DYNAMODB LAB GUIDE

AWS Management Console

Login onto the AWS Management console using your own credentials

Preferable to set your region to **US East (N. Virginia)** which is us-east-1

Navigate to the database service section and, click on “DynamoDB”

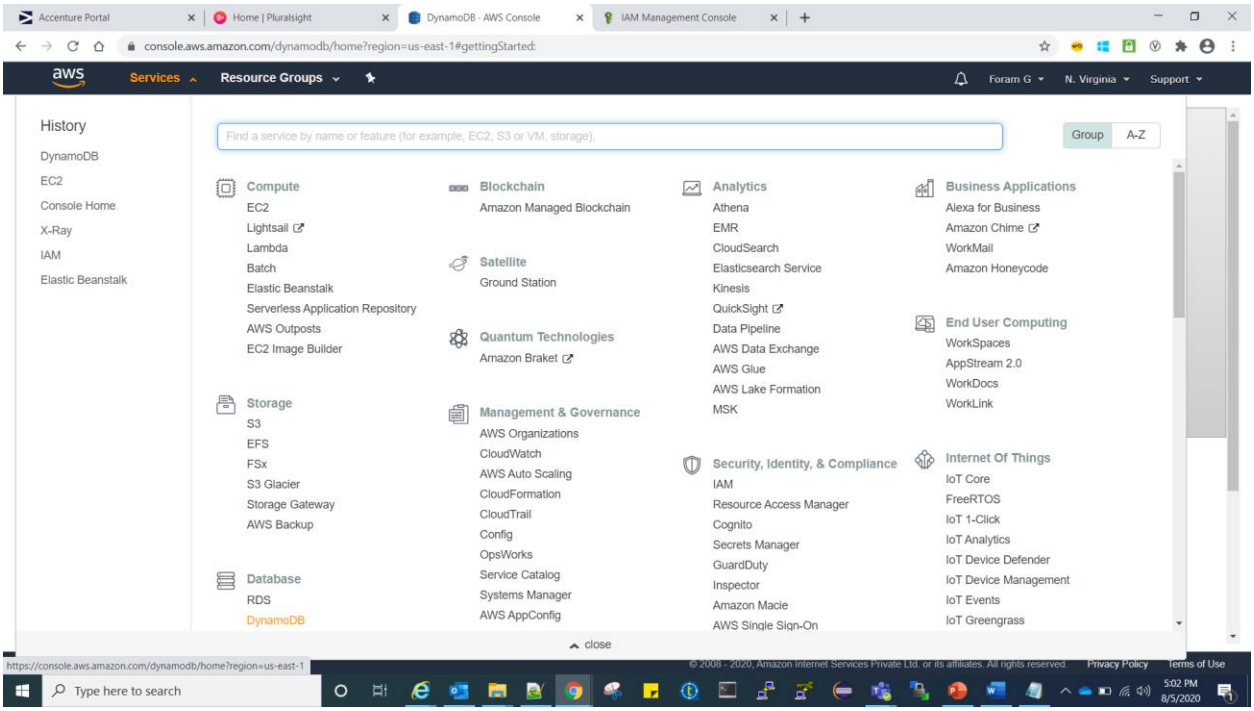
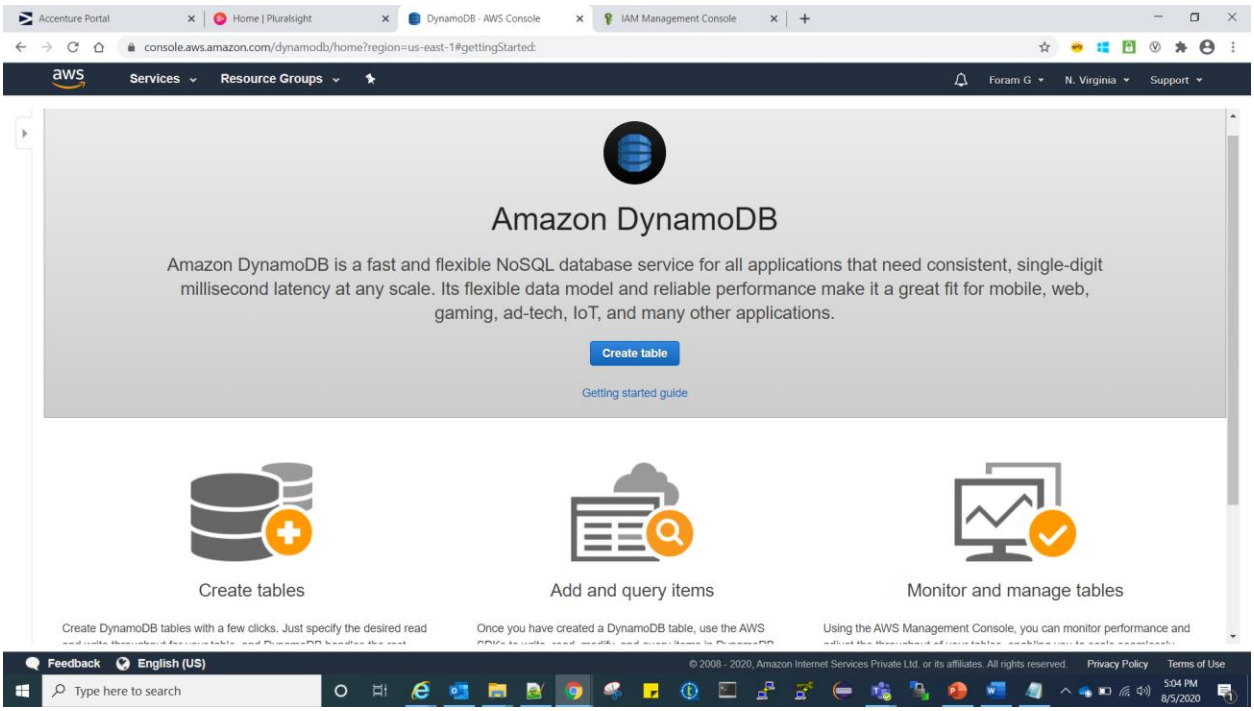


Table creation

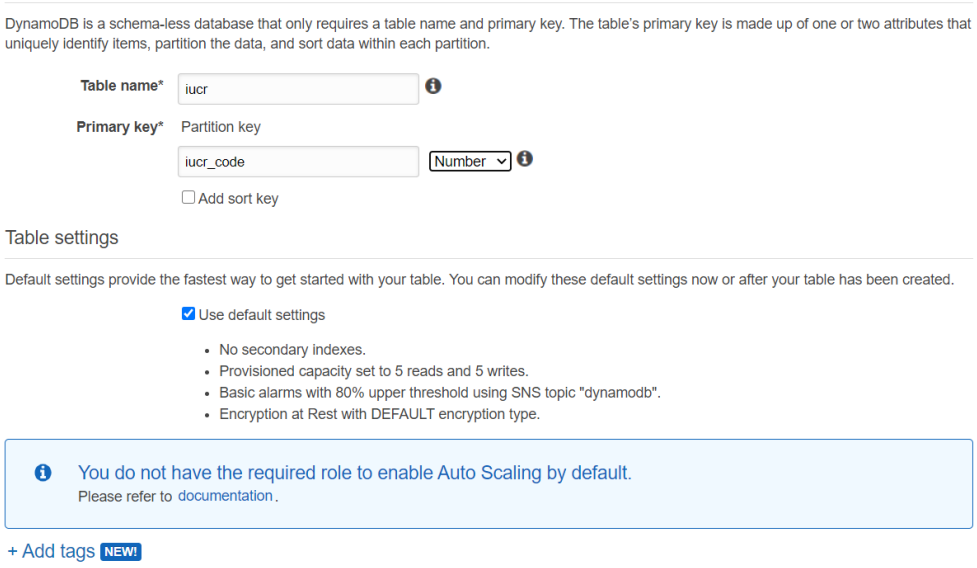
Select the “create table” button



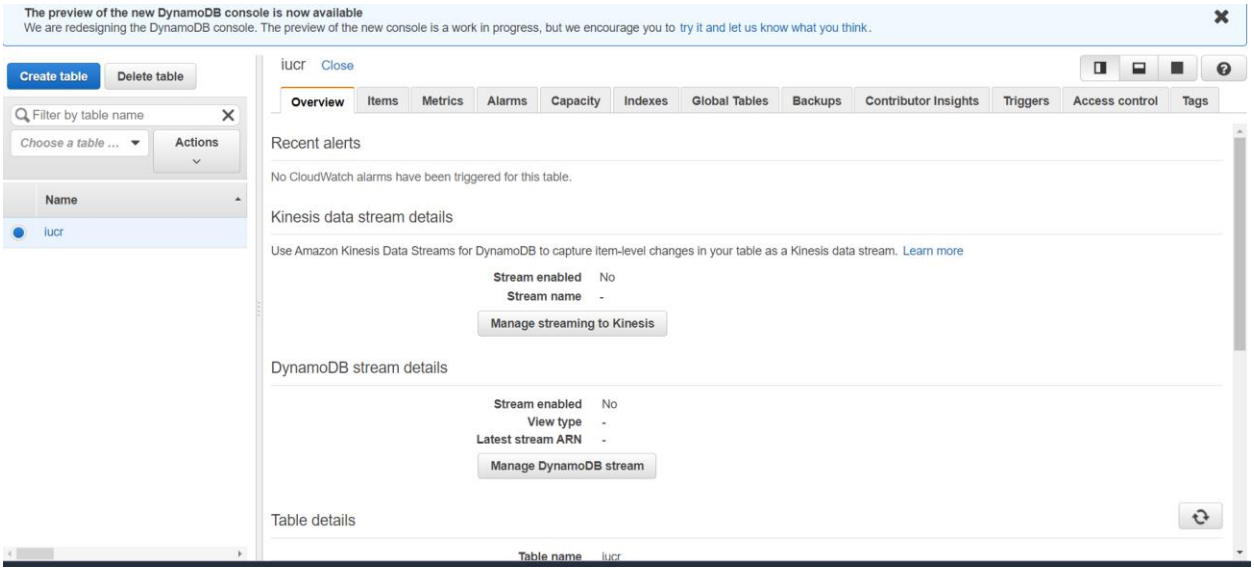
Mention details for

Table name: iucr

primary key: iucr_code and change the datatype to “Number”, as shown below



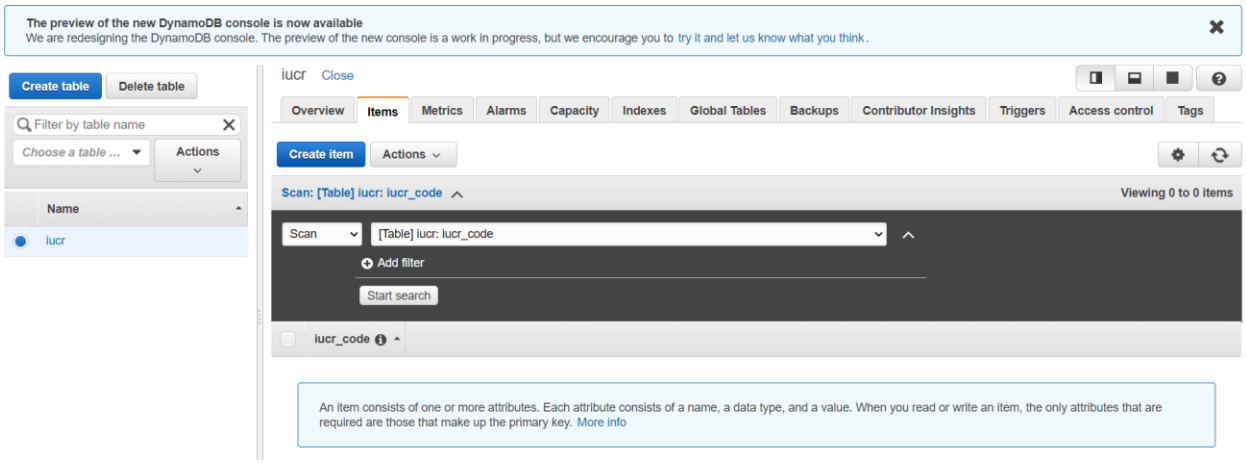
Click on “create” and the table is created as shown below.



