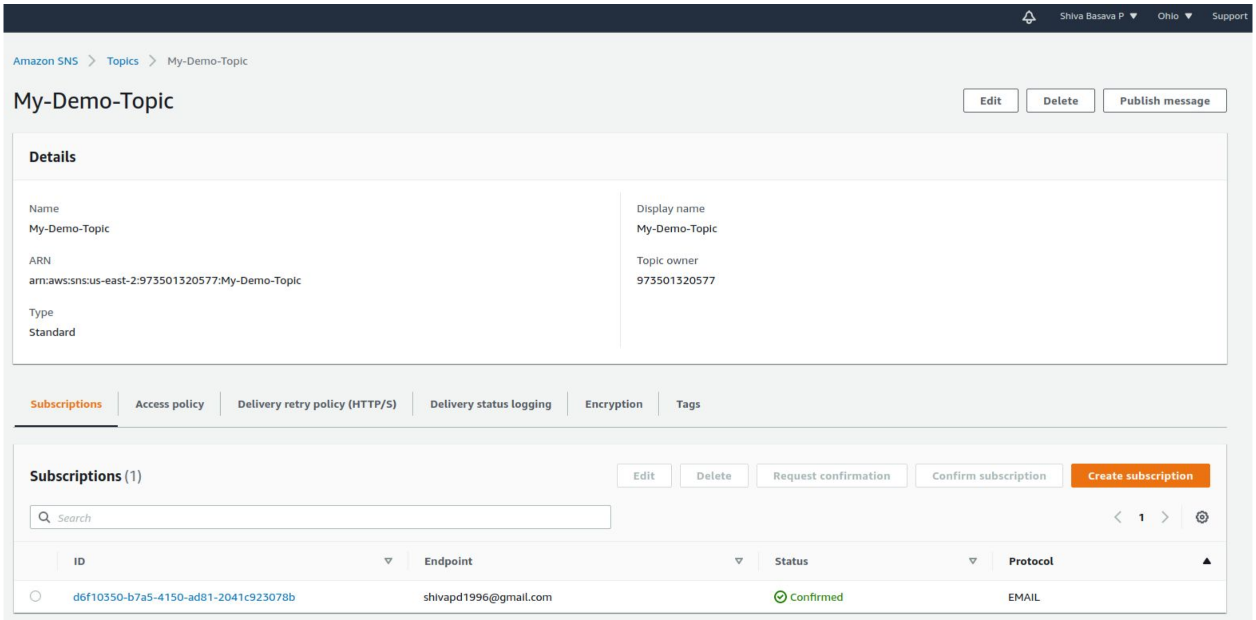
Assignment Solution Day 11 & 12

I. Day 11 Task & Solutions

1. **Task 1**:Working with **SNS**

Following is the screenshot -

SNS console, after creating **Topic** & **Subscriptions**



My-Demo-Topic

Details

Name
My-Demo-Topic

ARN
arn:aws:sns:us-east-2:973501320577:My-Demo-Topic

Type
Standard

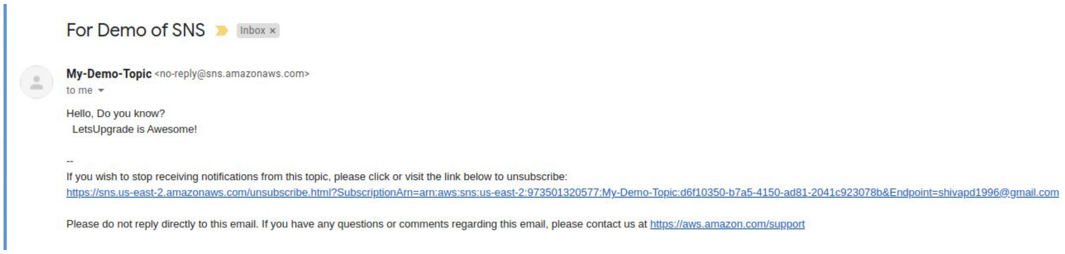
Display name
My-Demo-Topic

Topic owner
973501320577

Subscriptions (1)

ID	Endpoint	Status	Protocol
d6f10350-b7a5-4150-ad81-2041c923078b	shivapd1996@gmail.com	Confirmed	EMAIL

Inbox with the **published message,** After publishing the message from the above **SNS** to the **Subscriber**



For Demo of SNS

My-Demo-Topic <no-reply@sns.amazonaws.com>

Hello, Do you know?
LetsUpgrade is Awesome!

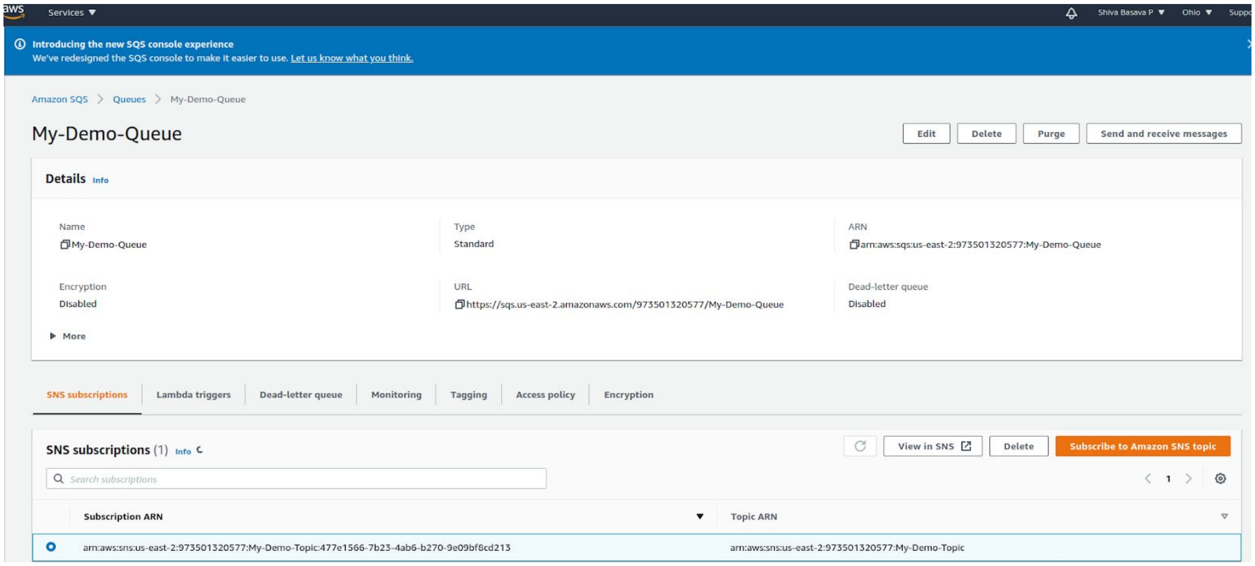
--
If you wish to stop receiving notifications from this topic, please click or visit the link below to unsubscribe:
https://sns.us-east-2.amazonaws.com/unsubscribe.html?SubscriptionArn=arn:aws:sns:us-east-2:973501320577:My-Demo-Topic:d6f10350-b7a5-4150-ad81-2041c923078b&Endpoint=shivapd1996@gmail.com

Please do not reply directly to this email. If you have any questions or comments regarding this email, please contact us at https://aws.amazon.com/support

2. **<u>Task 2</u>** :Working with **SQS**

Following is the screenshot -

SQS console after creating a Queue & **subscribing** it to a SNS



Introducing the new SQS console experience
We've redesigned the SQS console to make it easier to use. Let us know what you think.

