Amazon DynamoDB: Create and Query NoSQL table

Objective:

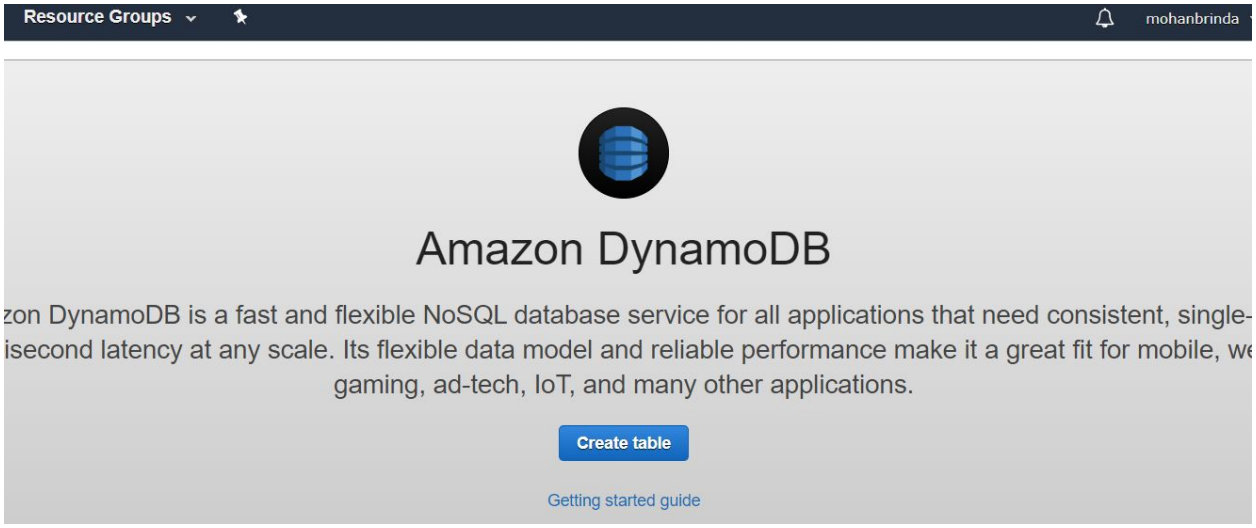
Create a simple table, add, scan and query the data, delete data, and delete the table by using the *Amazon DynamoDB*.

Amazon DynamoDB:

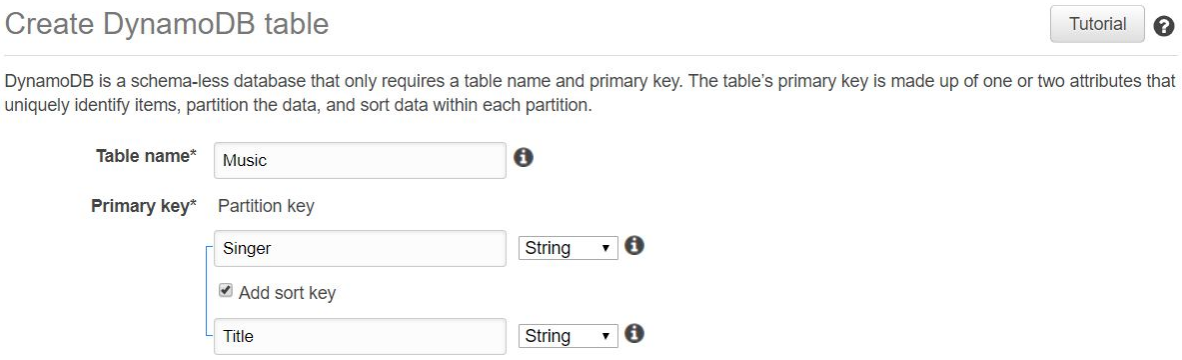
DynamoDB is a fully managed *NOSql* database. It supports document and key-value store models. DynamoDB is a great fit for mobile, web, gaming, IOT and many other applications due to its flexible data model, reliable performance, and automatic scaling of throughput capacity.

Open the Amazon console and search *DynamoDB* service. Open DynamoDB console.

1. Select *Create Table* on the DynamoDB console.



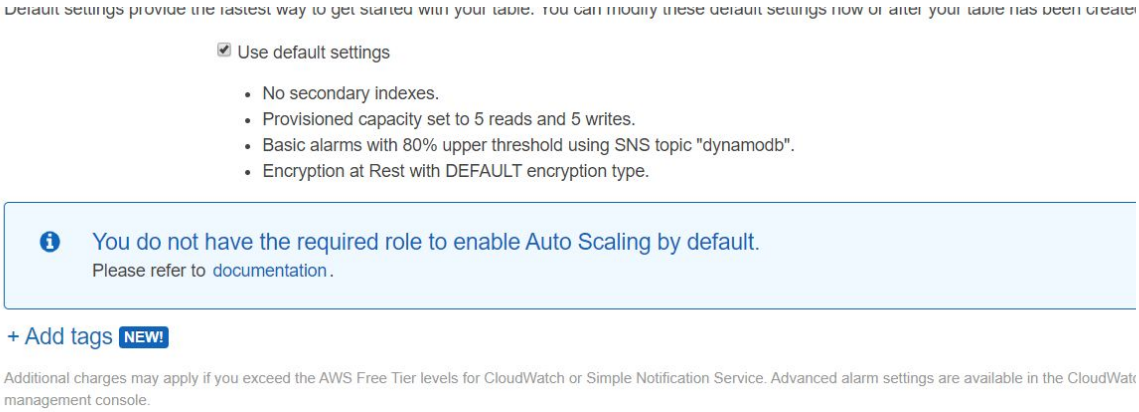
2. Partition Key:
   Type the *Singer* for the partition key box.
3. Sort Key:
   Since each artist may write many songs, sorting can be enabled with a sort key. Choose *Add Sort key* and type a *Title* for sort key box.