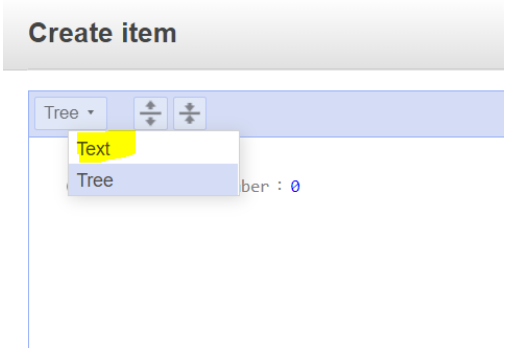
Adding Items

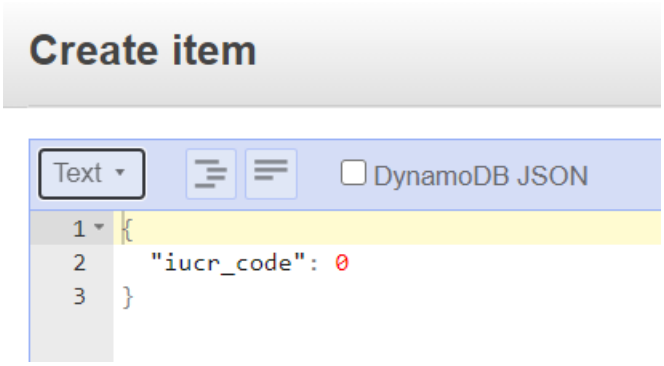
Click on “Items” Tab

Then click on “create item”

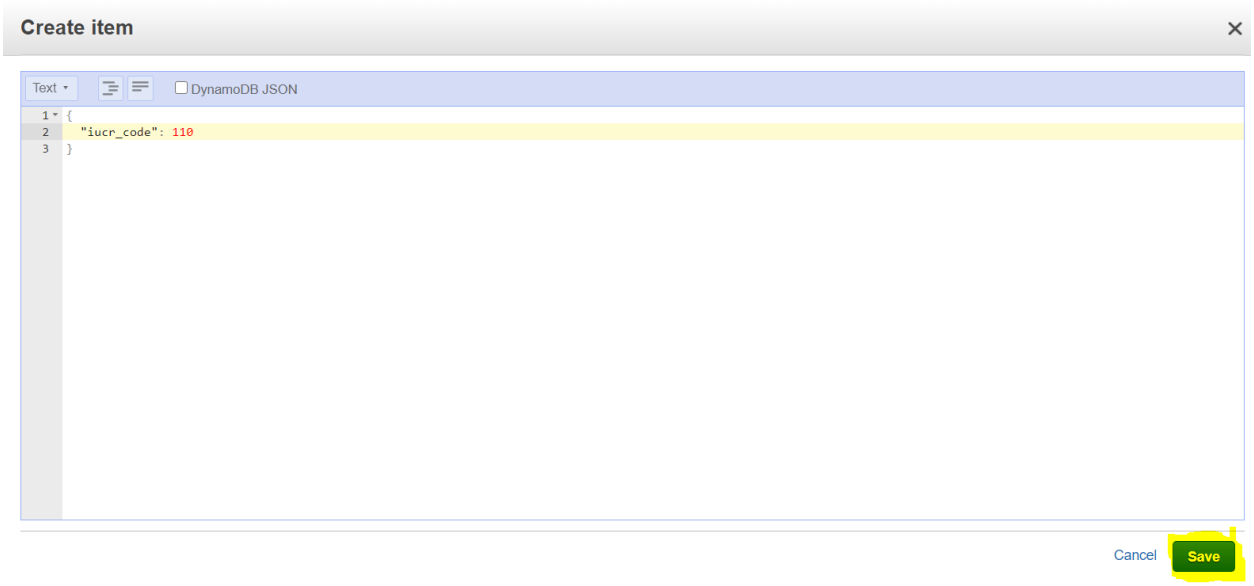


Click on the Drop down next to Tree and make it Text

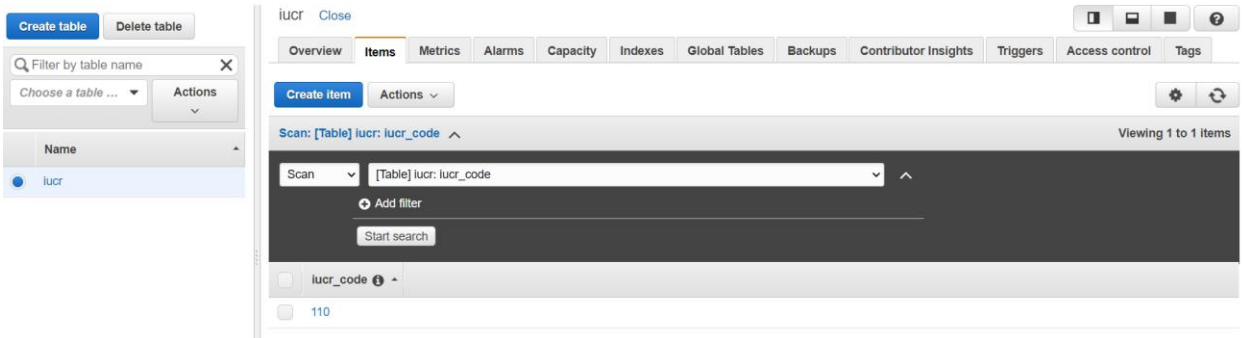




Change the iucr_code to 110 for example and click on “Save” as highlighted.

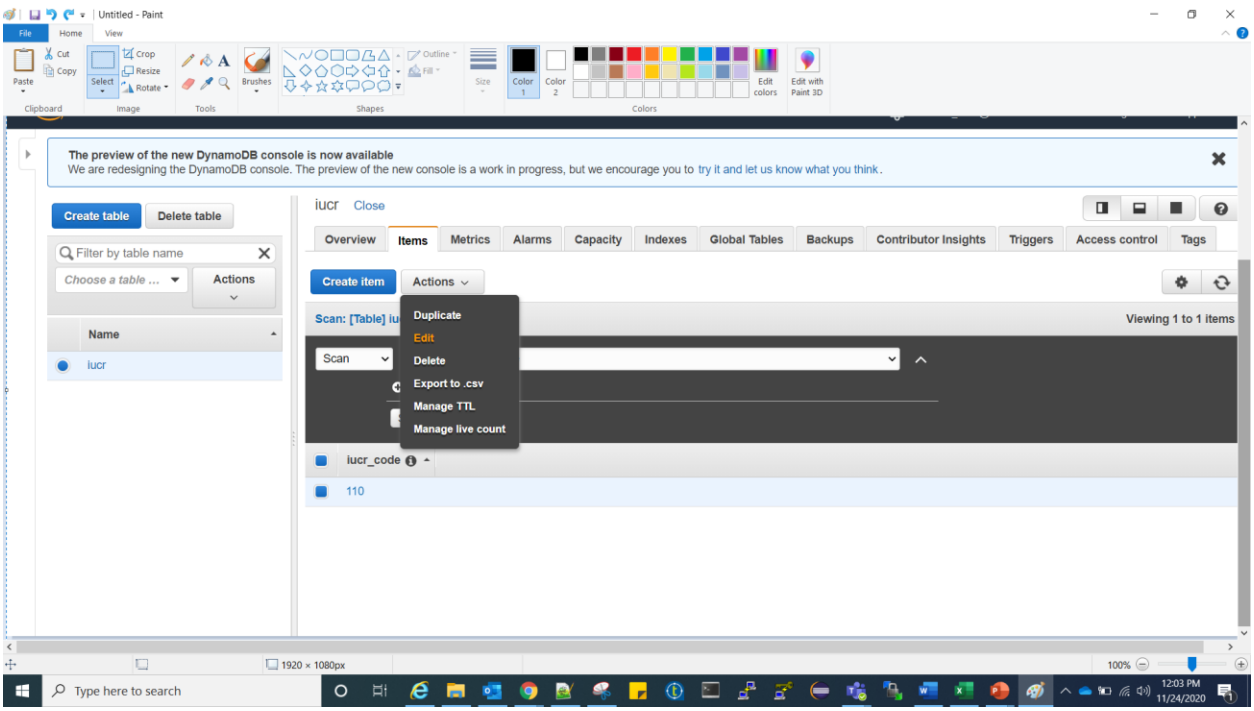


The first item we just inserted is visible.

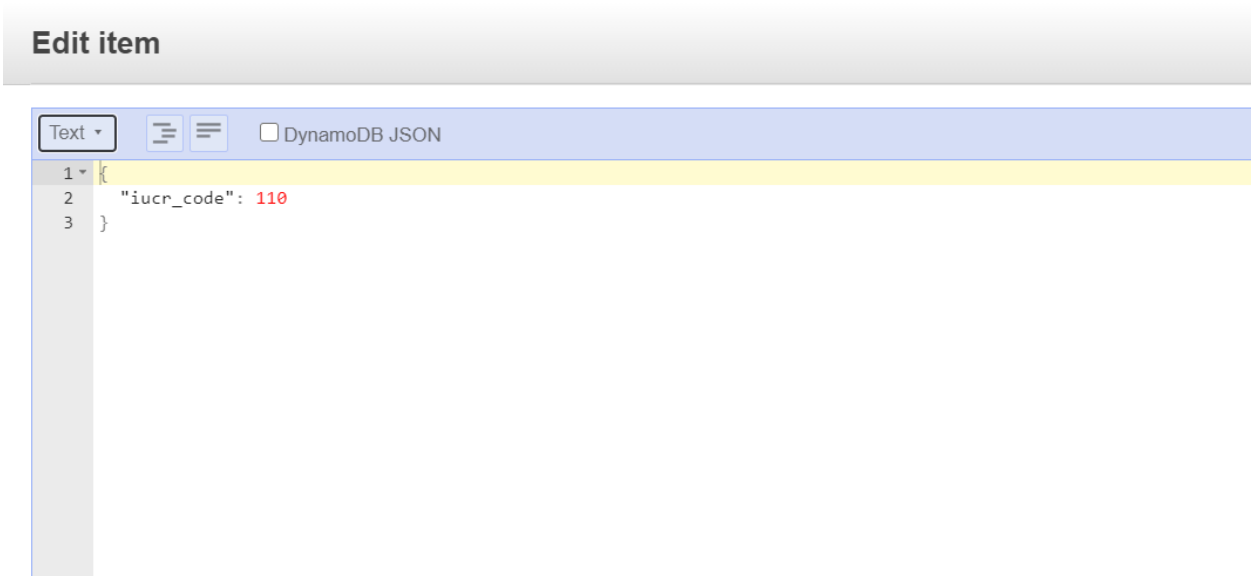


Editing Items

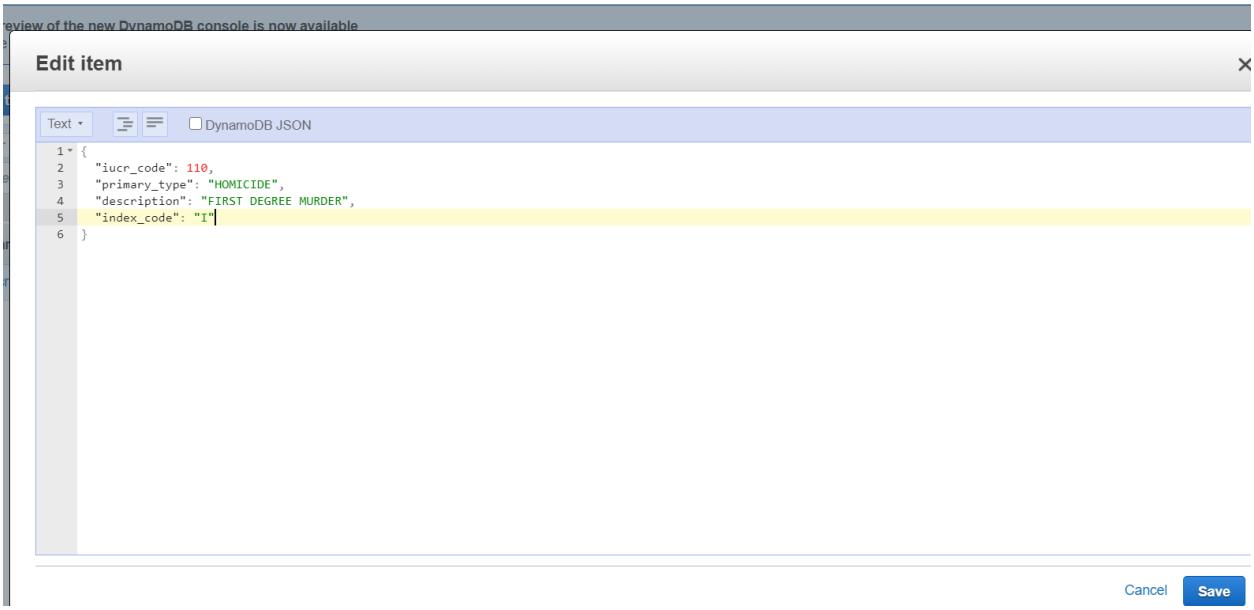
Select the record and click on Actions->Edit to add more attributes to the Item