My-Demo-Queue

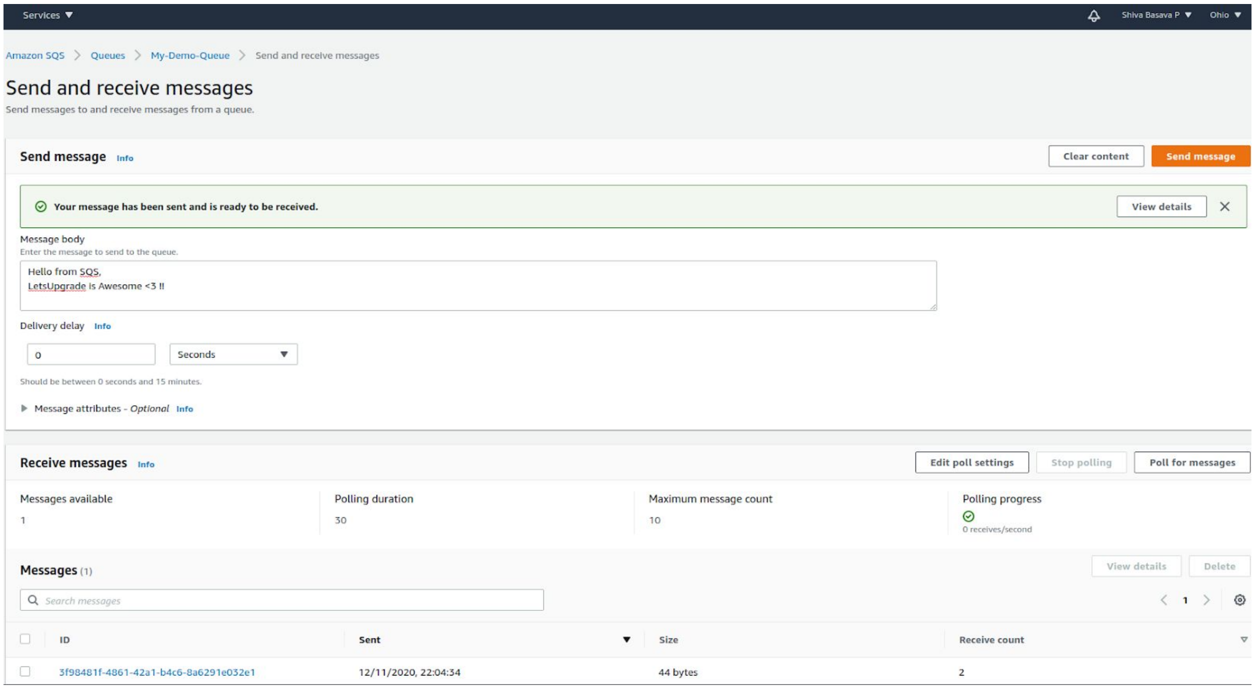
Details

Name: My-Demo-Queue
Type: Standard
ARN: arn:aws:sqs:us-east-2:973501320577:My-Demo-Queue
Encryption: Disabled
URL: https://sqs.us-east-2.amazonaws.com/973501320577/My-Demo-Queue
Dead-letter queue: Disabled

SNS subscriptions (1)

	Subscription ARN	Topic ARN
●	arn:aws:sns:us-east-2:973501320577:My-Demo-Topic:477e1566-7b23-4ab6-b270-9e09bf8cd213	arn:aws:sns:us-east-2:973501320577:My-Demo-Topic

Polling for messages



Send and receive messages
Send messages to and receive messages from a queue.

Send message

Your message has been sent and is ready to be received.

Message body
Enter the message to send to the queue.

Hello from SQS,
LetsUpgrade is Awesome <3 !!

Delivery delay: 0 Seconds
Should be between 0 seconds and 15 minutes.

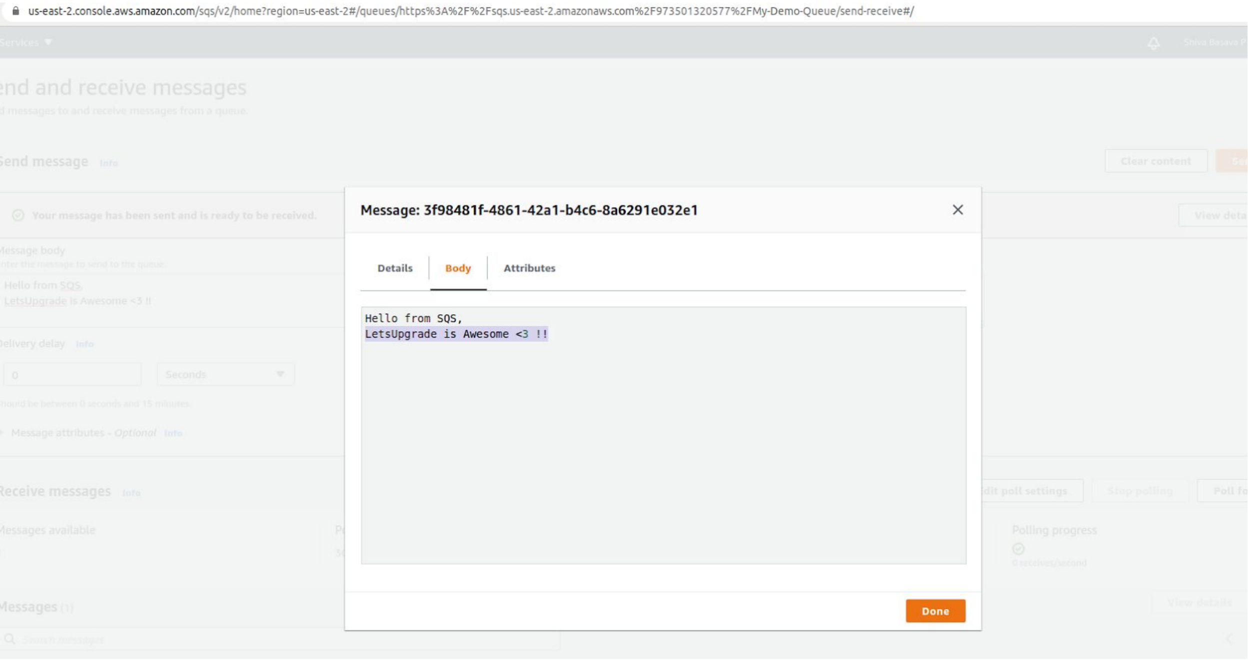
Receive messages

Messages available	Polling duration	Maximum message count	Polling progress
1	30	10	0 receives/second

