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Practical No: 7

Date Of Performance: 04/09/2025

Aim: To understand and demonstrate the use of AWS  
DynamoDB (NoSQL database)

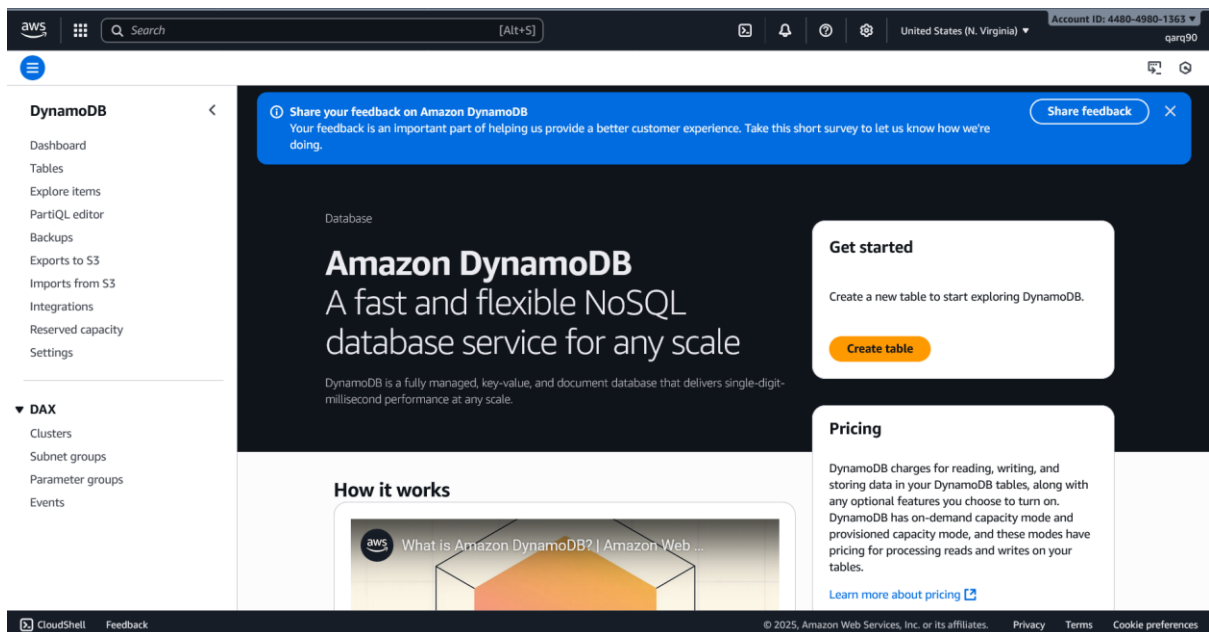
1. What is NO SQL, key value Databases?
2. Create a Table in DynamoDB, add items to the table  
(minimum 10 items), Query the table

ANS.1:

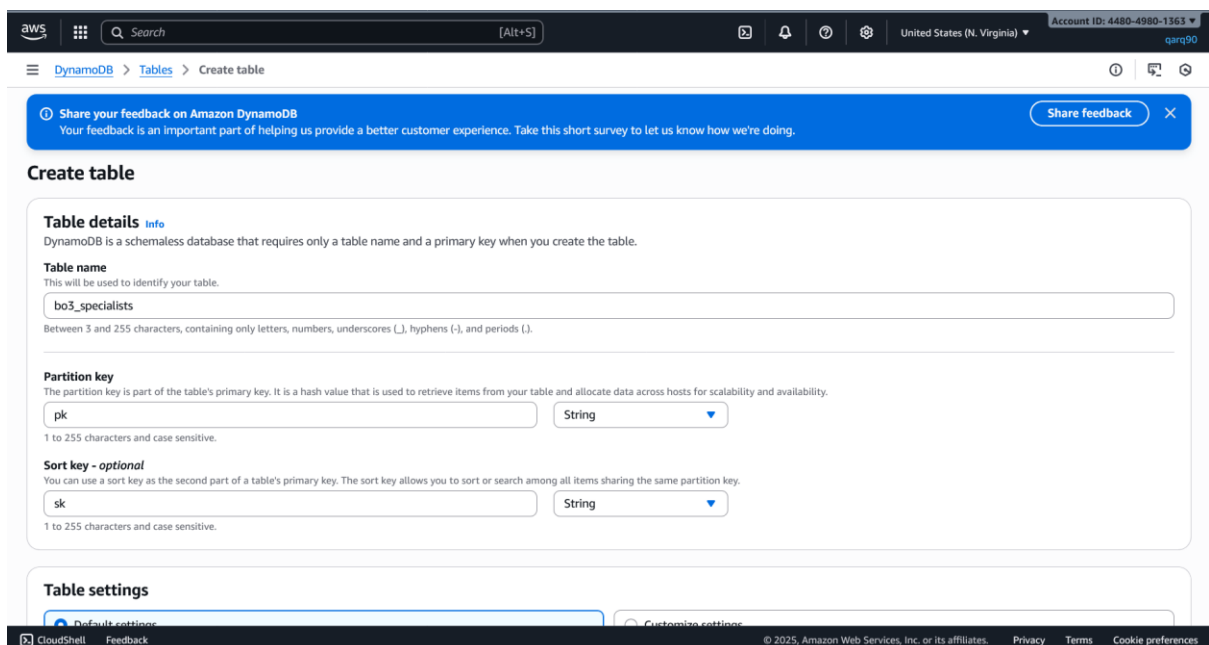
**NoSQL** ("Not Only SQL") is a category of databases designed for scalability and flexibility beyond traditional SQL. They are often schema-less, allowing for evolving data structures.

A **Key-Value Database** is a simple NoSQL type where every data item is stored as a key (a unique identifier) paired with its value (the data itself). This model enables incredibly fast reads and writes, as data is accessed directly via its key, making it ideal for simple, high-speed operations like caching, session storage, and user profiles. DynamoDB is a prime example.

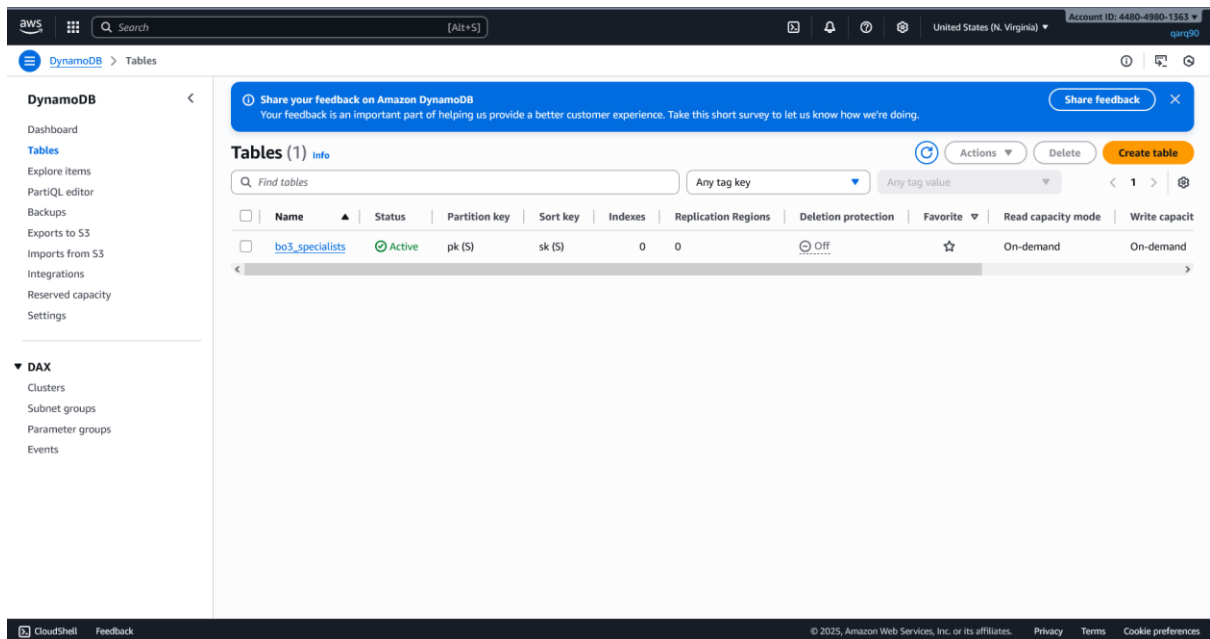
ANS.2:



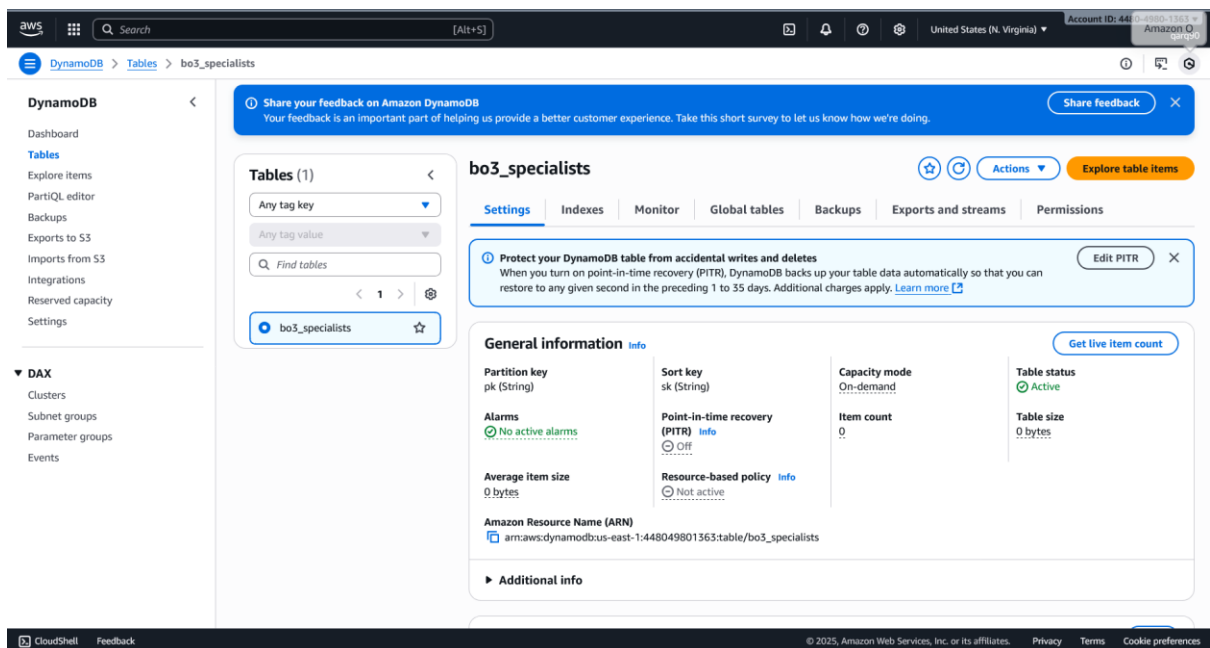
Dynamo DB Page



Creating a new table "bo3\_specialists"



## Table Created



## Table Details

aws

Search

[Alt+S]

United States (N. Virginia)

Account ID: 4480-4980-1363

qarq90

DynamoDB

Tables

bo3\_specialists

Create index

Share your feedback on Amazon DynamoDB

Your feedback is an important part of helping us provide a better customer experience. Take this short survey to let us know how we're doing.

Share feedback

### Create global secondary index info

Global secondary indexes allow you to perform queries on attributes that are not part of a table's primary key. Note that global secondary index read and write capacity settings are separate from those of the table, and they will incur additional costs.