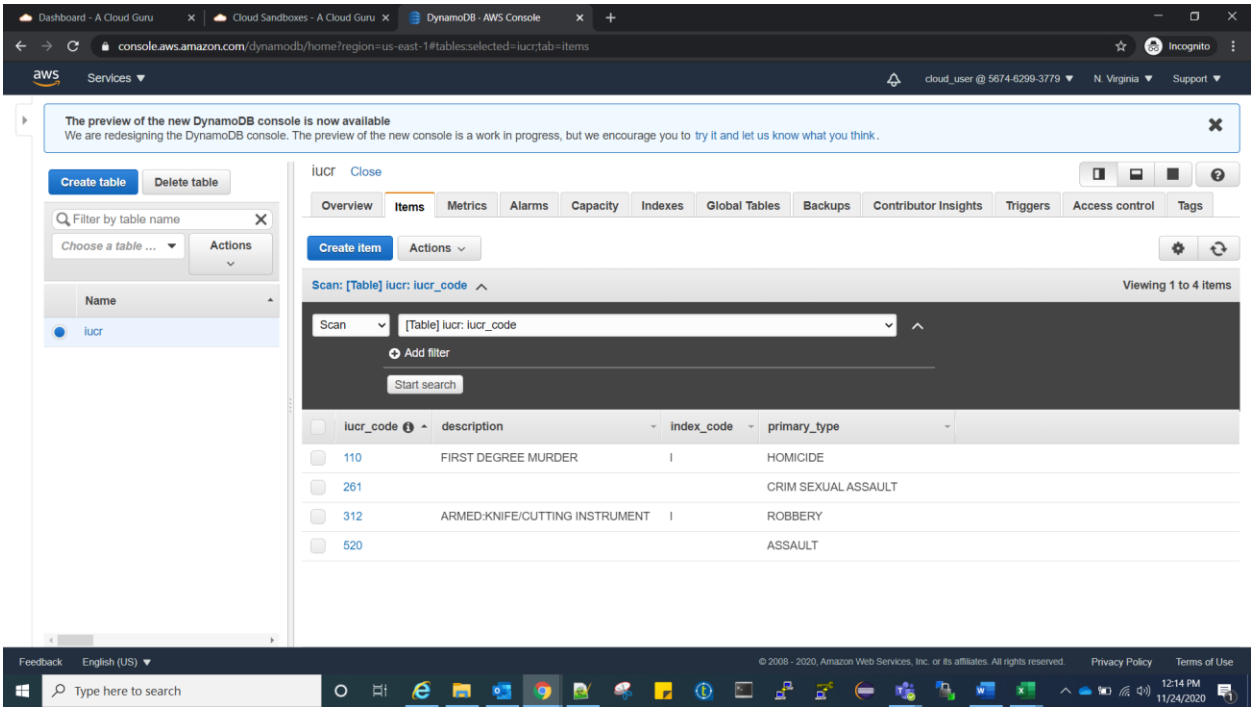
Change the Tree to Text



Specify additional attributes and click on “Save”