Messages (1)

□	ID	Sent	Size	Receive count
□	3f98481f-4861-42a1-b4c6-8a6291e032e1	12/11/2020, 22:04:34	44 bytes	2

Displayed the polled message window.



us-east-2.console.aws.amazon.com/sqs/v2/home?region=us-east-2#/queues/https%3A%2F%2Fsqs.us-east-2.amazonaws.com%2F973501320577%2FMy-Demo-Queue/send-receive#/

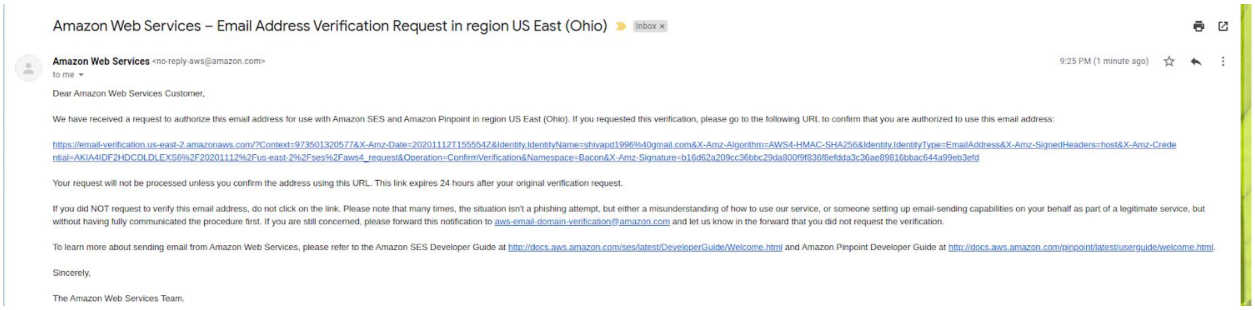
Message: 3f98481f-4861-42a1-b4c6-8a6291e032e1

```
Hello from SQS,
LetsUpgrade is Awesome <3 !!
```

3. **<u>Task 3</u>:** Working with **SES**

Following is the screenshot -

Inbox mail for verification of **SES** service



Amazon Web Services – Email Address Verification Request in region US East (Ohio)

Amazon Web Services <no-reply-aws@amazon.com>
to me

9:25 PM (1 minute ago)

Dear Amazon Web Services Customer,

We have received a request to authorize this email address for use with Amazon SES and Amazon Pinpoint in region US East (Ohio). If you requested this verification, please go to the following URL to confirm that you are authorized to use this email address:

https://email-verification.us-east-2.amazonaws.com/?Context=973501320577&X-Amz-Date=20201112T155554Z&Identity.IdentityName=shivapd1996%40gmail.com&X-Amz-Algorithm=AWS4-HMAC-SHA256&Identity.IdentityType=EmailAddress&X-Amz-SignedHeaders=host&X-Amz-Credential=AKIA4IDF2HDCDLDLEXS6%2F20201112%2Fus-east-2%2Fses%2Faws4_request&Operation=ConfirmVerification&Namespace=Bacon&X-Amz-Signature=b16d62a209cc36bbc29da800f9f836f8efdda3c36ae89816bbac644a99eb3efd

Your request will not be processed unless you confirm the address using this URL. This link expires 24 hours after your original verification request.

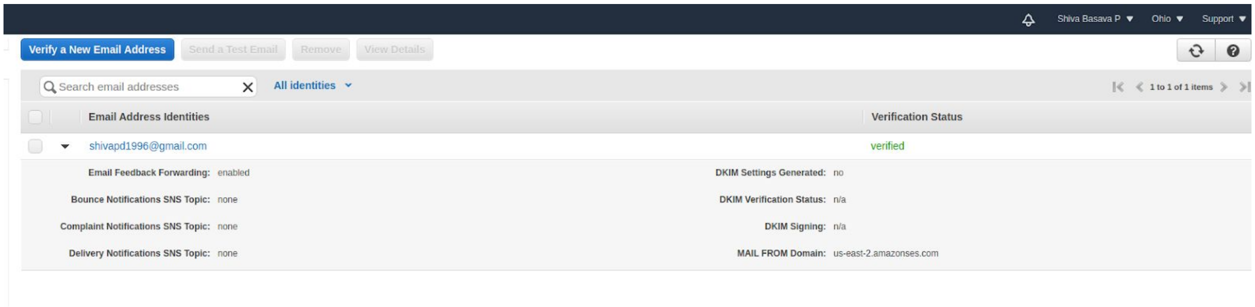
If you did NOT request to verify this email address, do not click on the link. Please note that many times, the situation isn't a phishing attempt, but either a misunderstanding of how to use our service, or someone setting up email-sending capabilities on your behalf as part of a legitimate service, but without having fully communicated the procedure first. If you are still concerned, please forward this notification to aws-email-domain-verification@amazon.com and let us know in the forward that you did not request the verification.

To learn more about sending email from Amazon Web Services, please refer to the Amazon SES Developer Guide at http://docs.aws.amazon.com/ses/latest/DeveloperGuide/Welcome.html and Amazon Pinpoint Developer Guide at http://docs.aws.amazon.com/pinpoint/latest/userguide/welcome.html.

Sincerely,

The Amazon Web Services Team.

