6. Demonstrate the execution of a simple Python program using AWS Lambda functions. Include step-by-step instructions for creating and configuring the Lambda function, list out the languages supported by AWS Lambda.
   https://www.youtube.com/watch?v=J5710cdMp5A

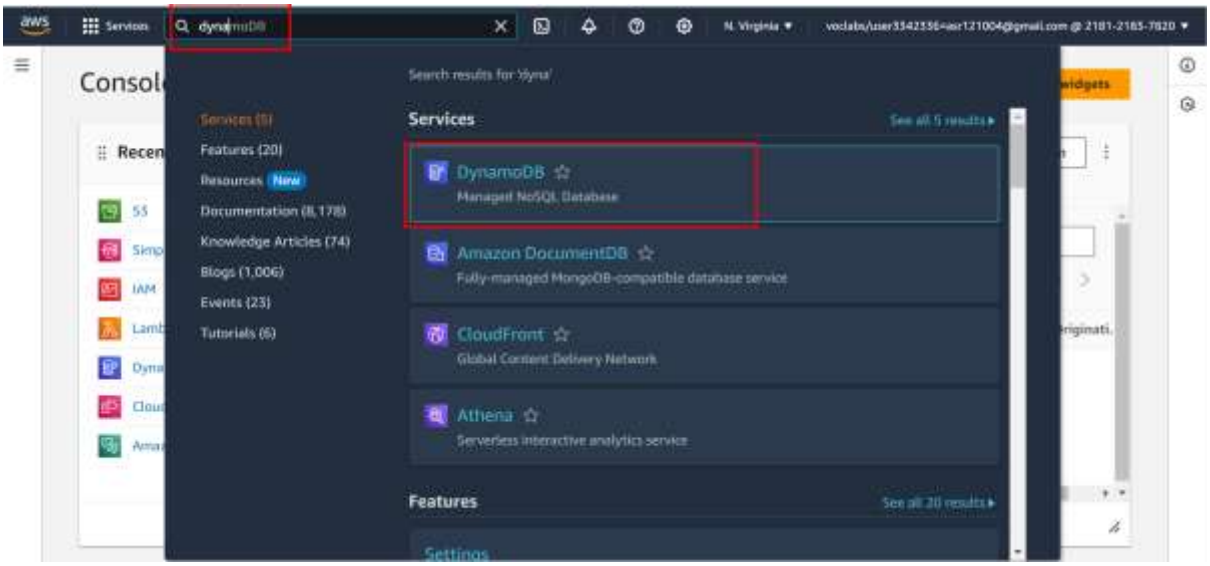
7. Create an AWS IAM User with attached policy and also Implement a role based access between AWS services as well as Create an group with attached policies
   https://www.youtube.com/watch?v=qYnoxSqCYoY

8. Migrate a website from local server to Cloud using Docker.
   https://www.youtube.com/watch?v=ipzp07hFF5E

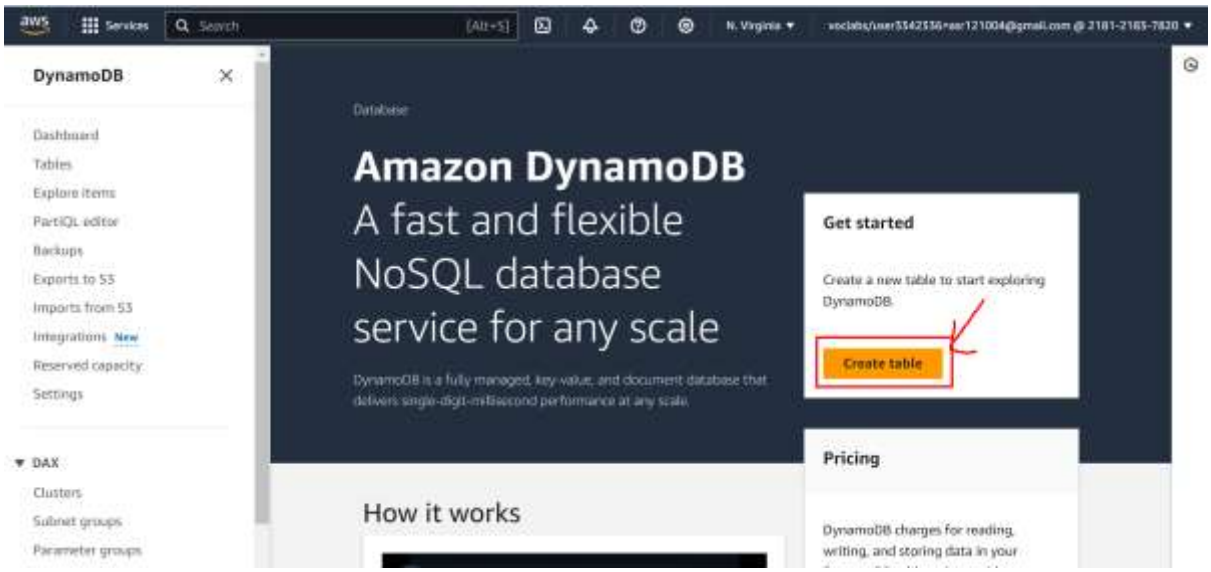
   For Document
   https://docs.google.com/document/d/17wnx5YY8ZUo1c6k_5Ymnzio_AU2U3rqvB6w0uNNLqHc/edit?usp=sharing

9. Launch a NoSQL database using Amazon DynamoDB.

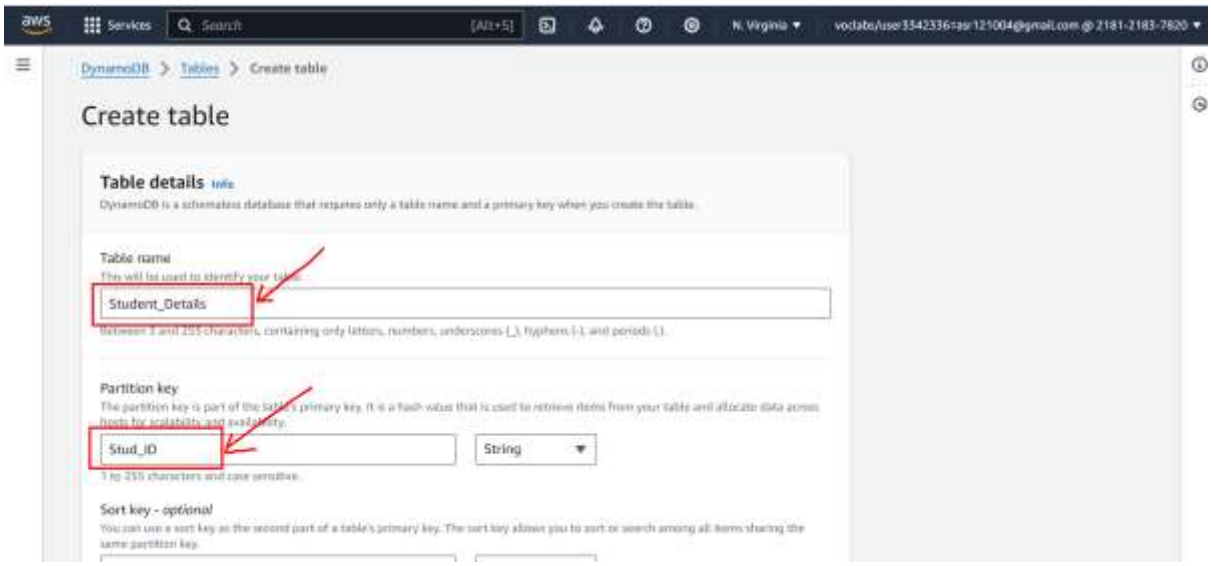
1. Search for the DynamoDB and click on DynamoDB



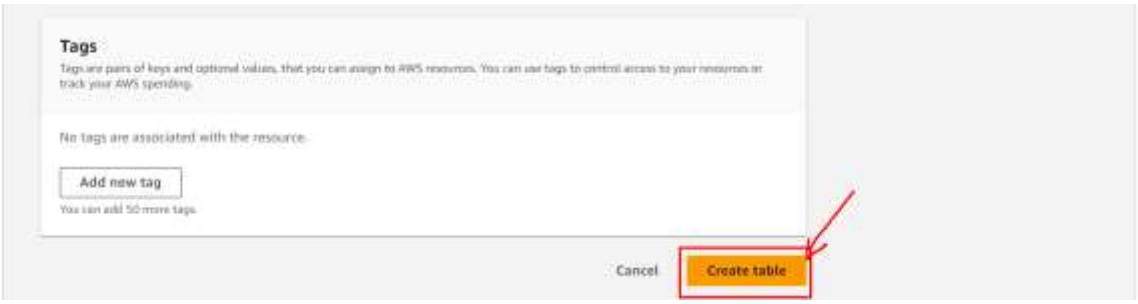
2. Now click on Create Table



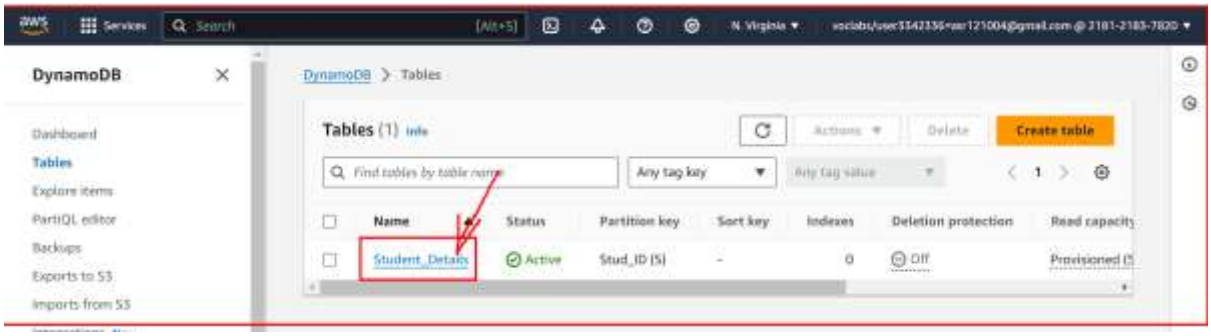
3. Now name your table and provide partition key



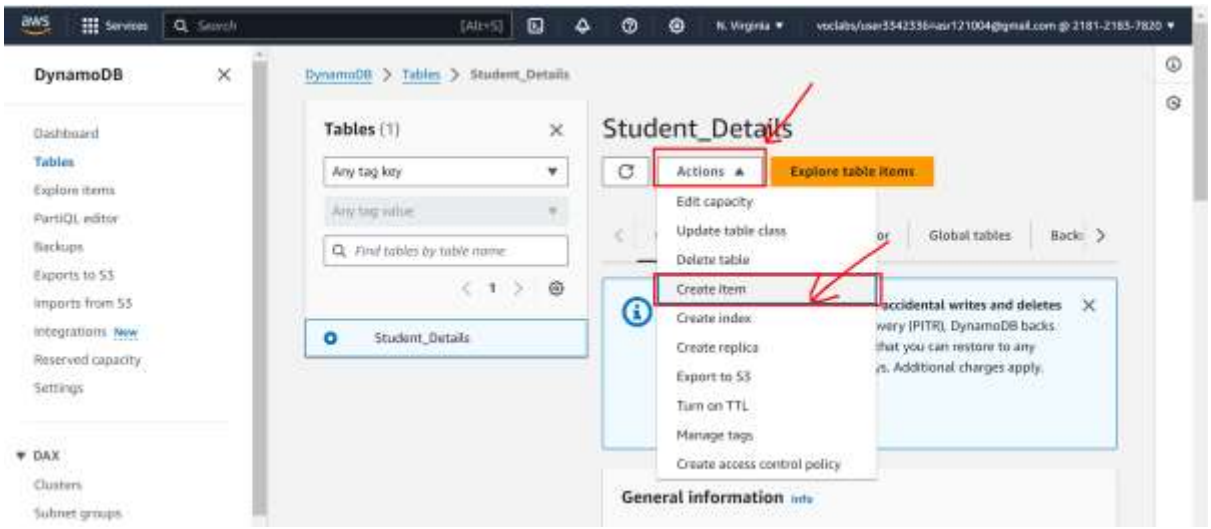
4. Now by leaving rest of the part by default scroll down to last of the page and click on create table