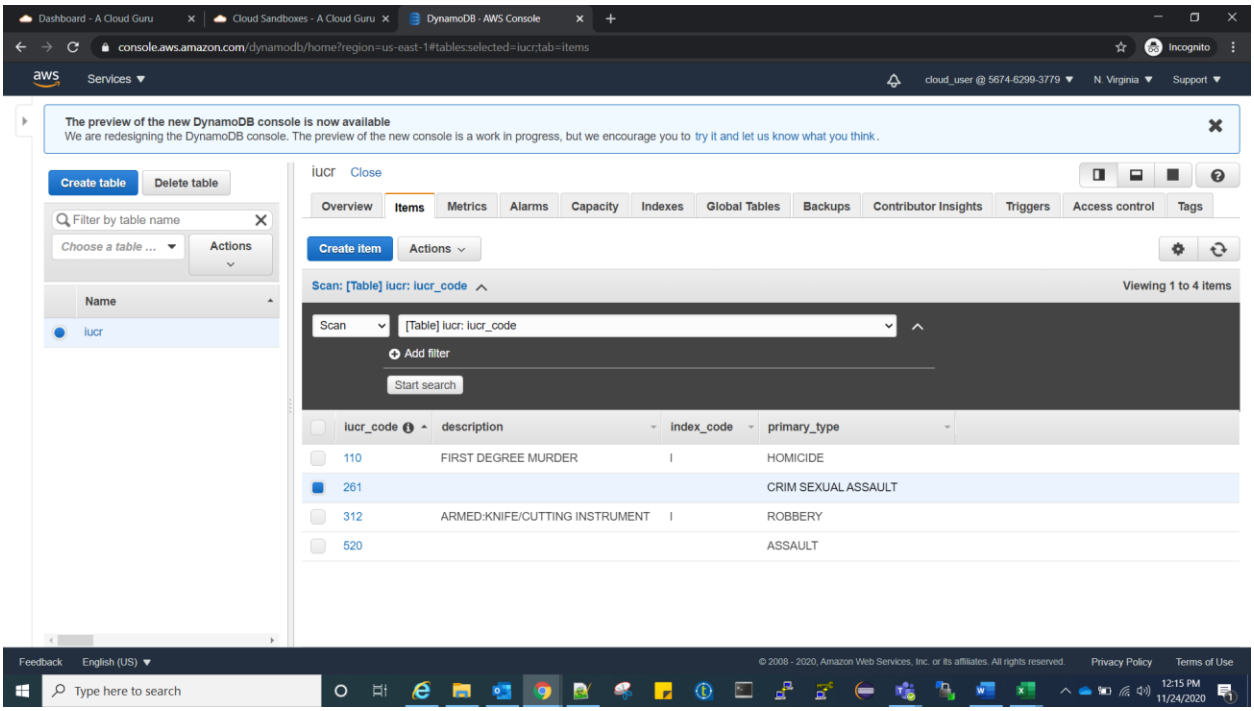


Similarly adding more items, data now looks like this

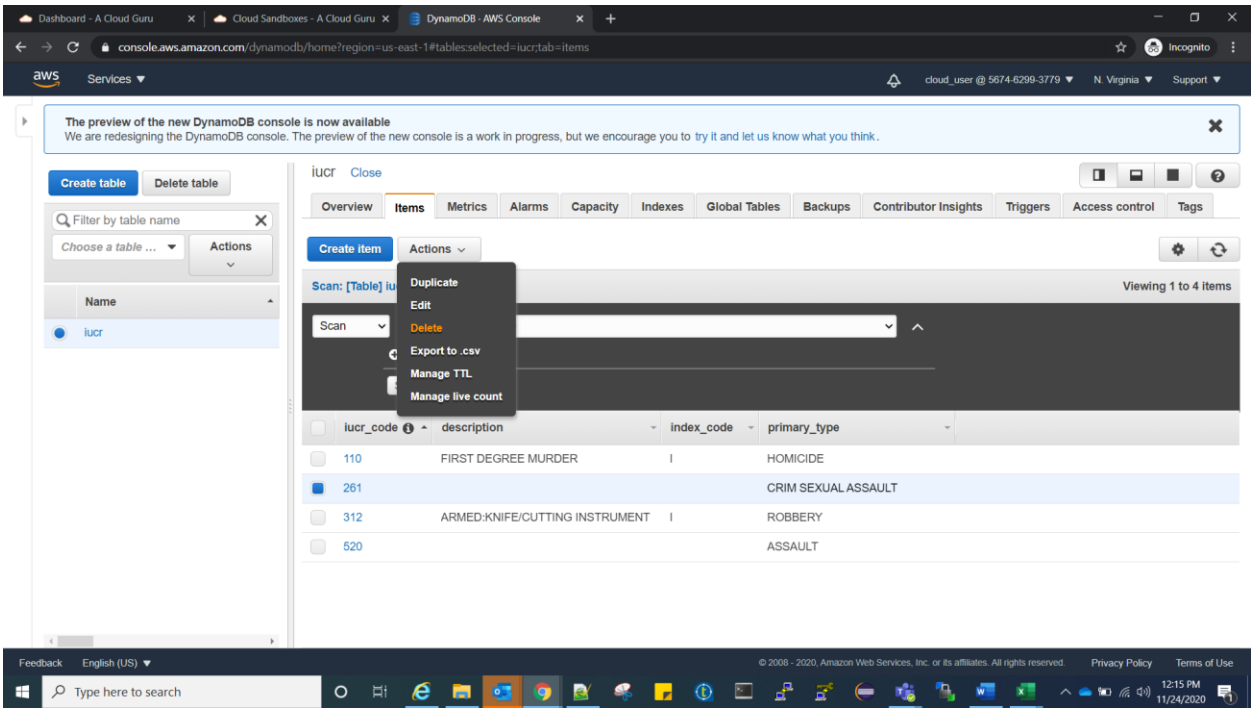


Deleting Items

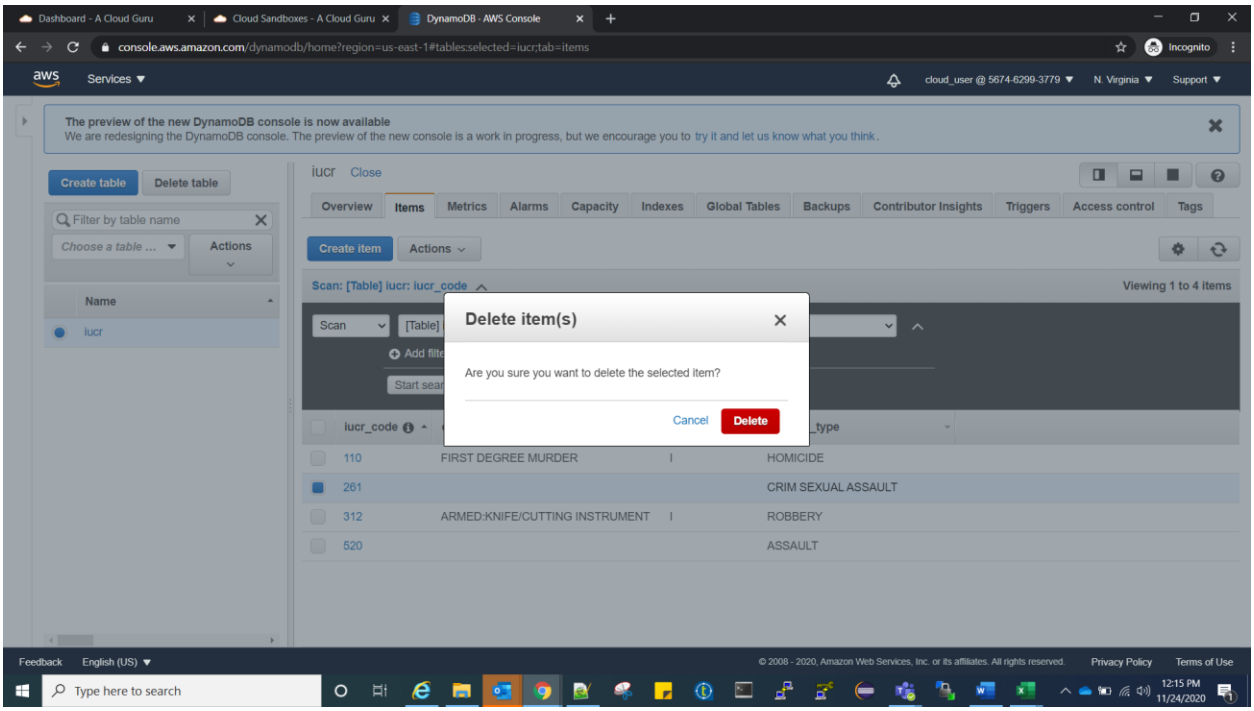
Select the item you want to delete

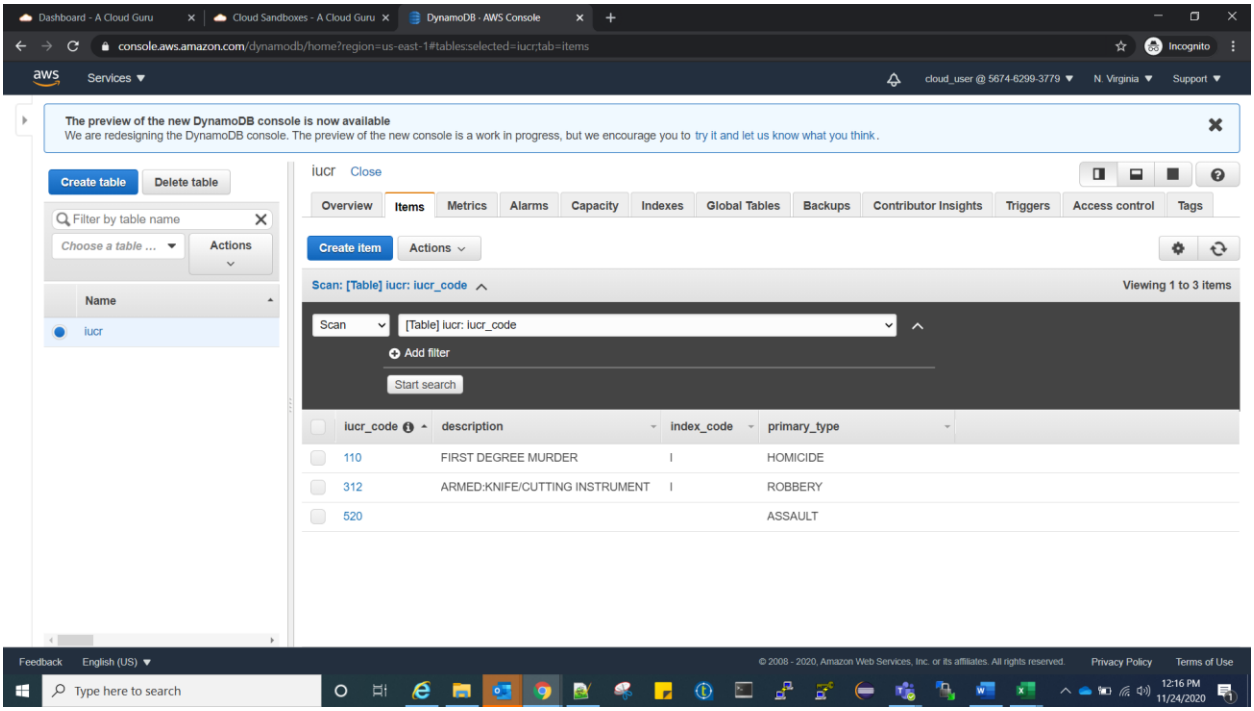


Click on Actions->Delete



Click on “Delete” on the prompt

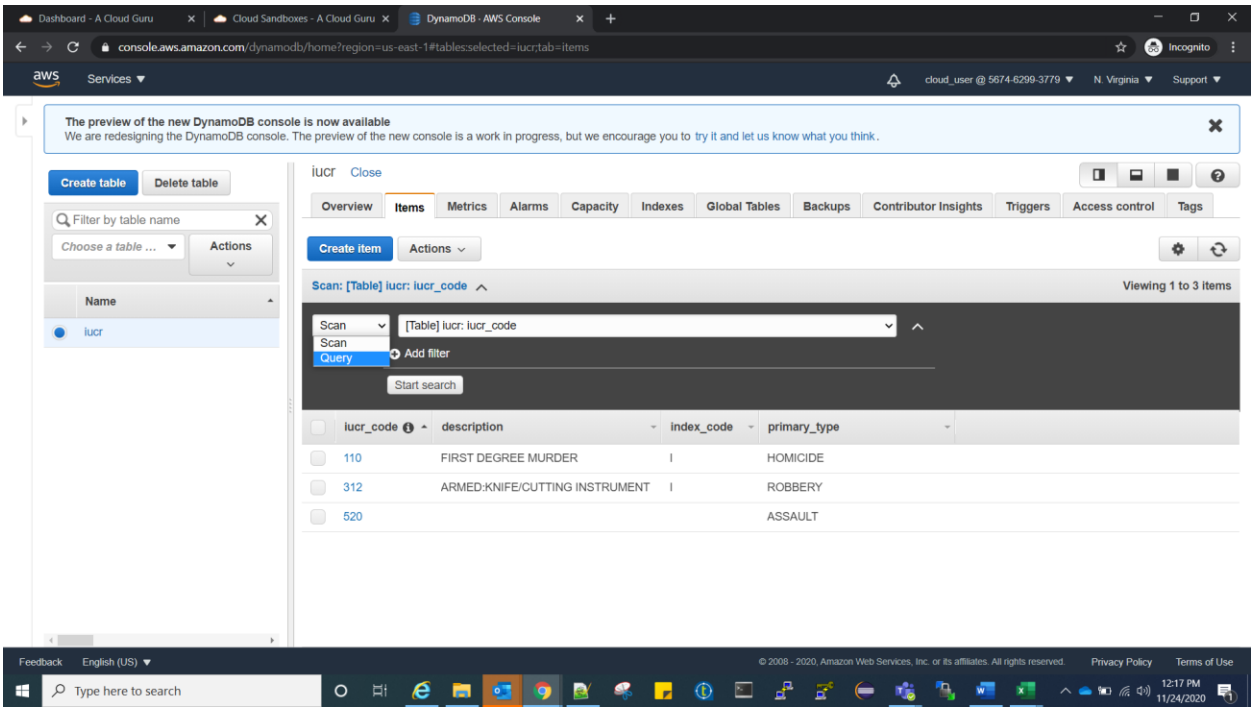




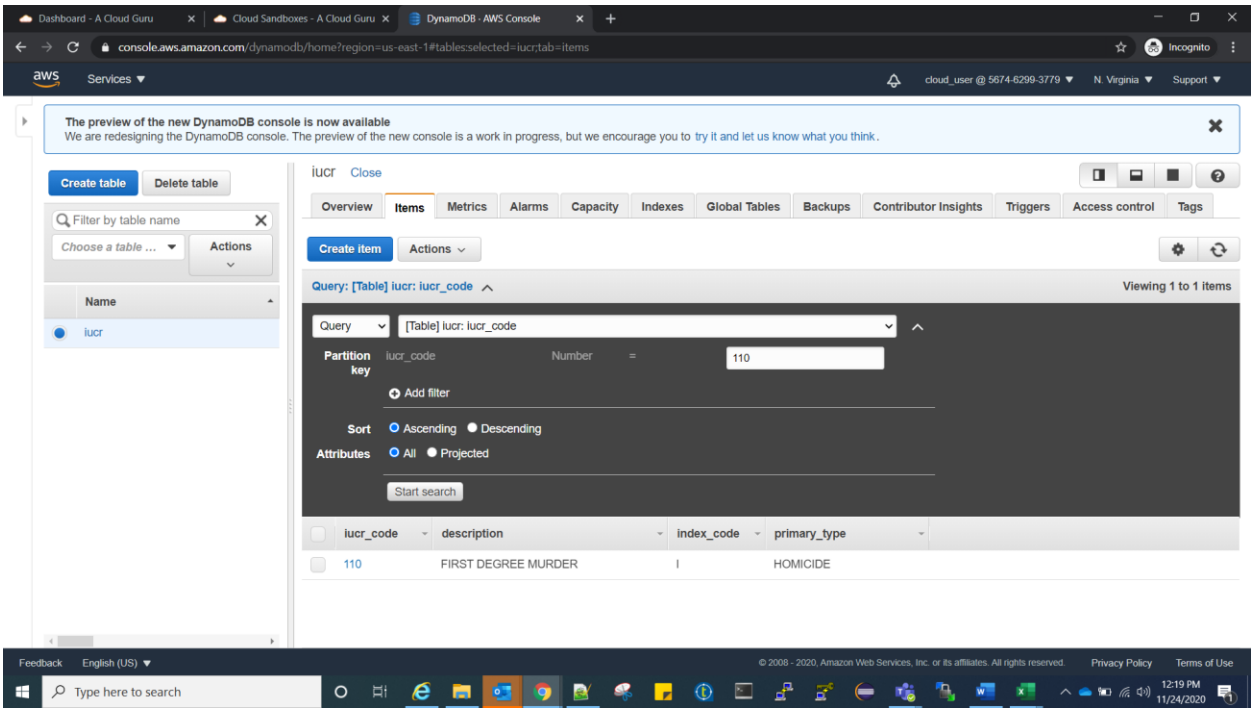
Dynamodb Operations

- **Query**

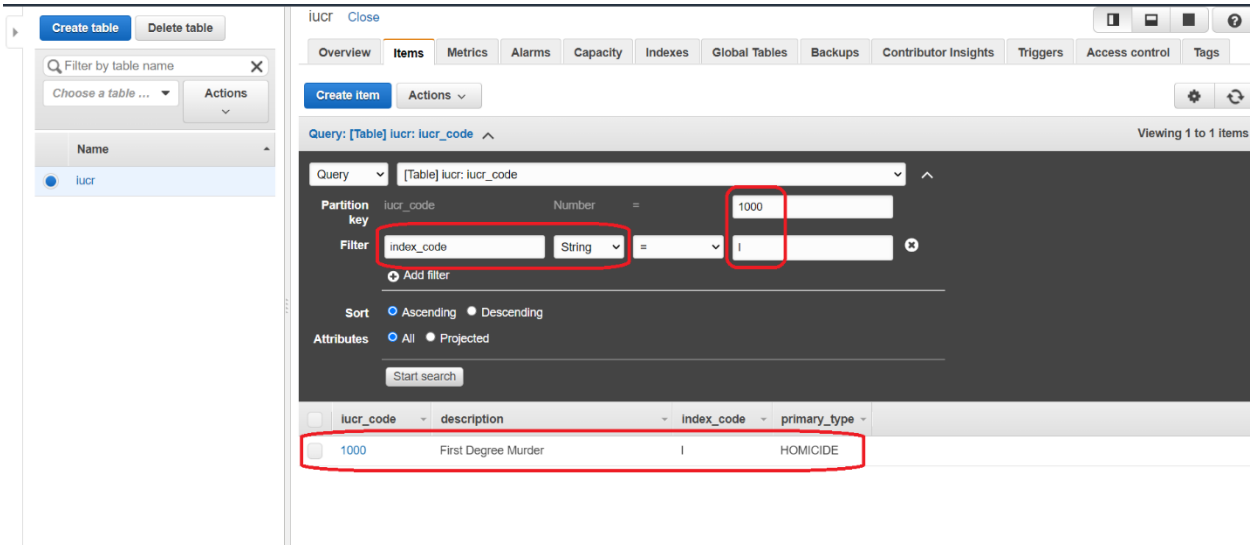
To query data, using primary key attributes, select dropdown next to Scan and select “query”



Specify any existing value for Partition key iucr_code (for e.g. 110) and click on “Start search”