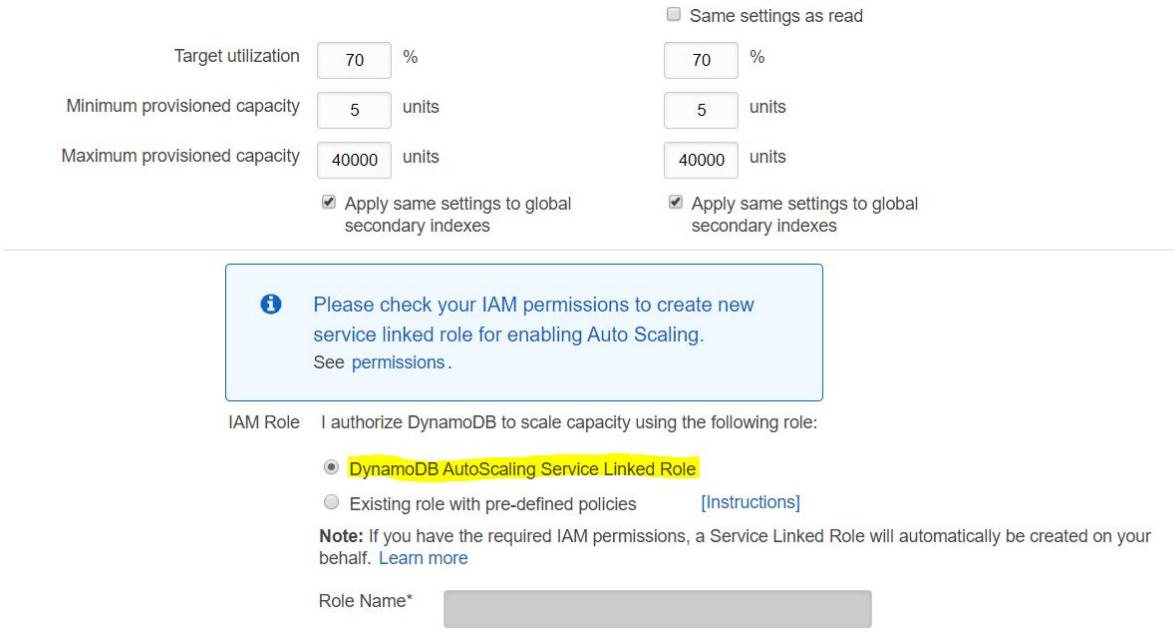
4. Enable DynamoDB *auto scaling* for the table. A role is created in DynamoDB when the *Use default settings* check box is unchecked.

   Based on the request volume, DynamoDB auto scaling will change the read and write capacity of the table. DynamoDB will manage the auto scaling process on

its own using the AWS Identity and Access Management (AWS IAM) role called *DynamoDBAutoscaleRole*. DynamoDB creates this role the first time when auto scaling is enabled in the account.



DynamoDB will create the *DynamoDBAutoscaleRole* role for you.Now select *Create.* The Music table appears in the table list with a check box and is ready to be used.