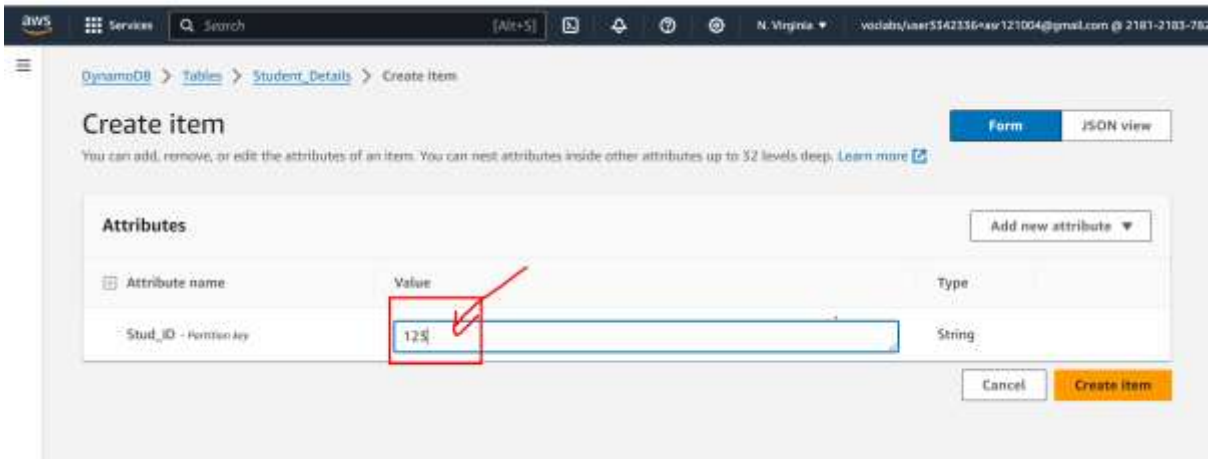
5. Click on the table “Student_Details”



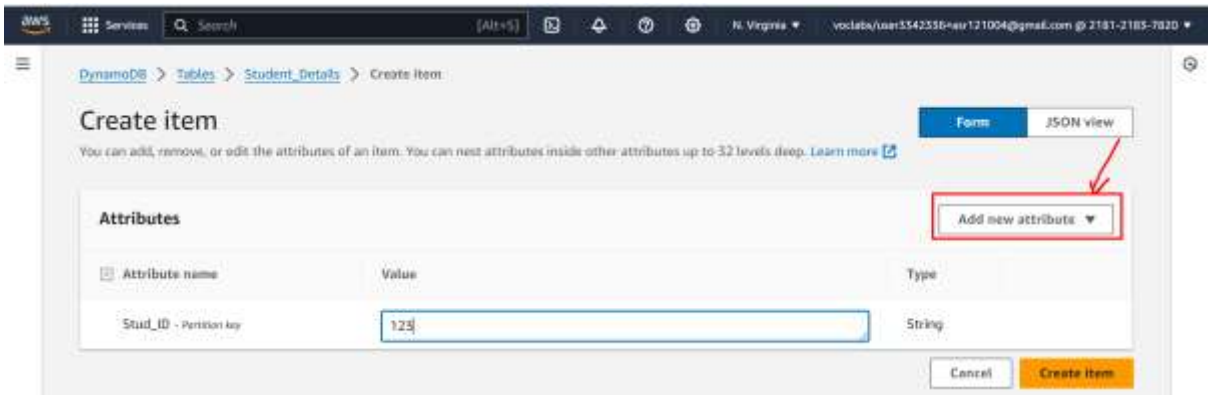
6. To create an Item =➔ click on actions =➔ click on Create Item