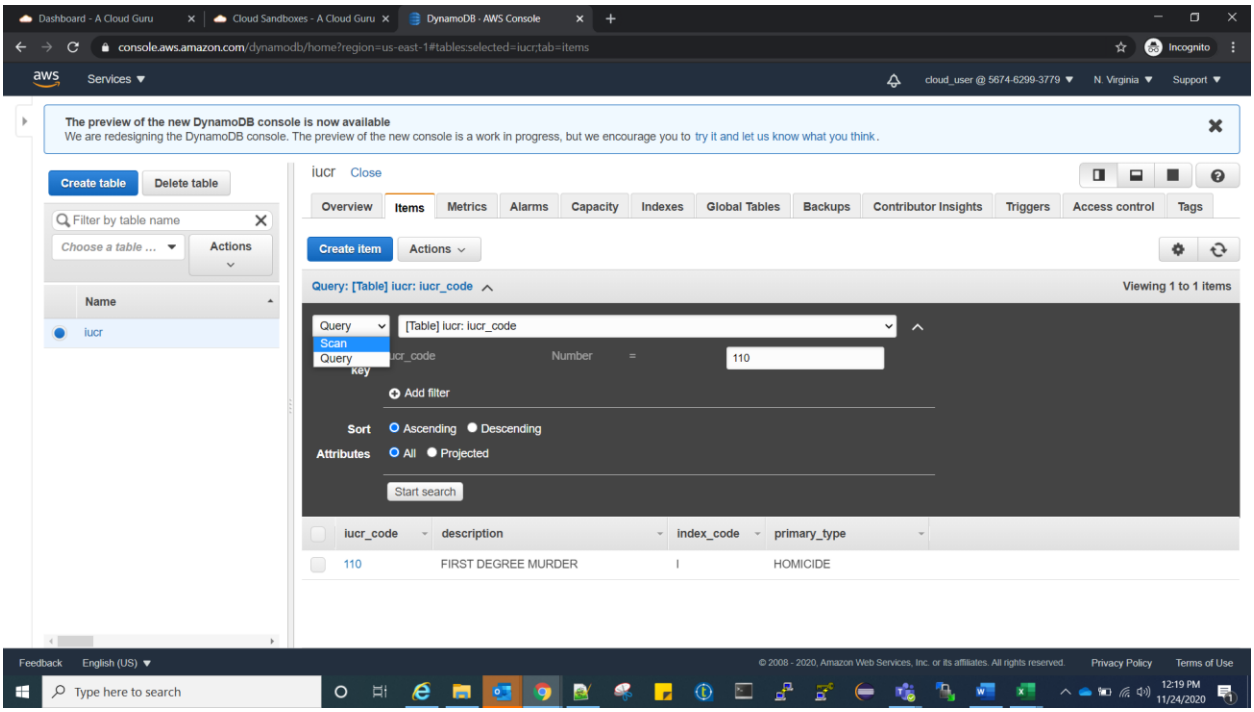


➢ To perform query with a filter condition

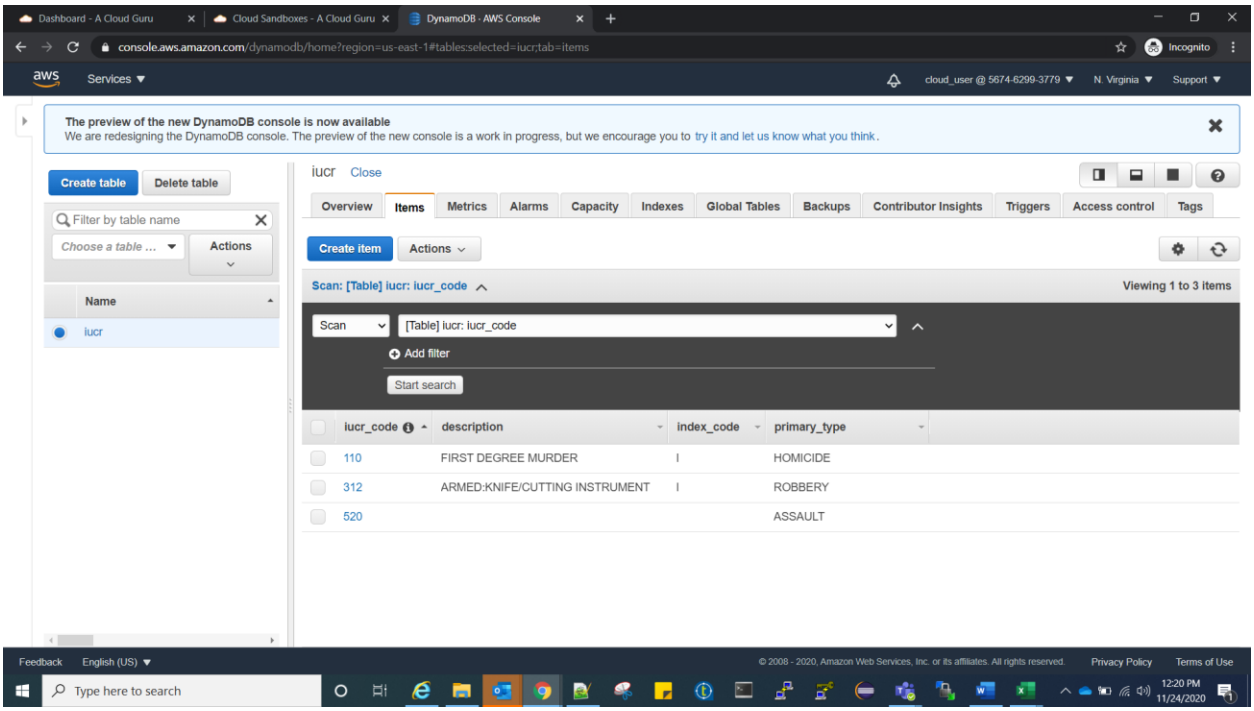


- **Scan**

To perform scan operation, select “Scan” in the dropdown



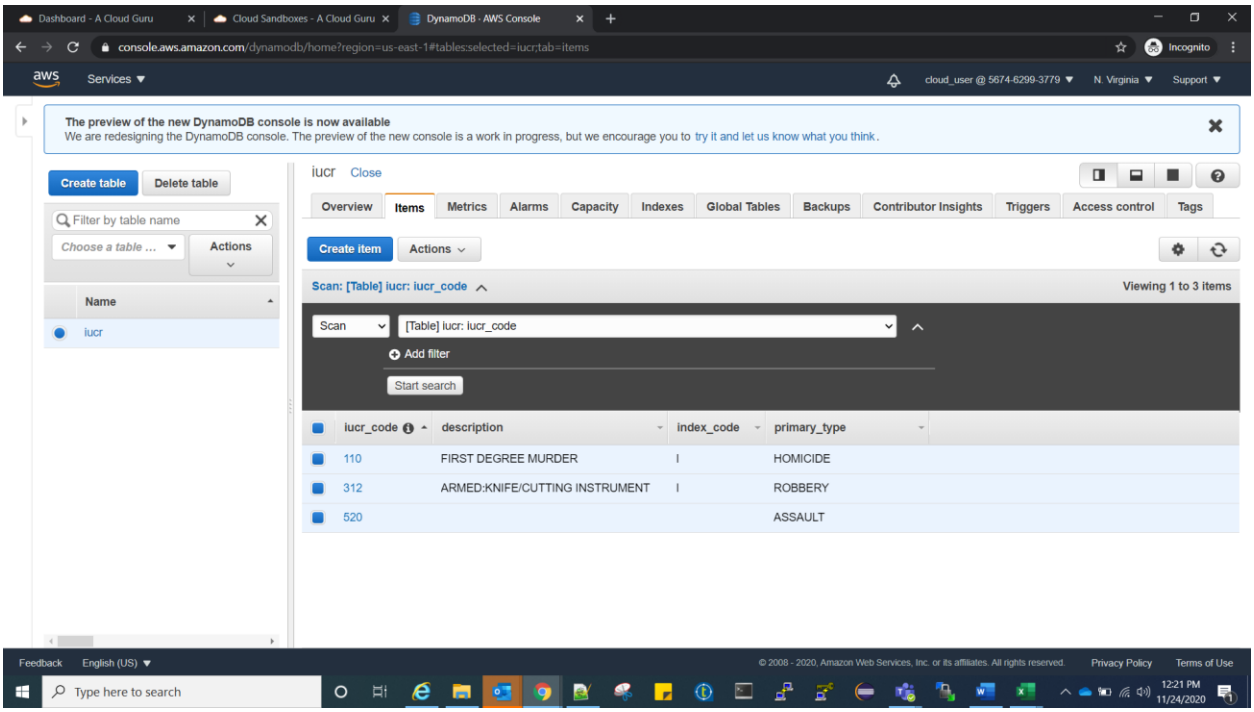
and click on “Start search”



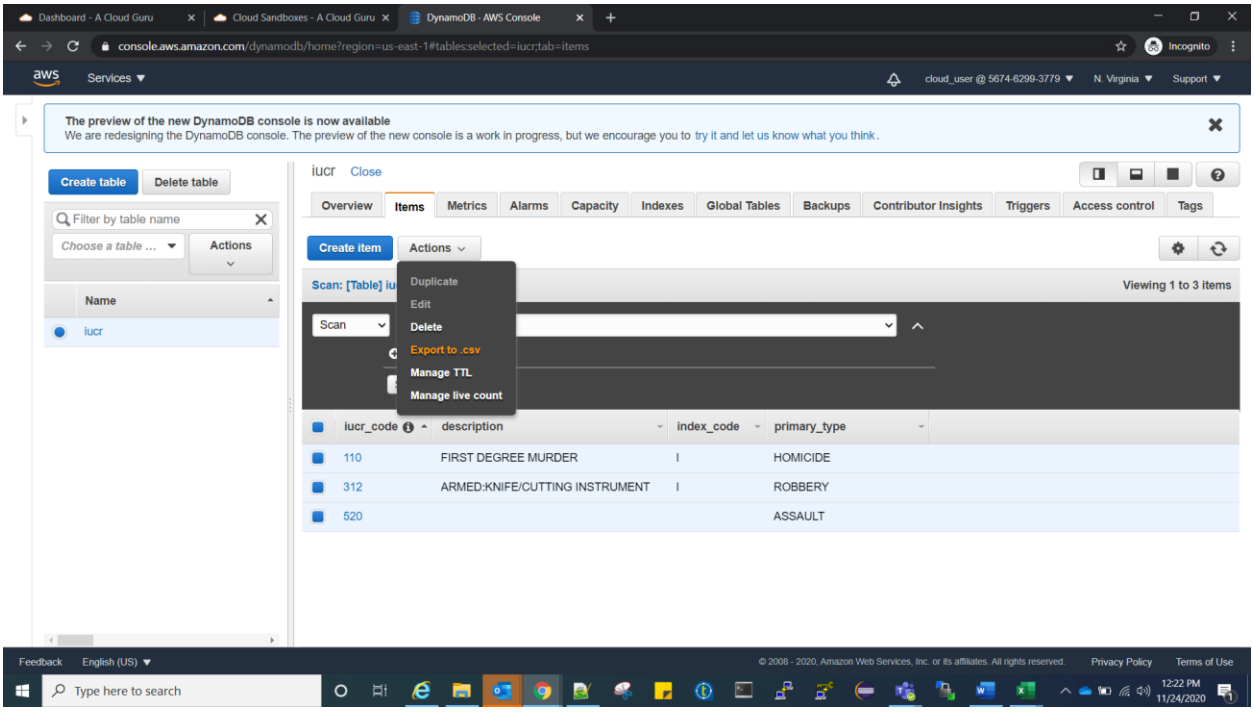
Data Export

To export data from Dynamodb table,

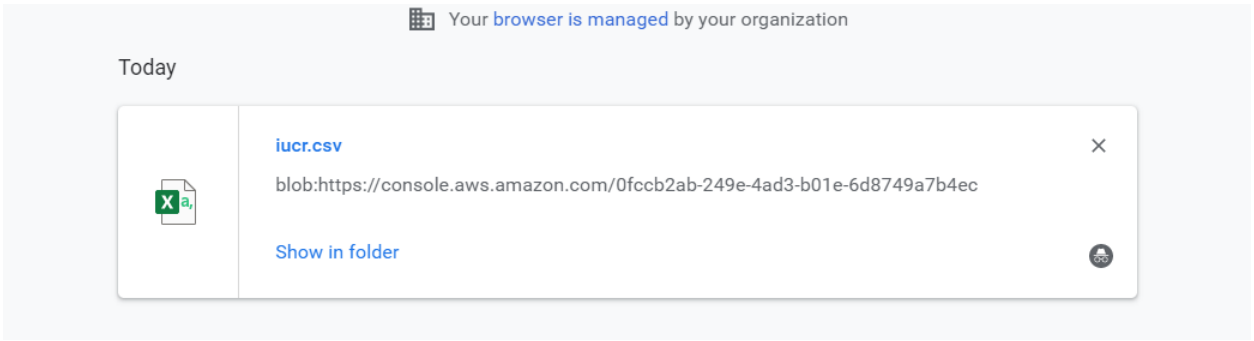
Select all records, by clicking on button before iucr_code column

