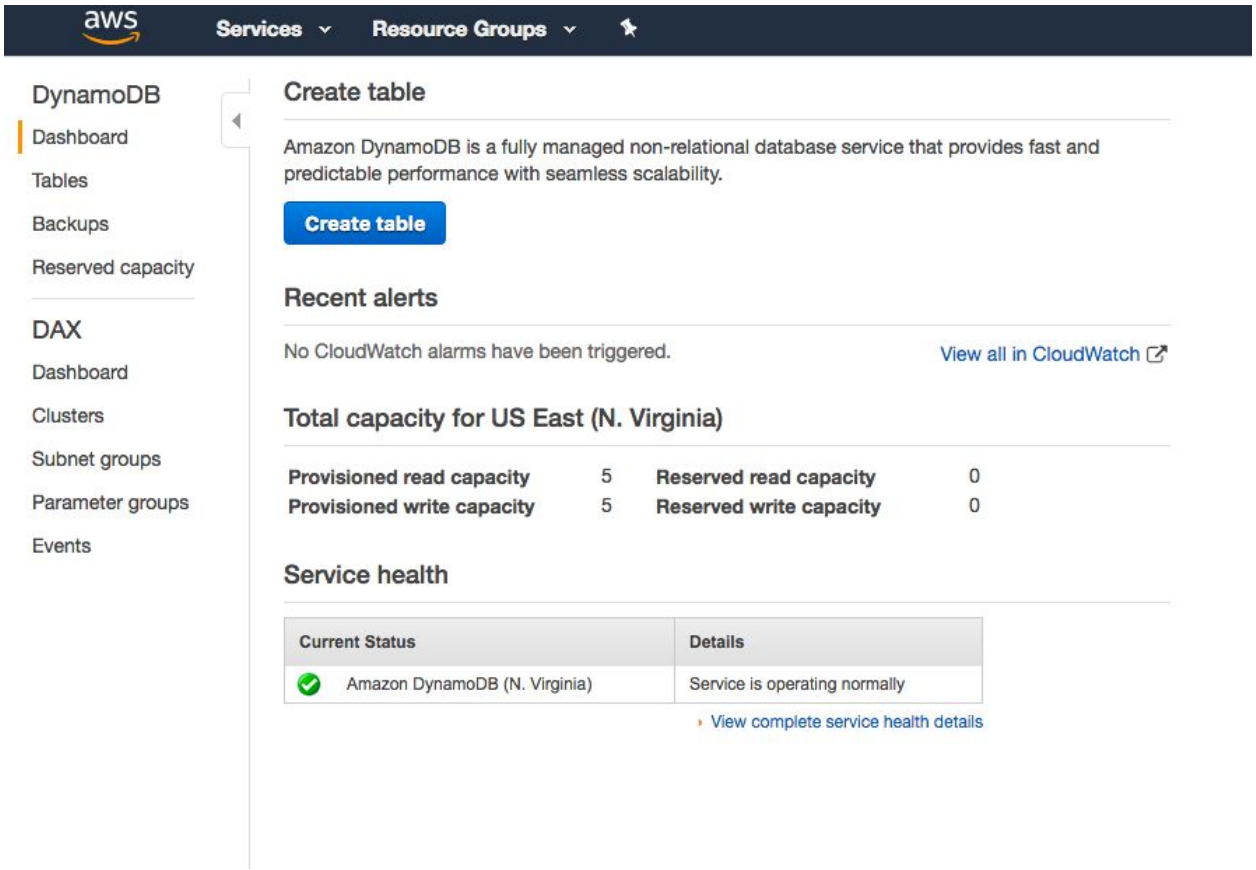
Demo_1(UsingConsole):

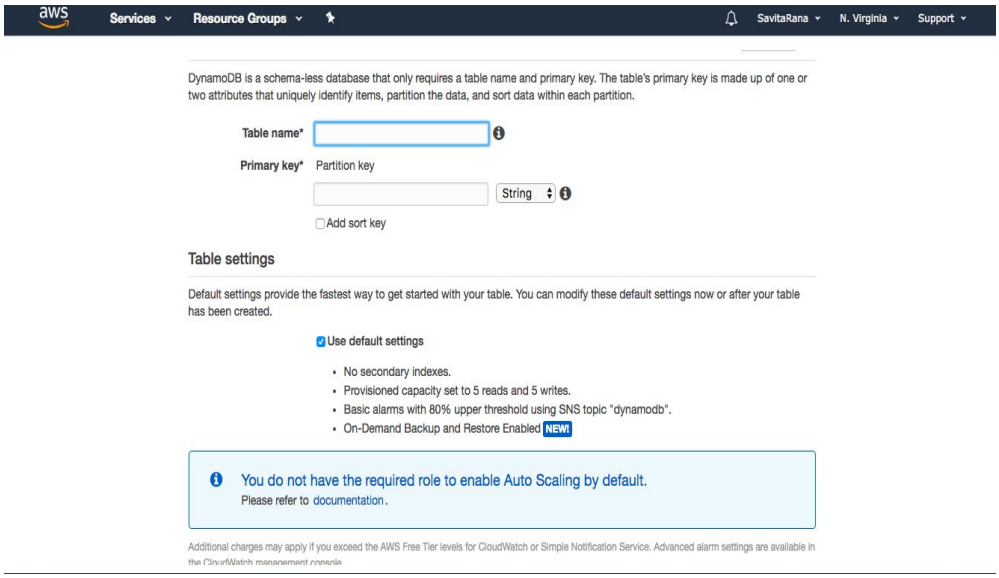
Creating Table :



Provide:

Name of the Table

Primary Key



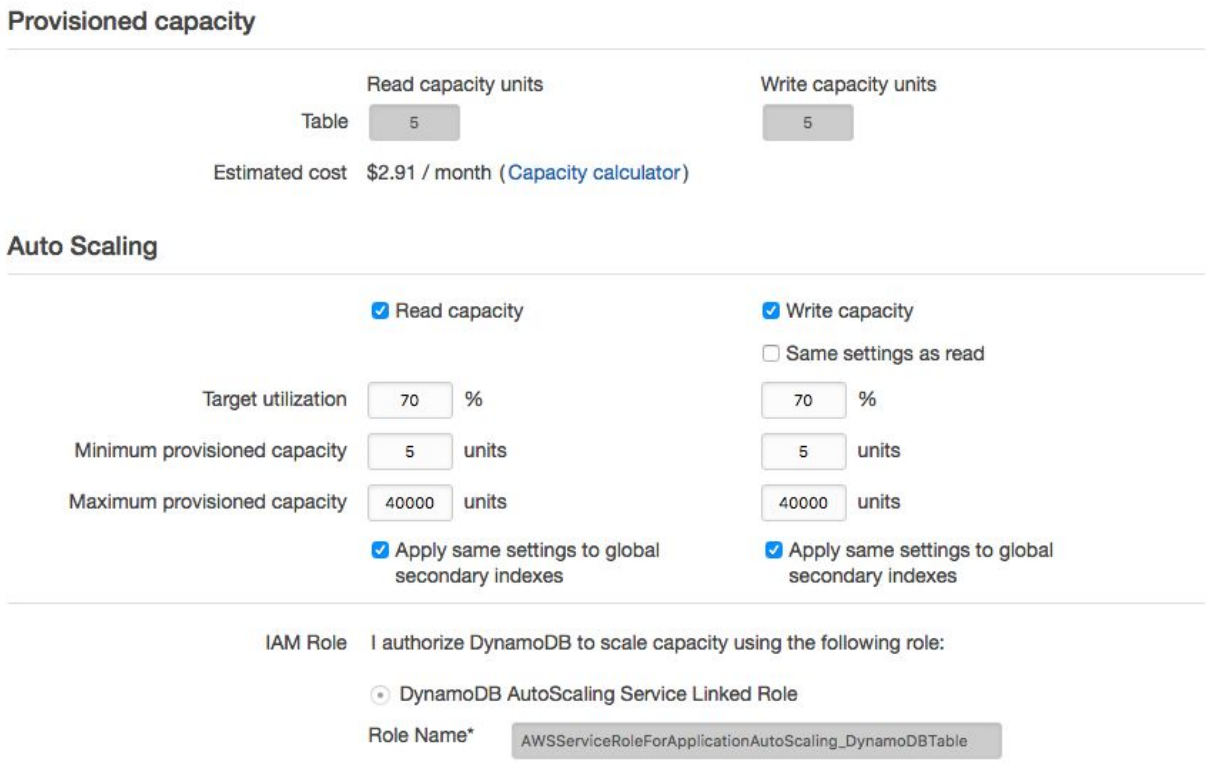
Default settings: (Default settings will cost us around 2.91 $ per month)