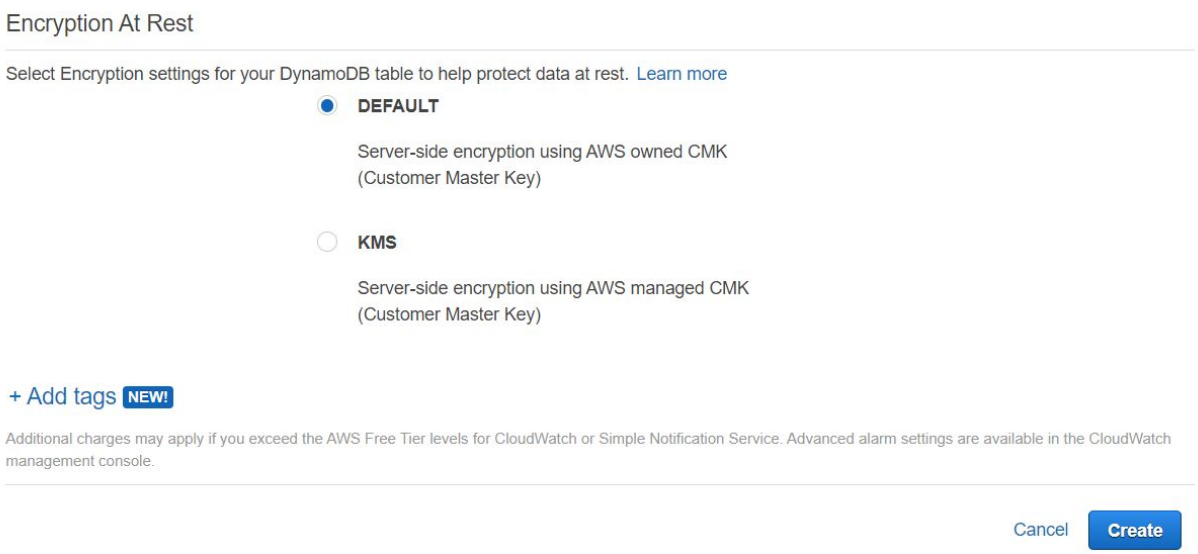
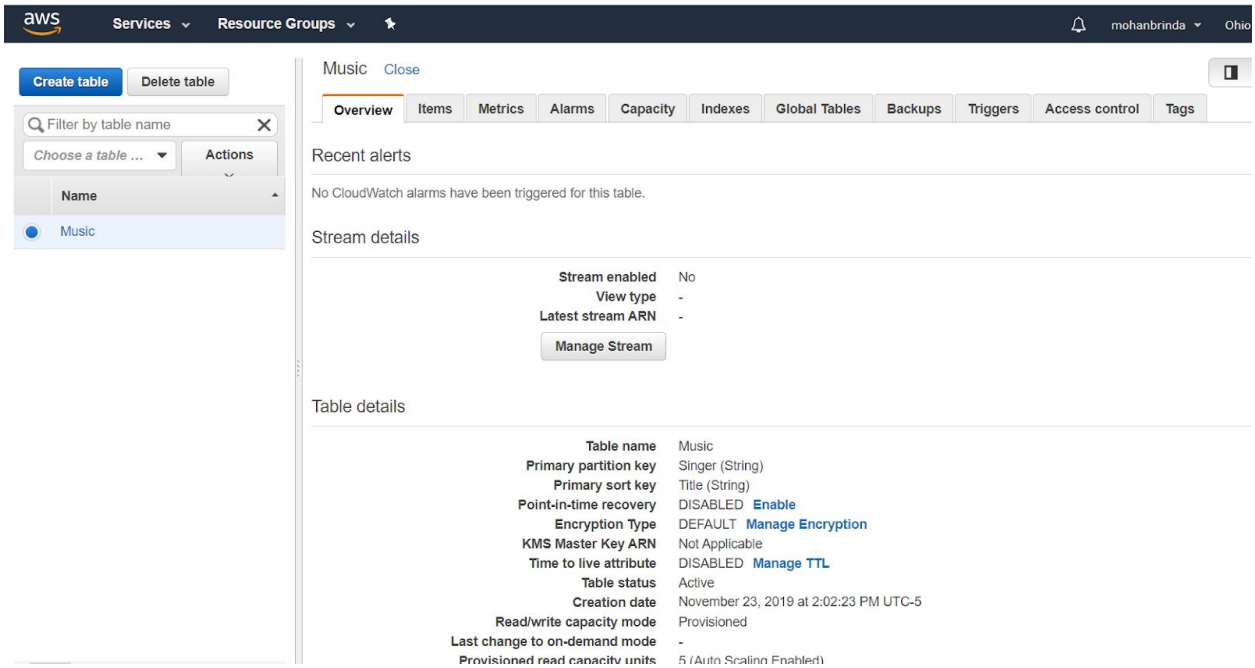
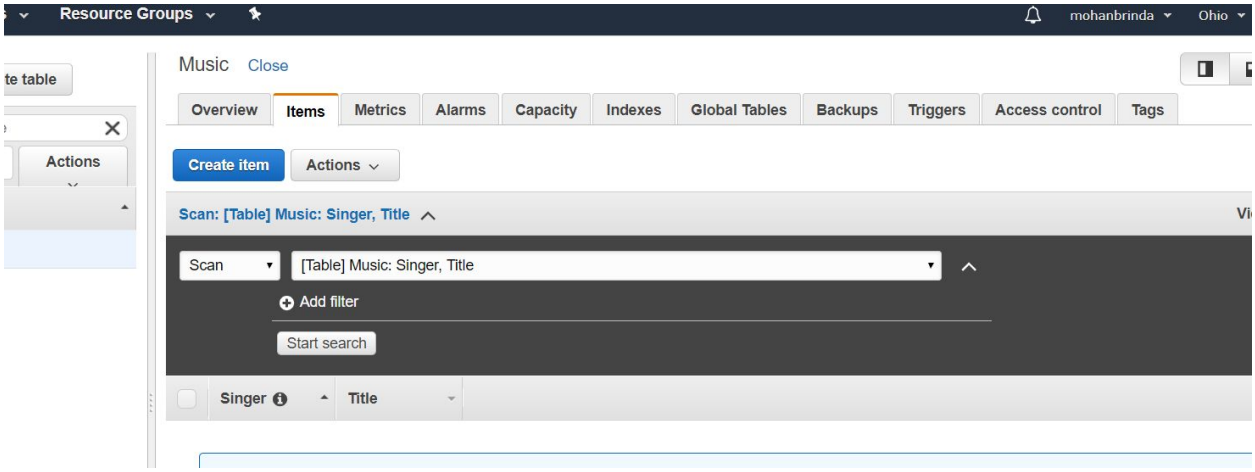
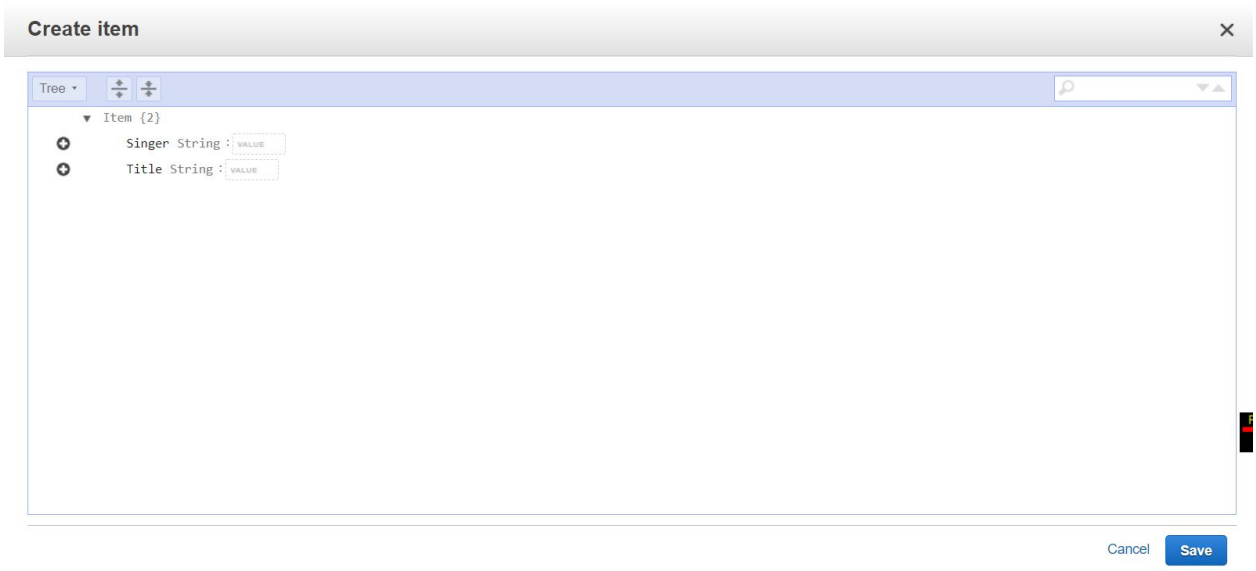