Verified email for **SES** subscription



	Email Address Identities	Verification Status
□	shivapd1996@gmail.com	verified

Email Feedback Forwarding: enabled
Bounce Notifications SNS Topic: none
Complaint Notifications SNS Topic: none
Delivery Notifications SNS Topic: none

DKIM Settings Generated: no
DKIM Verification Status: n/a
DKIM Signing: n/a
MAIL FROM Domain: us-east-2.amazonses.com

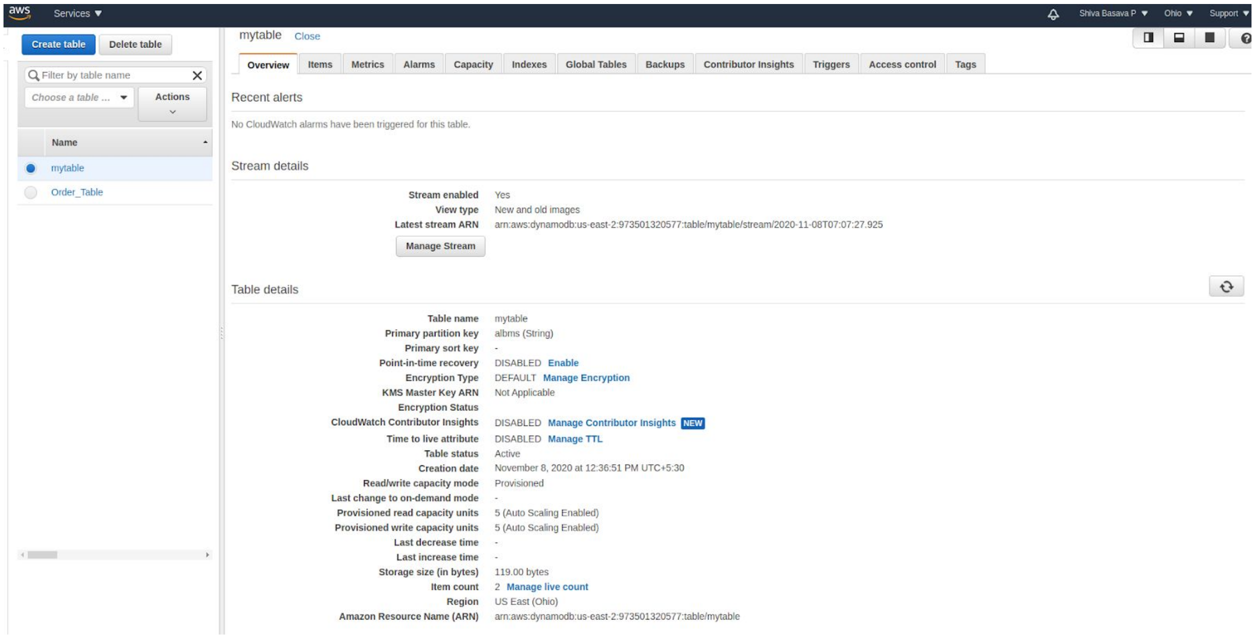
4. **Task 4**:TRIGGERING CLOUDWATCH EVENT SNS NOTIFICATION

(Trainer mentioned that Task 4 is Optional during the lecture.
Due to the reason that it includes the CloudWatch.)

II. Day 12 Task & Solutions

Question 1:

1. **Task 1**:Create a dynamo db table with minimum two disaster recovery zones and verify replication.
   a. **Disaster recovery regions** with the table (**mytable**)



Recent alerts

No CloudWatch alarms have been triggered for this table.

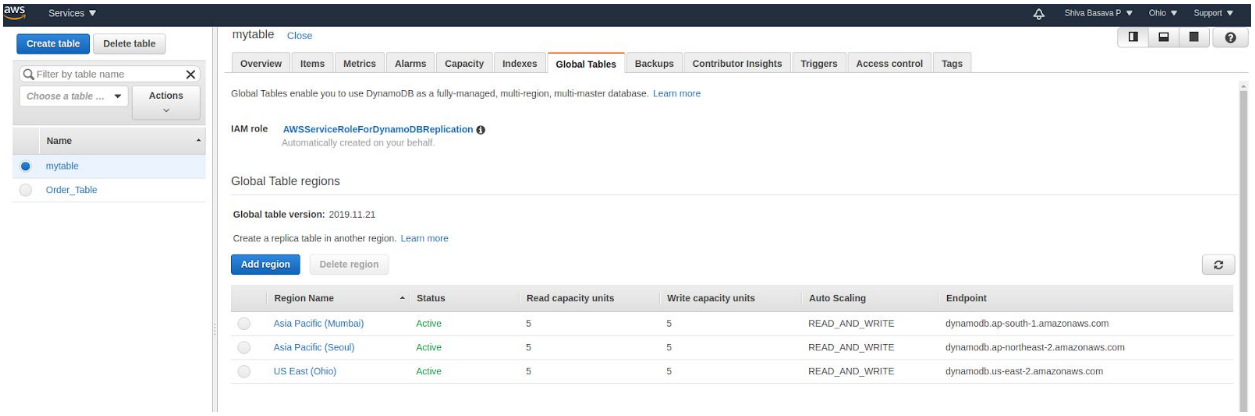
Stream details

Stream enabled	Yes
View type	New and old images
Latest stream ARN	arn:aws:dynamodb:us-east-2:973501320577:table/mytable/stream/2020-11-08T07:07:27.925

Table details

Table name	mytable
Primary partition key	albms (String)
Primary sort key	-
Point-in-time recovery	DISABLED Enable
Encryption Type	DEFAULT Manage Encryption
KMS Master Key ARN	Not Applicable
Encryption Status	
CloudWatch Contributor Insights	DISABLED Manage Contributor Insights NEW
Time to live attribute	DISABLED Manage TTL
Table status	Active
Creation date	November 8, 2020 at 12:36:51 PM UTC+5:30
Read/write capacity mode	Provisioned
Last change to on-demand mode	-
Provisioned read capacity units	5 (Auto Scaling Enabled)
Provisioned write capacity units	5 (Auto Scaling Enabled)
Last decrease time	-
Last increase time	-
Storage size (in bytes)	119.00 bytes
Item count	2 Manage live count
Region	US East (Ohio)
Amazon Resource Name (ARN)	arn:aws:dynamodb:us-east-2:973501320577:table/mytable

(Global replication, Home region- **Ohio** & Replica regions - **Mumbai**, **Seoul**)



Global Tables enable you to use DynamoDB as a fully-managed, multi-region, multi-master database. Learn more

IAM role AWSServiceRoleForDynamoDBReplication
Automatically created on your behalf.