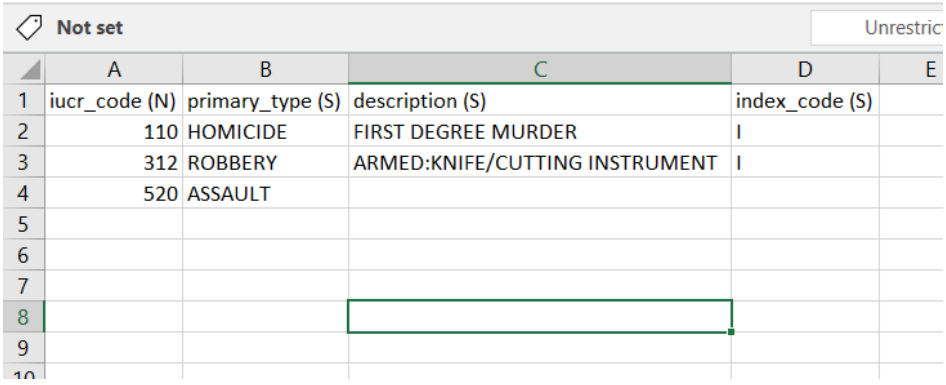


select Actions->Export to .csv



Check the Downloads directory for “iucr.csv”





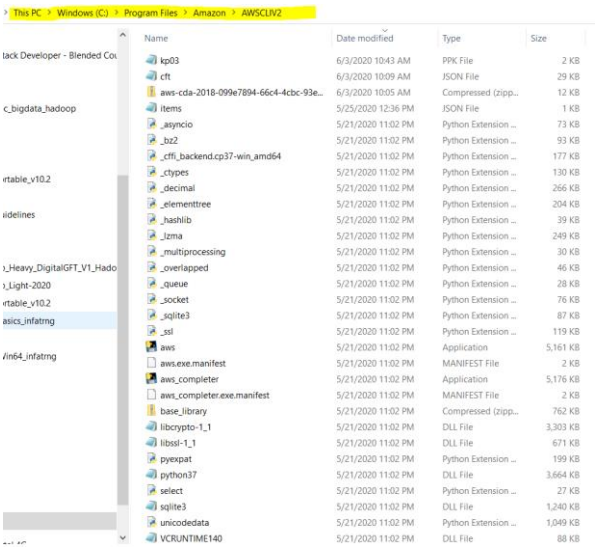
Not set

	A	B	C	D	E
1	iucr_code (N)	primary_type (S)	description (S)	index_code (S)	
2	110	HOMICIDE	FIRST DEGREE MURDER	I	
3	312	ROBBERY	ARMED:KNIFE/CUTTING INSTRUMENT	I	
4	520	ASSAULT			
5					
6					
7					
8					
9					

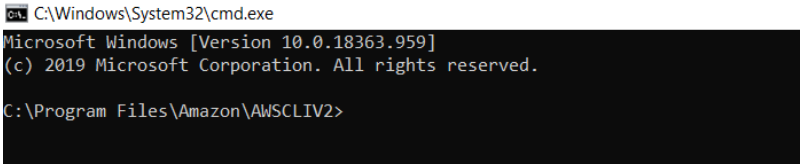
AWS Management CLI

Installation Link :https://docs.aws.amazon.com/cli/latest/userguide/install-cliv2-windows.html

To invoke CLI, go to the below folder

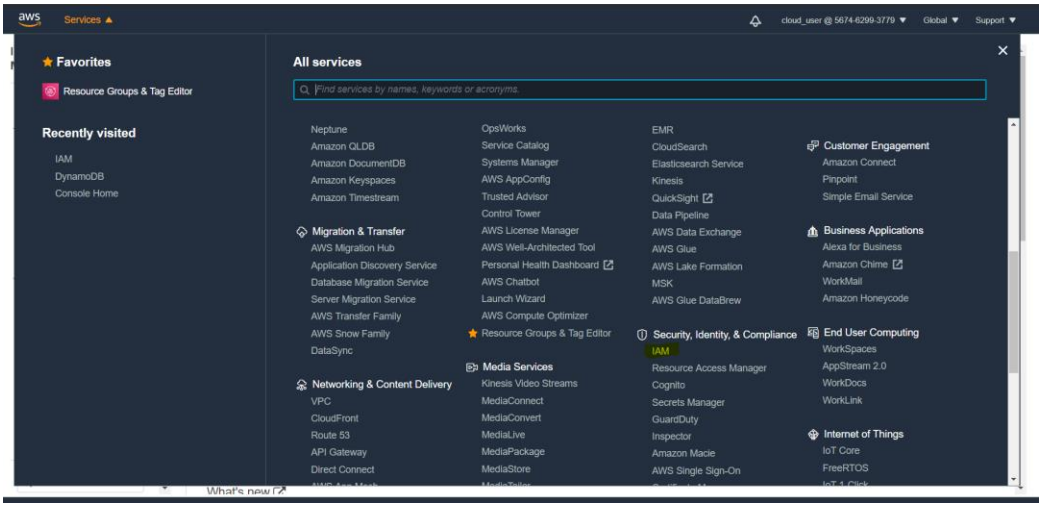


Type ”cmd” in the Address bar

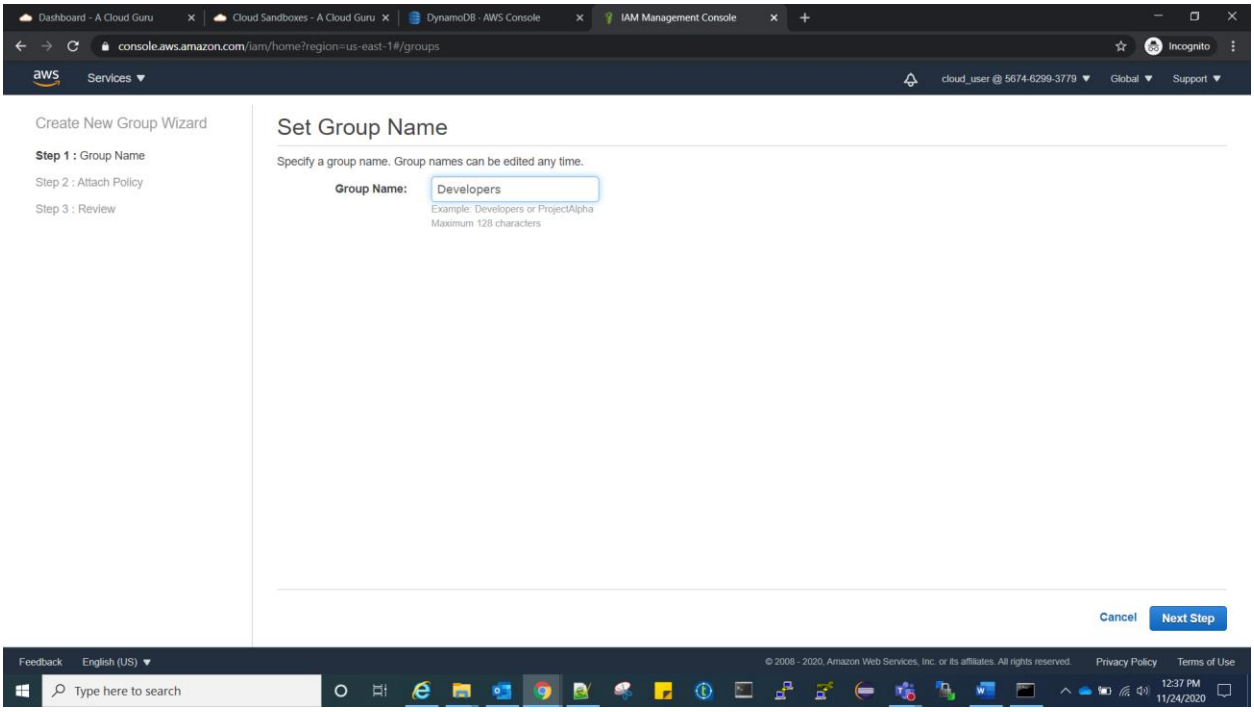


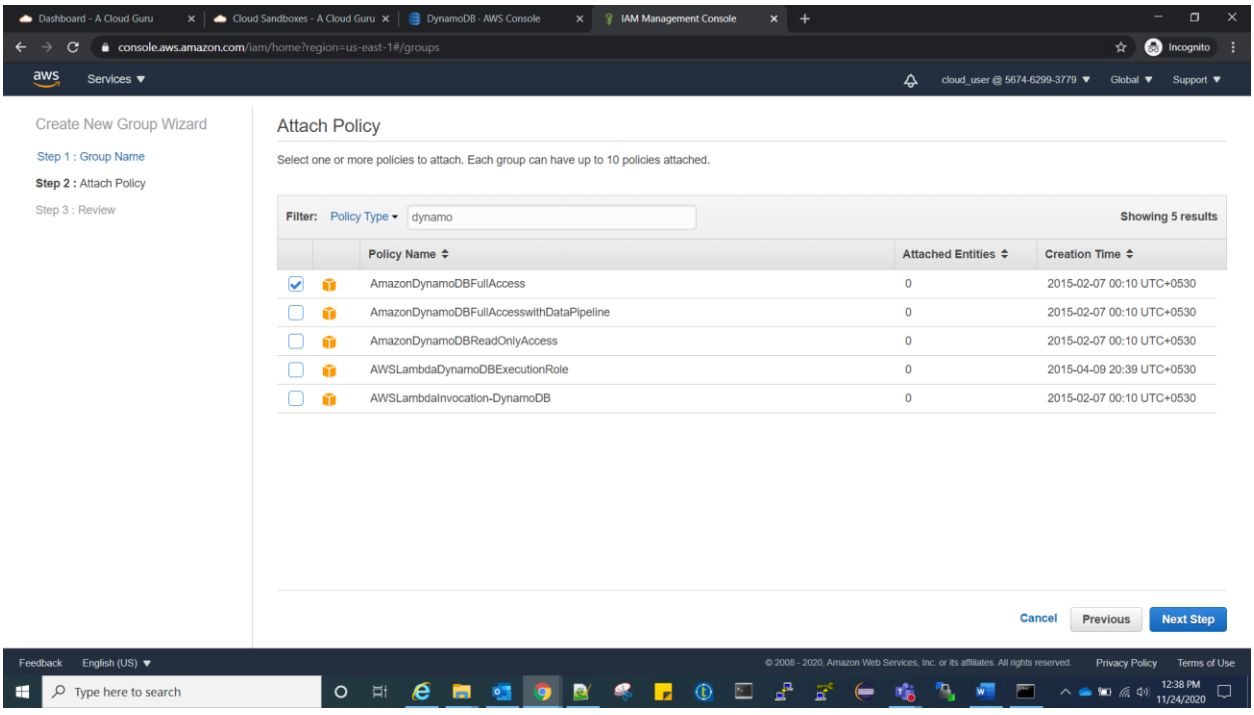
Group and User Creation

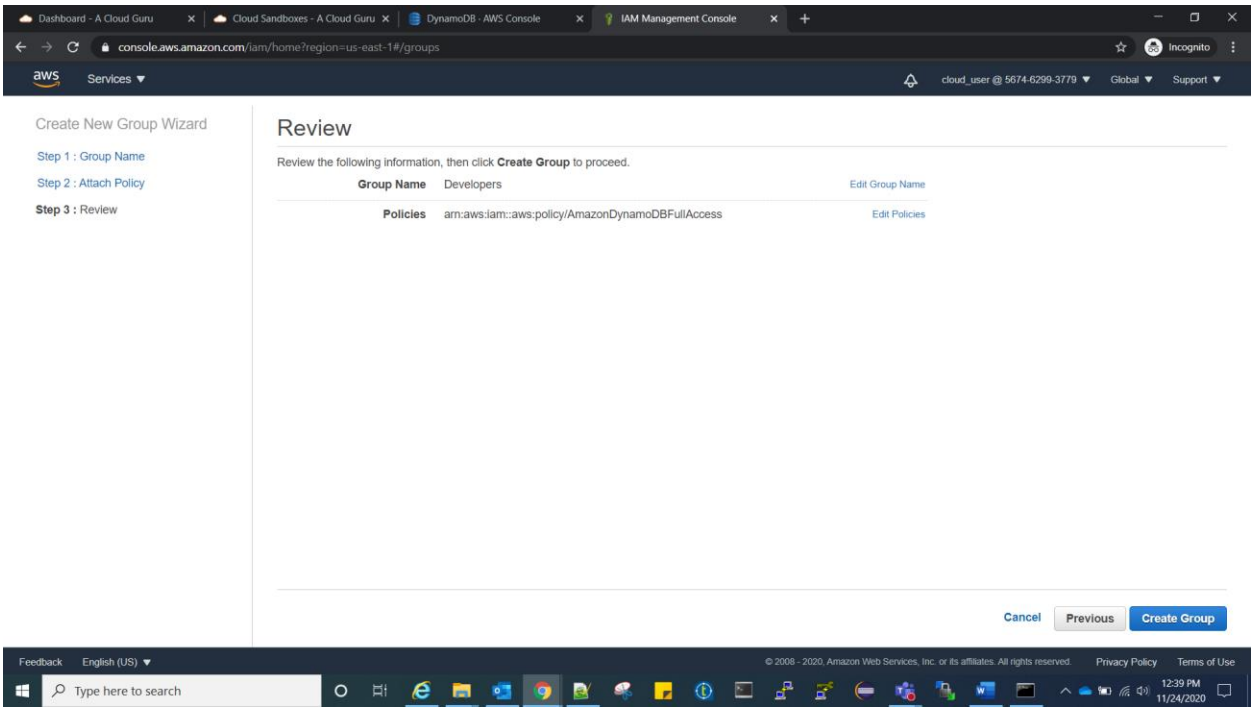
On the AWS Management console, go to Services->IAM under Security, Identity, & Compliance

