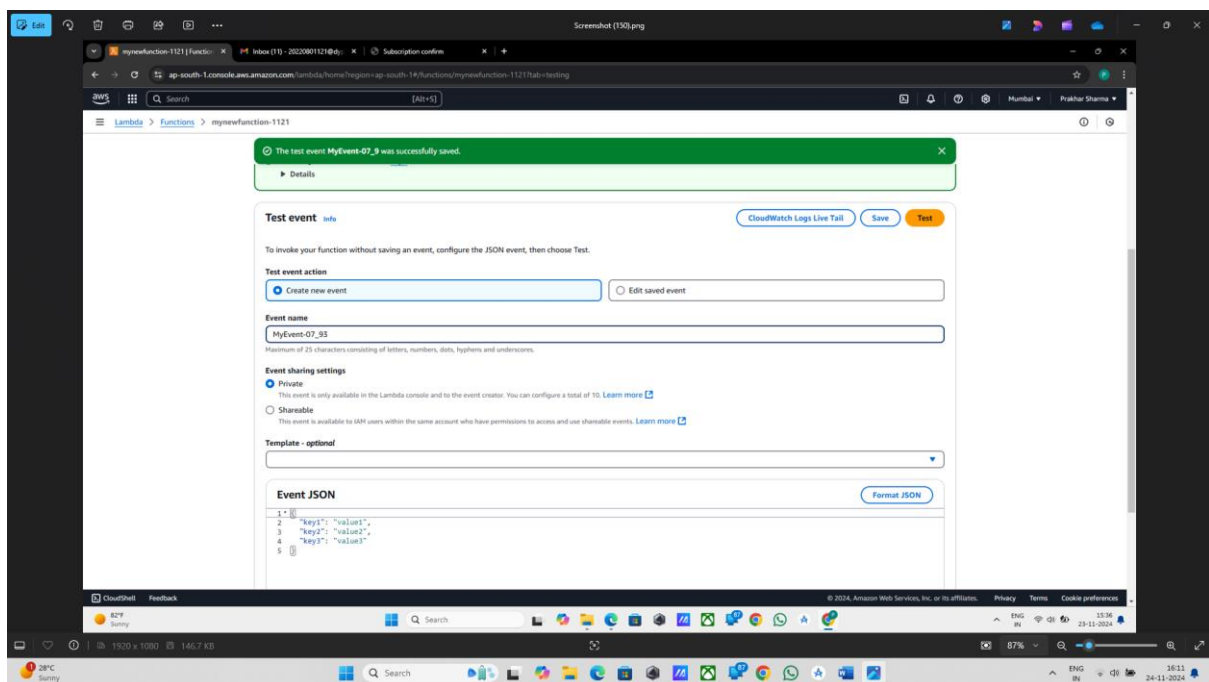


o Now, click Test to execute your Lambda function.

o Note: The error metrics may take some time to reflect in the Monitor tab.

Step 6: Create a CloudWatch Alarm

- Go to the CloudWatch service in the AWS console.

- Click Create Alarm.

- Click Select Metrics.

- In the Metrics section, select Lambda Metrics.

- Choose the By Function Name option.

- Select your Lambda function, and choose the Errors metric.

- Click Select Metric.

- In the Specify Metric and Conditions section:

- In the Statistics field, change the default Average to Maximum.

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- In the Conditions section, set the threshold type to Static.

- Under Whenever Error Count is, select Greater Than or Equal to.

- Set the value to 1.