Table created



5. Add Data to the NoSQL Table. Select the *Items tab* and choose *Create item* .

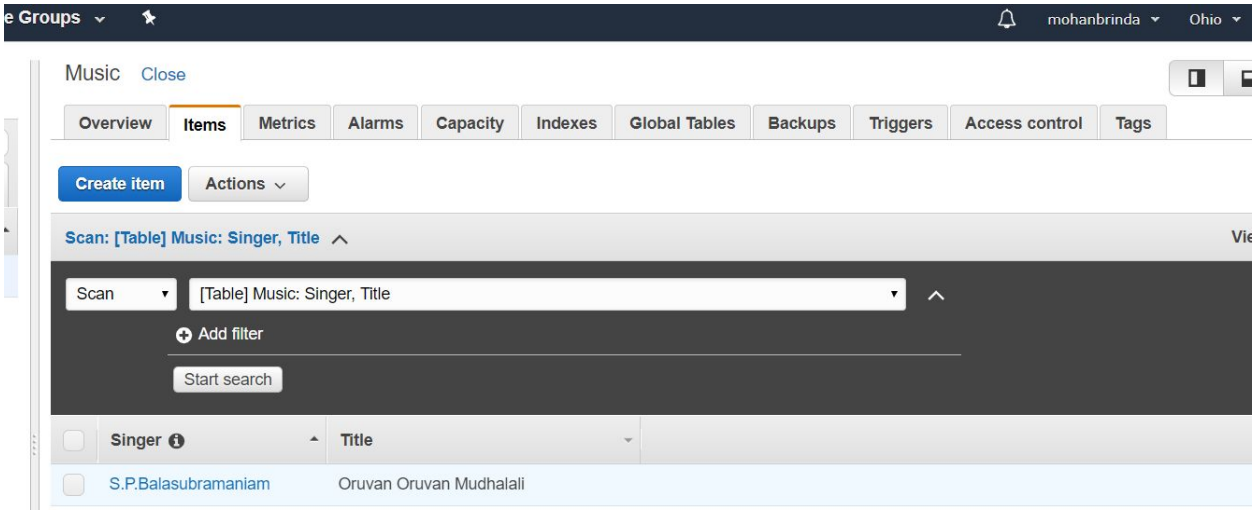




In the data entry window, enter the following text:

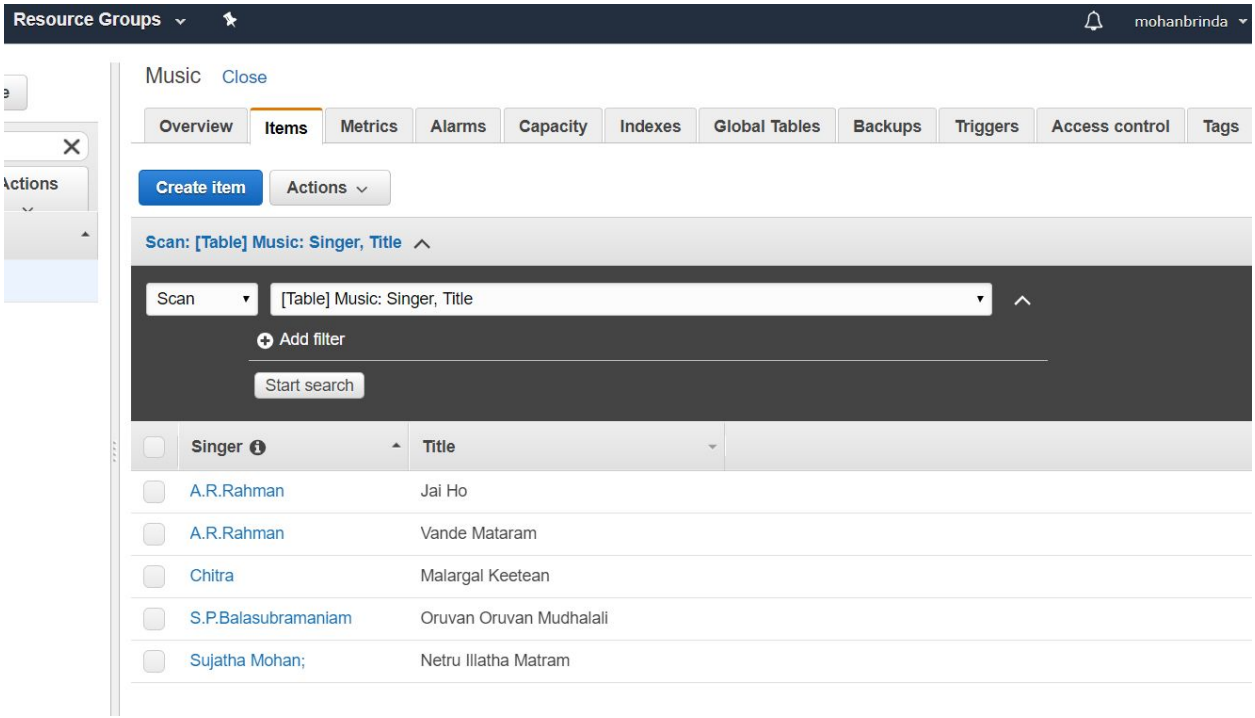
- For the Singer attribute, type *S.P.Balasubramaniam.*
- For the Title attribute, type *Oruvan Oruvan Mudhalali.*

Choose Save to save the item.



Repeat the process in order to add a few more items to the *Music* table:

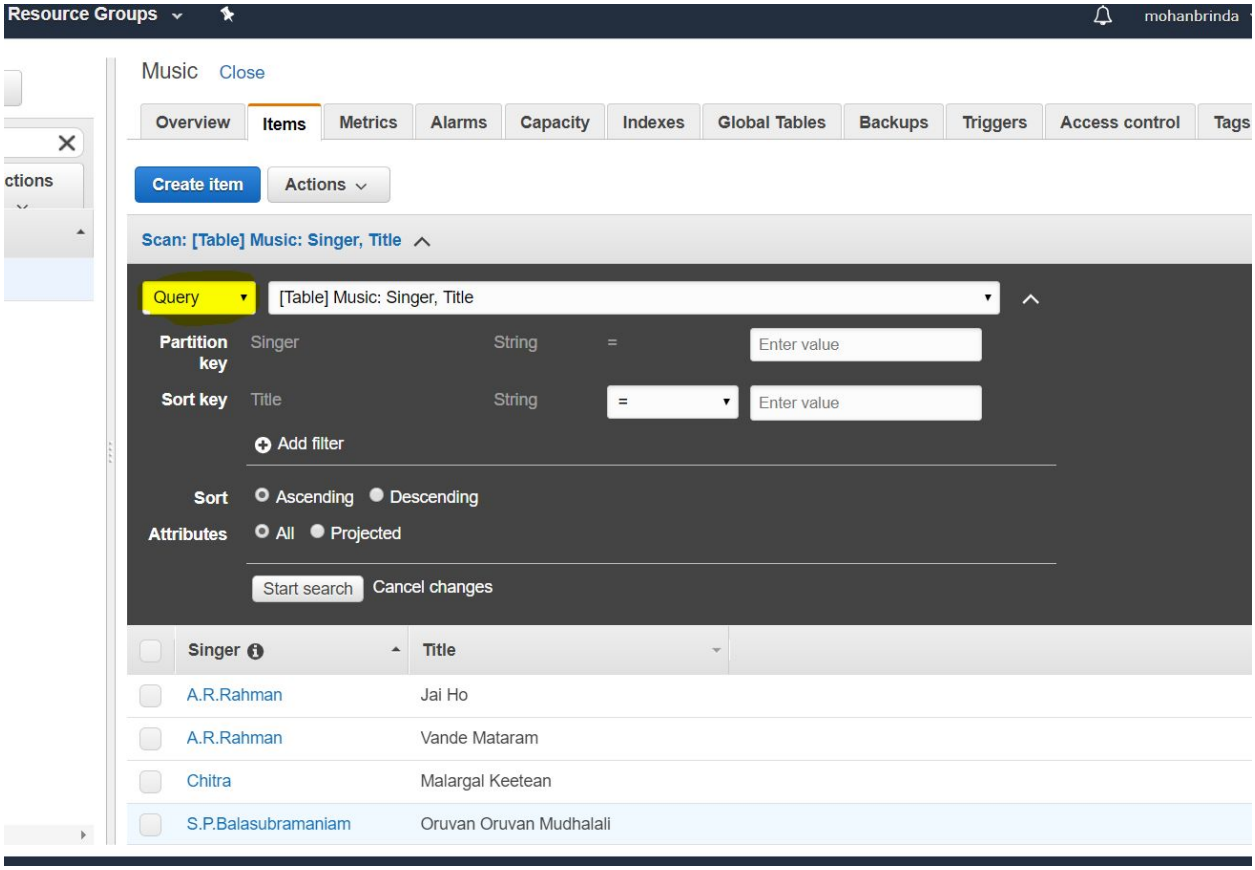
- Singer: *Sujatha Mohan*; Title: *Netru Illatha Matram*
- Singer: *A.R.Rahman*; Title: *Vande Mataram*
- Singer: *A.R.Rahman*; Title: *Jai Ho*
- Singer: *Chitra*; Title: *Malargal Keetean*



Query the NoSQL Table

In DynamoDB, query operations are efficient and use keys to find data. Scan operations traverse the entire table. Search for data in the table using query operations.

In the drop-down list in the dark gray banner above the items, change Scan to Query.

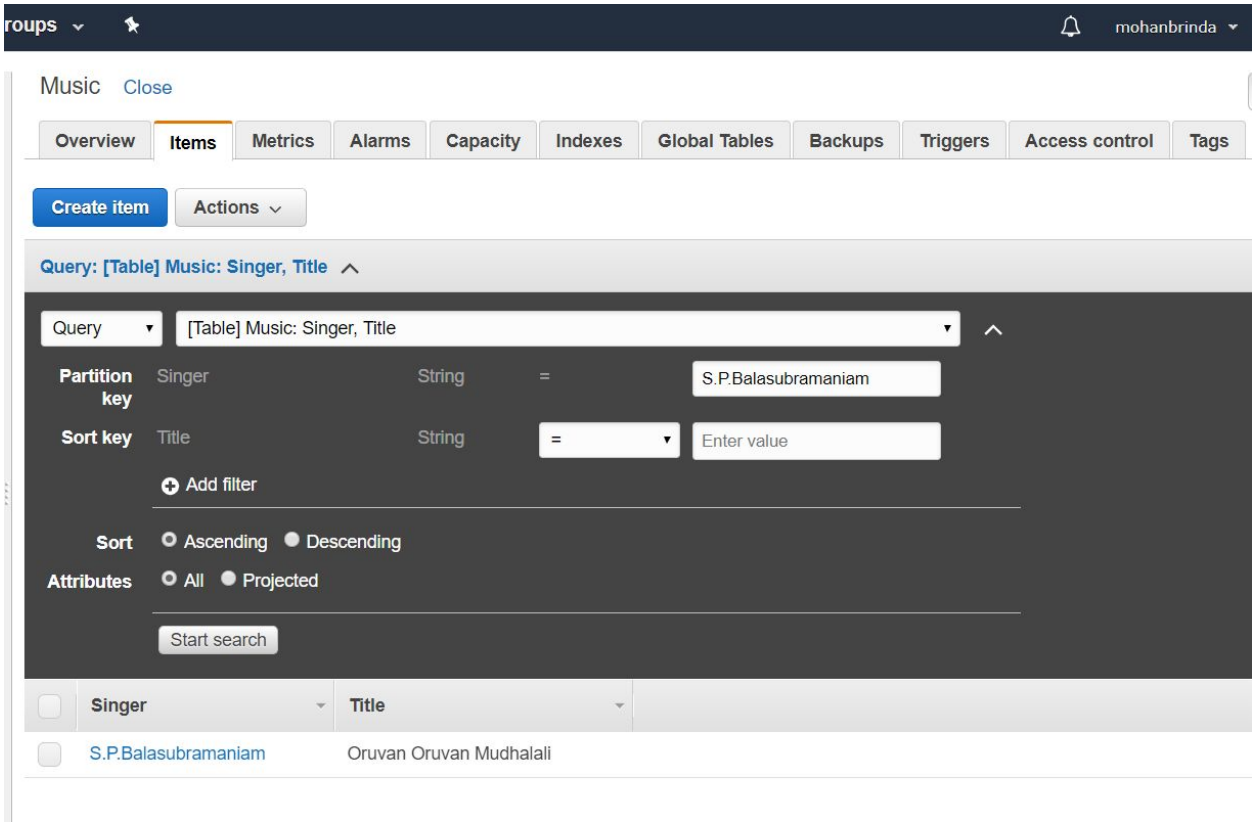


The console can be used to query the *Music* table in various ways.