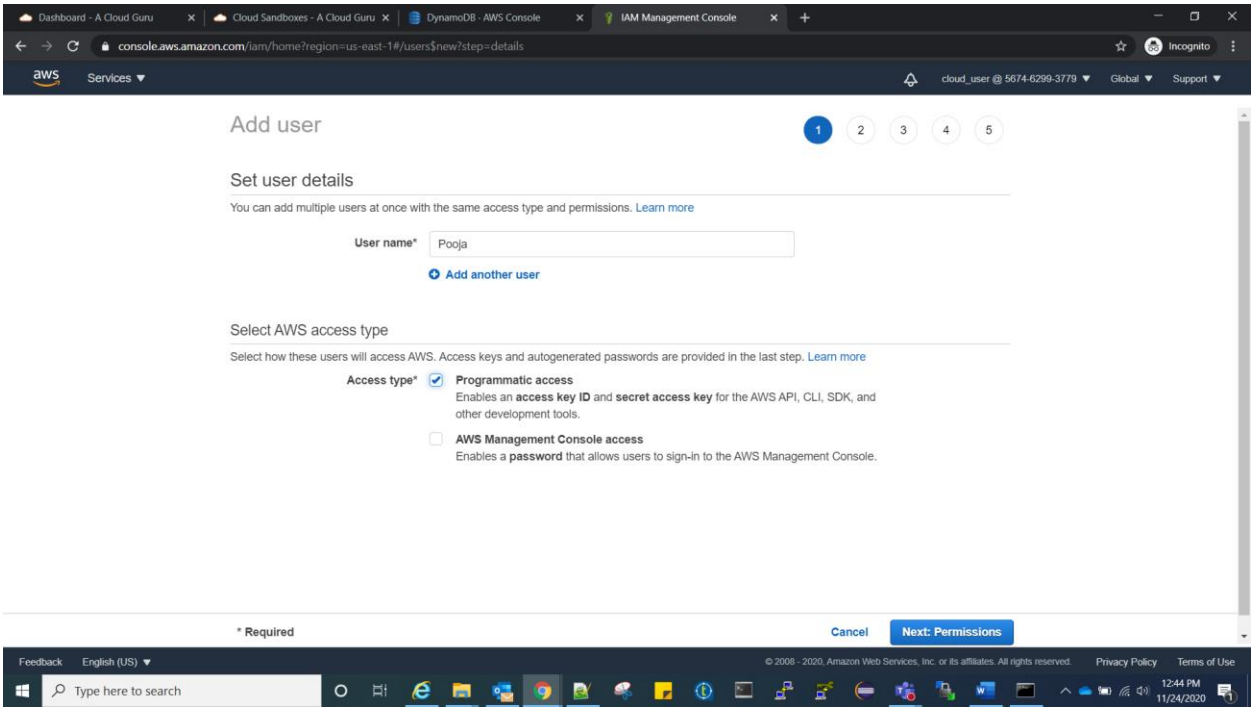


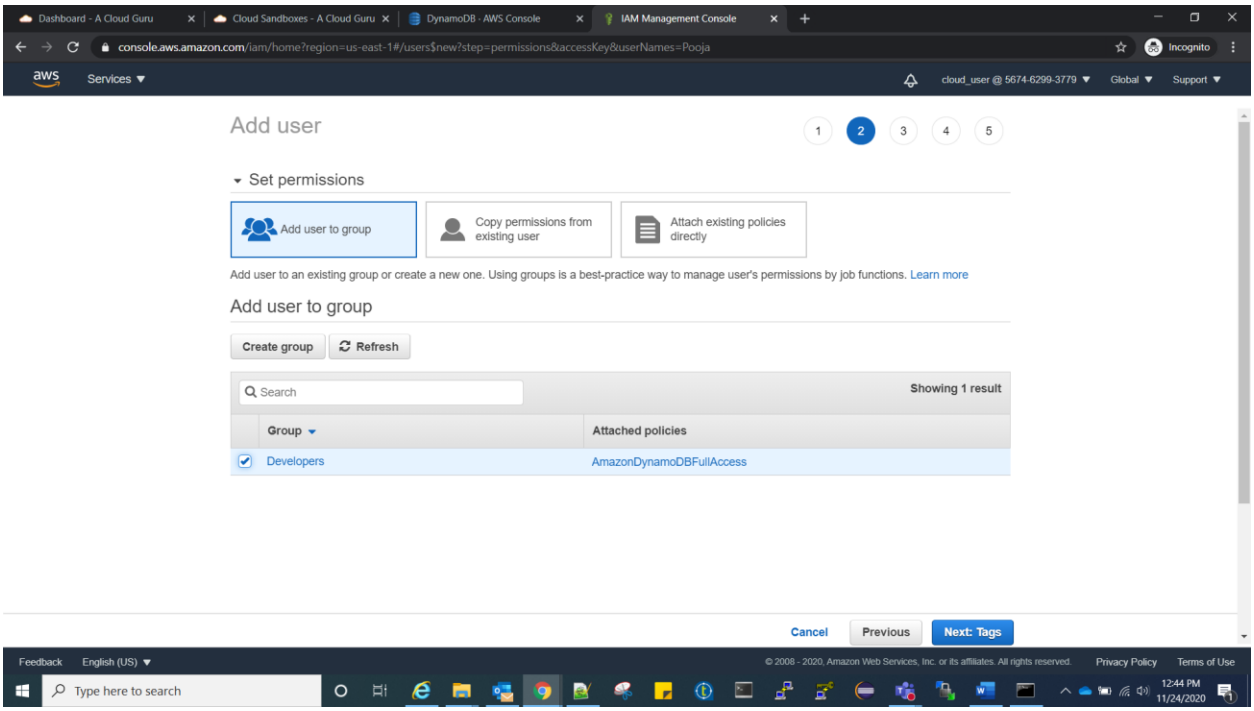
Create group “Developers” and create a user “pooja” and assign “Pooja” to the newly created group.

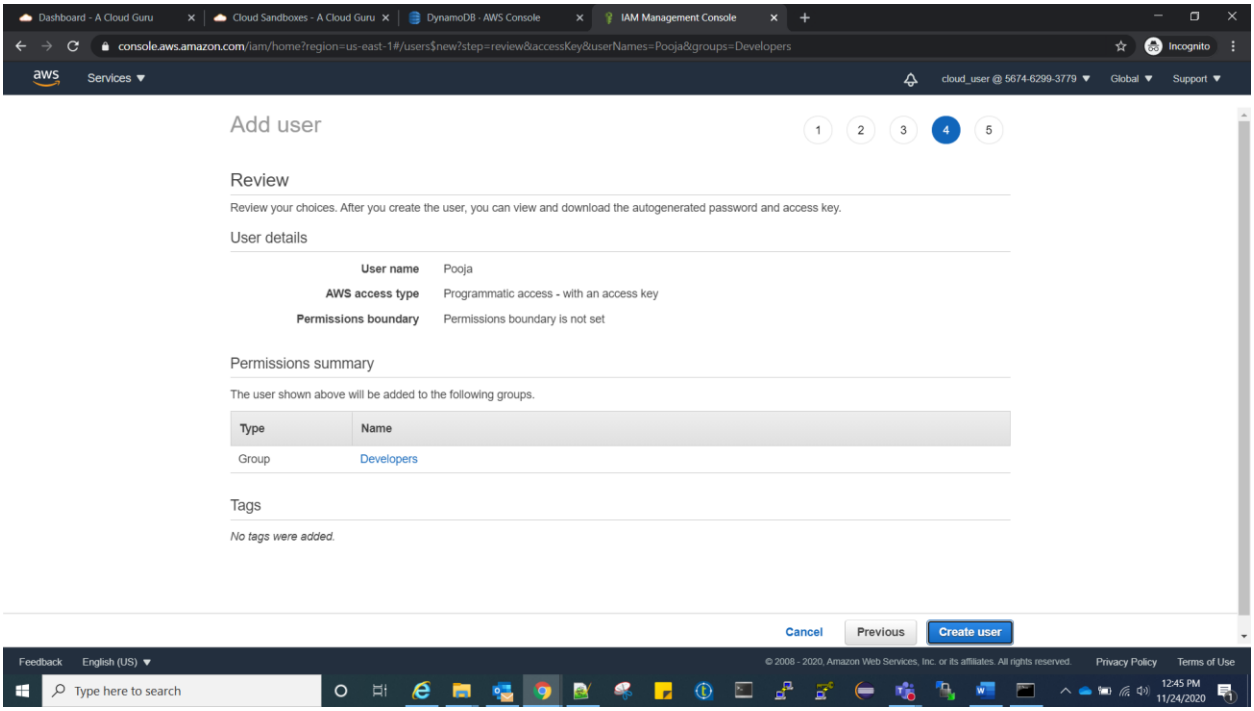


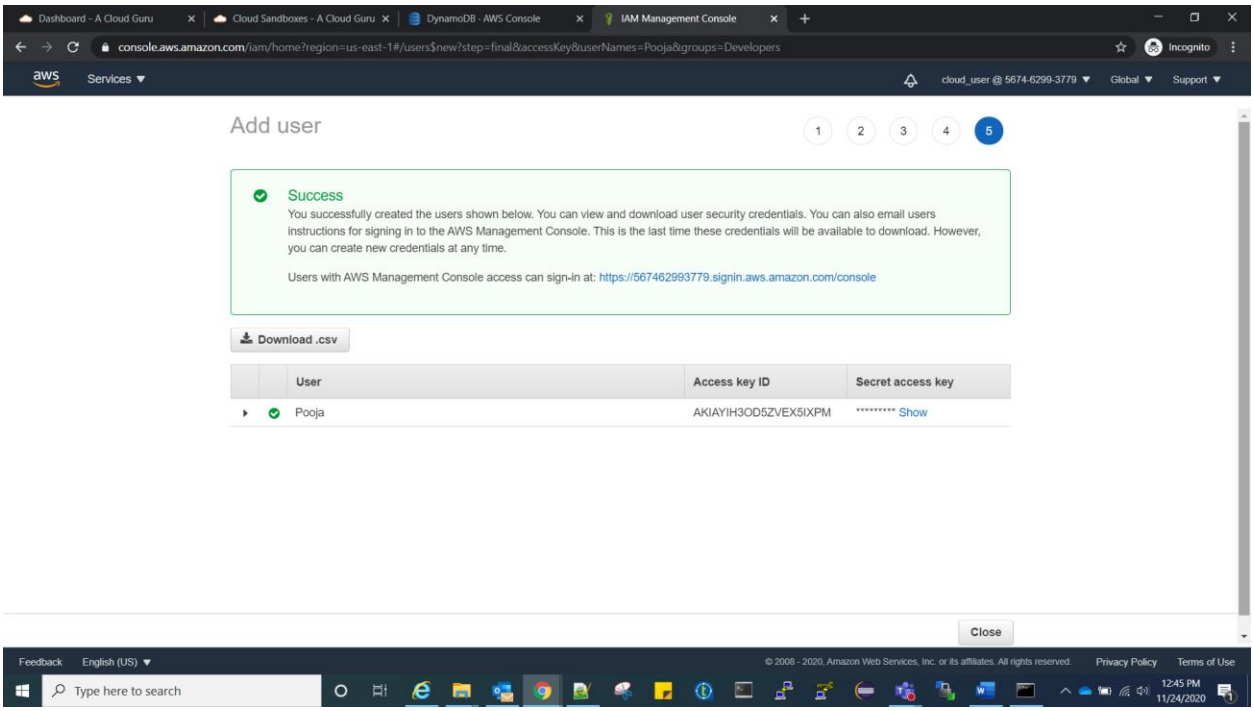



Dashboard - A Cloud Guru
Cloud Sandboxes - A Cloud Guru
DynamoDB - AWS Console
IAM Management Console
console.aws.amazon.com/iam/home?region=us-east-1#/groups
Incognito
Services
cloud_user @ 5674-6299-3779
Global
Support
Create New Group Wizard
Step 1 : Group Name
Step 2 : Attach Policy
Step 3 : Review
Review
Review the following information, then click Create Group to proceed.
Group Name
Developers
Edit Group Name
Policies
arn:aws:iam::aws:policy/AmazonDynamoDBFullAccess
Edit Policies
Cancel
Previous
Create Group
Feedback
English (US)
© 2008 - 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved.
Privacy Policy
Terms of Use
Type here to search
12:39 PM
11/24/2020