No secondary key

Read capacity units = 5

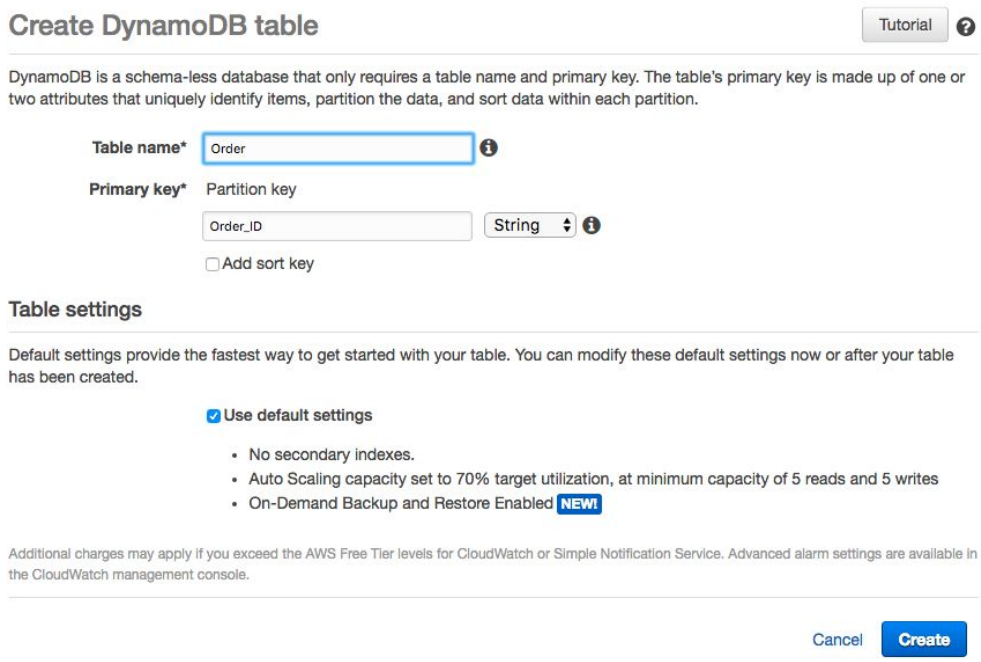
Write capacity units = 5

We can also configuring read/Write throughput(Provisioned read capacity units/Provisioned write capacity units)

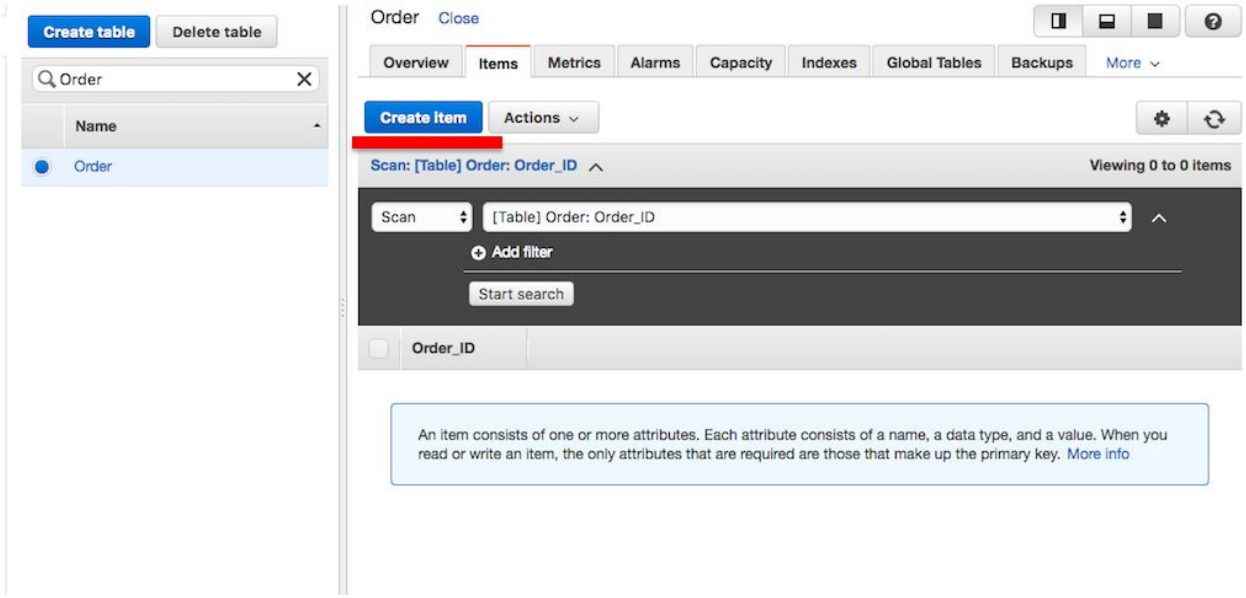


a) Example of Primary Key(Partition): Creating Table Order
Primary key is compulsory element to create Table.
Sort part of primary Key is optional

1.

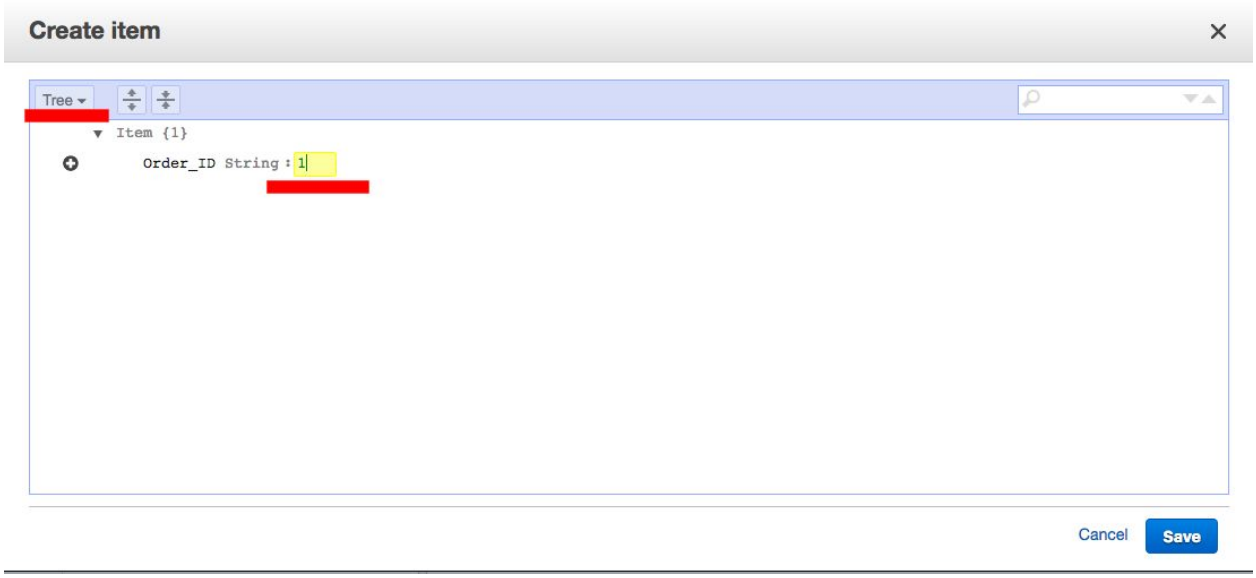


2.To Create Item in Table , Click Create Item as highlighted in below screenshot.