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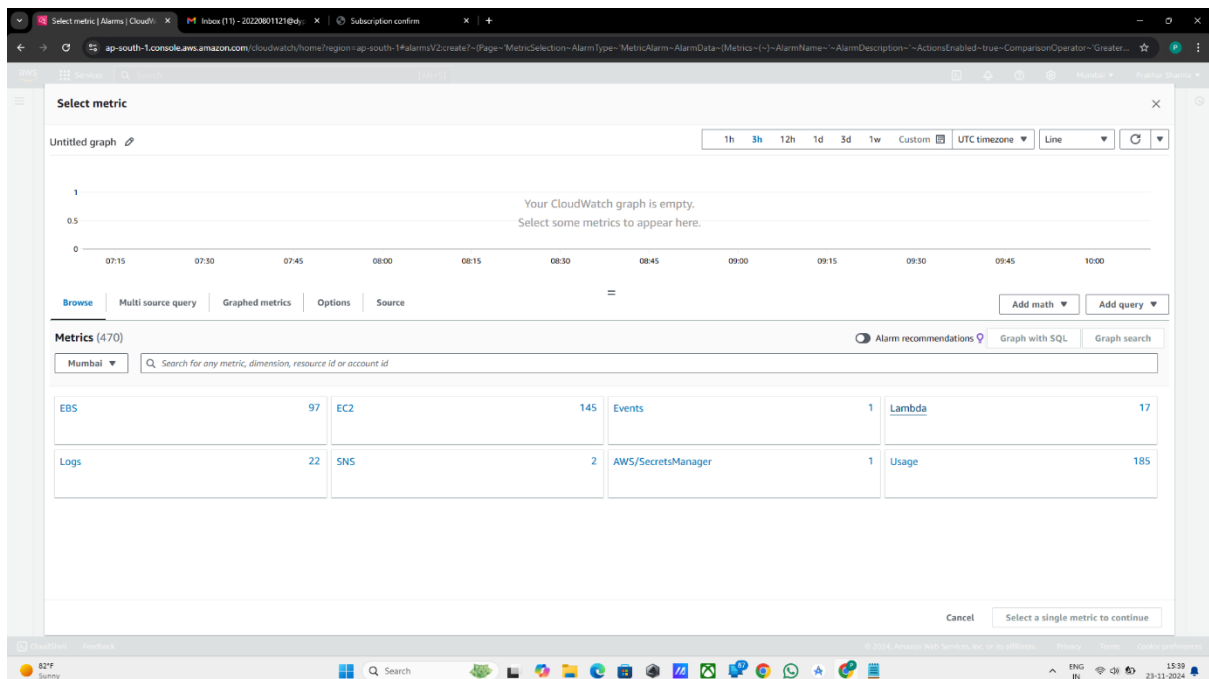# B.C.A. TY (CCSA)
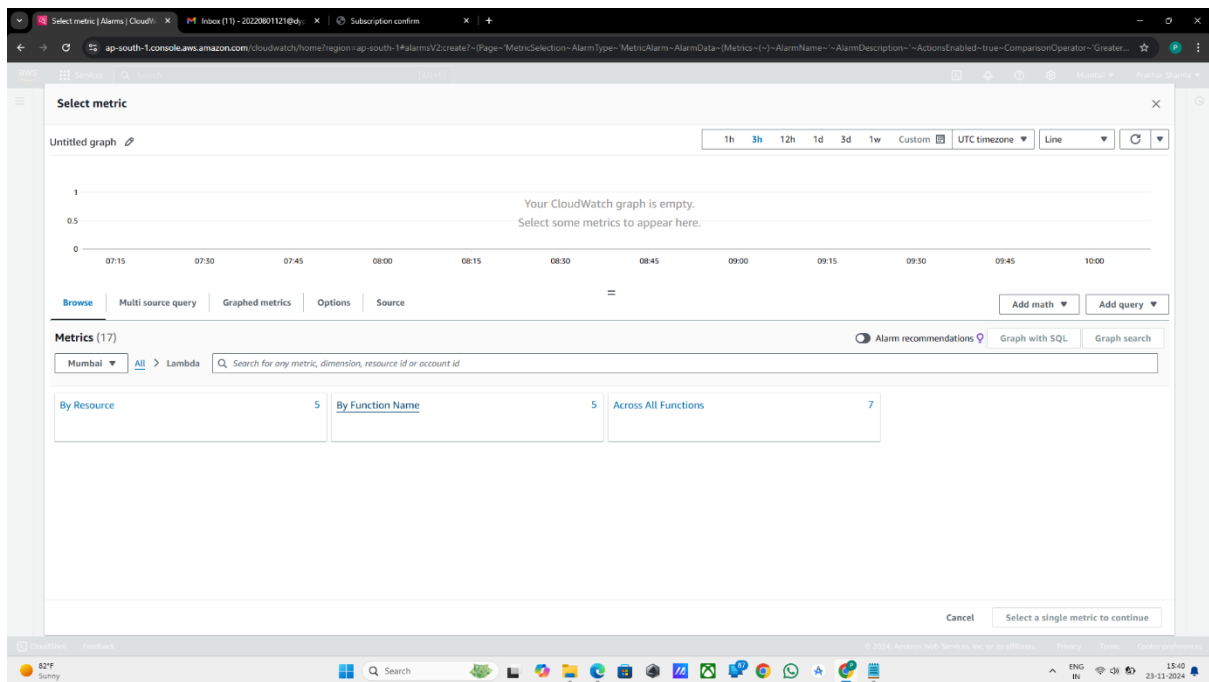# Subject : Advanced Cloud Computing (P)

