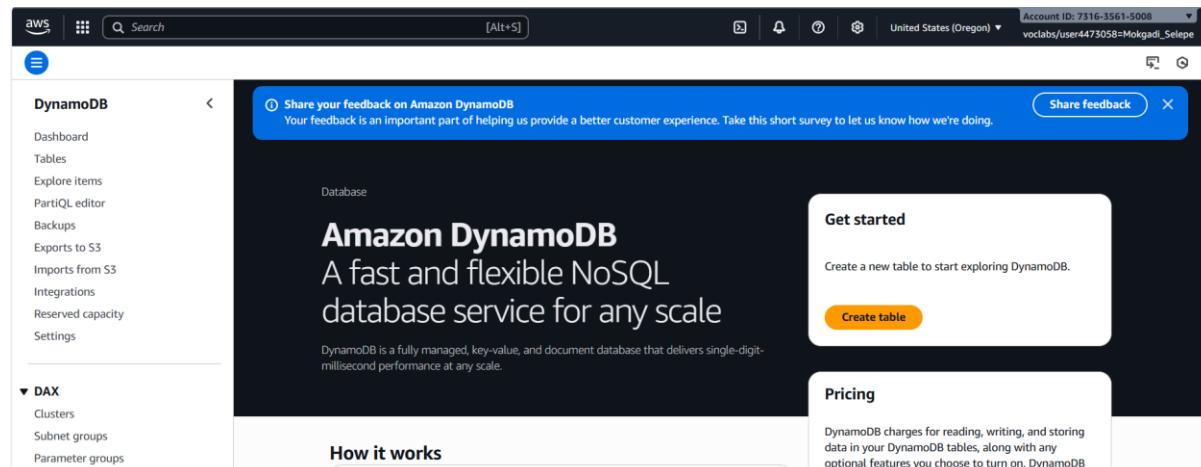


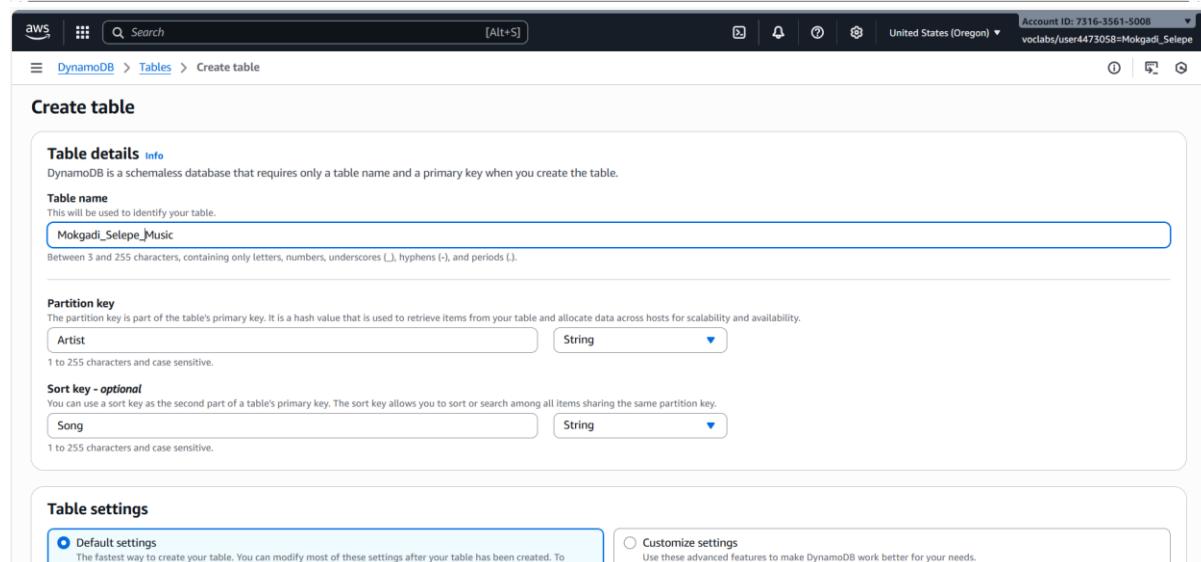
Introduction to Amazon DynamoDB

Welcome to the Amazon DynamoDB lab! In this lab, we'll explore DynamoDB, a fast and flexible database that's perfect for many types of applications, like mobile apps, websites, and games. We'll create a table to store music library data, add some songs, search for specific songs, and then delete the table. Let's get started and learn how to use DynamoDB!