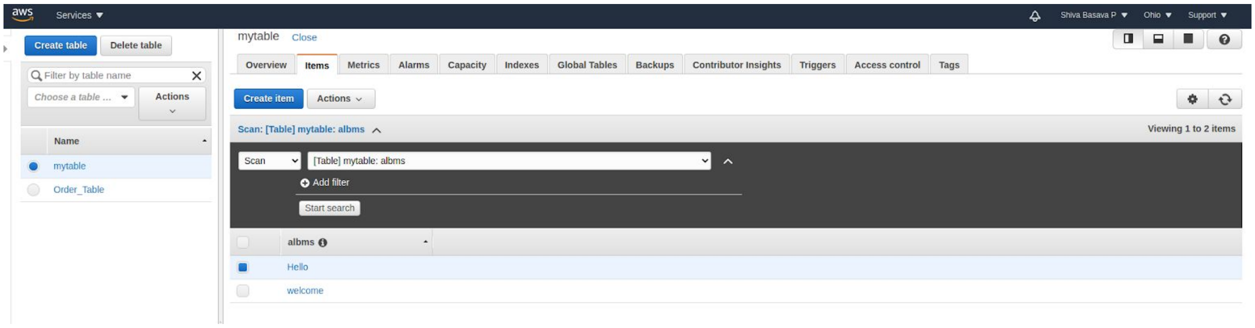
Global Table regions

Global table version: 2019.11.21

Create a replica table in another region. Learn more

Region Name	Status	Read capacity units	Write capacity units	Auto Scaling	Endpoint
Asia Pacific (Mumbai)	Active	5	5	READ_AND_WRITE	dynamodb.ap-south-1.amazonaws.com
Asia Pacific (Seoul)	Active	5	5	READ_AND_WRITE	dynamodb.ap-northeast-2.amazonaws.com
US East (Ohio)	Active	5	5	READ_AND_WRITE	dynamodb.us-east-2.amazonaws.com

b. **Home region** with all items displayed



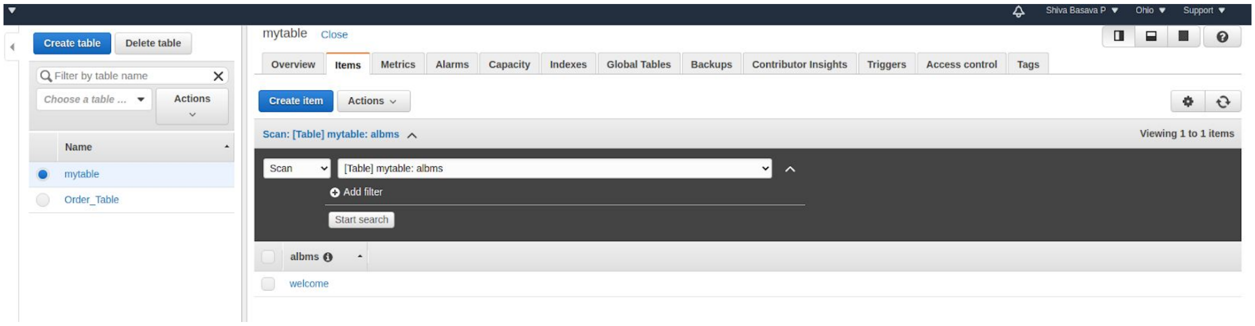
Scan: [Table] mytable: albms

Viewing 1 to 2 items

Scan [Table] mytable: albms

albms
Hello
welcome

C. Deleting an Item from **Collection** at Home Region(**Ohio**) and verifying the same in another Region(**Mumbai)**.

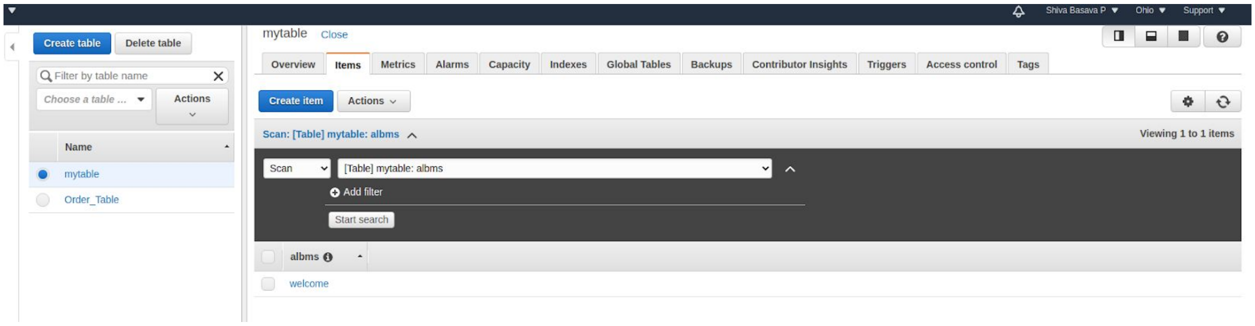


Scan: [Table] mytable: albms

Viewing 1 to 1 items

Scan [Table] mytable: albms

albms
welcome



mytable

Scan: [Table] mytable: albms

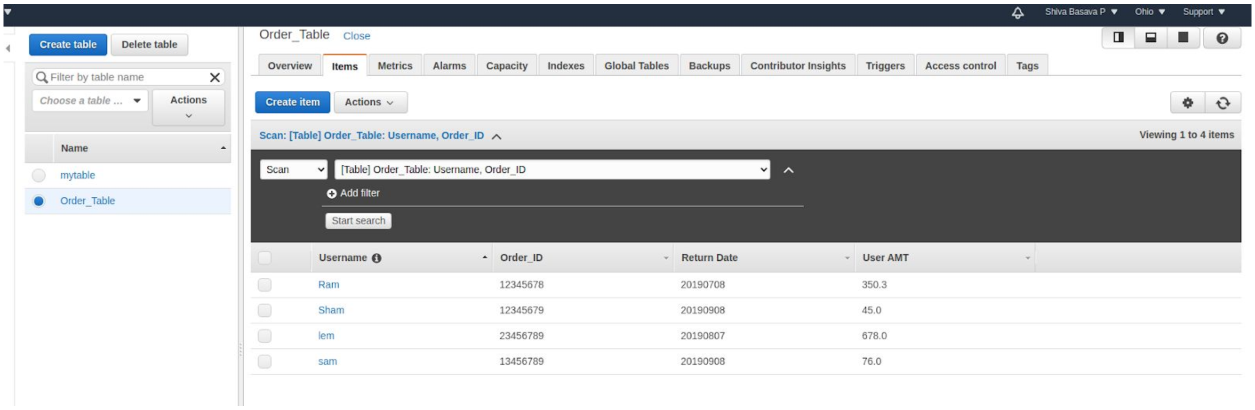
Viewing 1 to 1 items

Scan | [Table] mytable: albms

albms
welcome

d. Use **query** to fetch few items (Using table - **Order_Table**, from Task 2)

(**Before** Querying)