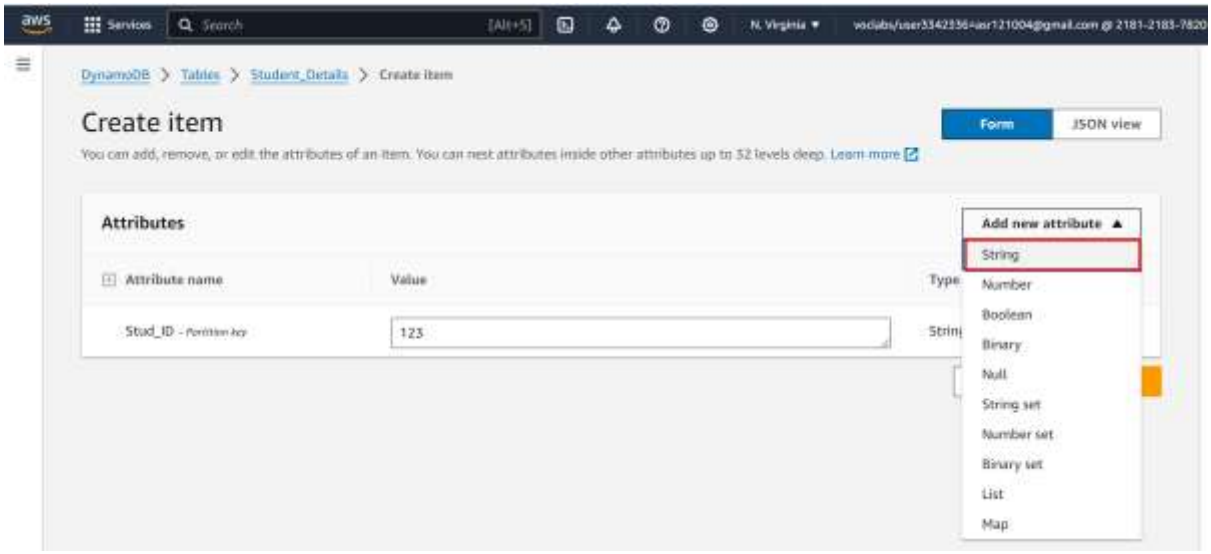


7. Enter the Stud_Id

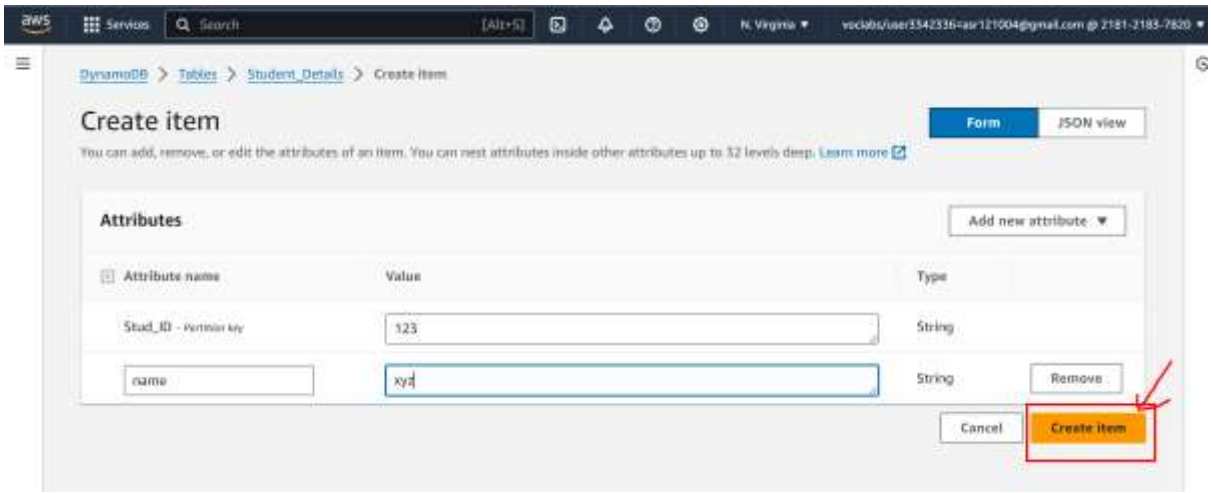


8. To add more attributes click on Add new attributes and select the datatype

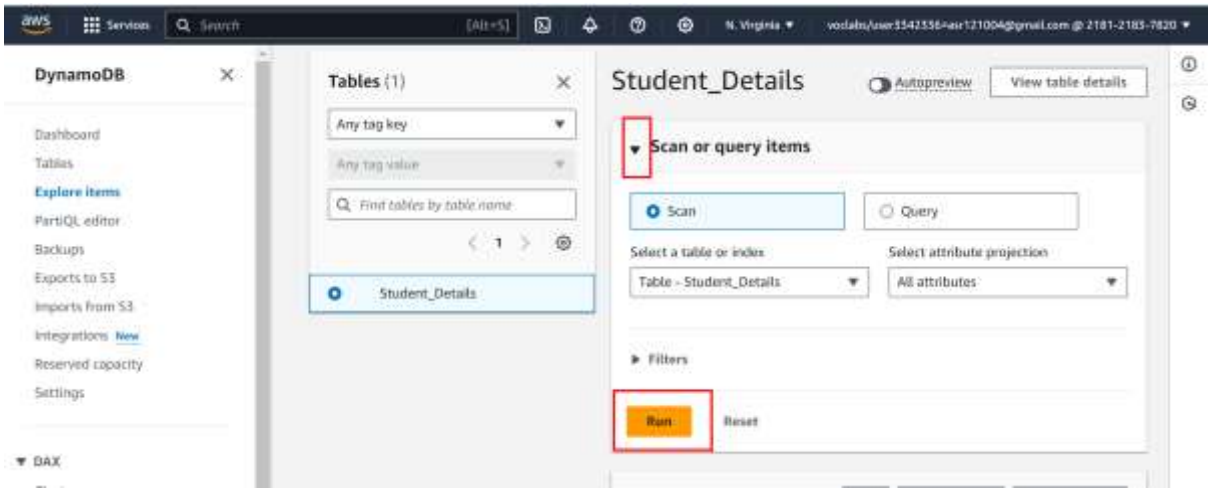




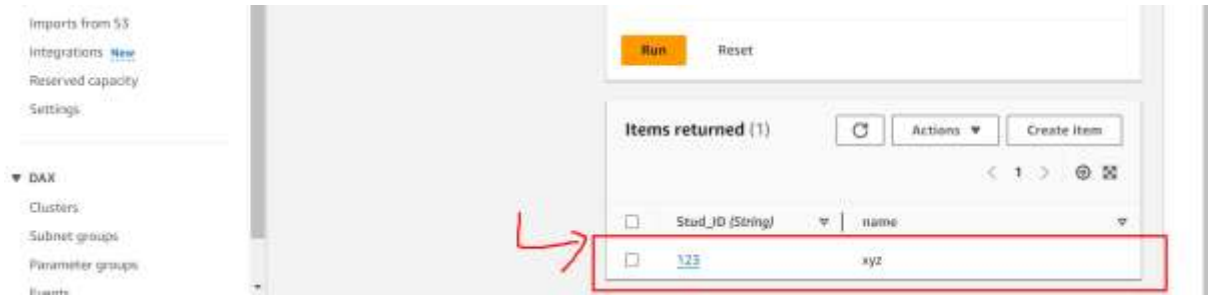
9. Click on create item



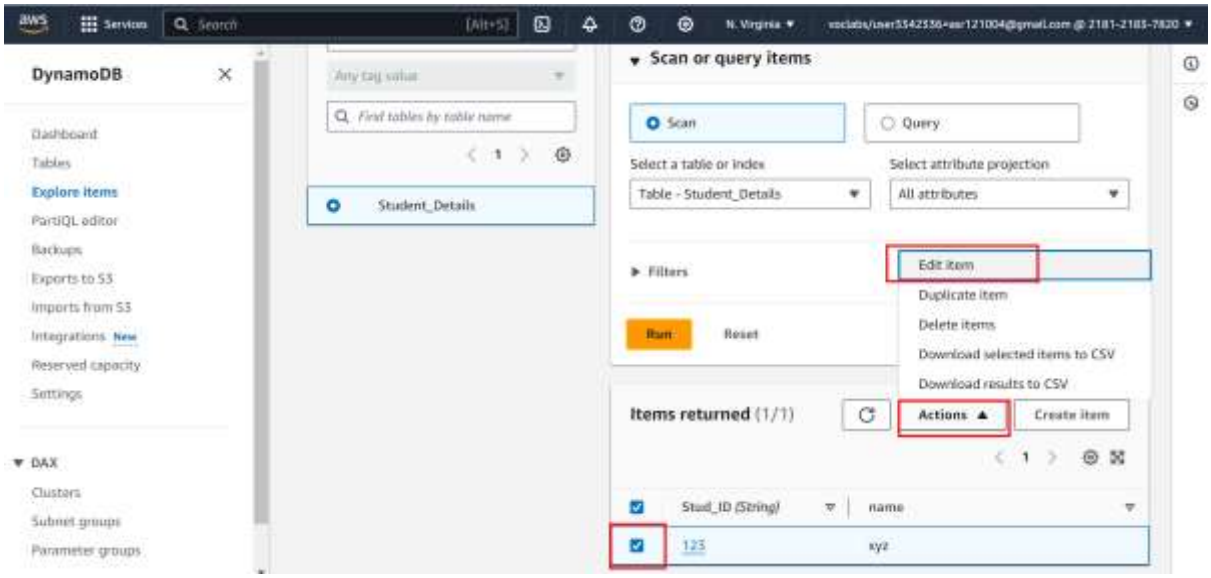
10. To scan the table expand “Scan or Query Items” then click on “Run”



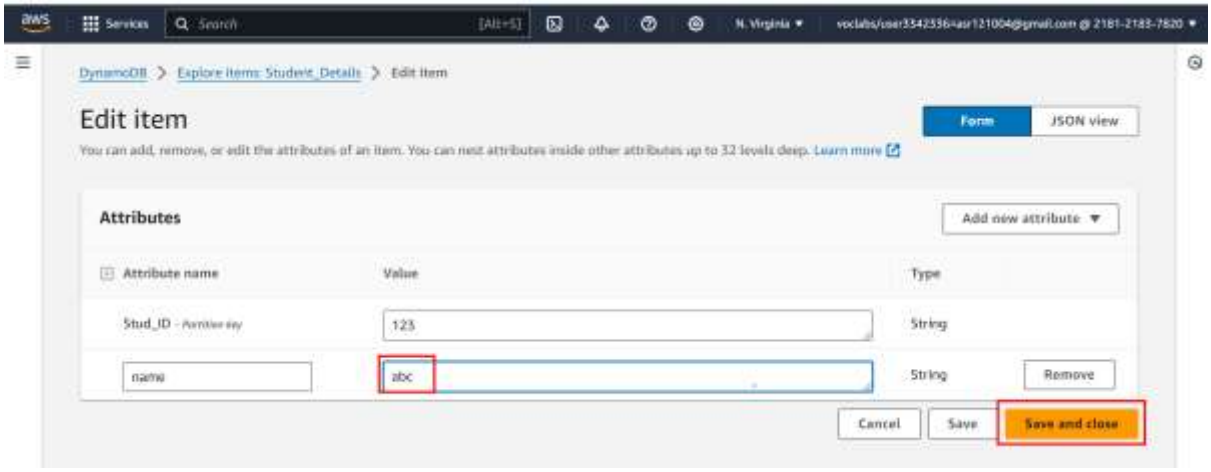
11. Now you can read all the items from the table



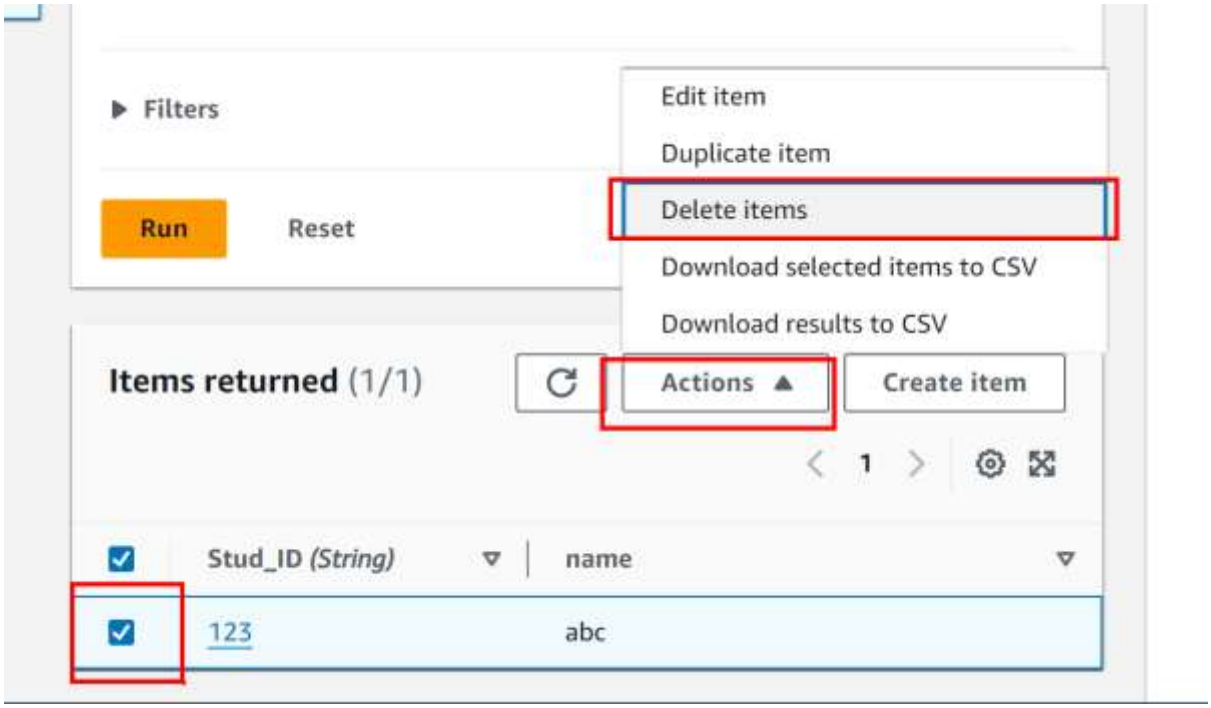
12. To update the data of an Item then select the item ➔ Click on Actions ➔ Click on Edit Item

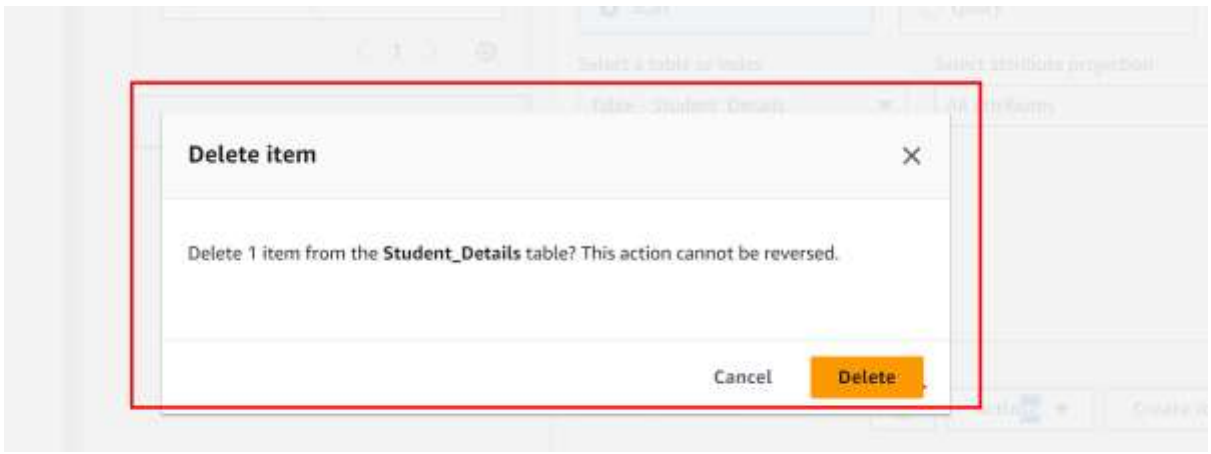


13. Now change the value which you required to update then click on Save and Close



14. Now if you want to delete any Item then select the Items ➔ Actions ➔ Click on Delete Items ➔ Click on Delete

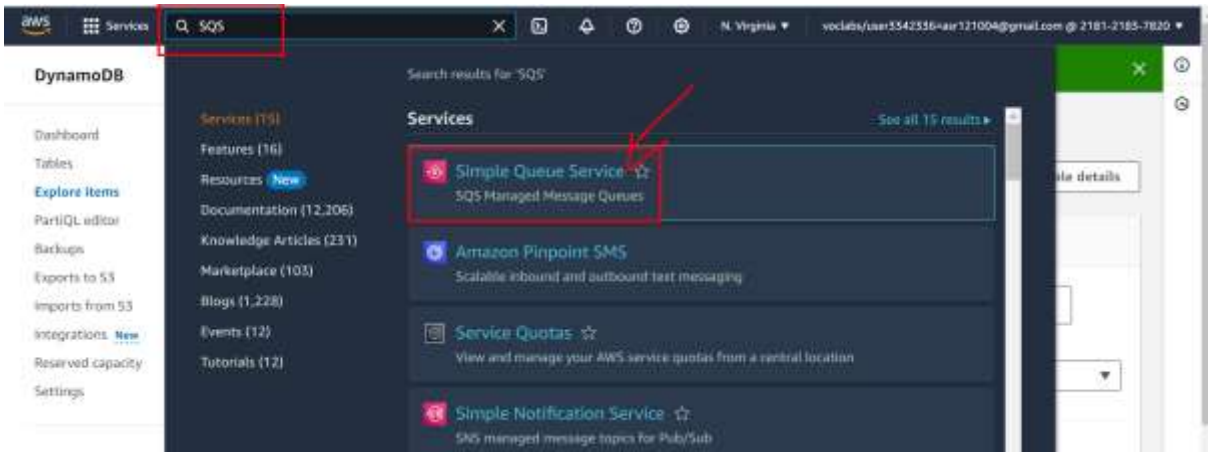




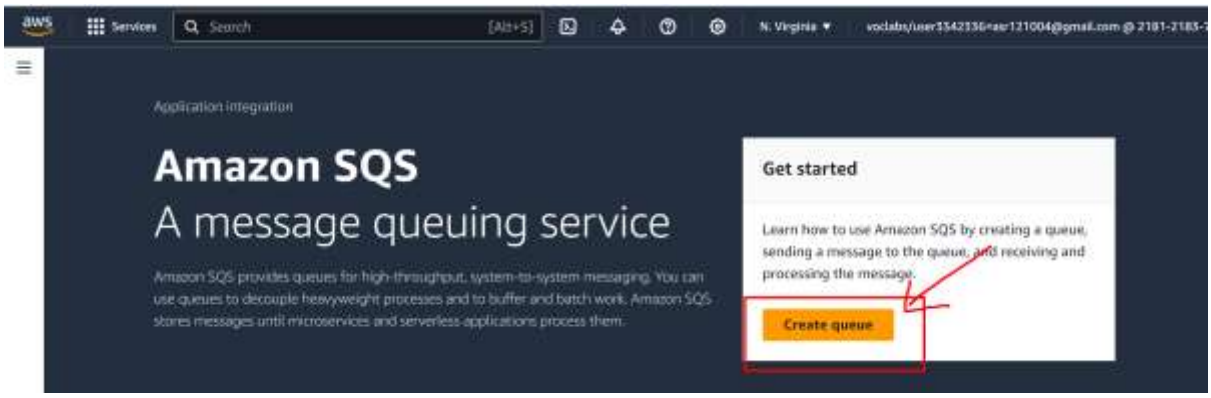
10. Create loosely coupled services with Amazon SQS and Amazon SNS to process data received from the applications.