In the Singer box, type *S.P.Balasubramaniam*, and choose Start search. All songs performed by *S.P.Balasubramaniam* are displayed.

Another query:

- In the Singer box, type *A.R.Rahman*, and choose Start search. All songs performed by *A.R.Rahman* are displayed.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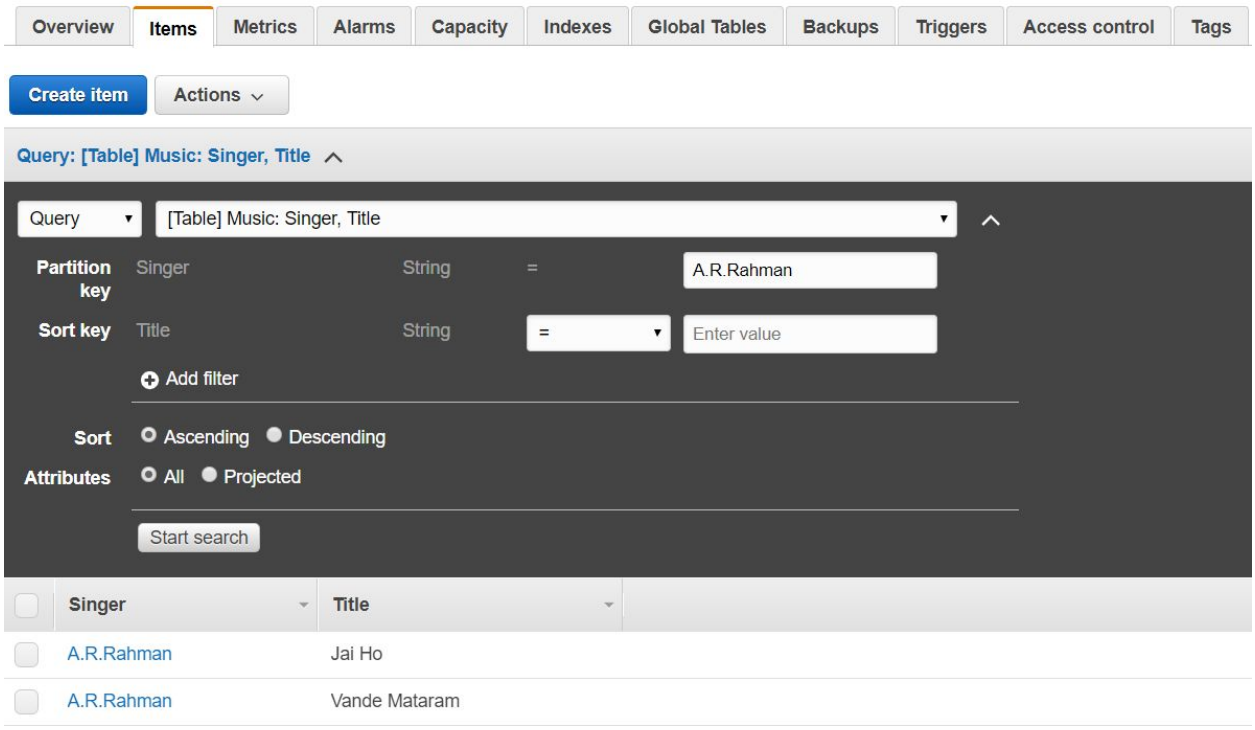
Music
Close
Overview
Items
Metrics
Alarms
Capacity
Indexes
Global Tables
Backups
Triggers
Access control
Tags
Create item
Actions
Query: [Table] Music: Singer, Title
Query
[Table] Music: Singer, Title
Partition key
Singer
String
=
S.P.Balasubramaniam
Sort key
Title
String
=
Enter value
Add filter
Sort
Ascending
Descending
Attributes
All
Projected
Start search
Singer
Title
S.P.Balasubramaniam
Oruvan Oruvan Mudhalali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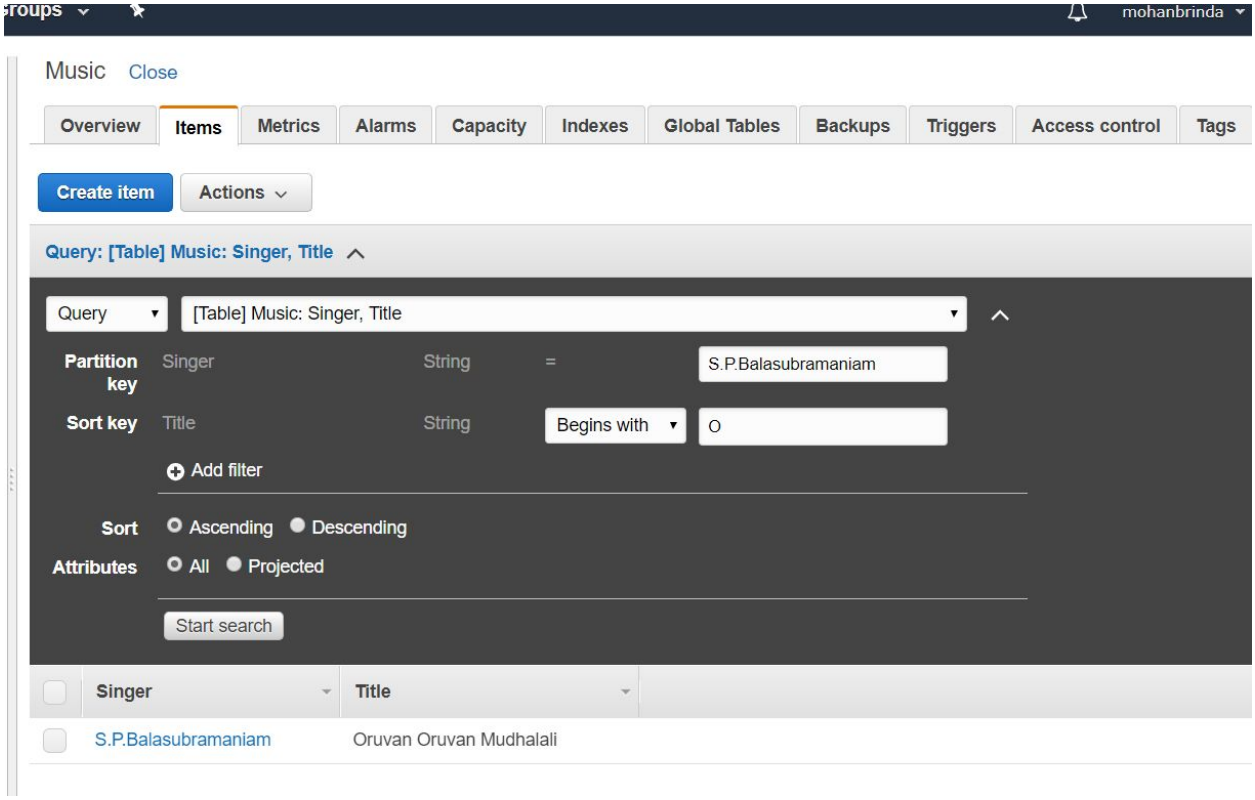
Projected
Start search
Singer
Title
A.R.Rahman
Jai Ho
A.R.Rahman
Vande Mataram