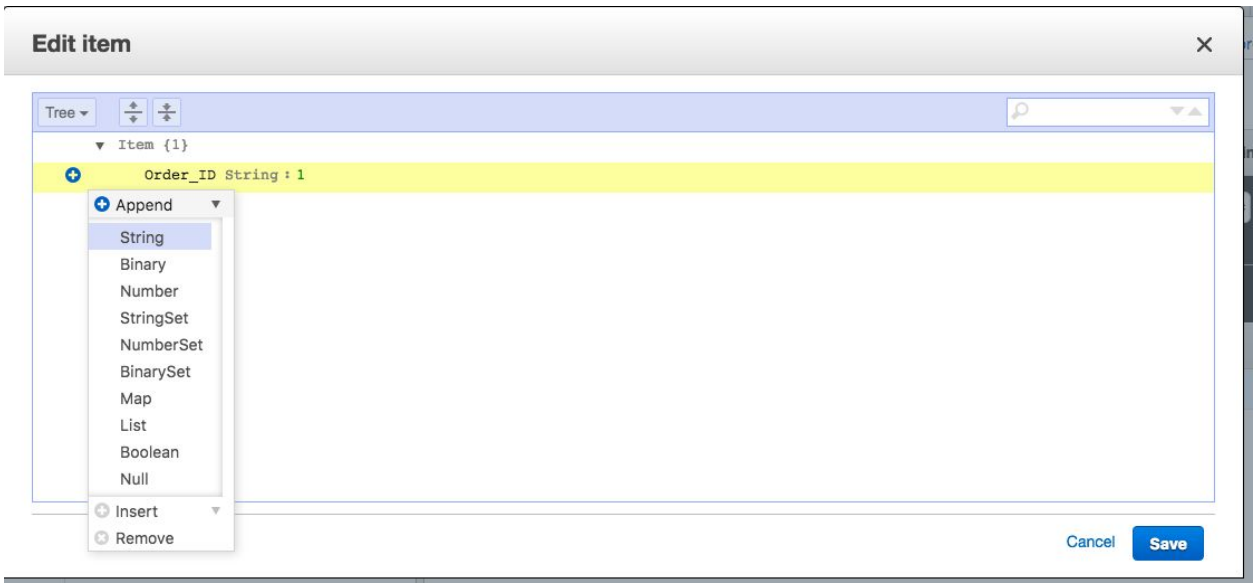


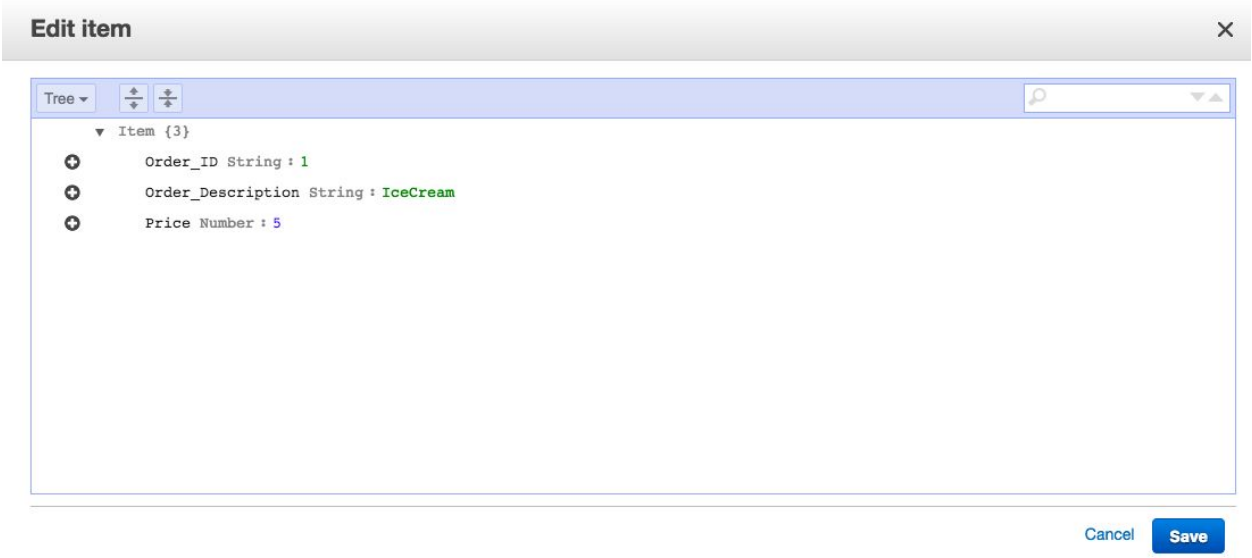
3. Below Window will appear:
We can give Input in Tree format or Test format.

And give Value in ORder Id.

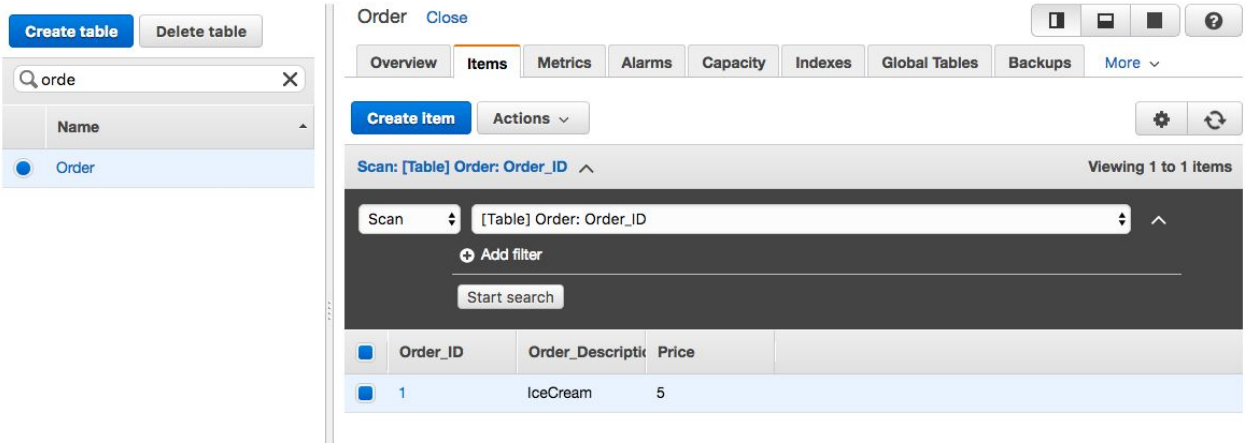


4. We can add more elements to Item:

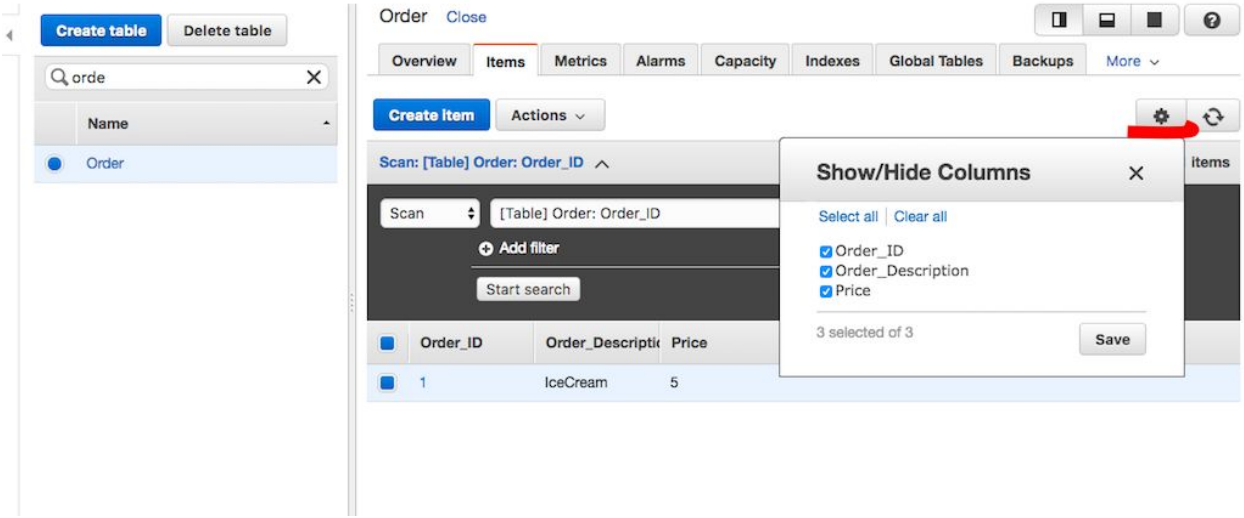




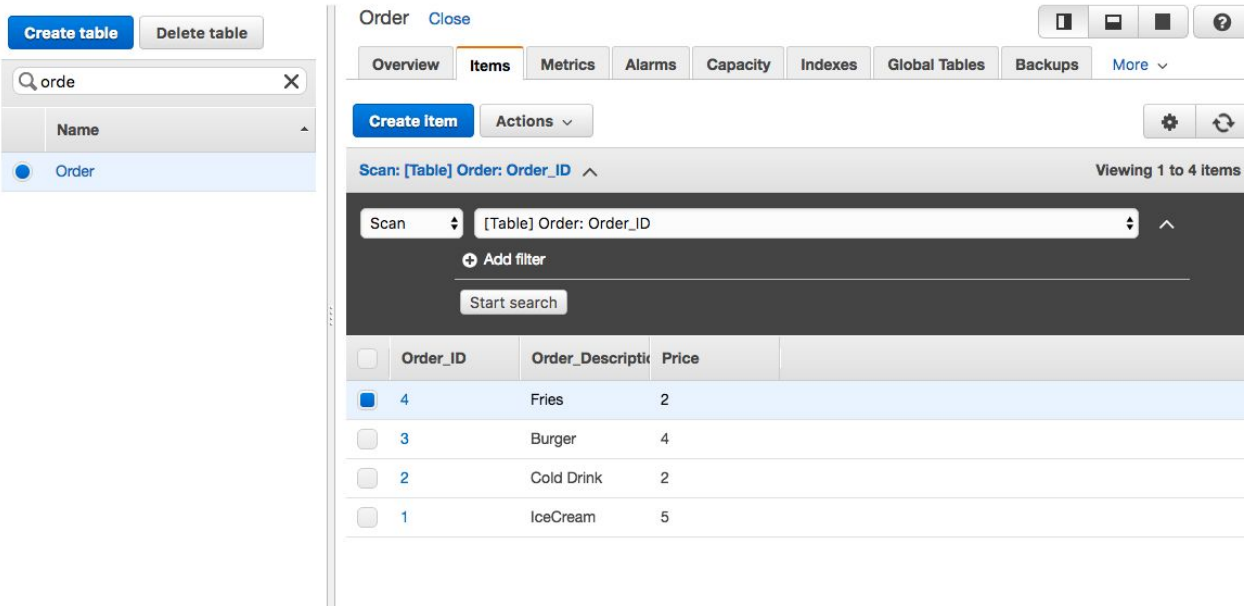
5. The table looks like this now:



6.If we click on settings we can show/hide Columns of table:

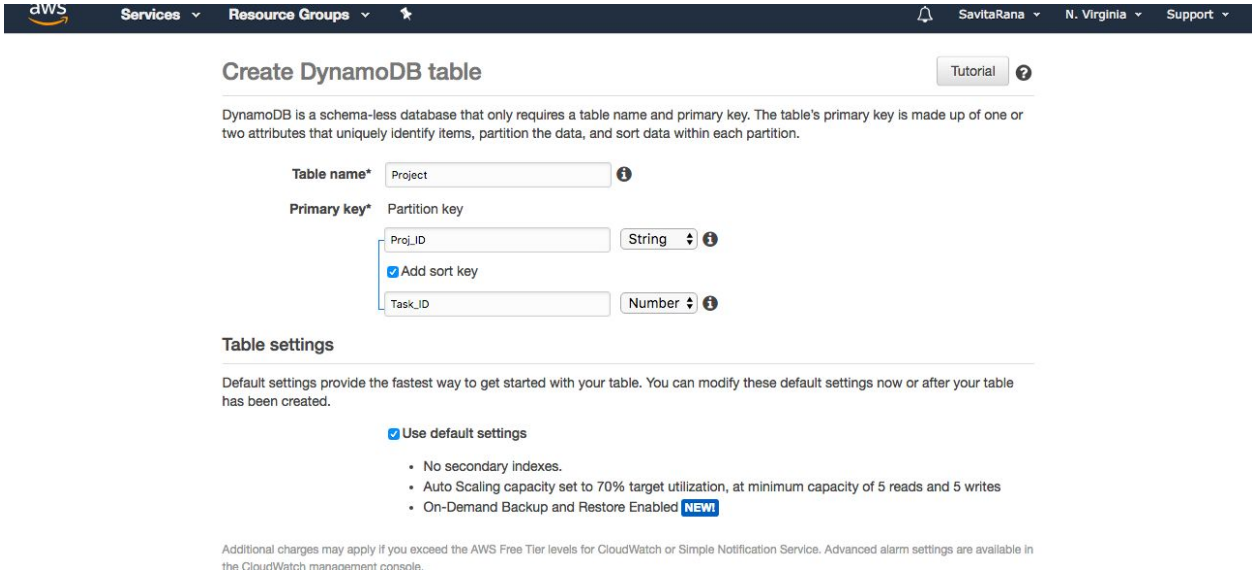


7.Adding few more elements in table:

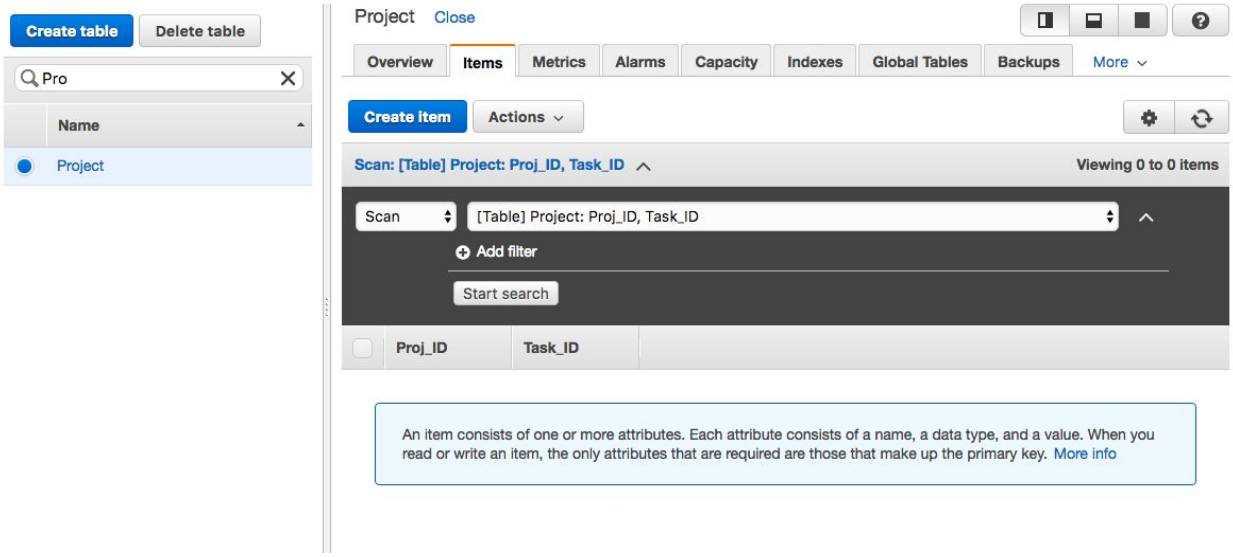


b) Example of Primary Key(Partition+Sort):

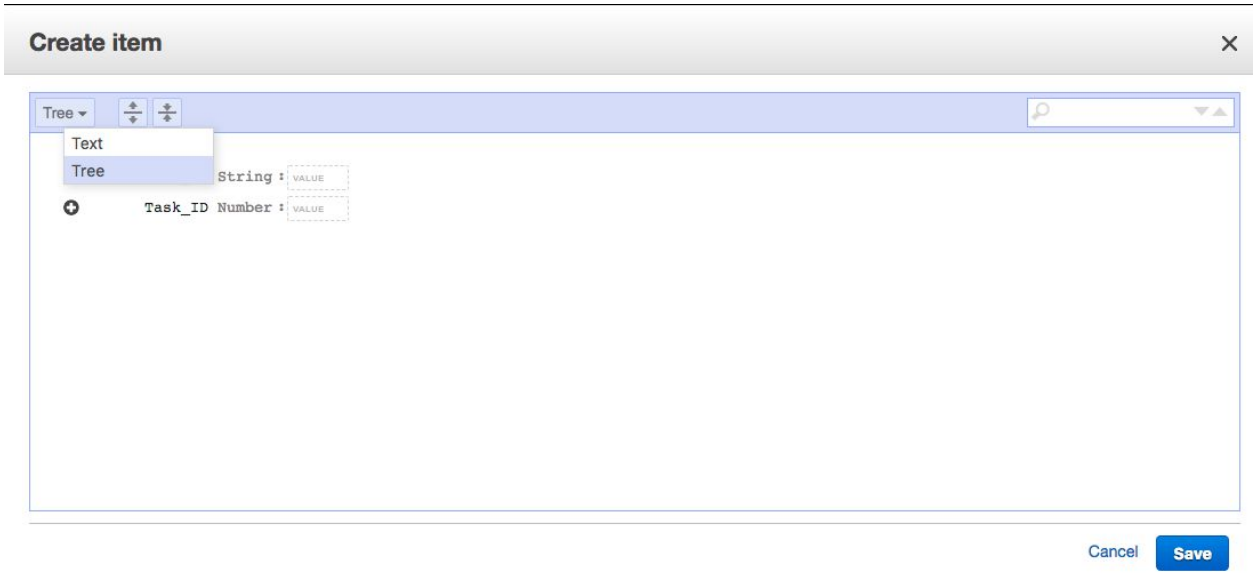
1. Creating Table Project



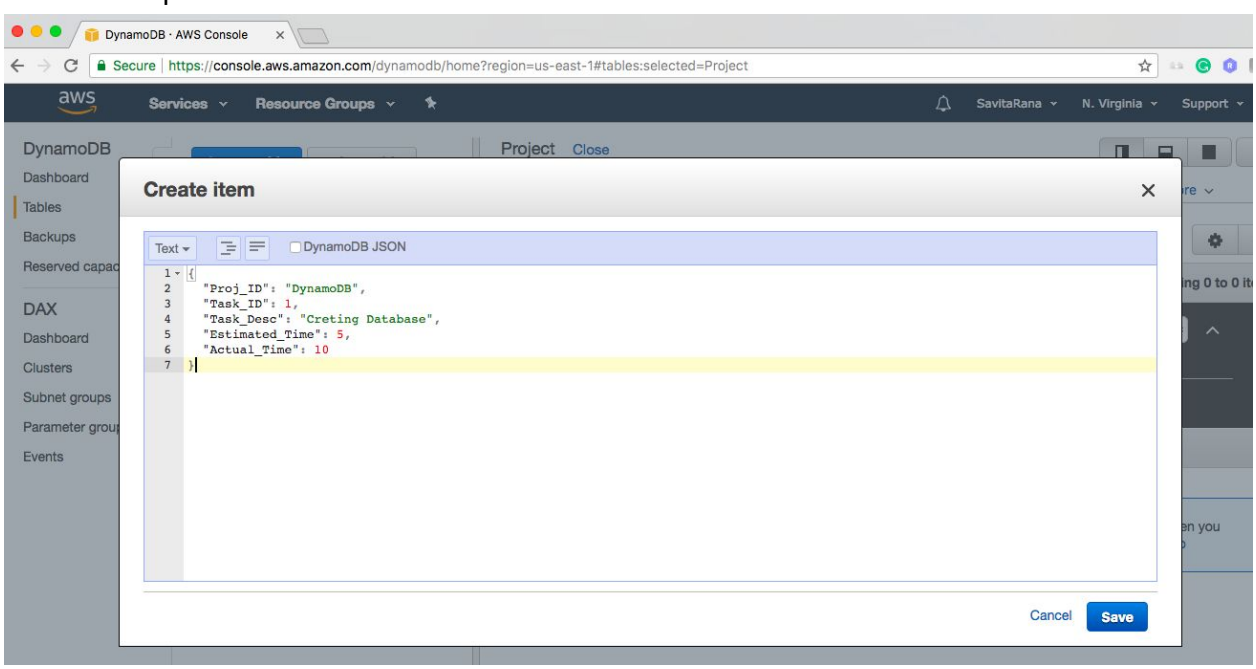
2.Below Table is created:



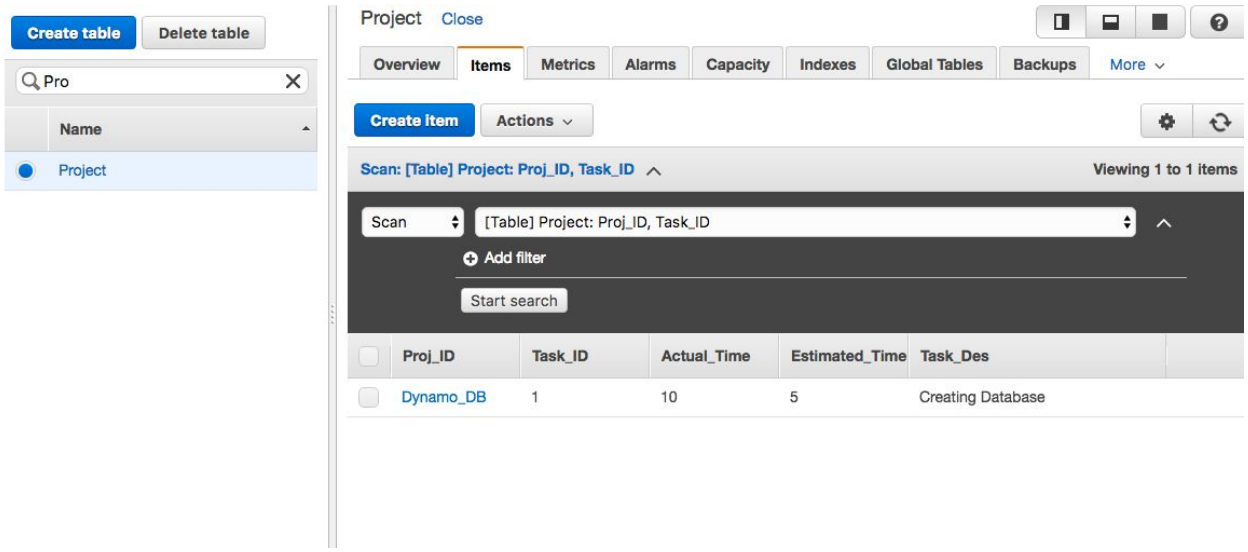
3. Again to add item we need to click “Create Item”.
And then in text window, we can add text format as well



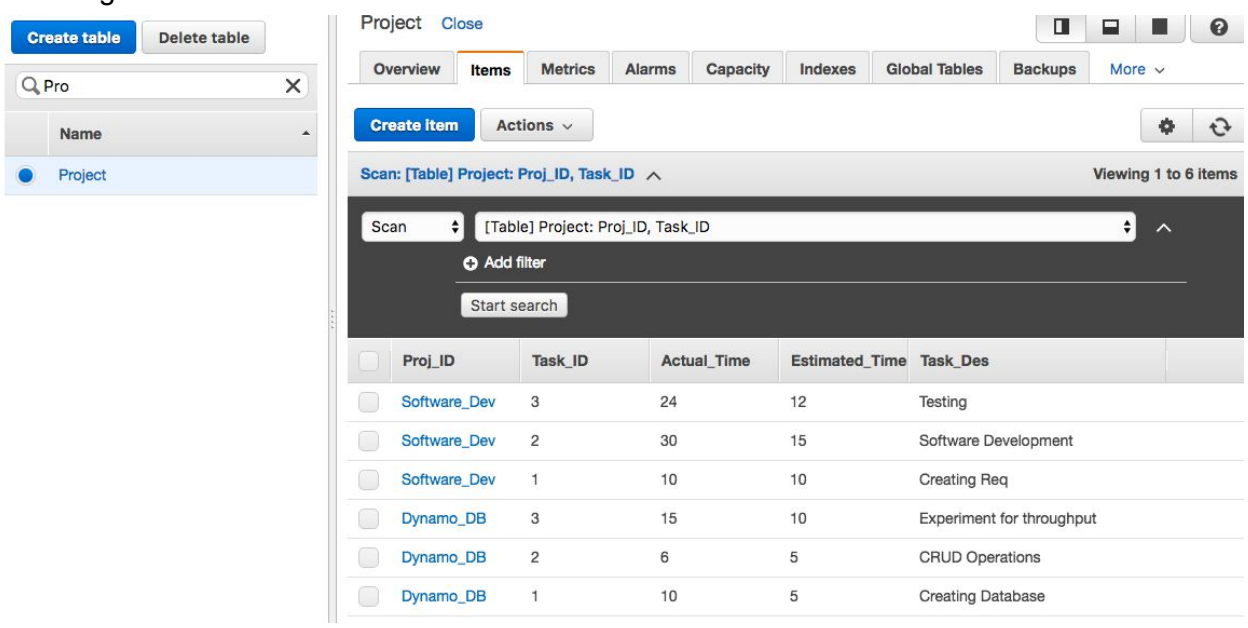
4. There is option for Json as well



5. Thus below Item in Table is created:



6. Adding few more items in Table:



Number of Partitions:

By Capacity : Total RCU/3000 + Total WCU/1000 By Size:

Total Size/10GB Total Partitions

CEILING(MAX(Capacity, Size))

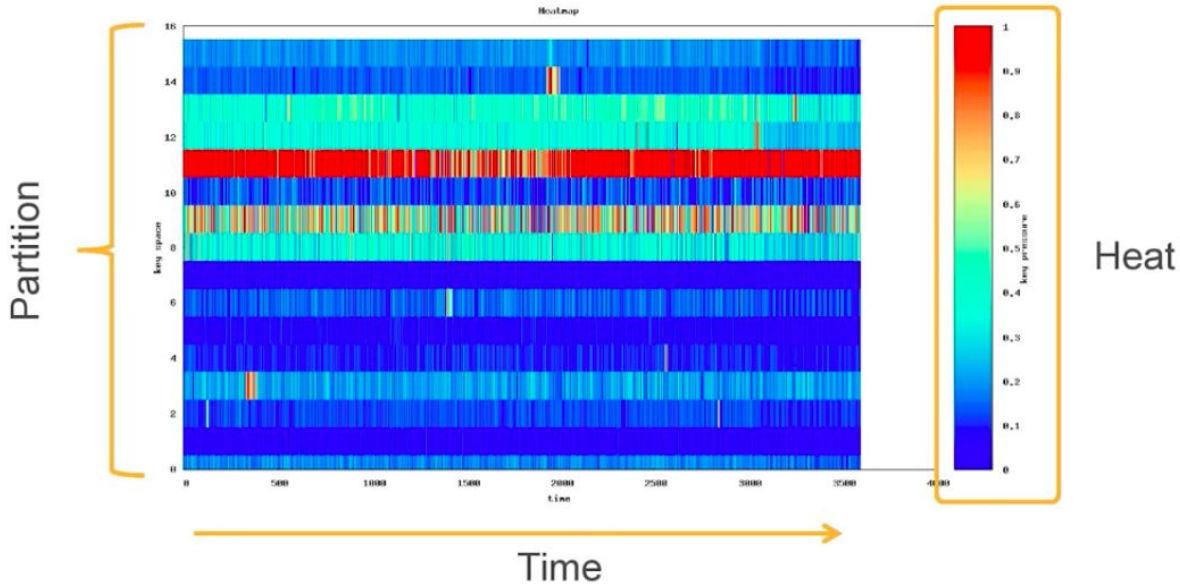
We can provide throughput for each partition

To get the most out of Dynamo DB throughput, create tables where the hash key element has a large number of distinct values, and values are requested fairly uniformly as randomly as possible.

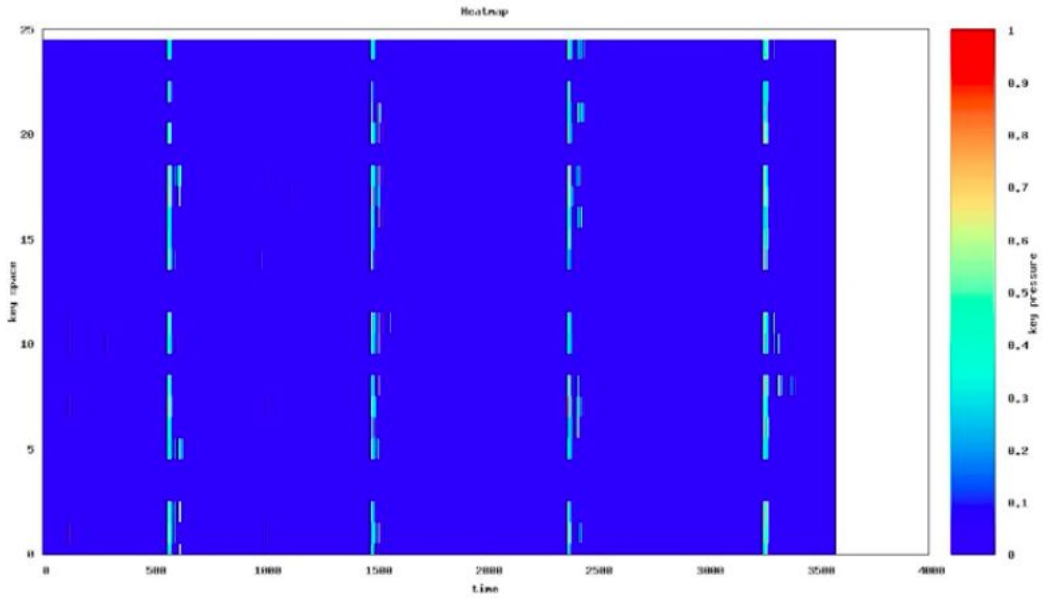
Space: access is evenly spread over the key-space

Time: requests arrive evenly spaced in time

Bad Example of Partition :