Order_Table

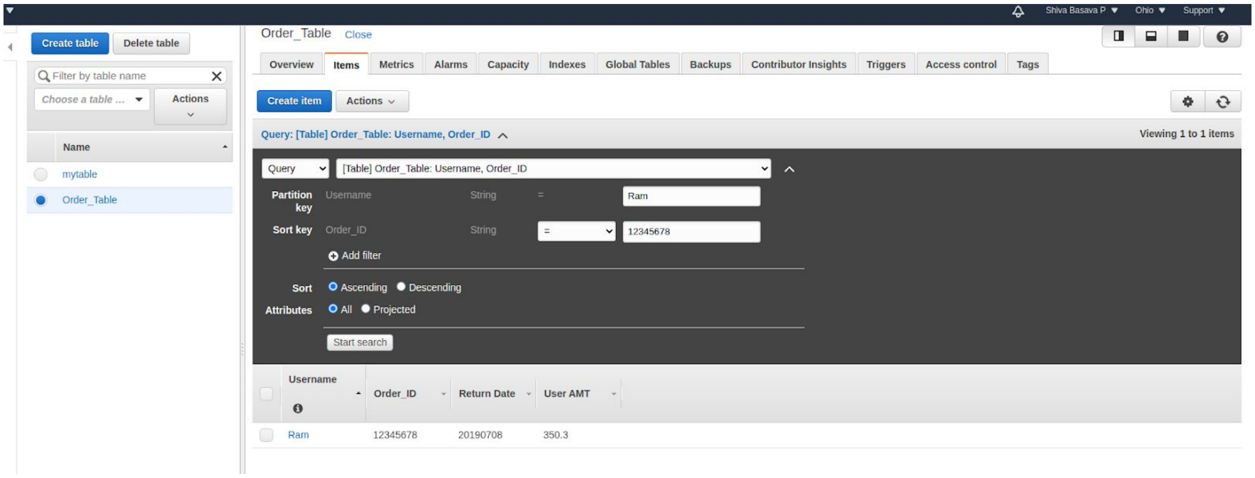
Scan: [Table] Order_Table: Username, Order_ID

Viewing 1 to 4 items

Scan | [Table] Order_Table: Username, Order_ID

Username	Order_ID	Return Date	User AMT
Ram	12345678	20190708	350.3
Sham	12345679	20190908	45.0
lem	23456789	20190807	678.0
sam	13456789	20190908	76.0

(**After** Querying, Username - Ram & Order_ID - 12345678)



Order_Table

Query: [Table] Order_Table: Username, Order_ID

Viewing 1 to 1 items

Query | [Table] Order_Table: Username, Order_ID

Partition key Username String = Ram

Sort key Order_ID String = 12345678

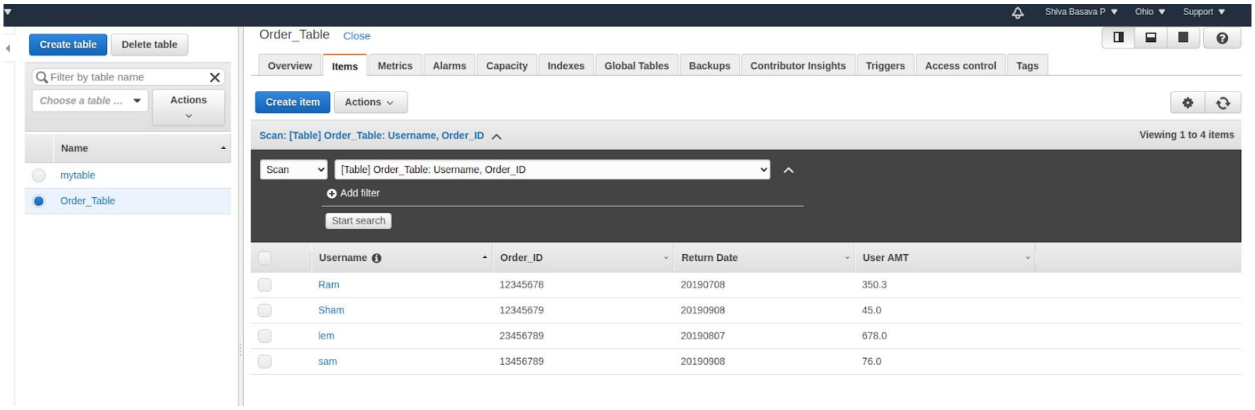
Sort ● Ascending ○ Descending

Attributes ● All ○ Projected

Username	Order_ID	Return Date	User AMT
Ram	12345678	20190708	350.3

2. **Task 2**:Creating a dynamo DB table with global secondary indexes and fetching data using **global secondary indexes**.

   a. Table with its items displayed for ‘**Order_Table’**



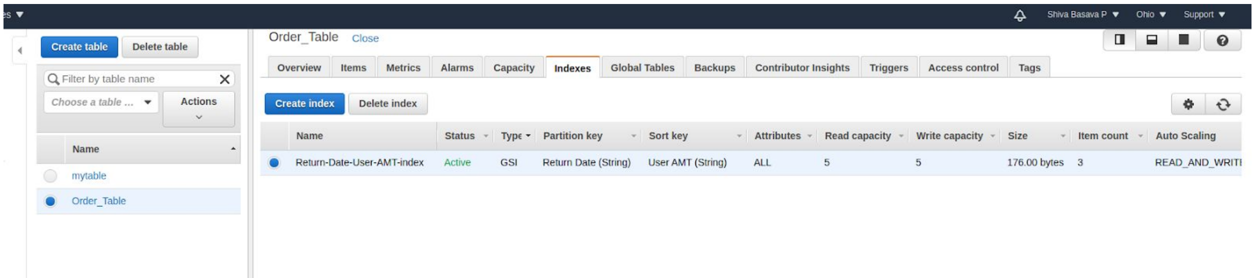
Scan: [Table] Order_Table: Username, Order_ID

Viewing 1 to 4 items

Scan [Table] Order_Table: Username, Order_ID

Username	Order_ID	Return Date	User AMT
Ram	12345678	20190708	350.3
Sham	12345679	20190908	45.0
lem	23456789	20190807	678.0
sam	13456789	20190908	76.0