#### Index details info

Partition key

entity\_type

1 to 255 characters.

Data type

String

Sort key - optional

name

1 to 255 characters.

Data type

String

Index name

entity\_type-name-index

Between 3 and 255 characters. Only A-Z, a-z, 0-9, underscore characters, hyphens, and periods allowed.

#### Index capacity info

Capacity mode

On-demand

Your global secondary indexes follow your base table's capacity mode. To switch to provisioned capacity, change your table's capacity mode to Provisioned in Settings.

Maximum table throughput - optional

Specify maximum on-demand read or write (or both) throughput for tables and secondary indexes to help manage throughput across and across bounded. The default maximum table throughput of one read and one write is only limited by the default

CloudShell

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Creating Partition, Sort Key and Index name

aws

Search

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qarq90

DynamoDB

Tables

bo3\_specialists

Dashboard

Tables

Explore items

PartiQL editor

Backups

Exports to S3

Imports from S3

Integrations

Reserved capacity

Settings

DAX

Clusters

Subnet groups

Parameter groups

Events

Successfully submitted the request to create your index.

Notifications

Tables (1)

Any tag key

Any tag value

Find tables

1

bo3\_specialists

### bo3\_specialists

Settings

Indexes

Monitor

Global tables

Backups

Exports and streams

Permissions

Global secondary indexes (1) info

Find indexes

1

entity\_type-name-index

Creating

entity\_type (String)

name (String)