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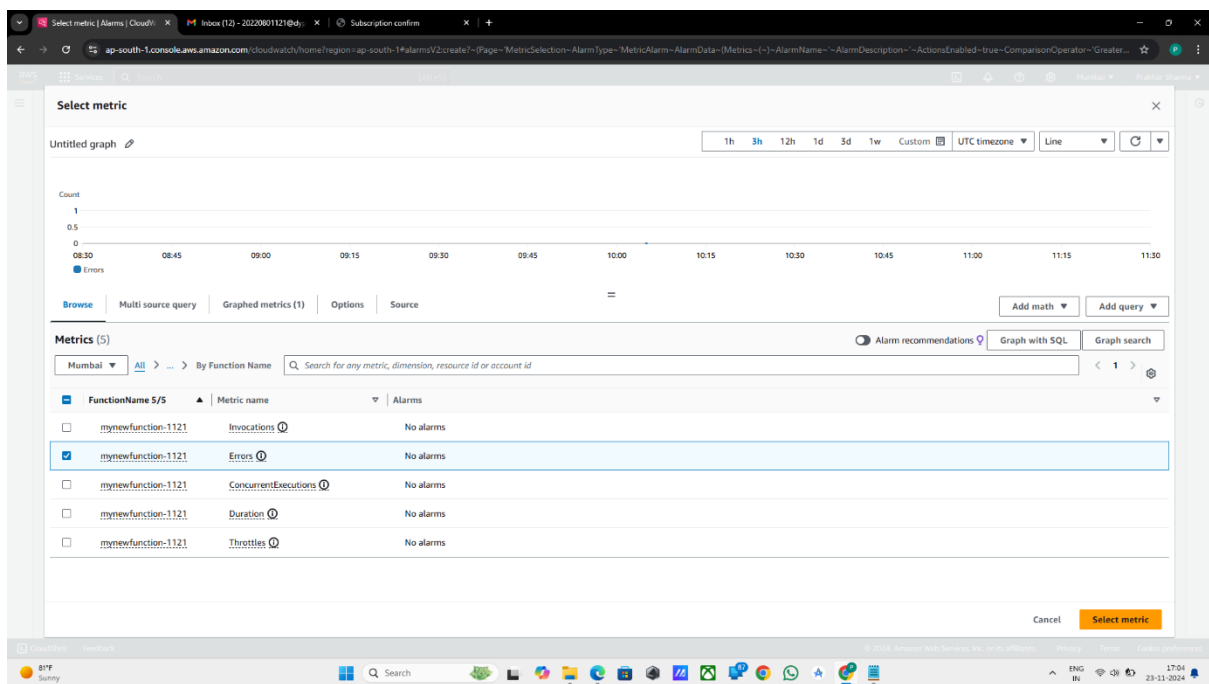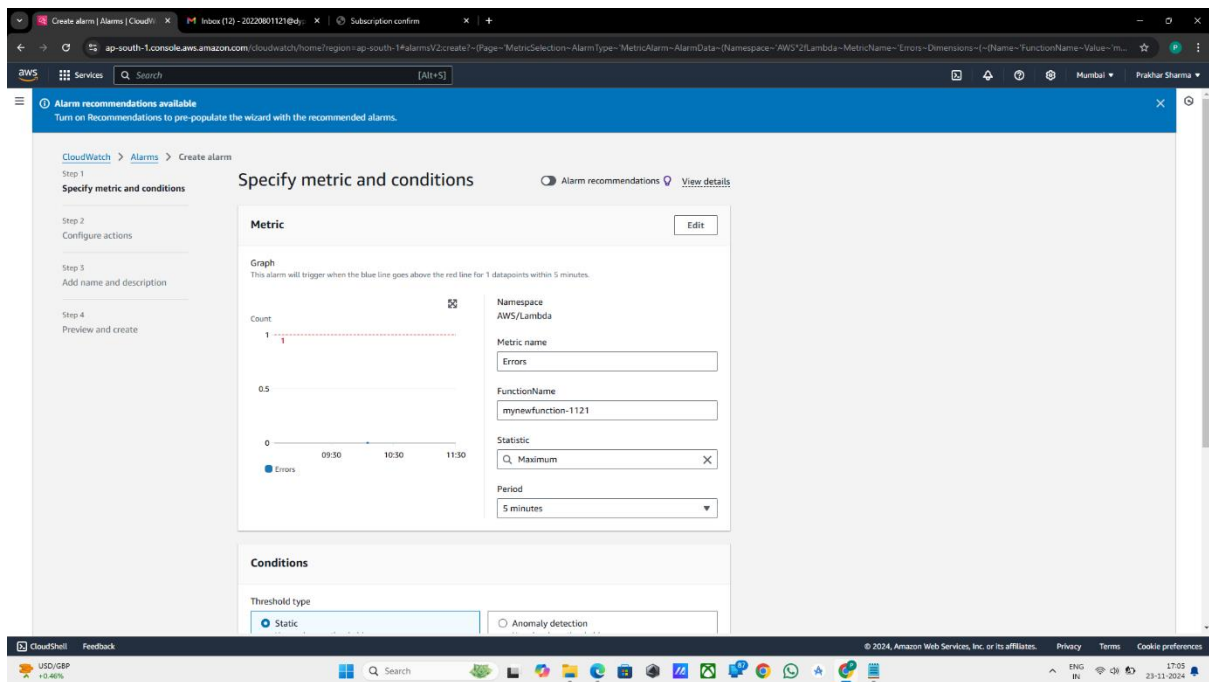# School of Computer Science, Engineering and Applications(SCSEA)
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Step 7: Set Up Notifications for the Alarm

- In the Notifications section, set the Alarm State Trigger to In Alarm.

- Under Send a Notification to, select Existing SNS Topic.

- Choose the SNS topic you created earlier.

- The email endpoint you provided will appear in the notification settings.

- Click Next.