For SQS (Simple Queue Service)

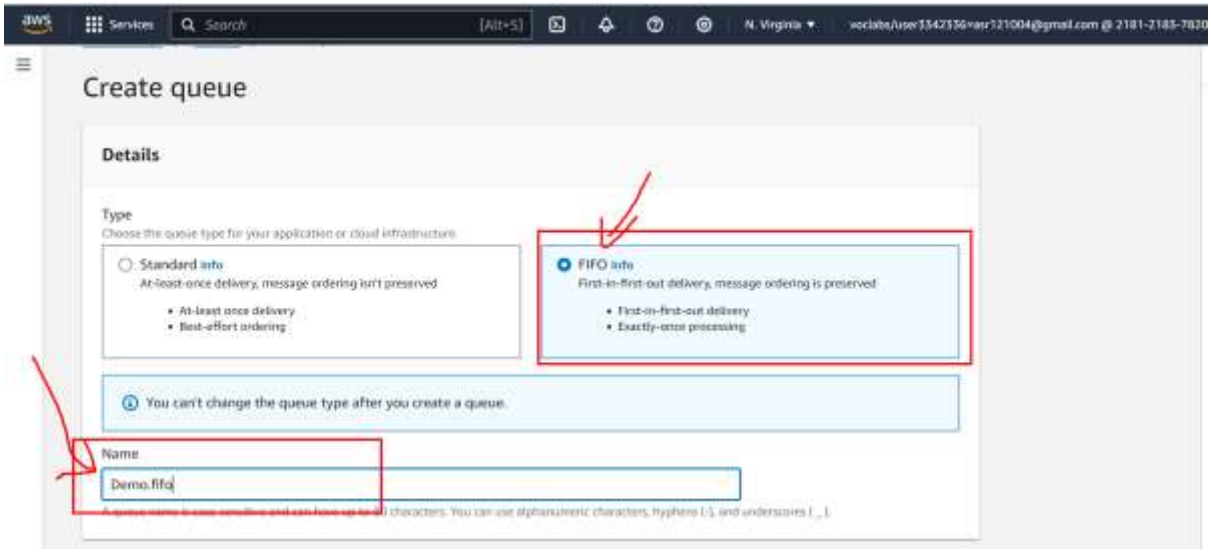
1. Search for SQS then Click on Simple Queue Service



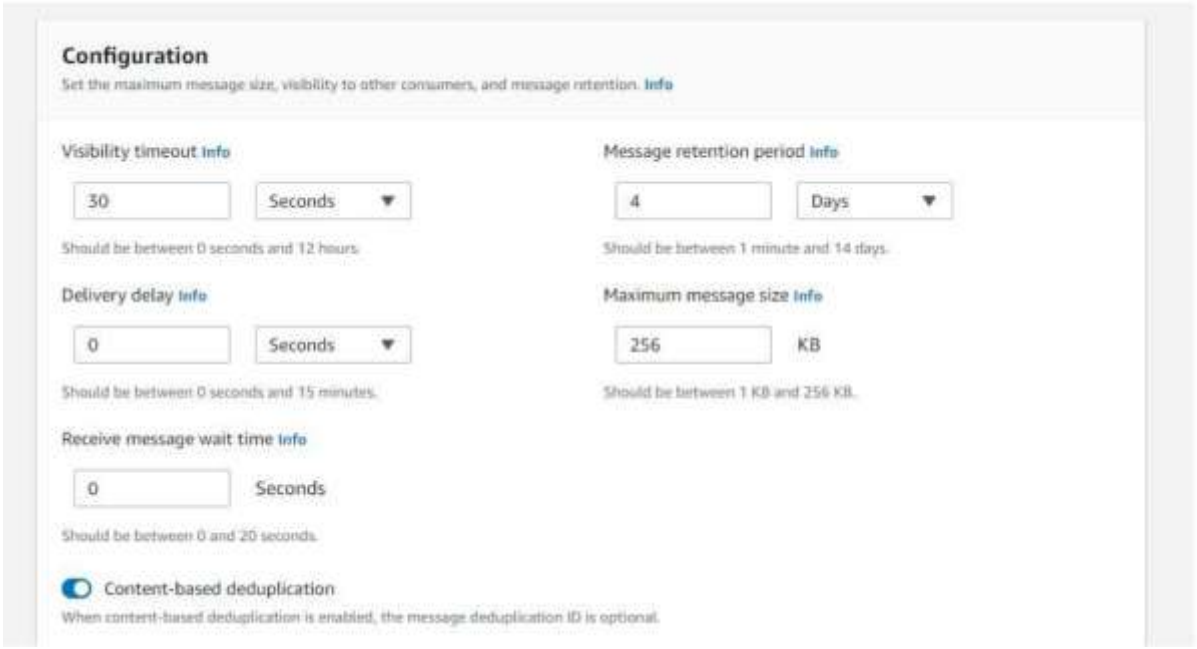
2. Click on Create Queue



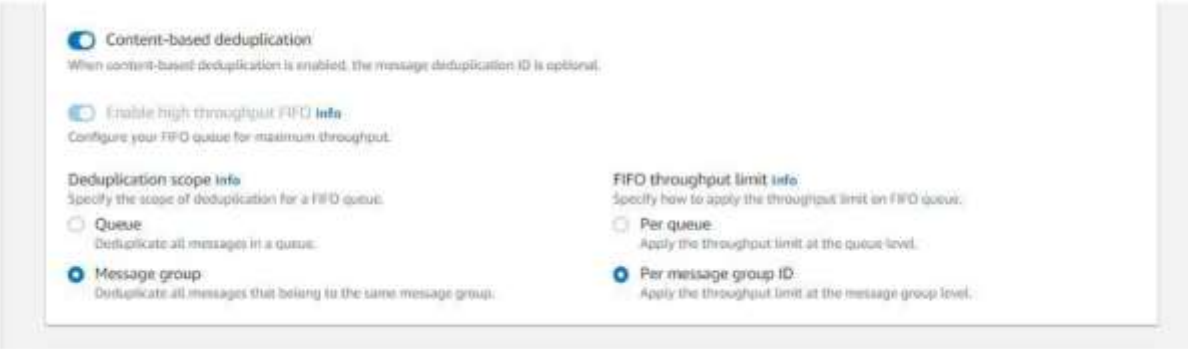
3. Select Fifo ➔ name your Queue



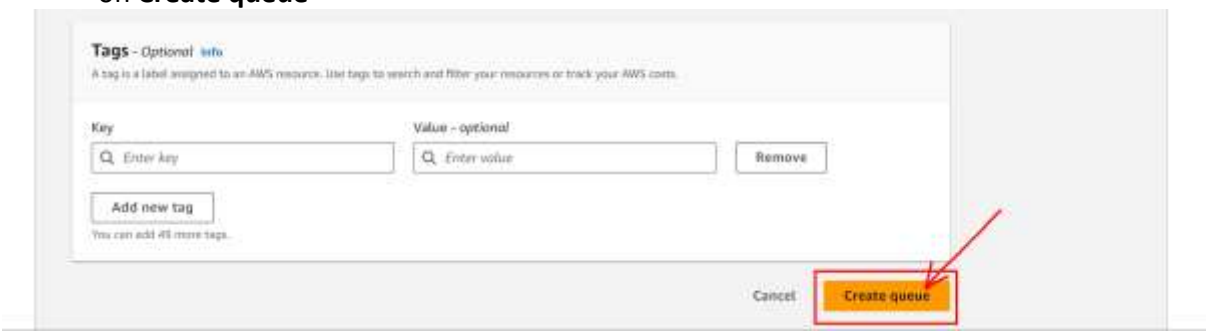
4. Keep the configuration as default options and Click on Content-based deduplication because we have a message group ID, it ensures the same message if you send it with same group ID will not be Duplicated.



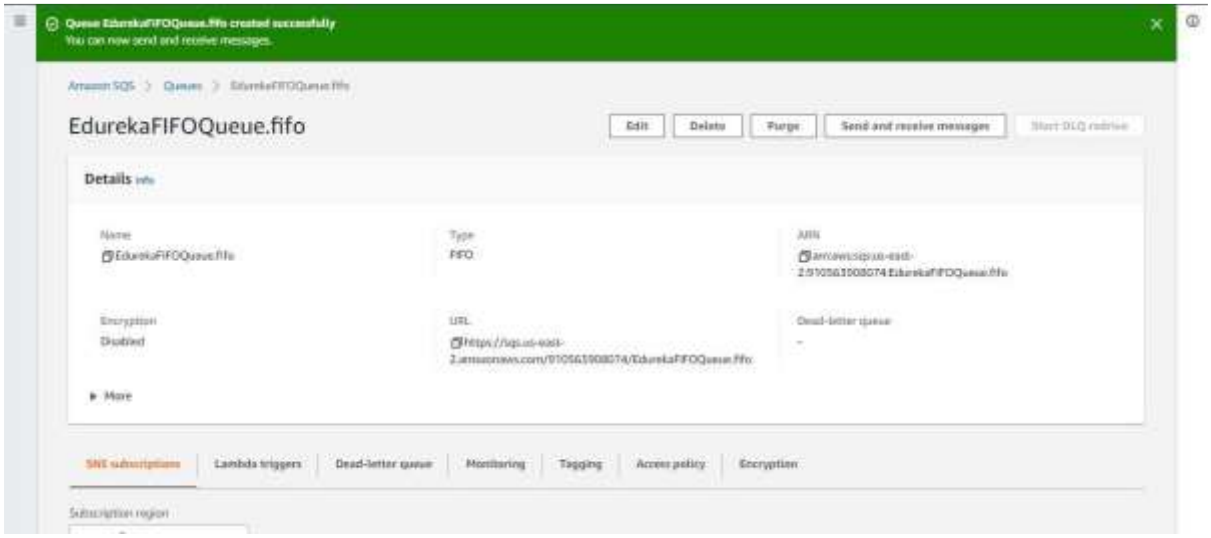
5. Also Check the **Message group** and **Per message group** options in the Deduplication scope



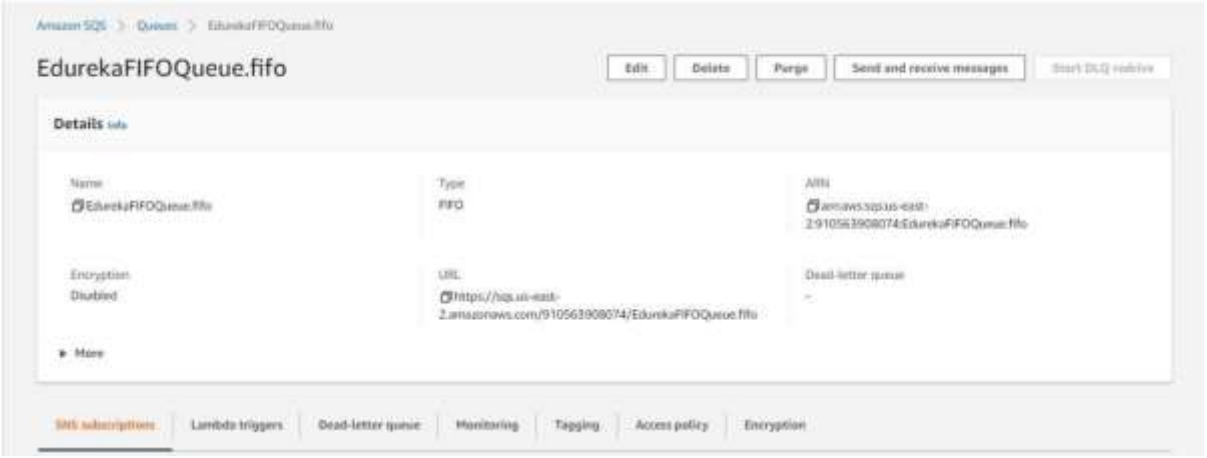
6. Keep the Access policy options as default and keep all other Options as default and click on **Create queue**