On-demand

On-demand

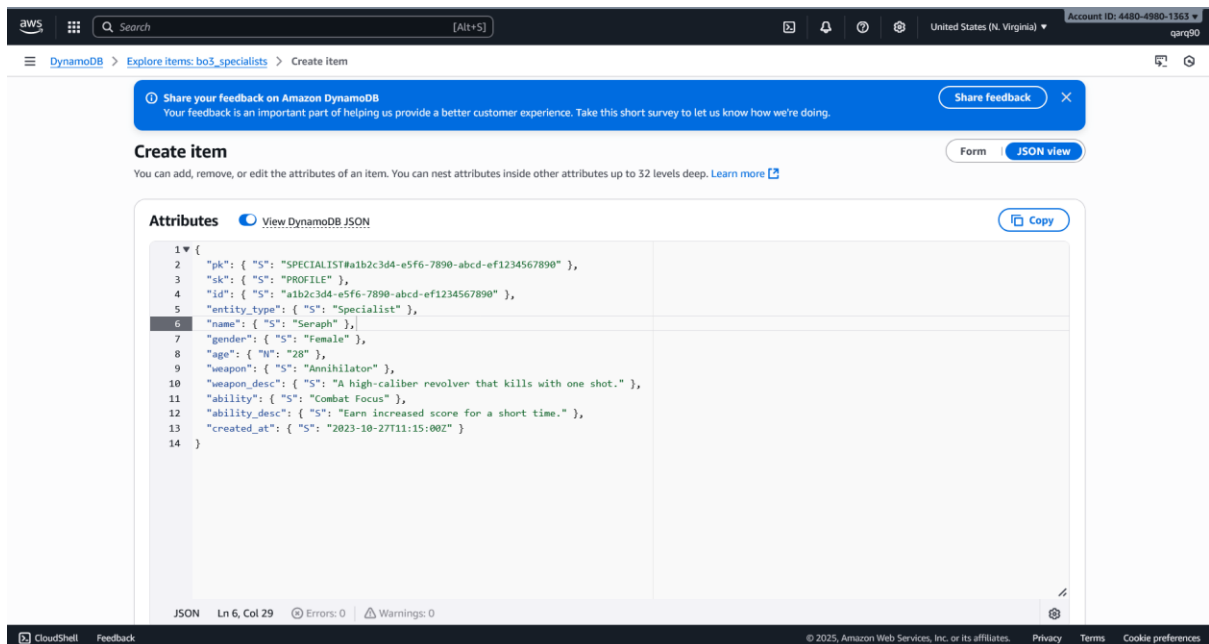
All

CloudShell

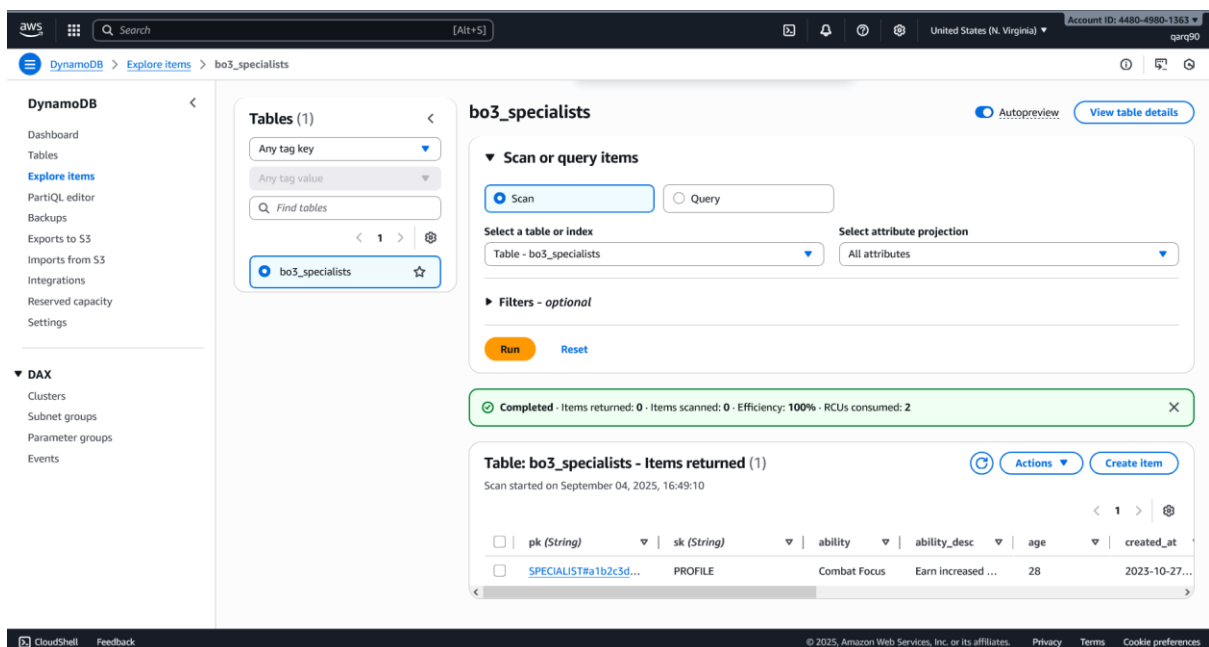
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Created Partition, Sort Key and Index name



Adding "Seraph" to the Database



Added "Seraph" to the Database

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DynamoDB > Explore items > bo3\_specialists

Dashboard  
Tables  
**Explore items**  
 PartiQL editor  
 Backups  
 Exports to S3  
 Imports from S3  
 Integrations  
 Reserved capacity  
 Settings

▼ DAX  
 Clusters  
 Subnet groups  
 Parameter groups  
 Events

Run Reset

Completed - Items returned: 0 - Items scanned: 0 - Efficiency: 100% - RCUs consumed: 2

Table: bo3\_specialists - Items returned (10)  
Scan started on September 04, 2025, 16:49:10