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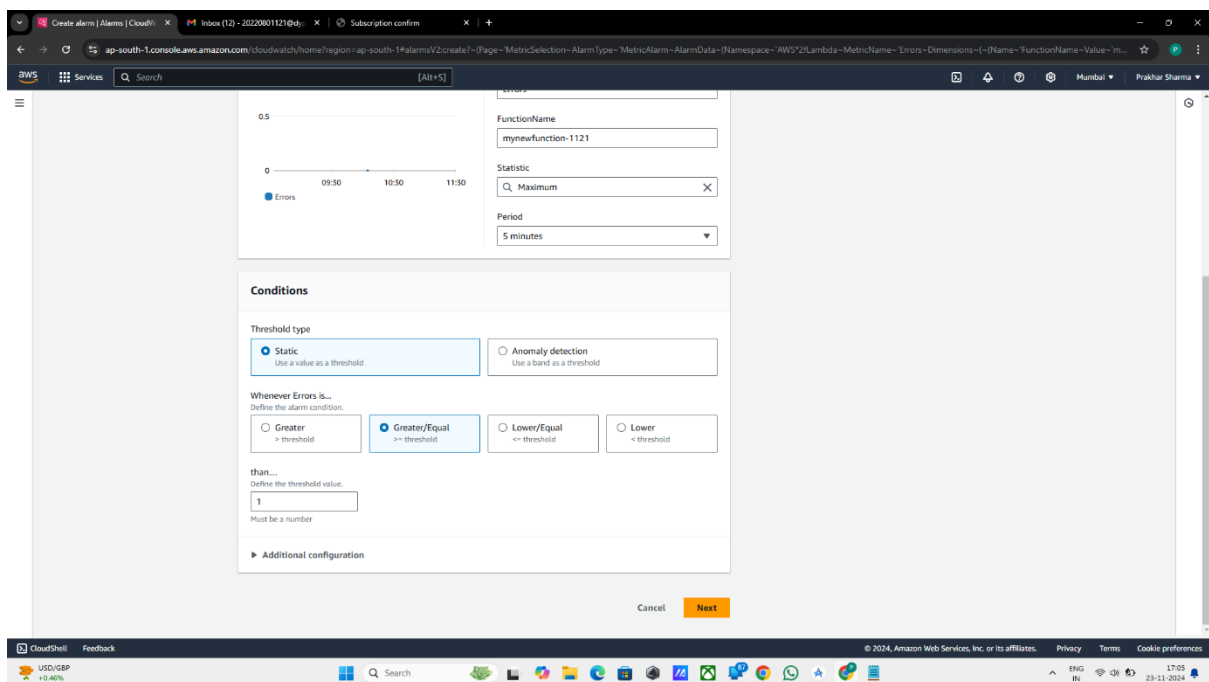## B.C.A. TY (CCSA)
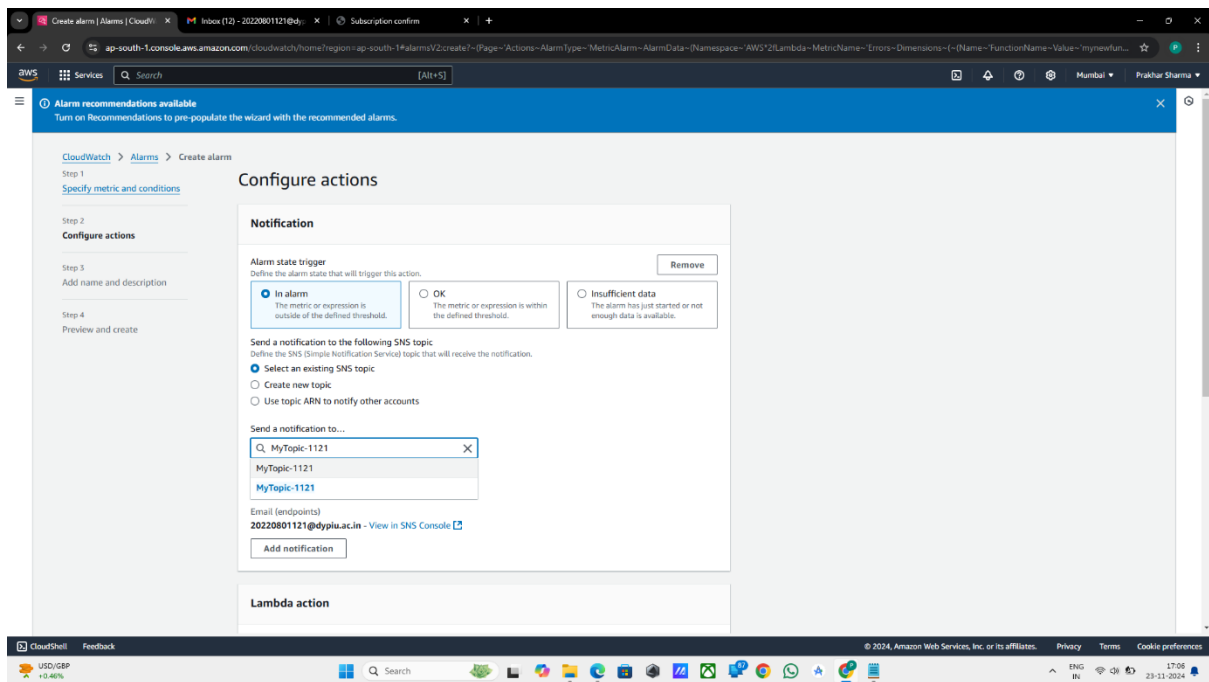## Subject : Advanced Cloud Computing (P)

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Step 8: Name and Create the Alarm

- Enter a name for your alarm.