Another query to narrow down the search results:

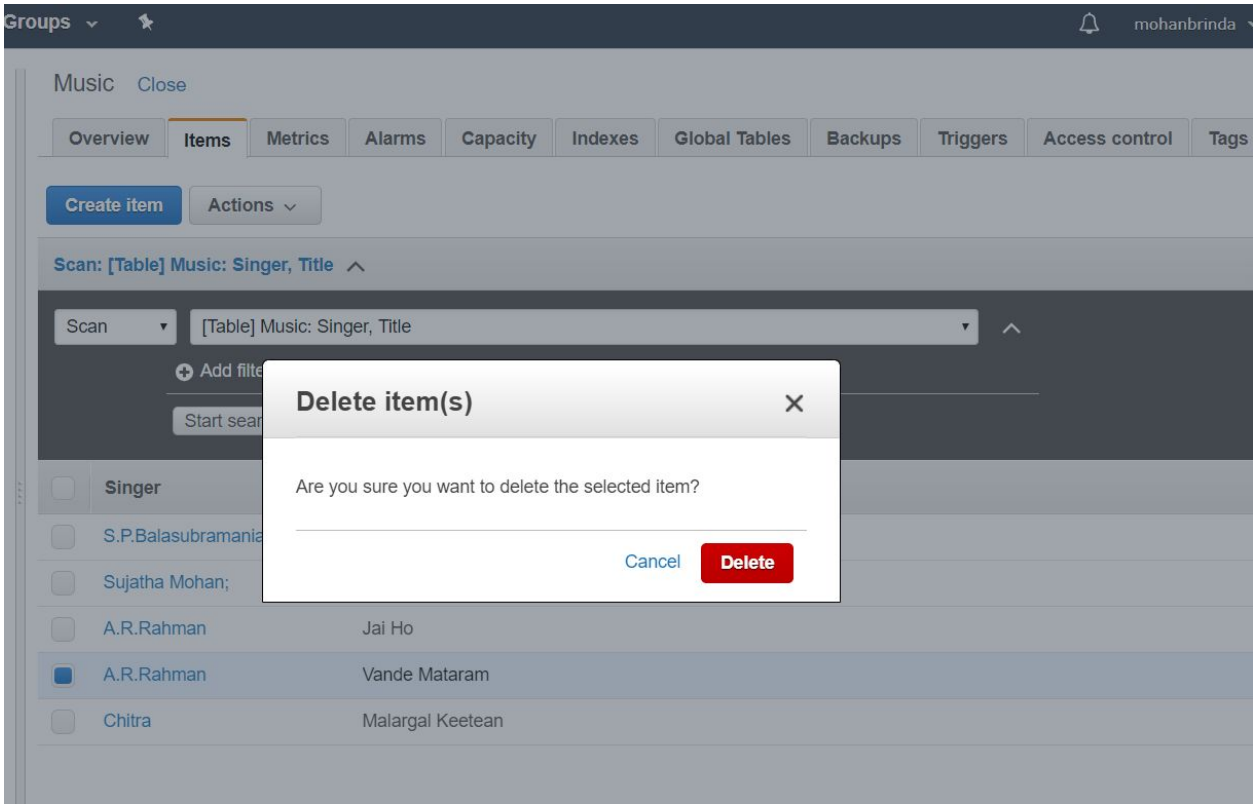
- In the Singer box, type *S.P.Balasubramaniam*
- In the Title box, select Begins with from the drop-down list and type *O*
- Choose Start search. Only "*Oruvan Oruvan Muthalali*" performed by *SS.P.Balasubramaniam* is displayed.



Delete an existing item

Change the Query drop-down list back to *Scan.*

Select the check box next to *A.R.Rahman.* In the *Actions* drop-down list, choose *Delete* and the item is deleted from the table.