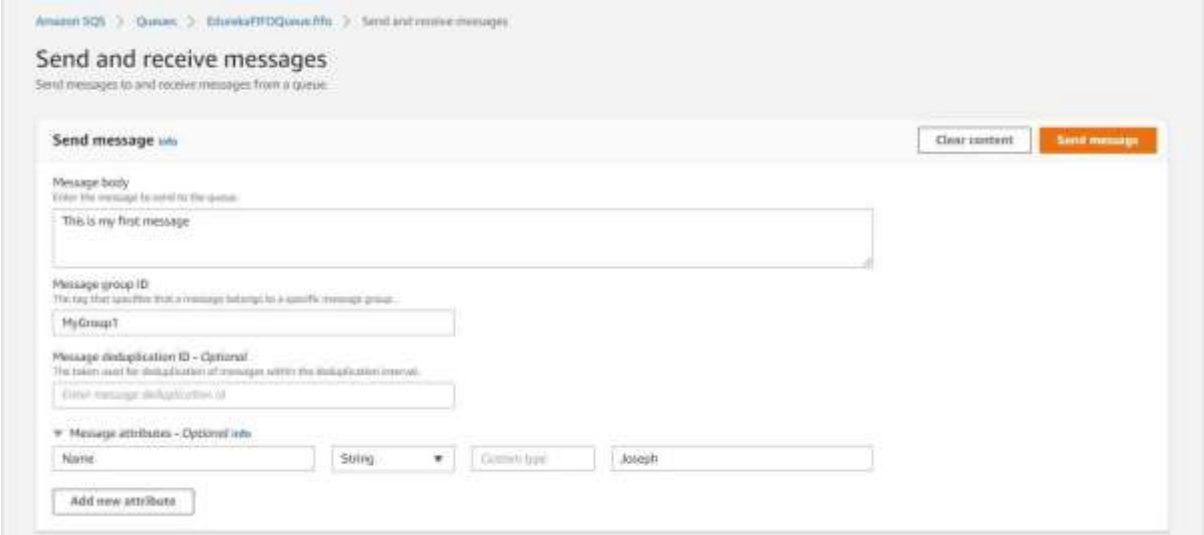
7. Now the FIFO Queue is successfully created. We can see the description of the Queue



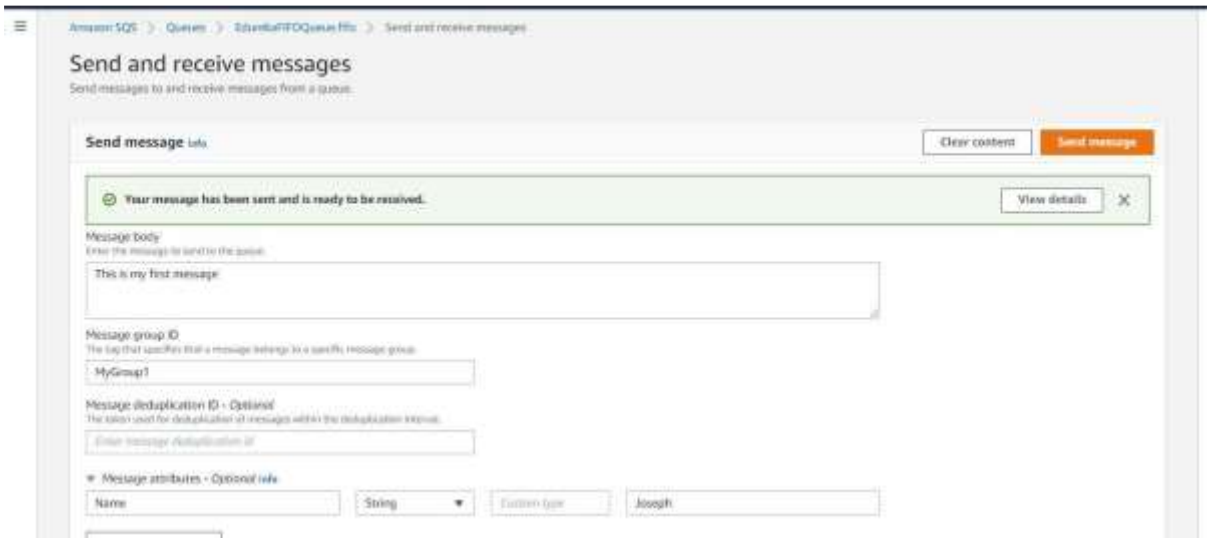
8. Click on Send and receive messages



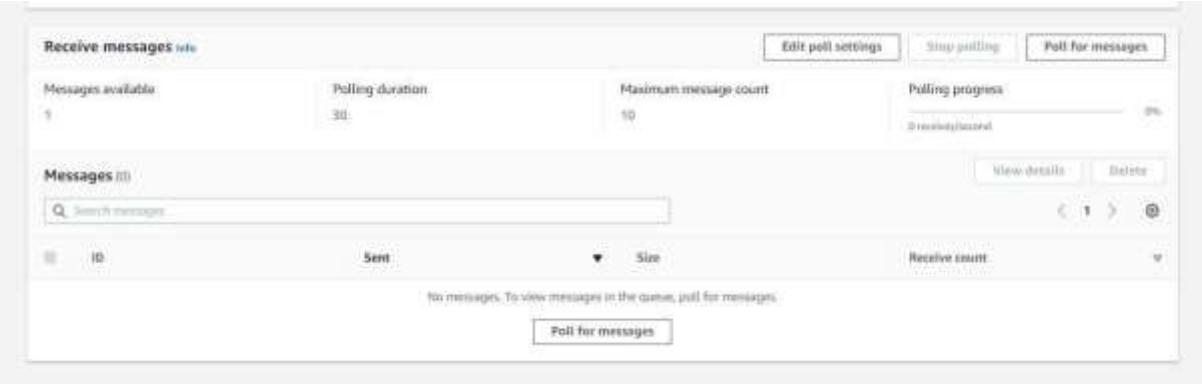
9. Enter the message in the Message Body, enter the Message group ID as **MyGroup1** and you can also message attributes.

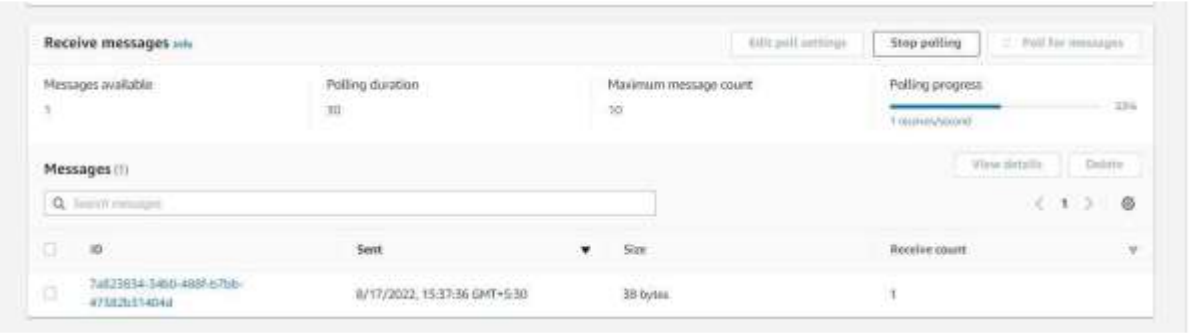


10. Click on Send message and the message has been send, ready to receive in the message section.

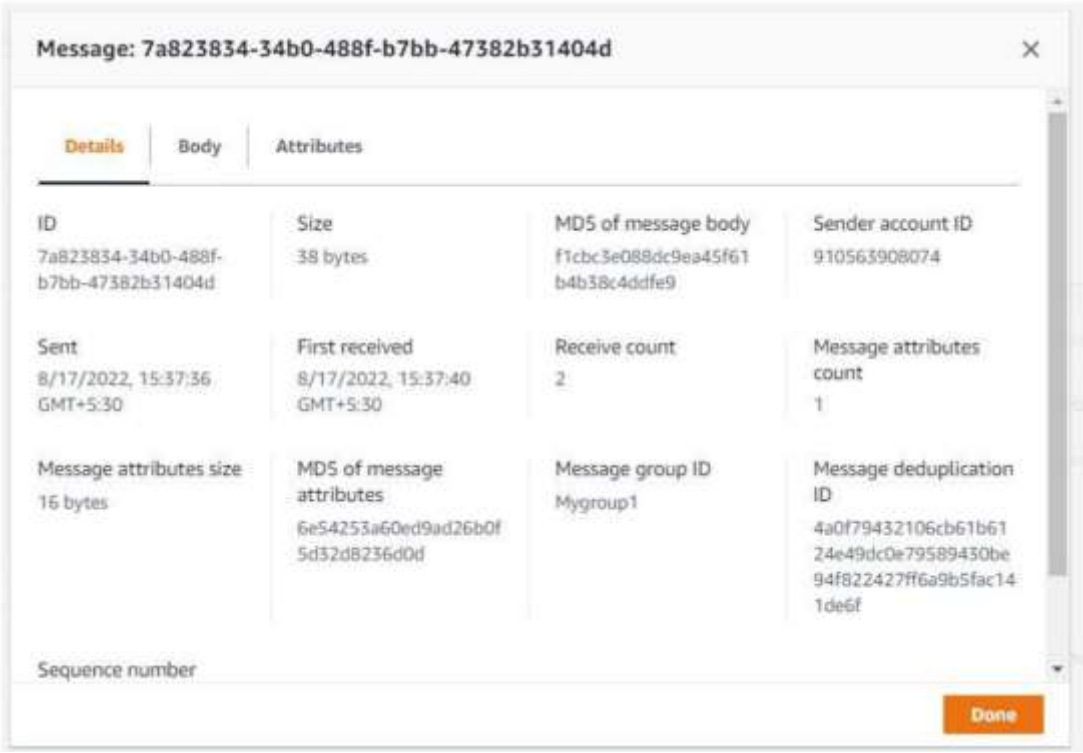


11. Here one message is available and polling duration is 30, Now Click on the **Poll for messages** and we can see the received message.