<input type="checkbox"/>	pk (String)	sk (String)	ability	ability_desc	age	created_at
<input type="checkbox"/>	SPECIALIST#9l3l1m7...	PROFILE	Overclock	Gain the ability...	40	2023-10-27...
<input type="checkbox"/>	SPECIALIST#8k2k0l6...	PROFILE	Heat Wave	Release a burst...	36	2023-10-27...
<input type="checkbox"/>	SPECIALIST#h7l1j9k5...	PROFILE	Active Camo	Become nearly ...	33	2023-10-27...
<input type="checkbox"/>	SPECIALIST#g6i0l8j4...	PROFILE	Psychosis	Spawn three d...	0	2023-10-27...
<input type="checkbox"/>	SPECIALIST#f5h9h7l3...	PROFILE	Rejack	Cheat death by...	38	2023-10-27...
<input type="checkbox"/>	SPECIALIST#d3f7f5g1...	PROFILE	Kinetic Armor	Temporary arm...	31	2023-10-27...
<input type="checkbox"/>	SPECIALIST#c2e6e4f0...	PROFILE	Glitch	Rewind your p...	42	2023-10-27...
<input type="checkbox"/>	SPECIALIST#b1d5d3e...	PROFILE	Vision Pulse	Send out a son...	29	2023-10-27...
<input type="checkbox"/>	SPECIALIST#a0c4c2d...	PROFILE	Overdrive	Gain a massive ...	35	2023-10-27...
<input type="checkbox"/>	SPECIALIST#a1b2c3d...	PROFILE	Combat Focus	Earn increased ...	28	2023-10-27...

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Added more specialists

aws [Search] [Alt+S] United States (N. Virginia) Account ID: 4480-4980-1363 qarc90

DynamoDB > Explore items > Find tables

Dashboard  
Tables  
**Explore items**  
 PartiQL editor  
 Backups  
 Exports to S3  
 Imports from S3  
 Integrations  
 Reserved capacity  
 Settings

▼ DAX  
 Clusters  
 Subnet groups  
 Parameter groups  
 Events

bo3\_specialists

Scan Query

Select a table or index  
Table - bo3\_specialists

Select attribute projection  
All attributes

Partition key: pk  
SPECIALIST#9l3l1m7-nkn3-3l1k-in3j-61o0k4n23456

Sort key: sk  
Equal to Enter sort key value ☐ Sort descending

Filters - optional

Run Reset

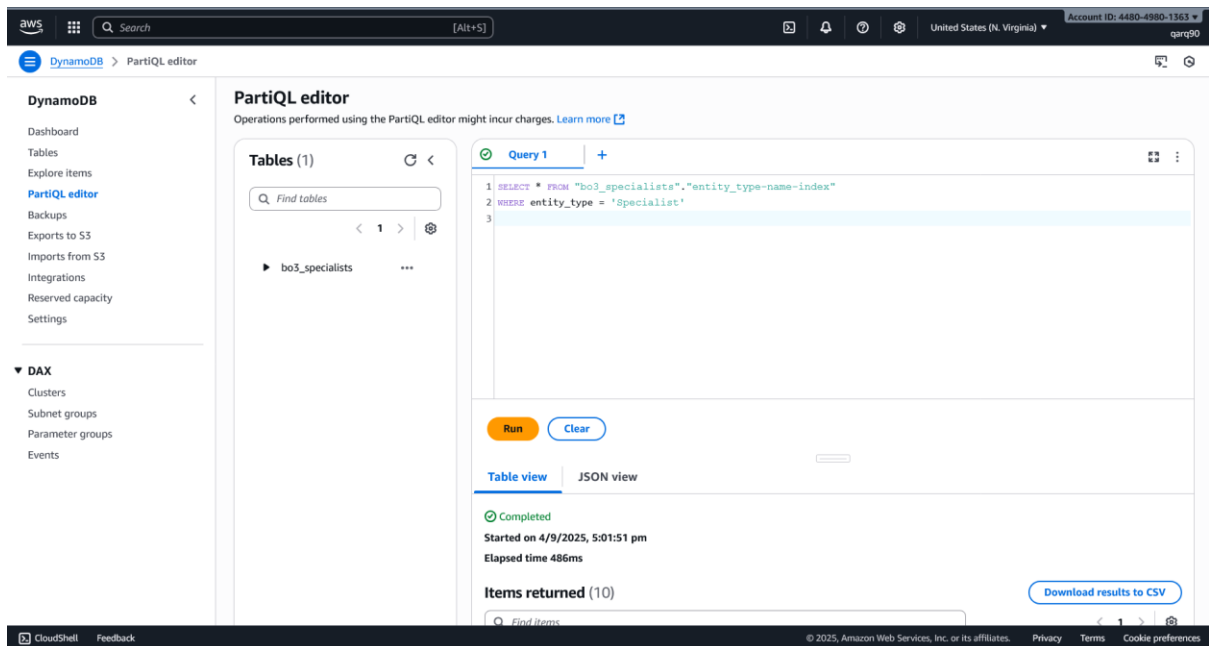
Completed - Items returned: 1 - Items scanned: 1 - Efficiency: 100% - RCUs consumed: 0.5