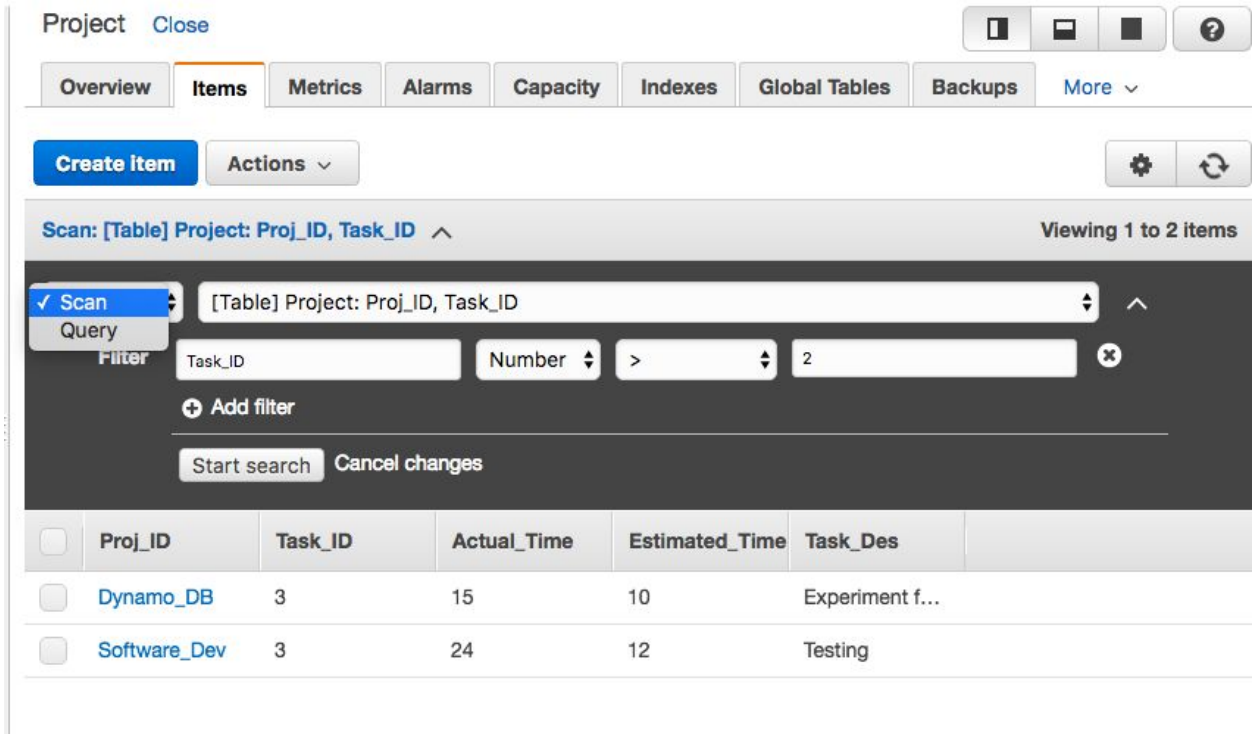


Good Example of Partition:



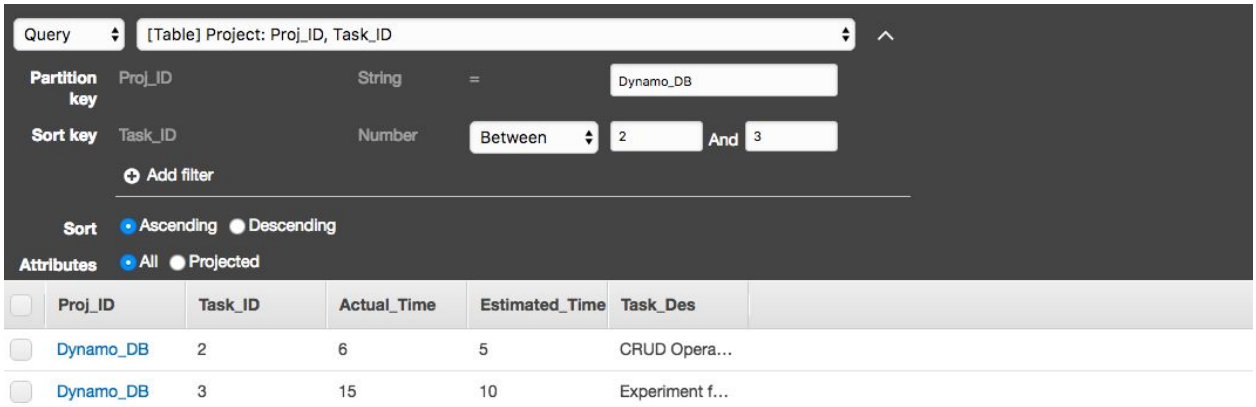
C. Scan and Query operation on Project Table:

1. Displaying Task_Ids > 2



A scan operation scans the entire table. You can specify filters to apply to the results to refine the values returned to you, after the complete scan.

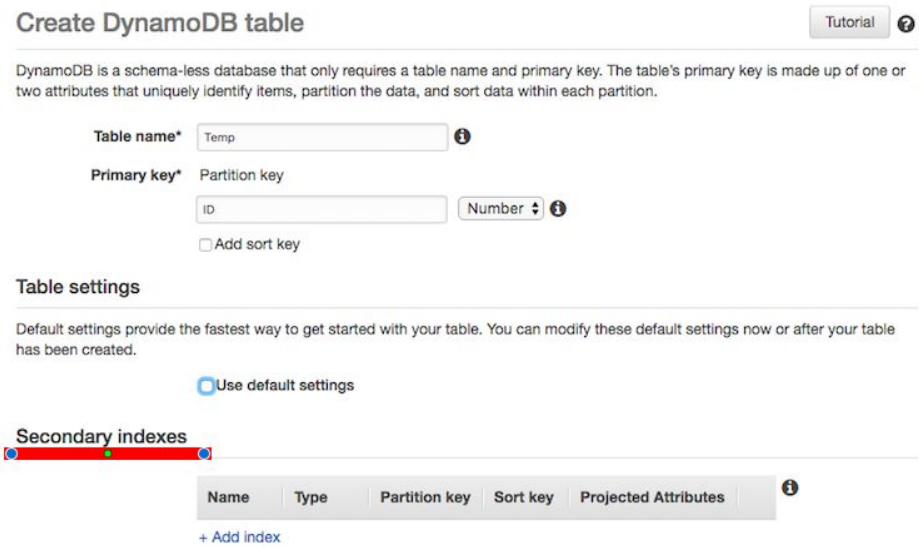
2. Query (Project Dynamo_DB and Task between 2 to 3)



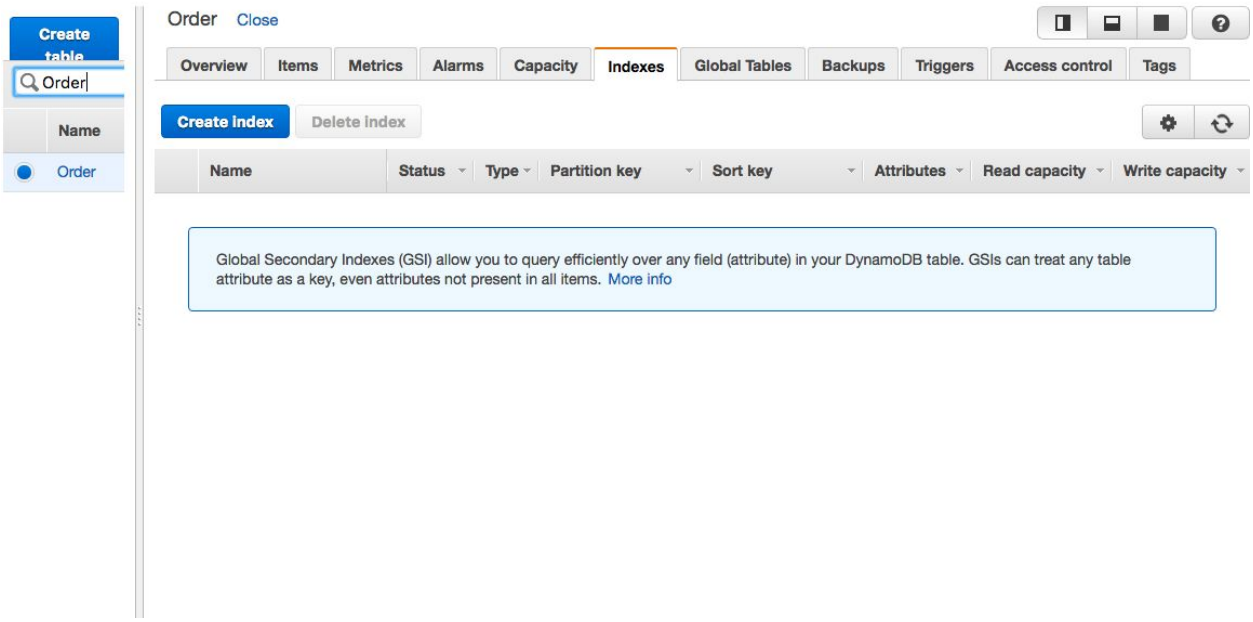
A query operation searches only primary key attribute values and supports a subset of comparison operators on key attribute values to refine the search process.

d) Creating Global Secondary Index:

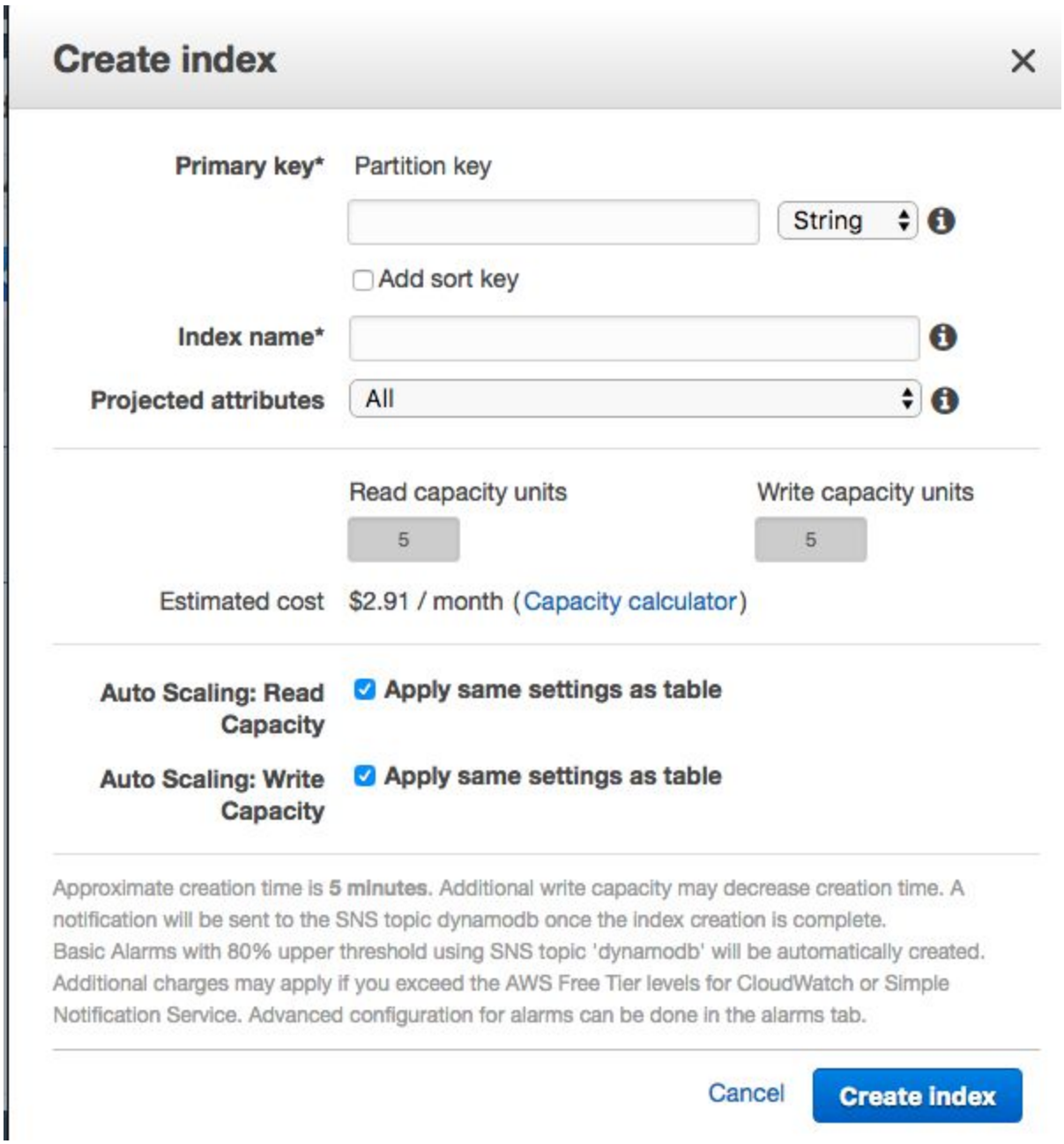
Option1 : We can specify Global Secondary Index, While creating Table Initially.



Option2: Or, After Table is created, Go to Indexes tab and click on Create Index:
1

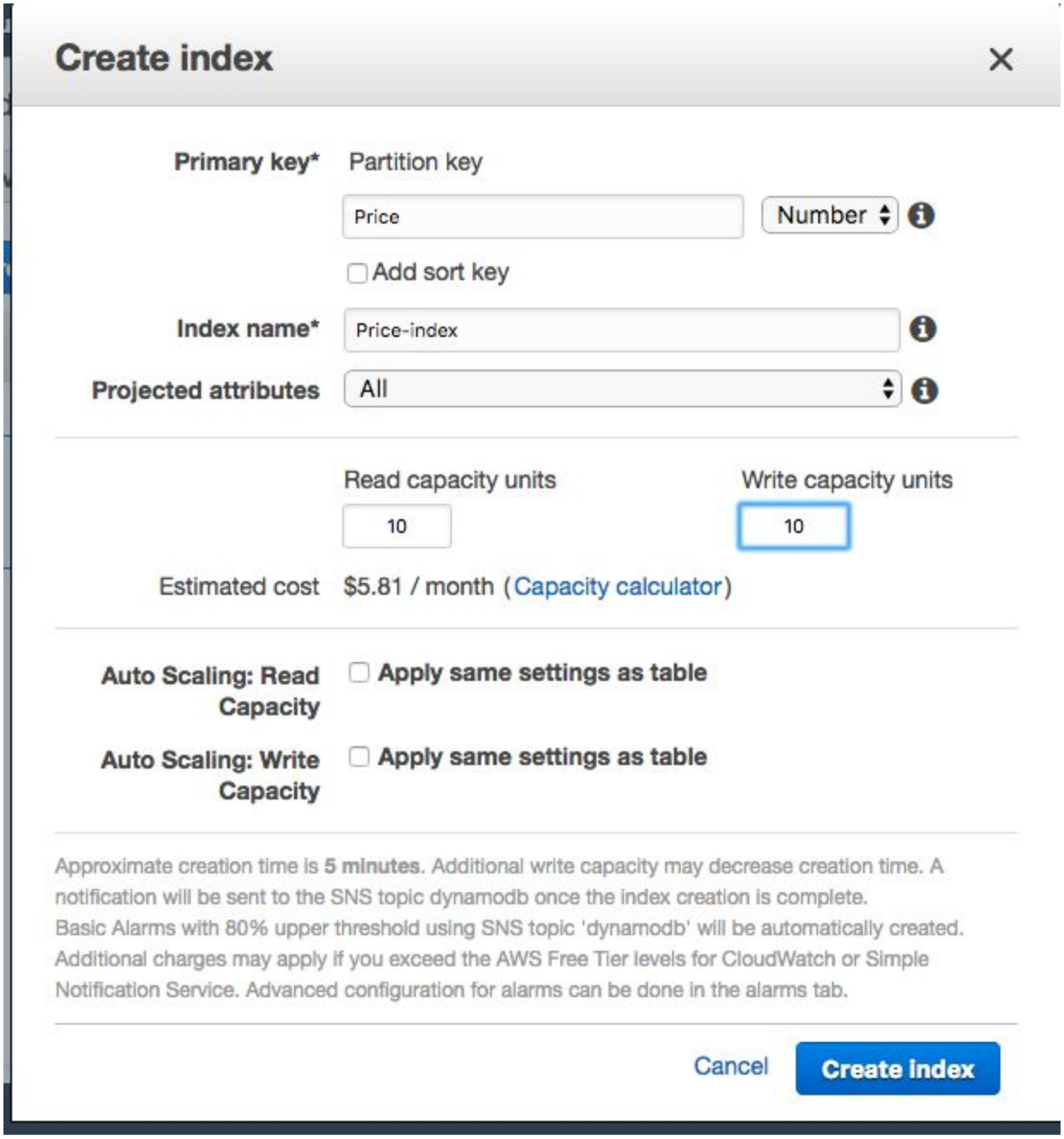


2. The below window will appear.
Here we can provide Primary key for Index and also optional sort key as we created in case of Primary Index
There extra charge for creating Secondary Index and we can also change the read and write capacity for the new partition.



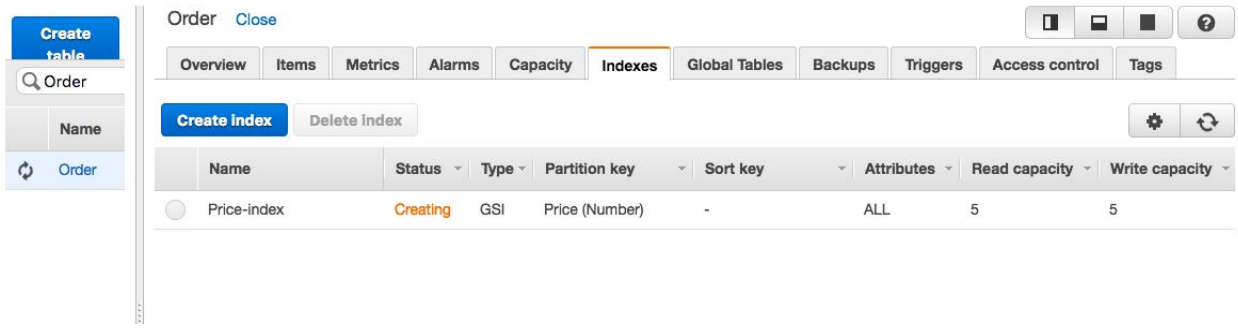
3. We selected Price index from Order table as secondary Index:

As we can see when we increase read/ write capacity of table price increased.