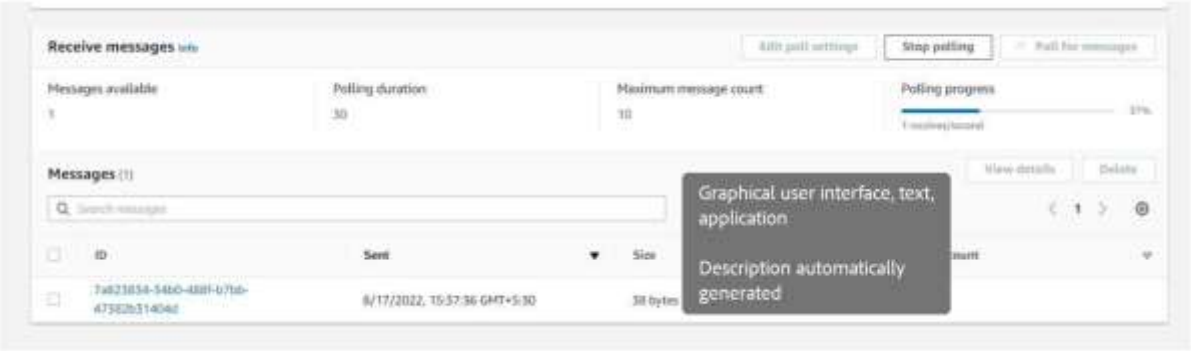




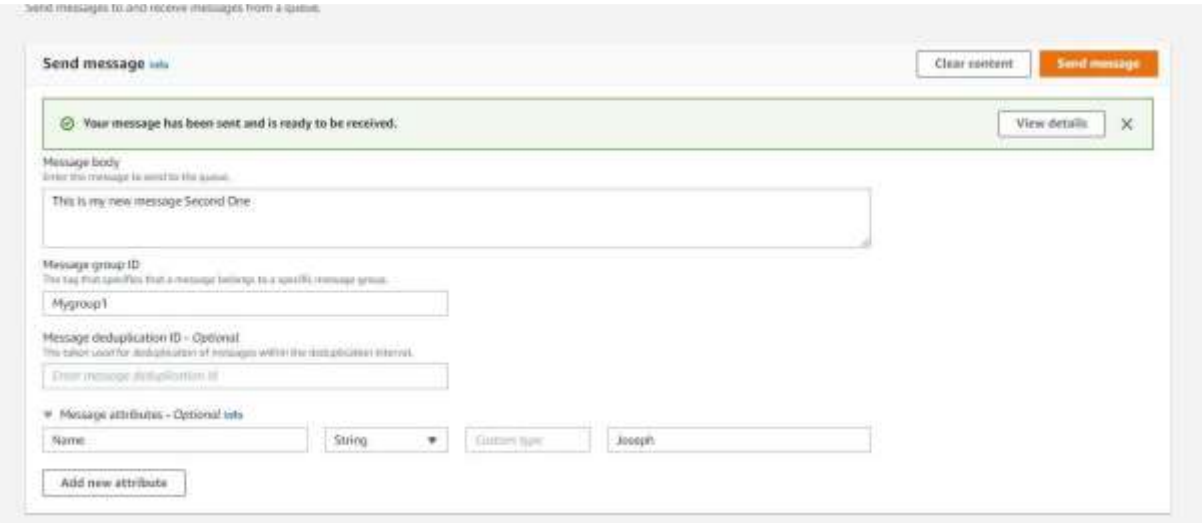
12. Now Click on ID to check the specifications of the Received message.

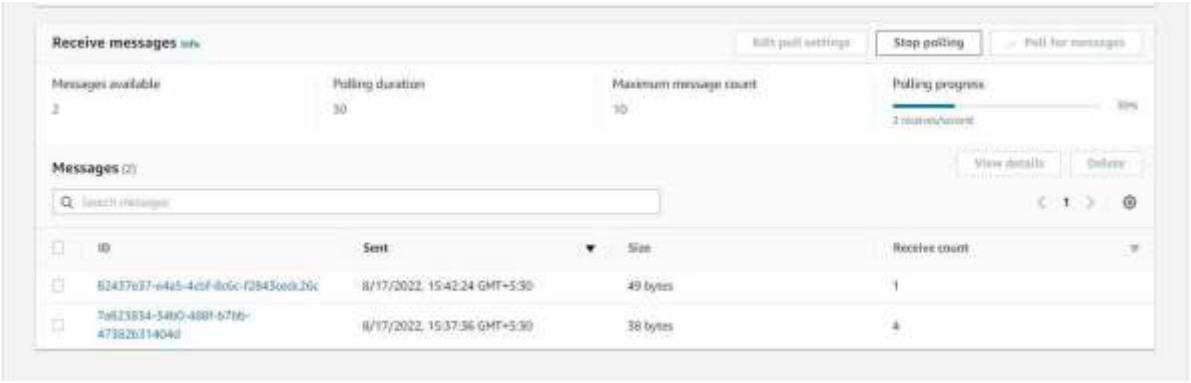


13. Now again send the message, we can see the same message is coming, it is not creating any new IDs for it, Here the message deduplication helped us if you send the same message again with the same Group ID, it will consider as same message. \



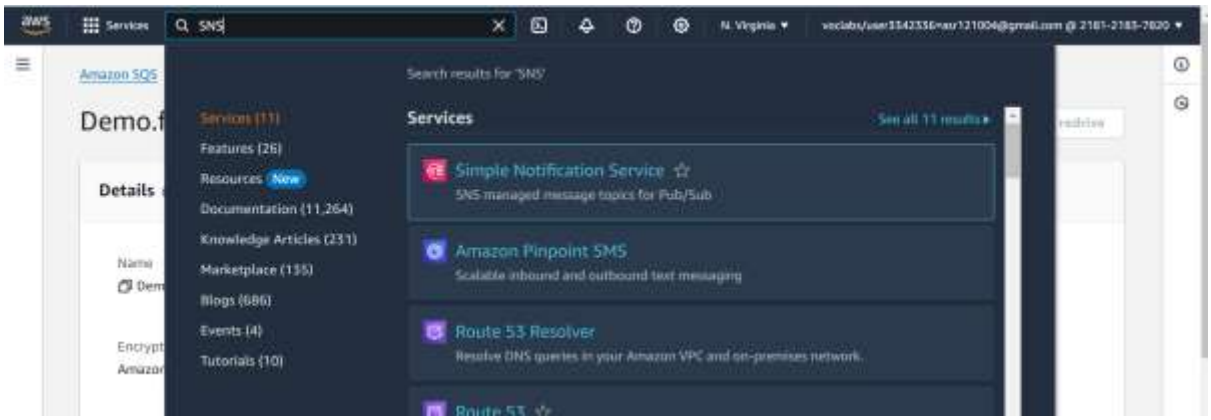
14. Now we edit the message with the same Group ID and send the message, we can see the after polling the ID has changed.



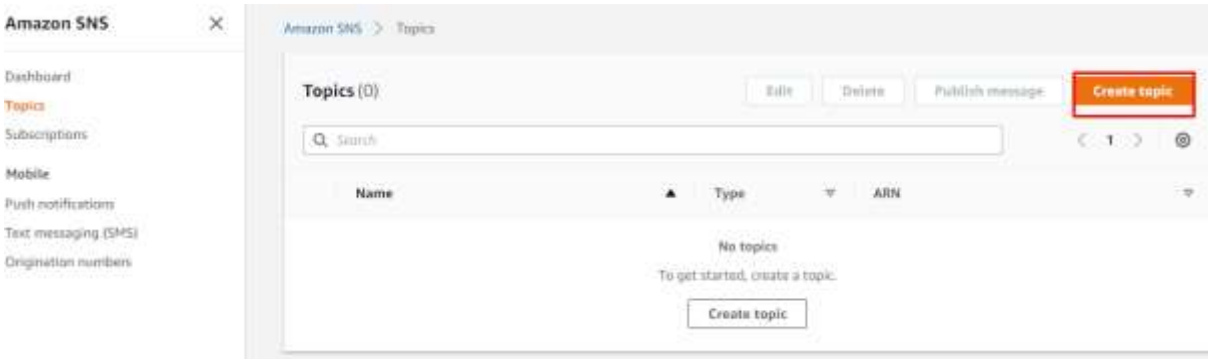


For SNS (Simple Notification Service)

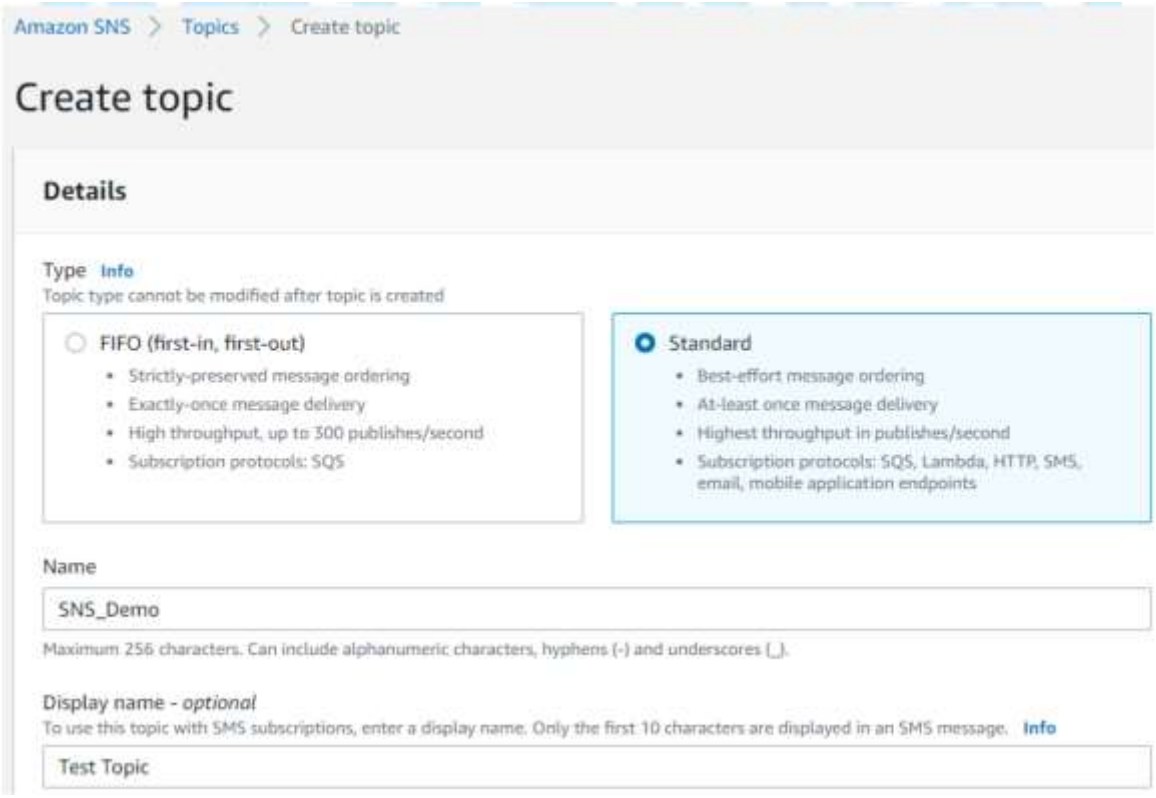
1. Search for SNS then Click on Simple Notification Service

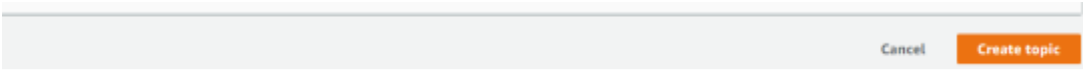


2: To create a topic, click on **Create Topic**.

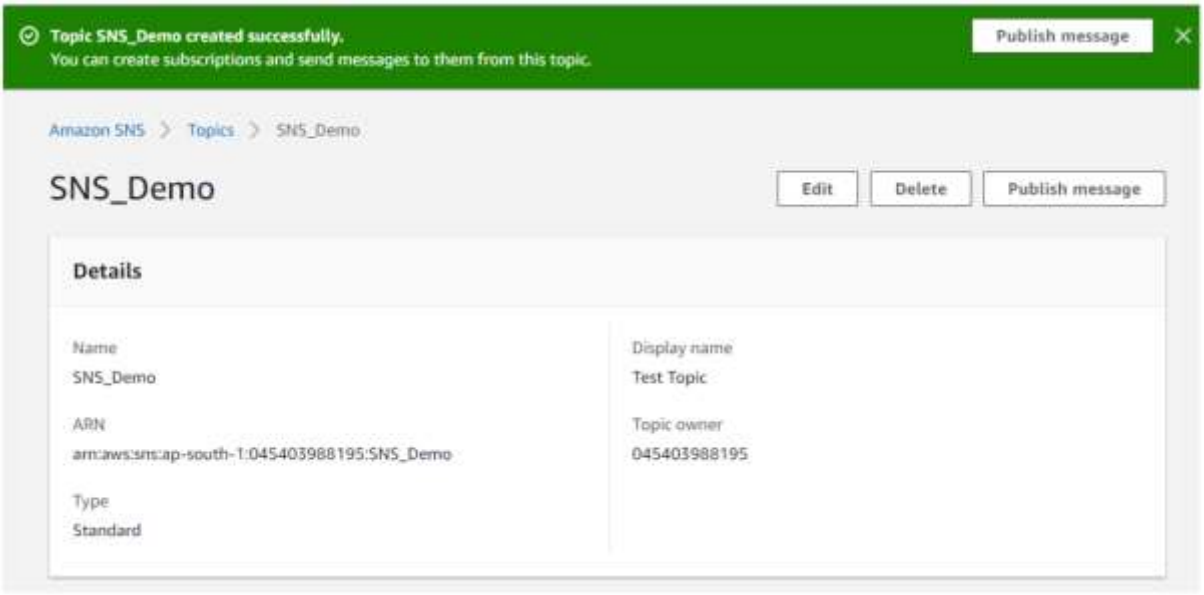


3: Enter the topic name followed by the display name and click on **Create topic**.