Table: bo3\_specialists - Items returned (1)  
Query started on September 04, 2025, 17:02:47

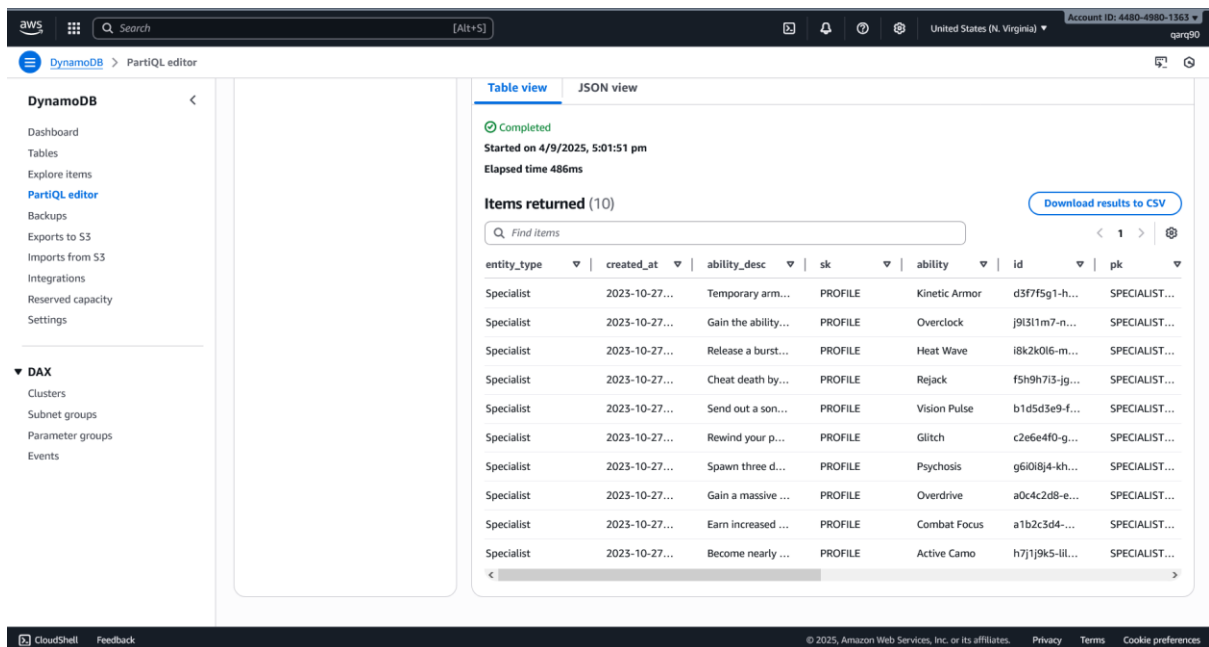
<input type="checkbox"/>	pk (String)	sk (String)	ability	ability_desc	age	created_at
<input type="checkbox"/>	SPECIALIST#9l3l1m7...	PROFILE	Overclock	Gain the ability...	40	2023-10-27...

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Query via a Partition Key



## Querying via PartiQL Editor



## Query Result