 - Click Next, then Create Alarm.

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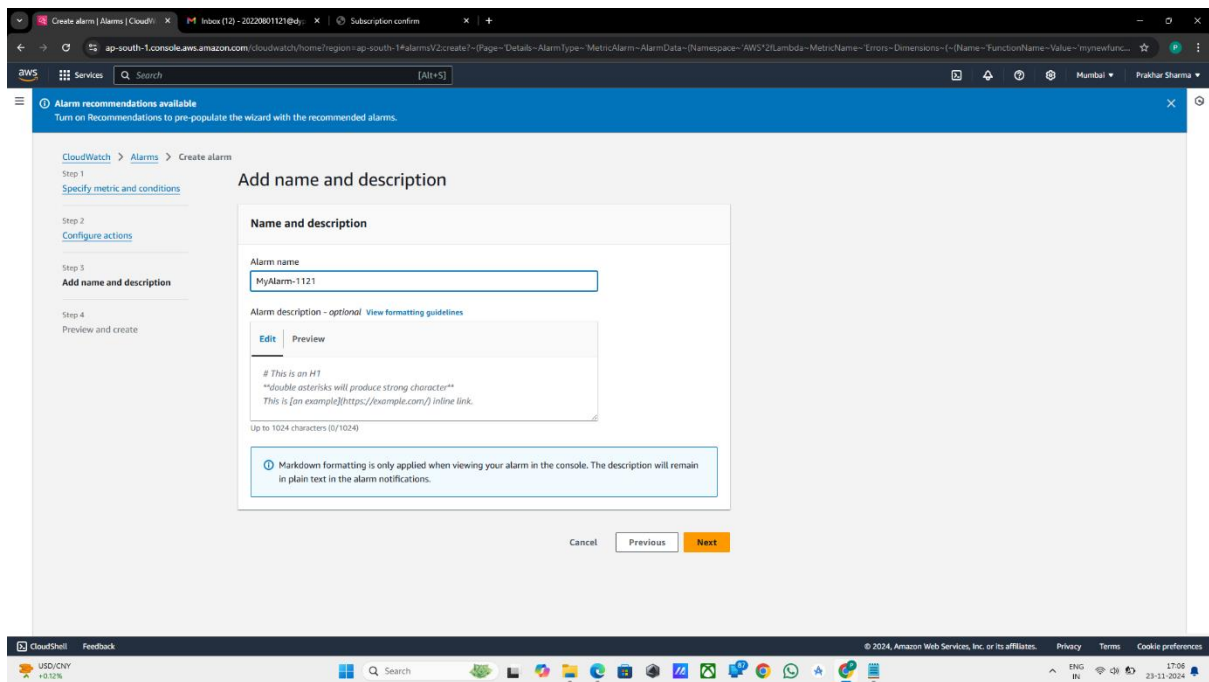## Subject : Advanced Cloud Computing (P)

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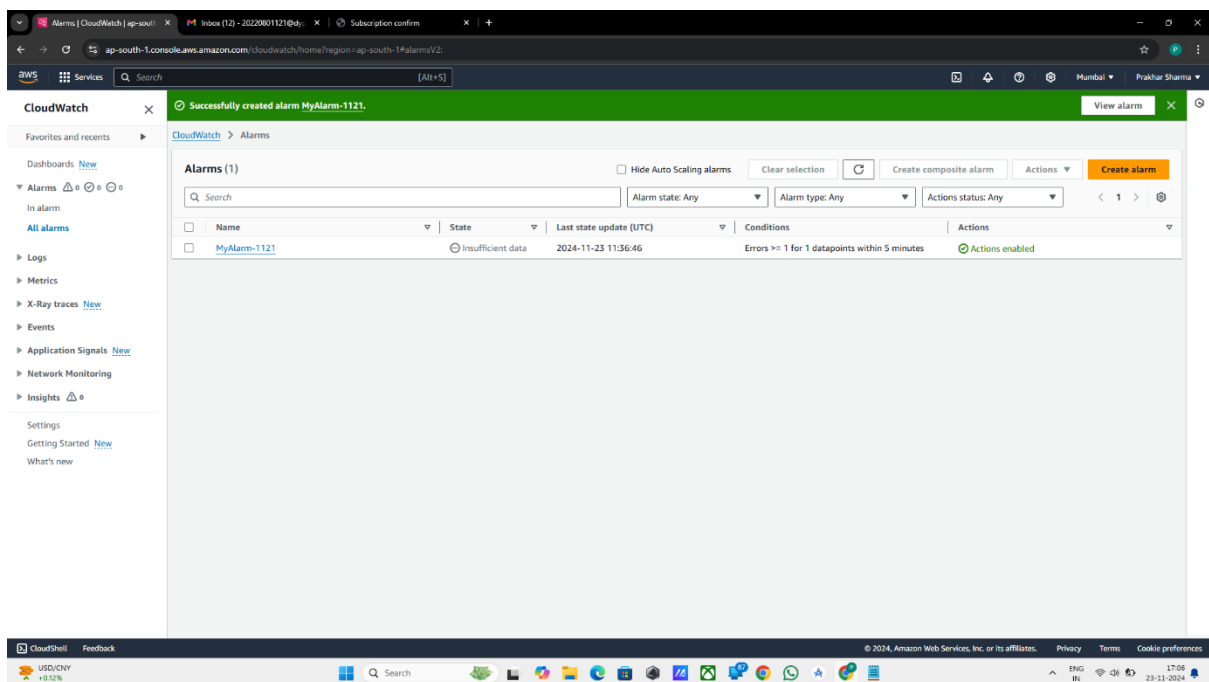# School of Computer Science, Engineering and Applications(SCSEA)
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Step 9: Trigger the Alarm with a Lambda Error