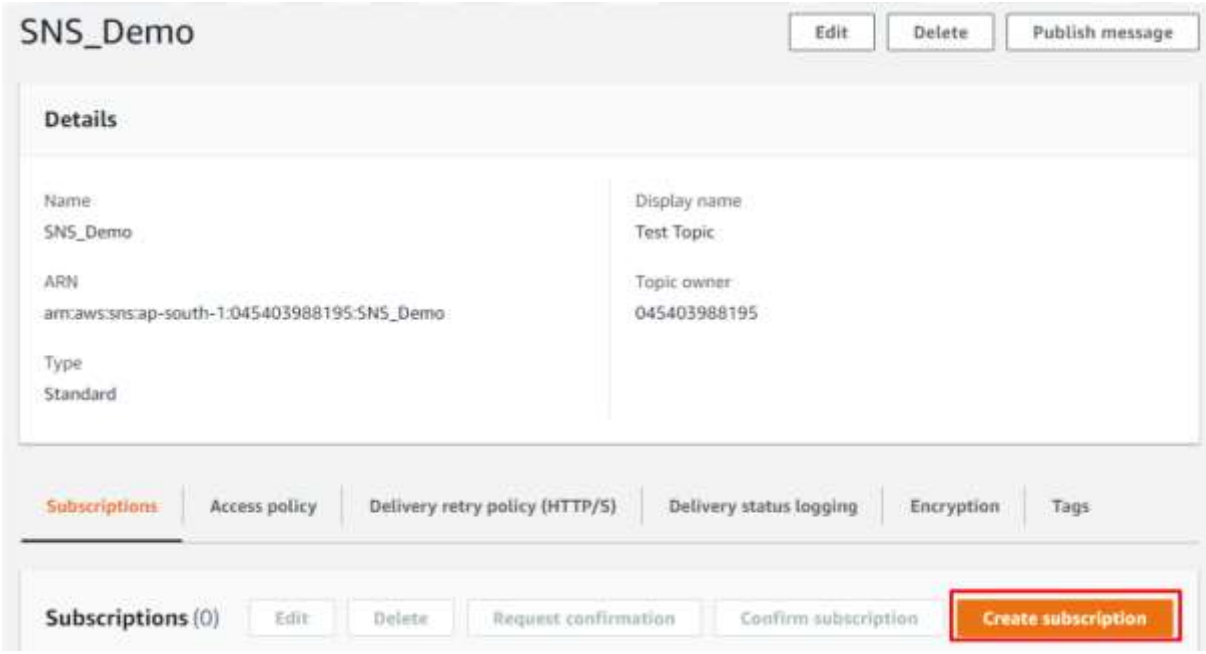




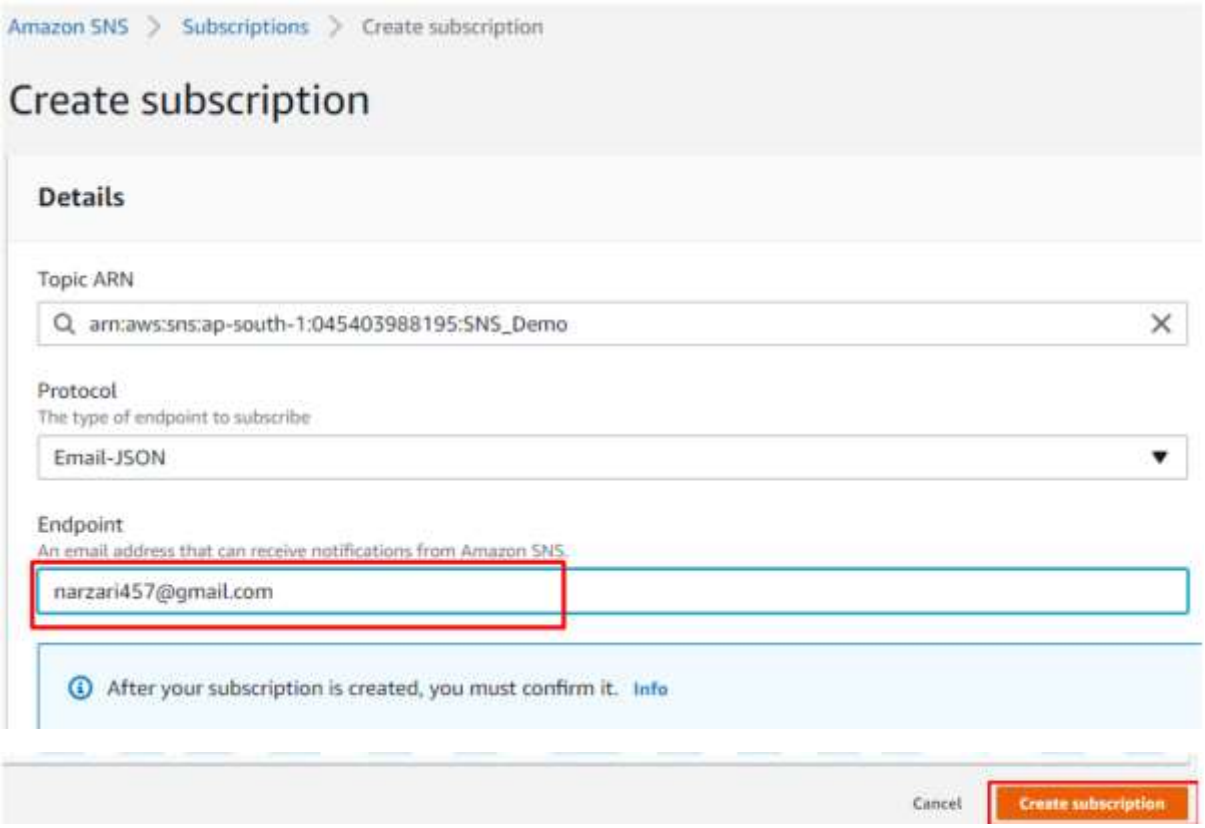
Our SNS topic has been successfully created as shown below



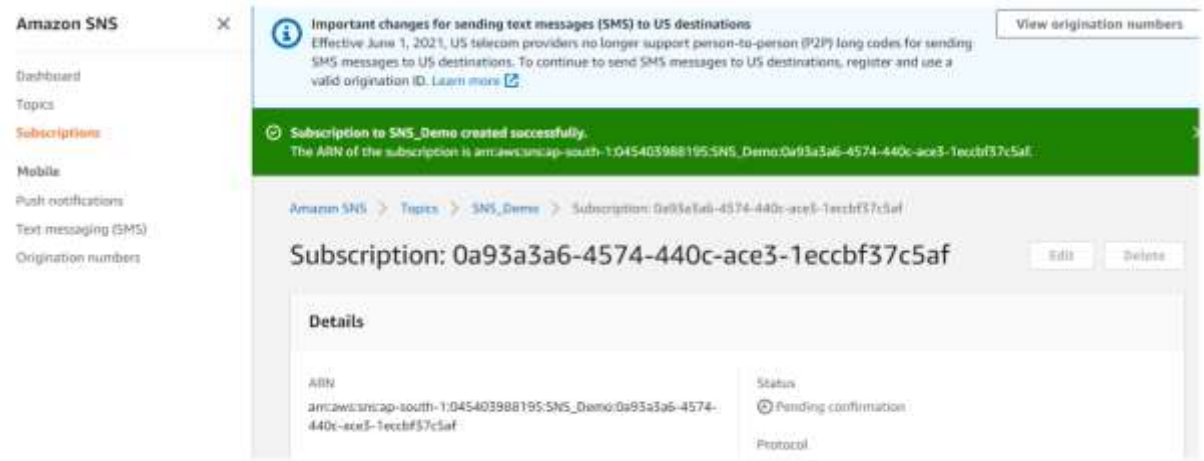
4: Click on **Create Subscription**.



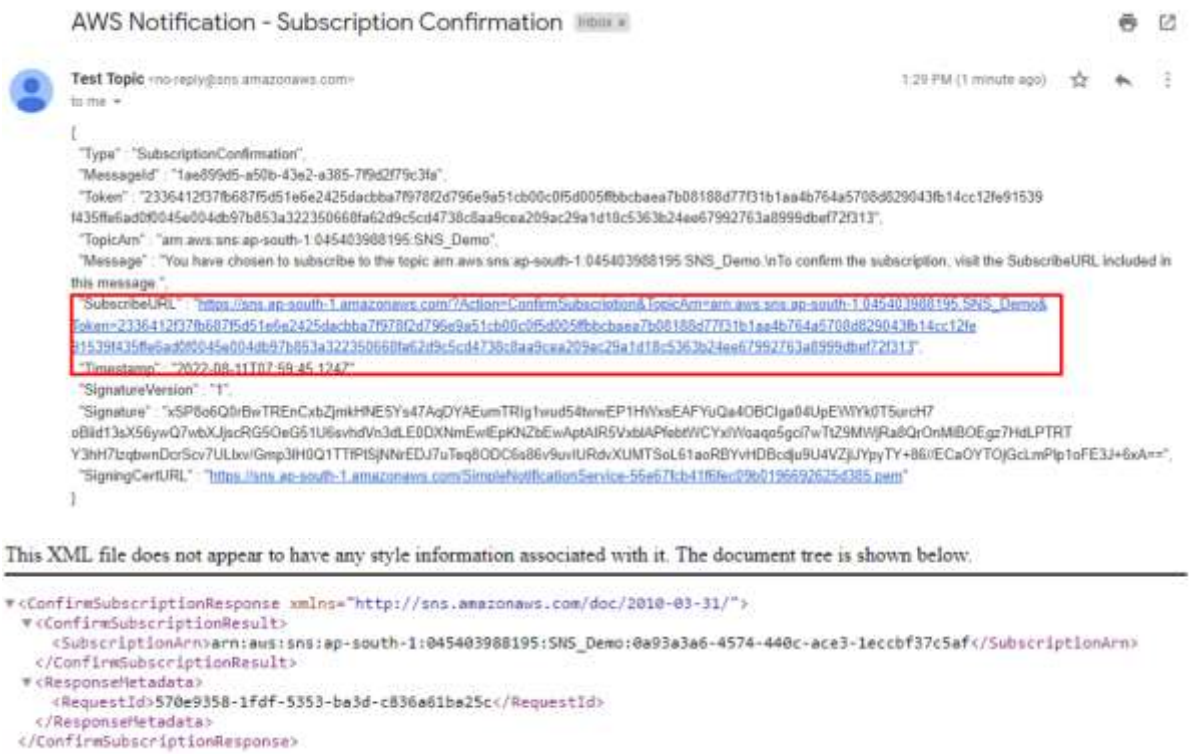
5: Choose the protocol (**Email-JSON**), enter your e-mail address in the endpoint box and click on **Create subscription**.



Our subscrption has been created successfully as shown below



6: When you receive a verification e-mail, click on the **Subscription URL** to confirm the subscription.



This XML file does not appear to have any style information associated with it. The document tree is shown below.