Groups
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Triggers
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Tags
Create item
Actions
Scan: [Table] Music: Singer, Title
Scan
[Table] Music: Singer, Title
Add filte
Start sear
Delete item(s)
Are you sure you want to delete the selected item?
Cancel
Delete
Singer
S.P.Balasubramania
Sujatha Mohan;
A.R.Rahman
Jai Ho
A.R.Rahman
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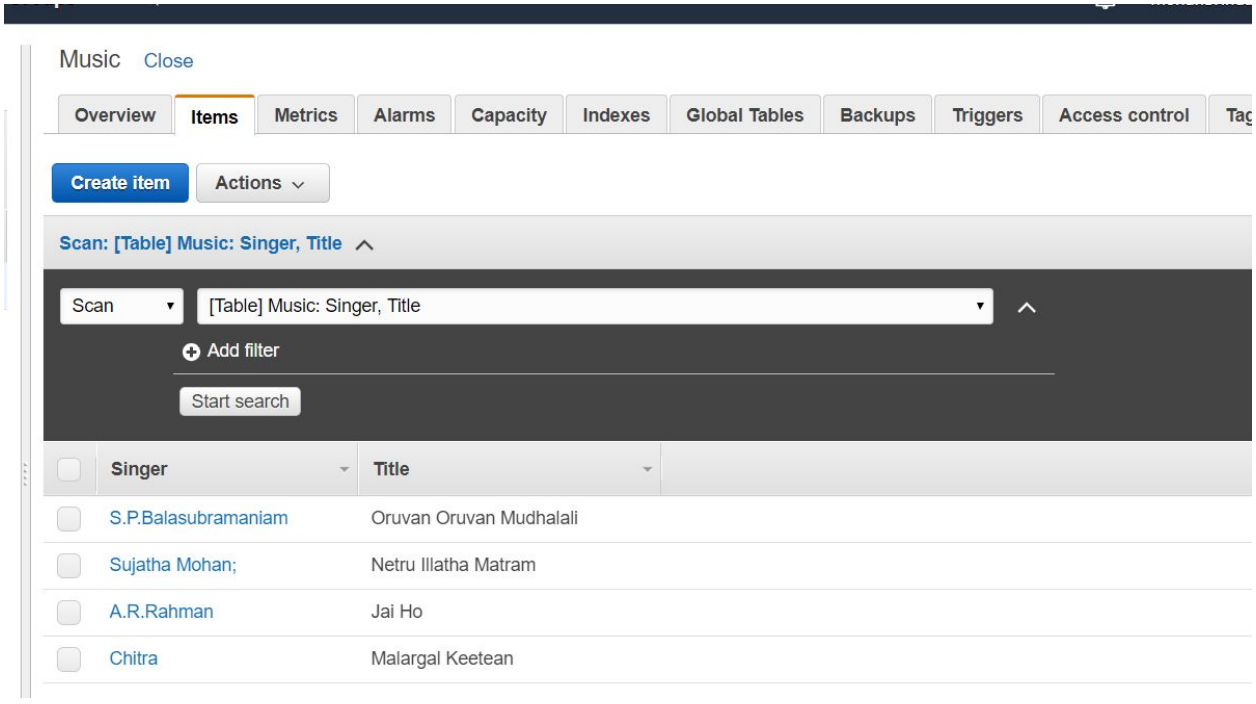
Chitra
Malargal Keetean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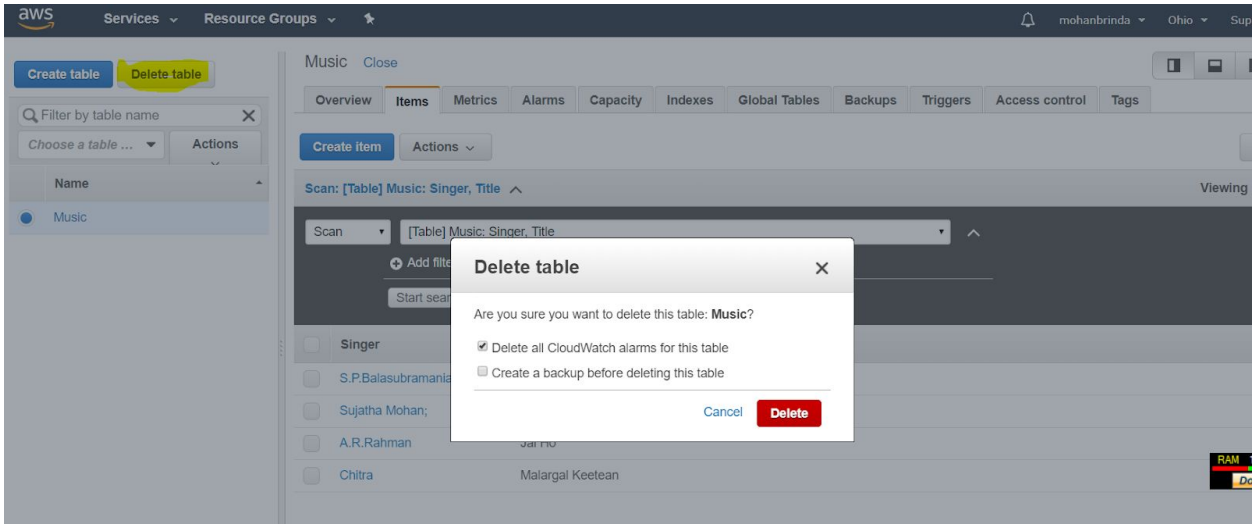
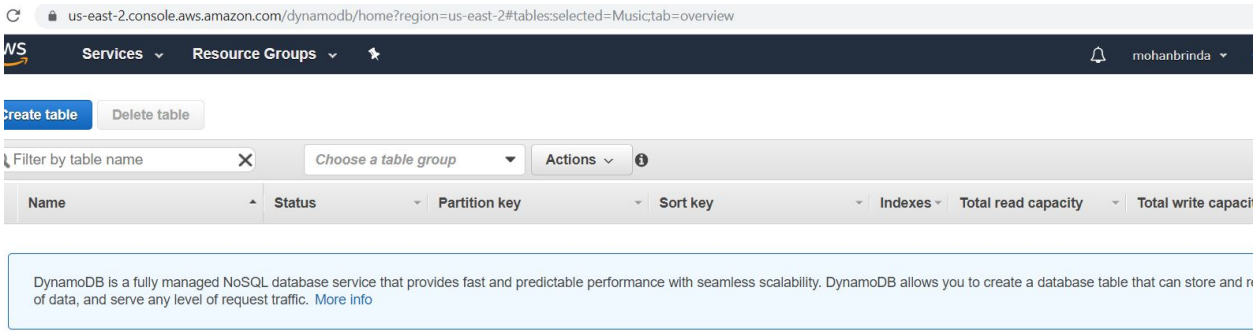
Scan: [Table] Music: Singer, Title
Scan
[Table] Music: Singer, Title
Add filter
Start search
Singer
Title
S.P.Balasubramaniam
Oruvan Oruvan Mudhalali
Sujatha Mohan;
Netru Illatha Matram
A.R.Rahman
Jai Ho
Chitra
Malargal Keetean

Delete the NOSQl Music Table

It is a best practice to delete tables that are no longer requires in order to avoid charges.

- In the *DynamoDB console*, choose the option next to the Music table and then choose *Delete table*.
- In the confirmation dialog box, choose *Delete.*





References:

aws.amazon.com