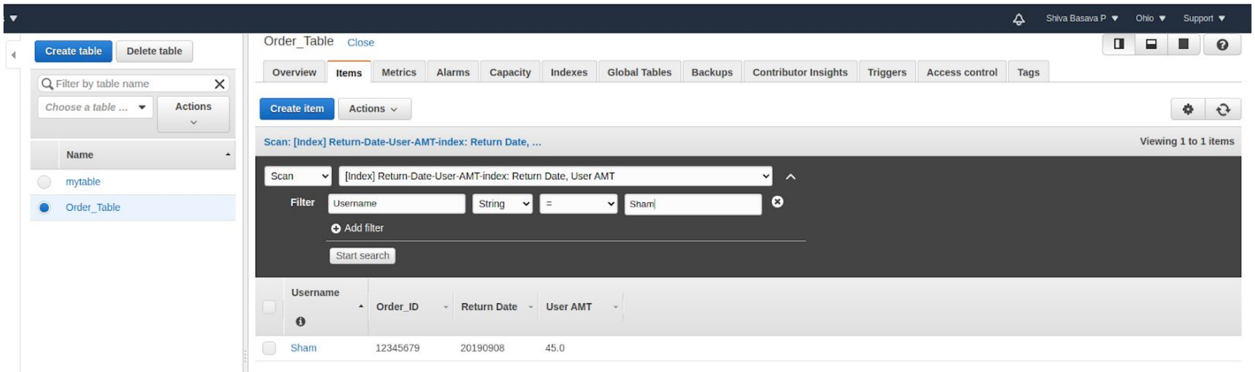
   b. Created global secondary index - **Return-Date-User-AMT-index**



Name	Status	Type	Partition key	Sort key	Attributes	Read capacity	Write capacity	Size	Item count	Auto Scaling
Return-Date-User-AMT-index	Active	GSI	Return Date (String)	User AMT (String)	ALL	5	5	176.00 bytes	3	READ_AND_WRITI

   c. **Scan** with **Global secondary index**

Username - Sham



Scan: [Index] Return-Date-User-AMT-index: Return Date, ...

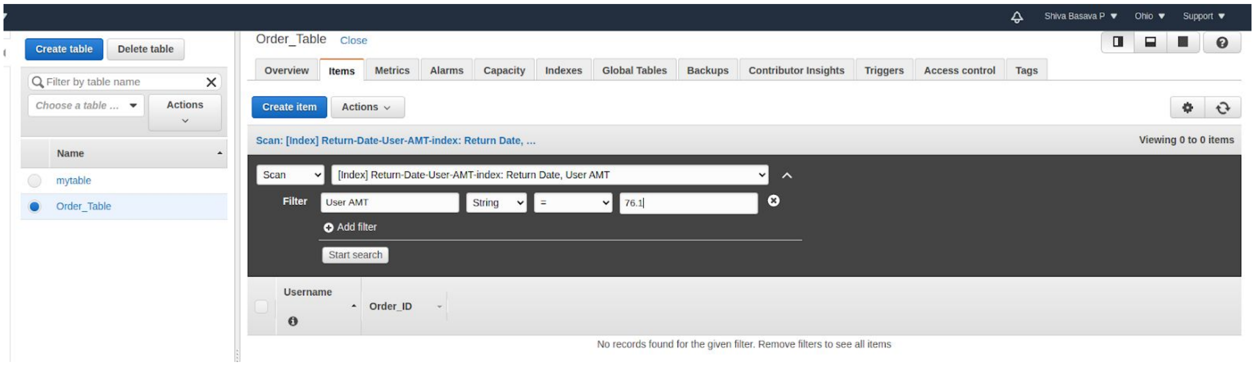
Viewing 1 to 1 items

Scan [Index] Return-Date-User-AMT-index: Return Date, User AMT

Filter Username String = Sham

Username	Order_ID	Return Date	User AMT
Sham	12345679	20190908	45.0

d. When Scanned with the Items **value not present** in the Table.



Name
○ mytable
● Order_Table

Order_Table Close

Scan: [Index] Return-Date-User-AMT-index: Return Date, ...

Viewing 0 to 0 items

Scan: [Index] Return-Date-User-AMT-index: Return Date, User AMT

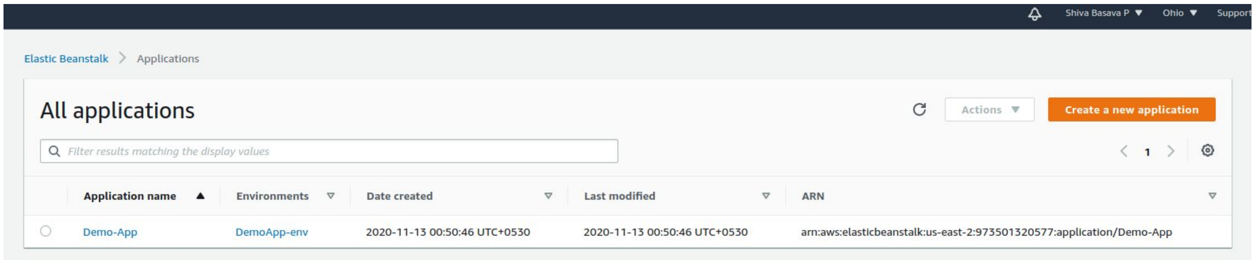
Filter: User AMT | String | = | 76.1

Username	Order_ID

No records found for the given filter. Remove filters to see all items

3. <u>**Task 3:**</u> Deploying a python application in AWS Elastic Beanstalk

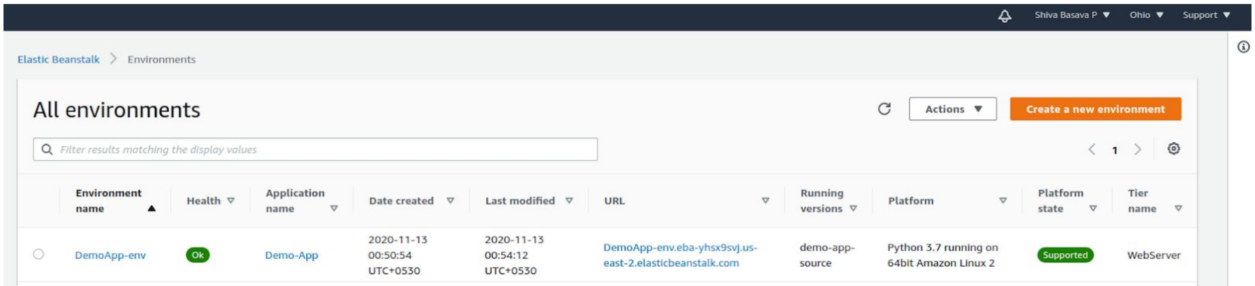
a. Application page


Shiva Basava P ▼
Ohio ▼
Support
Elastic Beanstalk > Applications
Actions ▼
Create a new application
Filter results matching the display values
1

All applications

	Application name ▲	Environments	Date created	Last modified	ARN
○	Demo-App	DemoApp-env	2020-11-13 00:50:46 UTC+0530	2020-11-13 00:50:46 UTC+0530	arn:aws:elasticbeanstalk:us-east-2:973501320577:application/Demo-App