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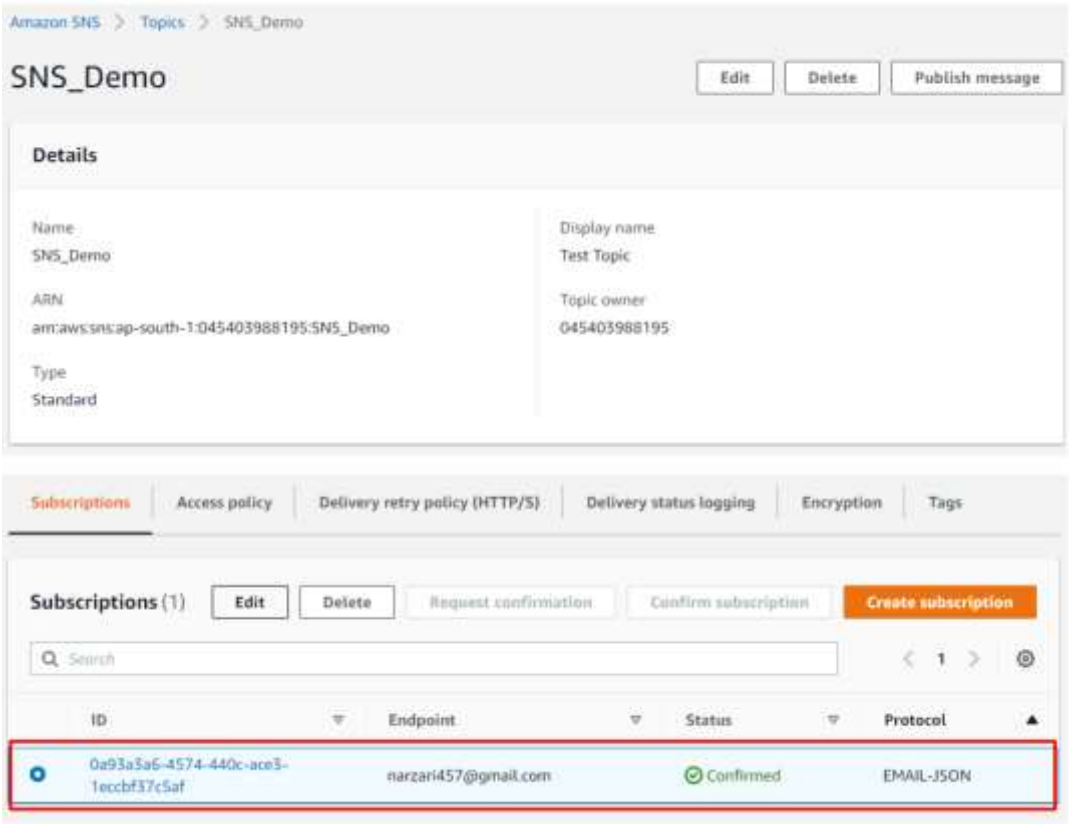
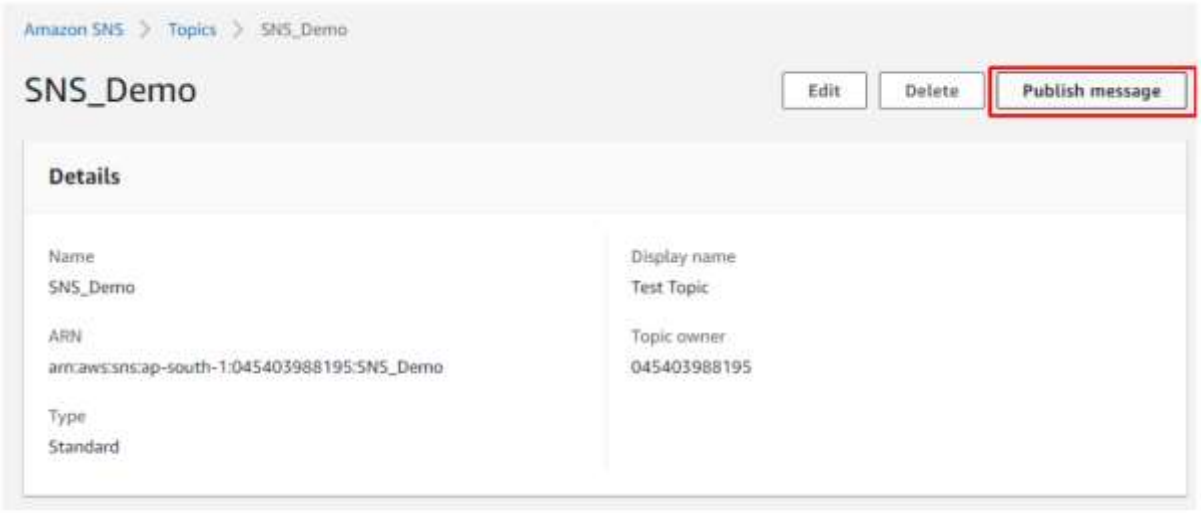
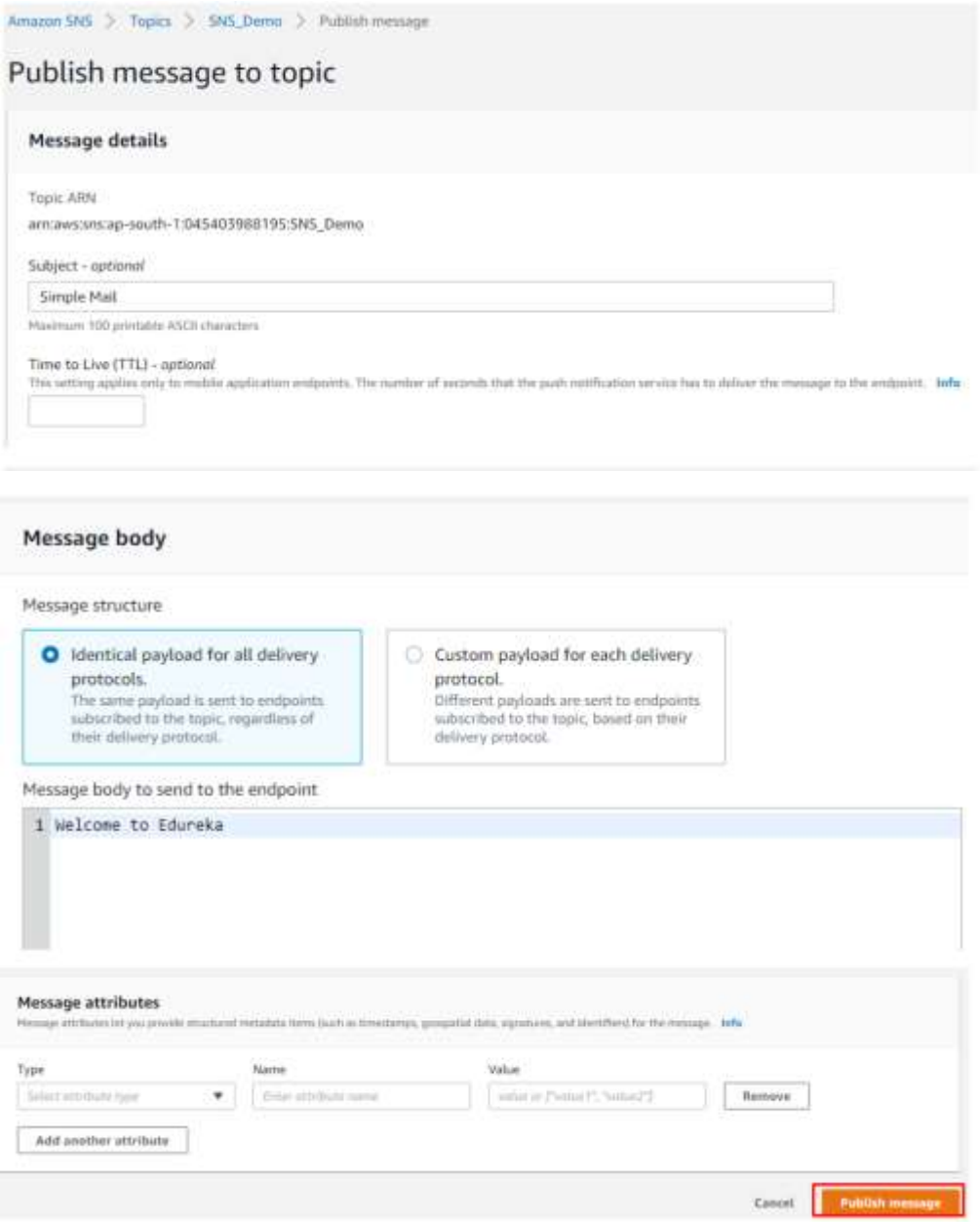
▼<ConfirmSubscriptionResponse xmlns="http://sns.amazonaws.com/doc/2010-03-31/">
  ▼<ConfirmSubscriptionResult>
     <SubscriptionArn>arn:aws:sns:ap-south-1:045403988195:SNS_Demo:0a93a3a6-4574-440c-ace3-1eccbf37c5af</SubscriptionArn>
   </ConfirmSubscriptionResult>
  ▼<ResponseMetadata>
     <RequestId>570e9358-1fdf-5353-ba3d-c836a61ba25c</RequestId>
   </ResponseMetadata>
 </ConfirmSubscriptionResponse>
```

7: Move back to the AWS Console and select the topic that you just created. You will find a **Subscription ID**. Now, publish the data by clicking on **Publish message**.

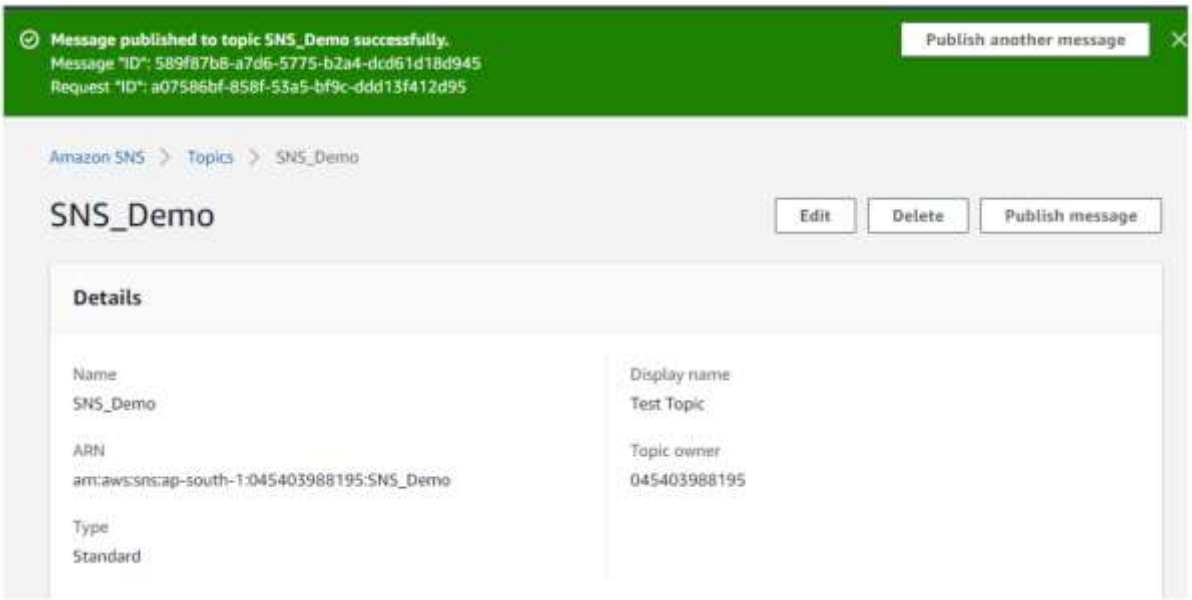




8: Enter the subject, type the message, and click on **Publish message.**



Our Message has been published successfully



9: Check your mailbox.

Note: You will receive a mail whenever some data is published.