- Go back to your Lambda function.

- Introduce an intentional error in the code (for example, change JSON to JON).

- Click Deploy to save your changes.

- Click Test 4 to 5 times to invoke the function and produce errors.

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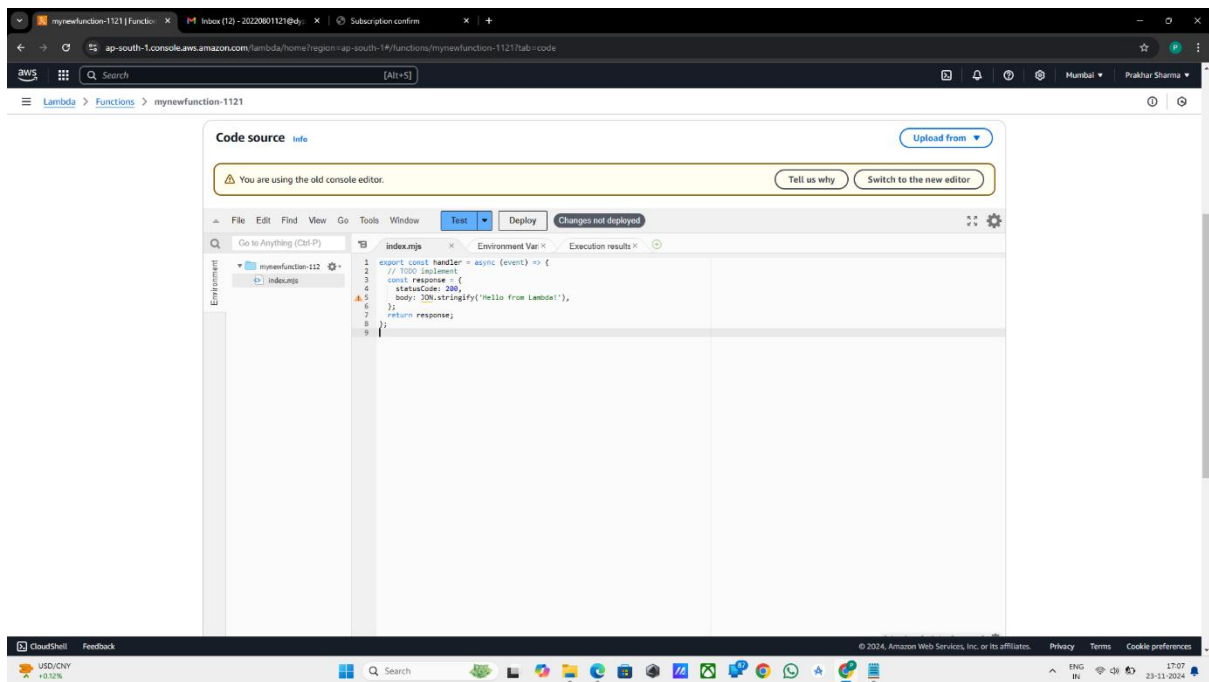## Subject : Advanced Cloud Computing (P)