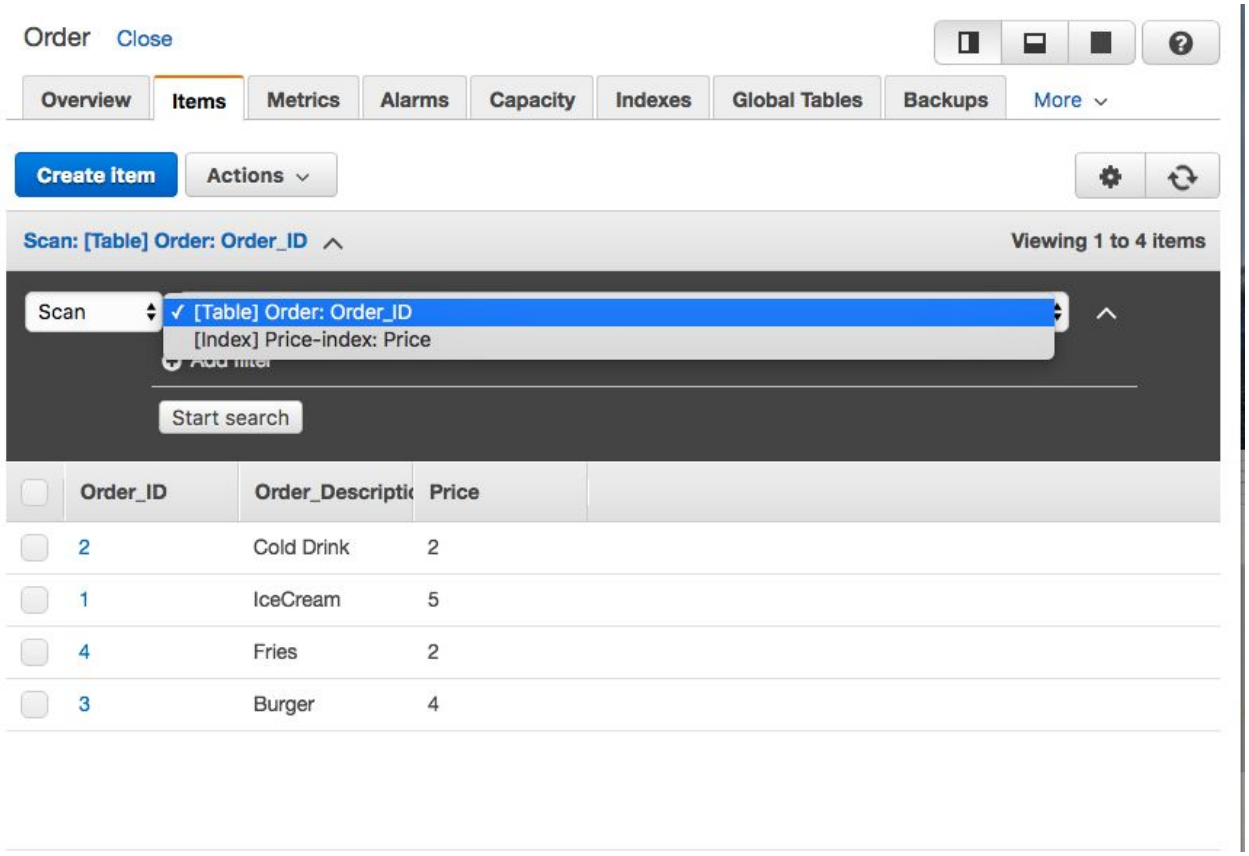


4. For this Activity , We kept the read and write capacity same as before i.e, 5.

The Index is created:



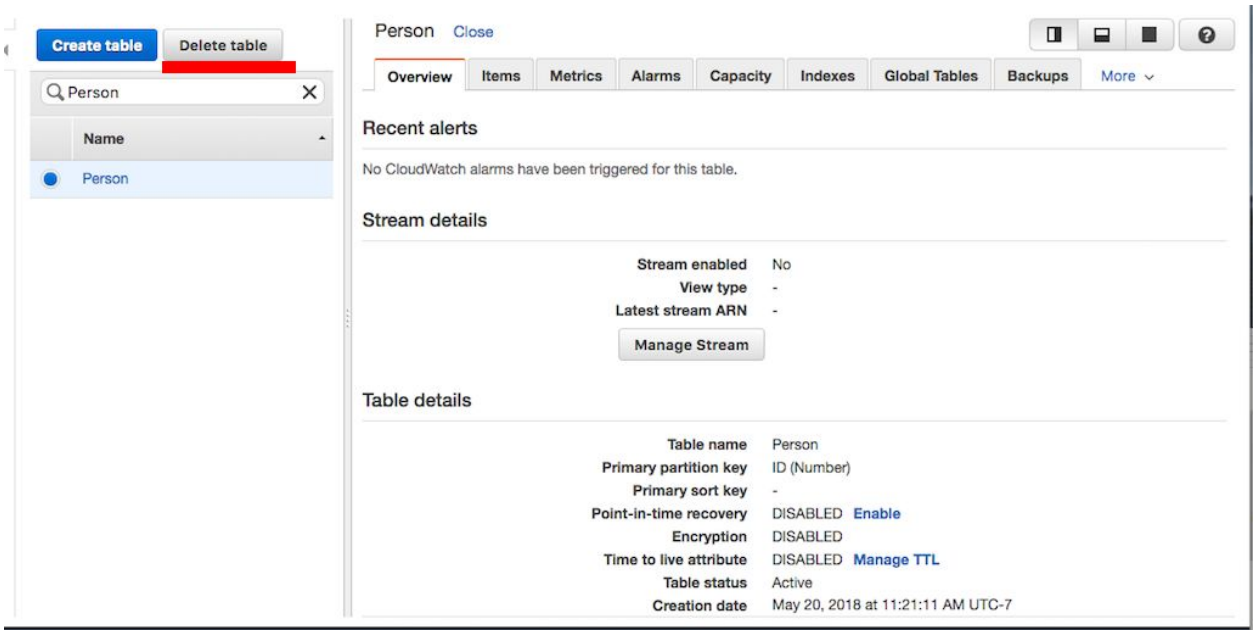
5. Now in Table we can see 2 indexes.



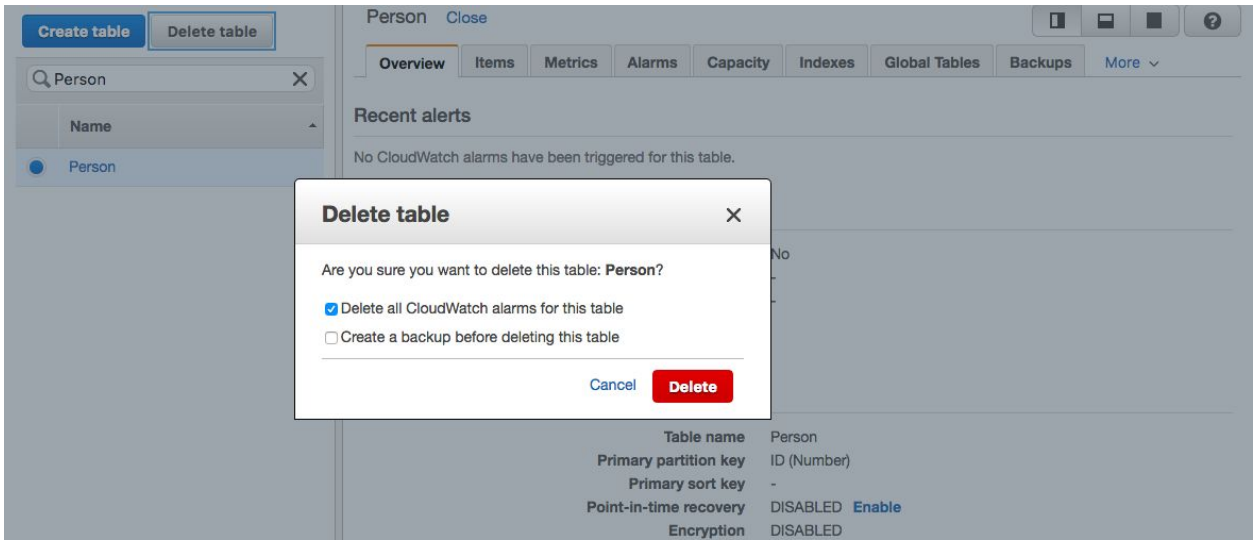
We can now perform scan and query operations using secondary index as well.

e) Delete Table

To Delete Table Person, We just need to select that table and click on Delete.



You can Choose to select backup:



Deleted Successfully.

Demo_2(Programming API):

Set up and getting access to DynamoDB programmatically:

1) Create AWS account and set up AWS access Key in order to use the AWS SDKs and then configure your credentials to access DynamoDB programmatically.
2) To set up AWS SDK for Java, first install a java development environment. If you are using Eclipse IDE then install AWS Toolkit for eclipse ,AWS SDK for java and set up your AWS security credentials.
3) Now, you will be able to access the DynamoDB programmatically.

The steps and process is clearly explained in the following link
https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/GettingStarted.Java.html

The following operations are performed in the DynamoDB for Demo:

1) Create table
2) Insert a new item to the table
3) Retrieve an item from the table
4) Update an item in the table
5) Delete an item
6) Upload a csv file into DynamoDB as another table