Dashboard - A Cloud Guru
Cloud Sandboxes - A Cloud Guru
DynamoDB - AWS Console
IAM Management Console
console.aws.amazon.com/iam/home?region=us-east-1#/users$new?step=details
Incognito
Services
cloud_user @ 5674-6299-3779
Global
Support
Add user
1
2
3
4
5
Set user details
You can add multiple users at once with the same access type and permissions. Learn more
User name*
Pooja
Add another user
Select AWS access type
Select how these users will access AWS. Access keys and autogenerated passwords are provided in the last step. Learn more
Access type*
Programmatic access
Enables an access key ID and secret access key for the AWS API, CLI, SDK, and other development tools.
AWS Management Console access
Enables a password that allows users to sign-in to the AWS Management Console.
* Required
Cancel
Next: Permissions
Feedback
English (US)
© 2008 - 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved.
Privacy Policy
Terms of Use
Type here to search
12:44 PM
11/24/2020

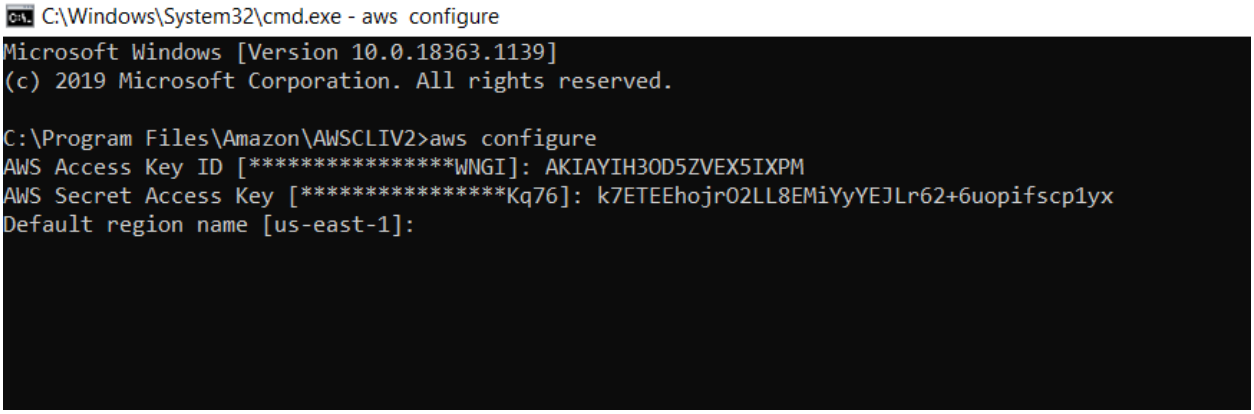

Dashboard - A Cloud Guru
Cloud Sandboxes - A Cloud Guru
DynamoDB - AWS Console
IAM Management Console
console.aws.amazon.com/iam/home?region=us-east-1#/users$new?step=permissions&accessKey&userNames=Pooja
Incognito
Services
cloud_user @ 5674-6299-3779
Global
Support
Add user
1 2 3 4 5
Set permissions
Add user to group
Copy permissions from existing user
Attach existing policies directly
Add user to an existing group or create a new one. Using groups is a best-practice way to manage user's permissions by job functions. Learn more
Add user to group
Create group
Refresh
Search
Showing 1 result
Group
Attached policies
Developers
AmazonDynamoDBFullAccess
Cancel
Previous
Next: Tags
Feedback
English (US)
© 2008 - 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved.
Privacy Policy
Terms of Use
Type here to search
12:44 PM
11/24/2020


Dashboard - A Cloud Guru
Cloud Sandboxes - A Cloud Guru
DynamoDB - AWS Console
IAM Management Console
console.aws.amazon.com/iam/home?region=us-east-1#/users$new?step=review&accessKey&userNames=Pooja&groups=Developers
Incognito
Services
cloud_user @ 5674-6299-3779
Global
Support
Add user
1 2 3 4 5
Review
Review your choices. After you create the user, you can view and download the autogenerated password and access key.
User details
User name
Pooja
AWS access type
Programmatic access - with an access key
Permissions boundary
Permissions boundary is not set
Permissions summary
The user shown above will be added to the following groups.
Type
Name
Group
Developers
Tags
No tags were added.
Cancel
Previous
Create user
Feedback
English (US)
© 2008 - 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved.
Privacy Policy
Terms of Use
Type here to search
12:45 PM
11/24/2020



Make a note of Access Key Id and Secret Access Key

On the CLI, type “aws configure”



Press “enter” and then again press enter

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.18363.1139]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Program Files\Amazon\AWSCLIV2>aws configure
AWS Access Key ID [****************WNGI]: AKIAYIH3OD5ZVEX5IXPM
AWS Secret Access Key [****************Kq76]: 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
Default region name [us-east-1]:
Default output format [None]:

C:\Program Files\Amazon\AWSCLIV2>
```

The CLI is now configured for use

AWS CLI APIs

To check all dynamodb tables,

C:\Program Files\Amazon\AWSCLIV2>aws dynamodb list-tables

```
C:\Program Files\Amazon\AWSCLIV2>aws dynamodb list-tables
{
    "TableNames": [
        "iucr"
    ]
}
```

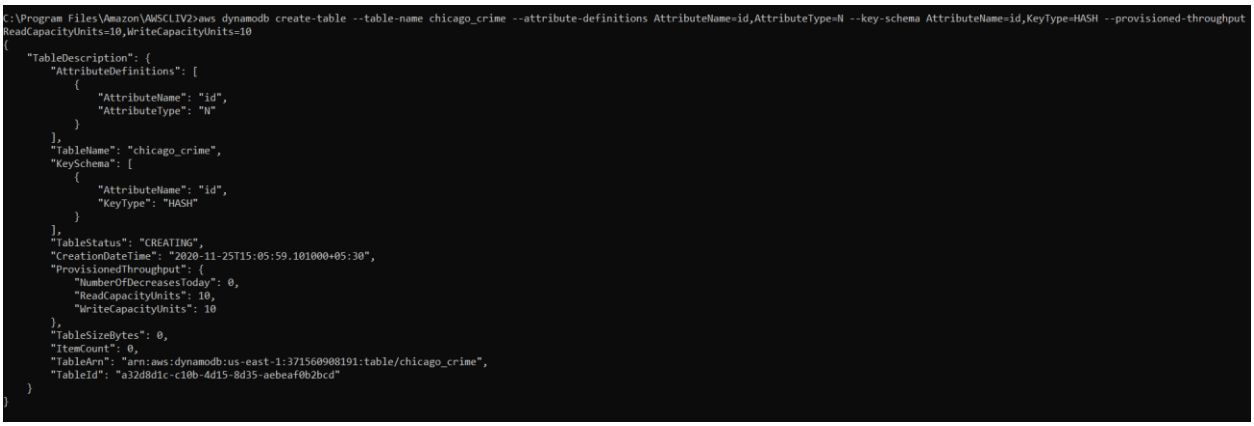
To create a new dynamodb table,

C:\Program Files\Amazon\AWSCLIV2> aws dynamodb create-table --table-name Cats --attribute-definitions AttributeName=Age,AttributeType=N --key-schema AttributeName=Age,KeyType=HASH --provisioned-throughput ReadCapacityUnits=5,WriteCapacityUnits=5

// aws dynamodb create-table --table-name Cats1 --attribute-definitions AttributeName=Age,AttributeType=N AttributeName=CatName,AttributeType=S --key-schema AttributeName=Age,KeyType=HASH AttributeName=CatName,KeyType=RANGE --provisioned-throughput ReadCapacityUnits=5,WriteCapacityUnits=5

//

C:\Program Files\Amazon\AWSCLIV2>aws dynamodb create-table --table-name chicago_crime --attribute-definitions AttributeName=id,AttributeType=N --key-schema AttributeName=id,KeyType=HASH --provisioned-throughput ReadCapacityUnits=100,WriteCapacityUnits=100



To check table metadata,

C:\Program Files\Amazon\AWSCLIV2>aws dynamodb describe-table --table-name Cats

C:\Program Files\Amazon\AWSCLIV2>aws dynamodb describe-table --table-name chicago_crime

```
C:\Program Files\Amazon\AWSCLIV2>aws dynamodb describe-table --table-name chicago_crime
{
    "Table": {
        "AttributeDefinitions": [
            {
                "AttributeName": "id",
                "AttributeType": "N"
            }
        ],
        "TableName": "chicago_crime",
        "KeySchema": [
            {
                "AttributeName": "id",
                "KeyType": "HASH"
            }
        ],
        "TableStatus": "ACTIVE",
        "CreationDateTime": "2020-11-25T15:05:59.101000+05:30",
        "ProvisionedThroughput": {
            "NumberOfDecreasesToday": 0,
            "ReadCapacityUnits": 10,
            "WriteCapacityUnits": 10
        },
        "TableSizeBytes": 0,
        "ItemCount": 0,
        "TableArn": "arn:aws:dynamodb:us-east-1:371560908191:table/chicago_crime",
        "TableId": "a32d8d1c-c10b-4d15-8d35-aebeaf0b2bcd"
    }
}


C:\Program Files\Amazon\AWSCLIV2>
```

Next, we'll add an entry to our Cats table

C:\Program Files\Amazon\AWSCLIV2>aws dynamodb put-item --table-name Cats --item file://catdetails.json

To retrieve a single record from table,

C:\Program Files\Amazon\AWSCLIV2>aws dynamodb get-item --table-name Cats --region us-east-1 --key "{\"Age\":{\"N\":\"5\"}}"

- aws dynamodb list-tables

To delete the table and all of its entries run,
C:\Program Files\Amazon\AWSCLIV2>aws dynamodb delete-table --table-name Cats

- aws dynamodb list-tables

To clear the screen,

C:\Program Files\Amazon\AWSCLIV2>cls

To load a json file with multiple records into dynamodb,

C:\Program Files\Amazon\AWSCLIV2>aws dynamodb batch-write-item --request-items file://chicago_crime.json

The **scan** command enables us to view all the data stored in a table.

C:\Program Files\Amazon\AWSCLIV2>aws dynamodb scan --table-name chicago_crime

To retrieve a single record from table,

C:\Program Files\Amazon\AWSCLIV2>aws dynamodb get-item --table-name chicago_crime --region us-east-1 --key "{\"id\":{\"N\":\"10508693\"}}"

To delete a record from table,

C:\Program Files\Amazon\AWSCLIV2>aws dynamodb delete-item --table-name chicago_crime --region us-east-1 --key "{\"id\":{\"N\":\"10508693\"}}"