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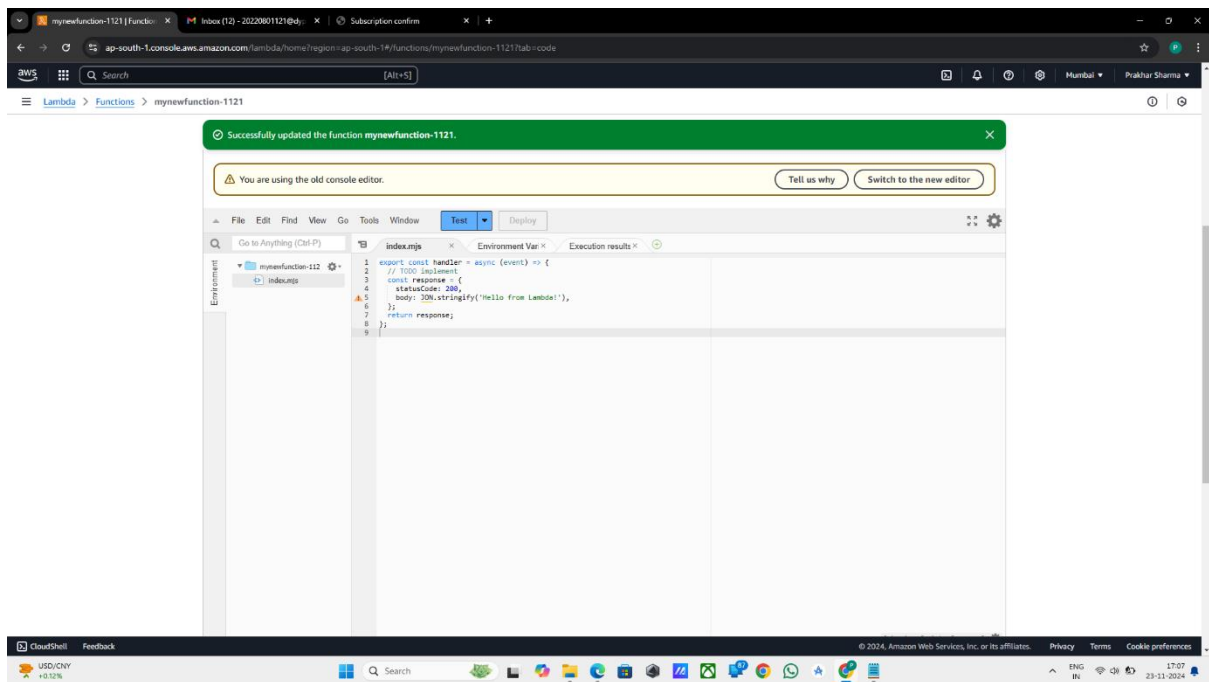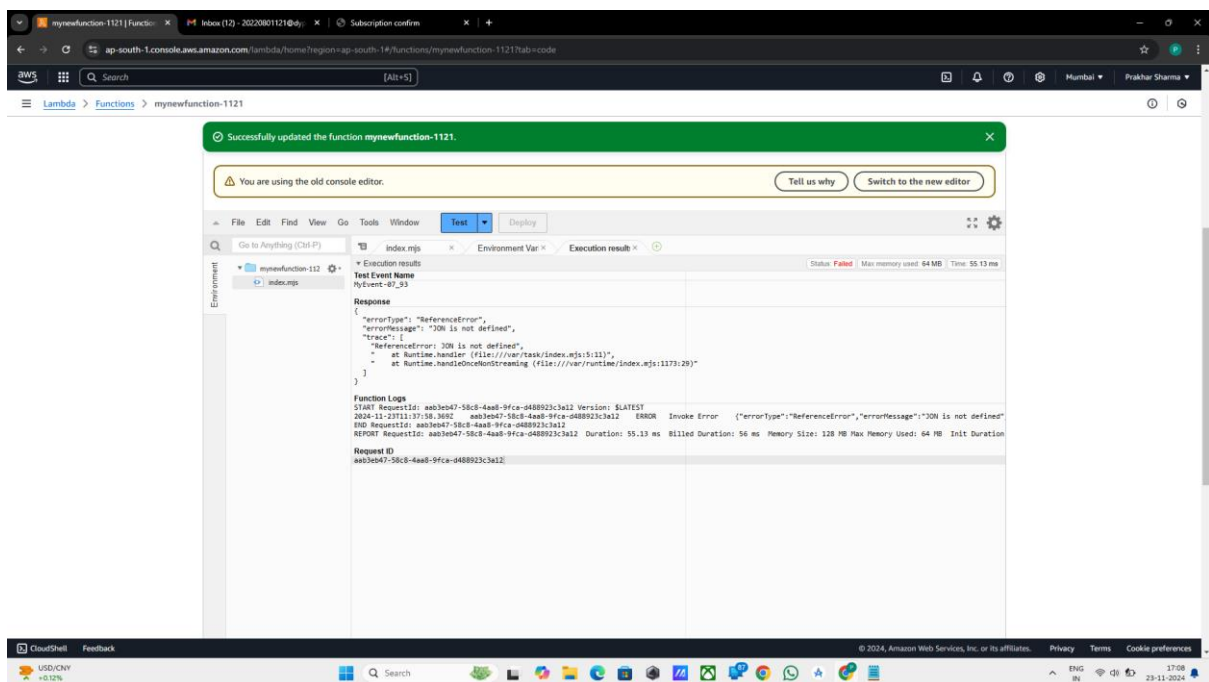## Subject : Advanced Cloud Computing (P)

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Step 10: Verify the CloudWatch Alarm

 - Go back to the CloudWatch service.

 - Check the state of your alarm, which will be set to In Alarm if errors were detected.