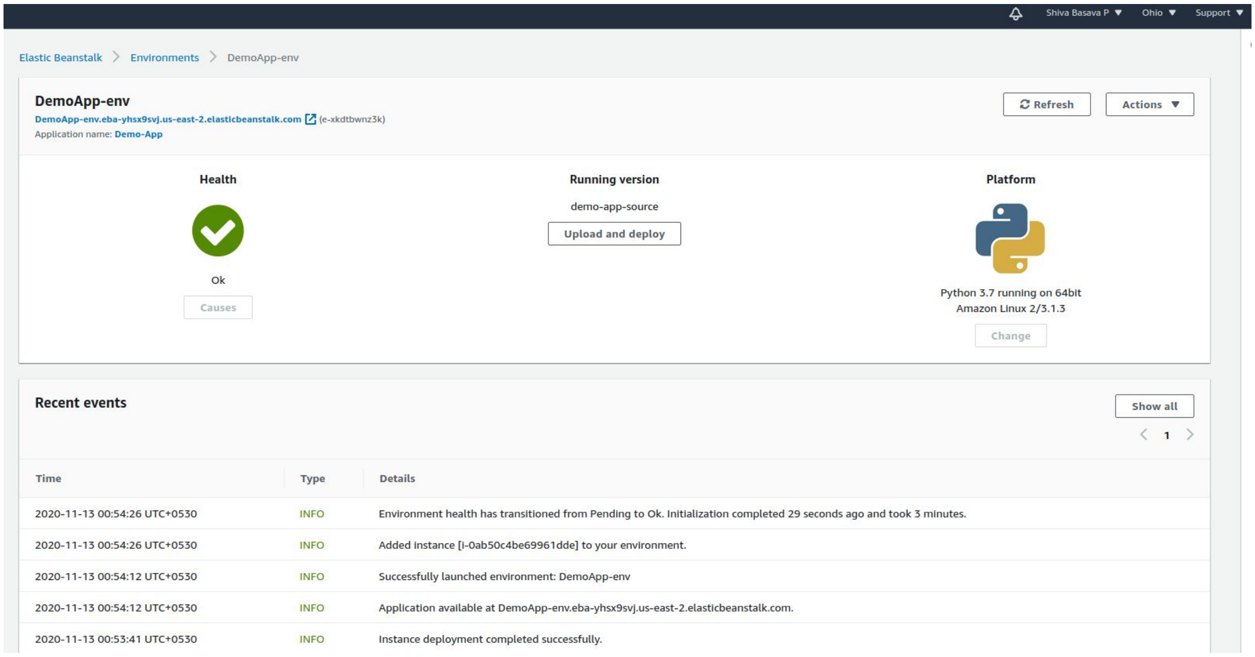
b. Environment list page


Shiva Basava P ▼
Ohio ▼
Support ▼
Elastic Beanstalk > Environments
Actions ▼
Create a new environment
Filter results matching the display values
1

All environments

	Environment name ▲	Health	Application name	Date created	Last modified	URL	Running versions	Platform	Platform state	Tier name
○	DemoApp-env	Ok	Demo-App	2020-11-13 00:50:54 UTC+0530	2020-11-13 00:54:12 UTC+0530	DemoApp-env.eba-yhsx9svj.us-east-2.elasticbeanstalk.com	demo-app-source	Python 3.7 running on 64bit Amazon Linux 2	Supported	WebServer

c. Environment health status page



DemoApp-env

DemoApp-env.eba-yhsx9svj.us-east-2.elasticbeanstalk.com (e-xkdtbwnz3k)

Application name: Demo-App

Health: Ok

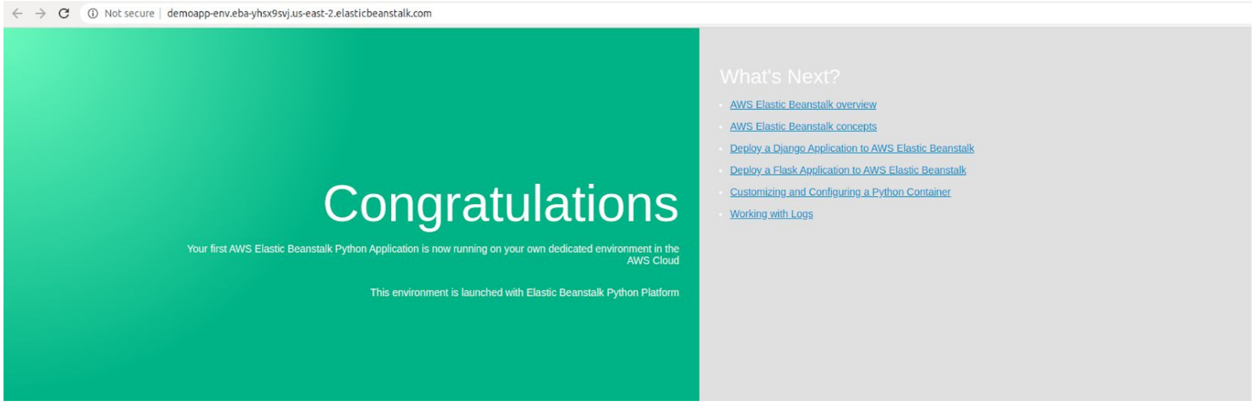
Running version: demo-app-source

Platform: Python 3.7 running on 64bit Amazon Linux 2/3.1.3

Recent events

Time	Type	Details
2020-11-13 00:54:26 UTC+0530	INFO	Environment health has transitioned from Pending to Ok. Initialization completed 29 seconds ago and took 3 minutes.
2020-11-13 00:54:26 UTC+0530	INFO	Added instance [i-0ab50c4be69961dde] to your environment.
2020-11-13 00:54:12 UTC+0530	INFO	Successfully launched environment: DemoApp-env
2020-11-13 00:54:12 UTC+0530	INFO	Application available at DemoApp-env.eba-yhsx9svj.us-east-2.elasticbeanstalk.com.
2020-11-13 00:53:41 UTC+0530	INFO	Instance deployment completed successfully.

d. Web page launched using the Elastic Beanstalk Environment


Not secure | demoapp-env.eba-yhsx9svj.us-east-2.elasticbeanstalk.com

Congratulations

Your first AWS Elastic Beanstalk Python Application is now running on your own dedicated environment in the AWS Cloud

This environment is launched with Elastic Beanstalk Python Platform

What's Next?

- AWS Elastic Beanstalk overview
- AWS Elastic Beanstalk concepts
- Deploy a Django Application to AWS Elastic Beanstalk
- Deploy a Flask Application to AWS Elastic Beanstalk
- Customizing and Configuring a Python Container
- Working with Logs

Question 2:

Submitted this as an Assessment Project - 1, as per the instructions of the Trainer. (In assignment submit form selected **Project-1** for this submission)