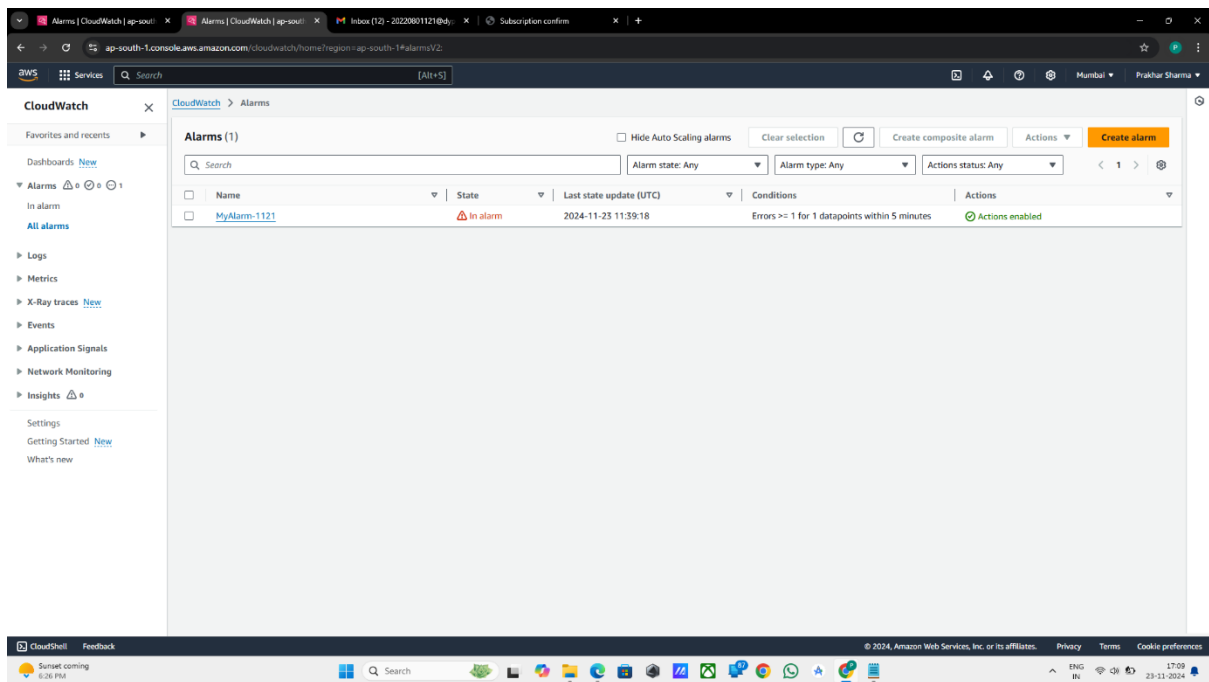# School of Computer Science, Engineering and Applications(SCSEA)
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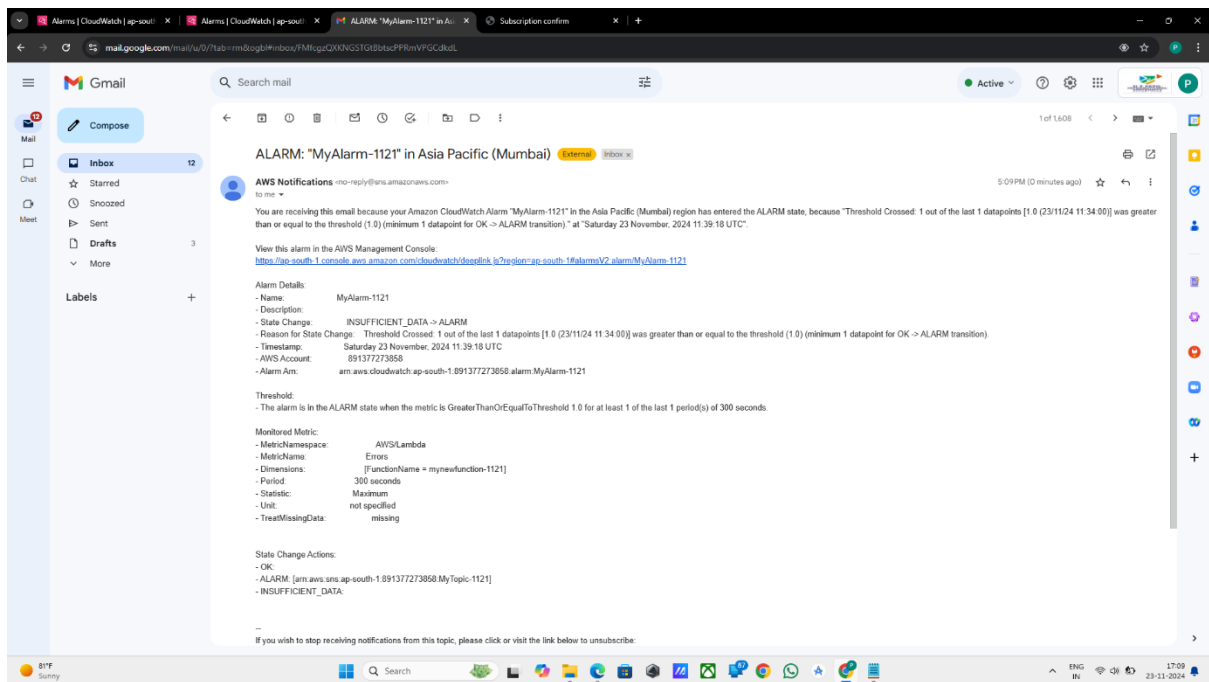


Step 11: Receive SNS Email Notification

- Once the alarm state changes to In Alarm, you should receive an email notification at the email address you provided during the SNS subscription setup.

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