1: Create a new table



The screenshot shows the AWS DynamoDB homepage. On the left, there's a navigation sidebar with options like Dashboard, Tables, Explore items, PartQL editor, Backups, Exports to S3, Imports from S3, Integrations, Reserved capacity, Settings, DAX Clusters, Subnet groups, Parameter groups, and Events. The main content area features a large 'Amazon DynamoDB' heading with the subtext 'A fast and flexible NoSQL database service for any scale'. Below this is a section titled 'How it works' with a small image of a smartphone displaying the AWS logo and the text 'What is Amazon DynamoDB? | Amazon Web Se...'. To the right, there are two boxes: 'Get started' (with a 'Create table' button) and 'Pricing' (describing the cost structure). At the bottom, there's a 'CloudShell' button and a feedback link.



The screenshot shows the 'Create table' wizard. The first step, 'Table details', is active. It asks for a 'Table name' (set to 'Mokgadi_Selepe_Music') and a 'Partition key' (set to 'Artist'). A note says the partition key must be a string type. The 'Sort key - optional' field is also shown. At the bottom, there are two radio buttons: 'Default settings' (selected) and 'Customize settings'.

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The image contains two side-by-side screenshots of the AWS DynamoDB Management Console. Both screenshots show the 'Tables' page with a single table named 'Mokgadi_Selepe_Music'. In the top screenshot, a blue banner at the top says 'Creating the Mokgadi_Selepe_Music table. It will be available for use shortly.' Below the banner, the table details are shown: Name: Mokgadi_Selepe_Music, Status: Creating, Partition key: Artist (S), Sort key: Song (S), Indexes: 0, Replication Regions: 0, Deletion protection: Off, Read capacity: On-demand. In the bottom screenshot, a green banner at the top says 'The Mokgadi_Selepe_Music table was created successfully.' Below the banner, the table details are identical to the first screenshot.

I've created a new table in DynamoDB!

Here's what I did:

- I went to the AWS Management Console and opened DynamoDB.
- I clicked "Create table" and named it "Music".
- I set the partition key (like a unique ID) to "Artist" and the sort key to "Song".
- I used the default settings and clicked "Create table".
- My table is now being created, and I'll wait for it to become active.

Think of it like creating a music playlist:

- I made a new playlist called "Music".
- I decided to organize it by artist and song title.
- My playlist is now being set up, and I'll wait for it to be ready to use!

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2: Add data

The screenshot shows the AWS DynamoDB console with the 'Mokgadi_Selepe_Music' table selected. The left sidebar shows navigation options like Dashboard, Tables, Explore items, PartiQL editor, Backups, Exports to S3, Imports from S3, Integrations, Reserved capacity, and Settings. Under 'Tables', there is a list of tables with 'Mokgadi_Selepe_Music' highlighted. The main area displays the table's general information, including its ARN: arn:aws:dynamodb:us-west-2:731635615008:table/Mokgadi_Selepe_Music. It shows the partition key as 'Artist (String)', sort key as 'Song (String)', capacity mode as 'On-demand', and item count as 0. A note about Point-in-time recovery (PITR) is present, stating that it backs up data automatically for restore within 35 days.

The screenshot shows the 'Create item' form for the 'Mokgadi_Selepe_Music' table. The 'Attributes' section lists two attributes: 'Artist - Partition key' with a value of 'Empty value' and 'Song - Sort key' with a value of 'Empty value'. The 'Type' column for both is set to 'String'. At the bottom right of the form are 'Cancel' and 'Create item' buttons.

The screenshot shows the 'Create item' form with a dropdown menu open for selecting the type of a new attribute. The menu includes options: String, Number, Boolean, Binary, Null, String set, Number set, Binary set, List, and Map. The 'String' option is currently selected.

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The screenshots illustrate the process of creating a new item in a DynamoDB table named 'Mokgadi_Selepe_Music'. The first screenshot shows the initial state with three attributes: 'Artist' (Partition key) set to 'Pink Floyd', 'Song' (Sort key) set to 'Money', and 'Album' set to 'The Dark Side of the Moon'. The second screenshot shows the 'Type' dropdown menu open for the 'Album' attribute, with options like String, Number, Boolean, Binary, Null, String set, Number set, Binary set, List, and Map. The third screenshot shows the 'Year' attribute added with a value of '1973', and the 'Type' dropdown menu closed.

Create item
You can add, remove, or edit the attributes of an item. You can nest attributes inside other attributes up to 32 levels deep. [Learn more](#)

Attributes

Attribute name	Value	Type	Remove
Artist - Partition key	Pink Floyd	String	
Song - Sort key	Money	String	
Album	The Dark Side of the Moon	String	Remove

Create item
You can add, remove, or edit the attributes of an item. You can nest attributes inside other attributes up to 32 levels deep. [Learn more](#)

Attributes

Attribute name	Value	Type	Add new attribute ▾
Artist - Partition key	Pink Floyd	String	
Song - Sort key	Money	String	
Album	The Dark Side of the Moon	String	
Attribute name	0	Number	

Create item
You can add, remove, or edit the attributes of an item. You can nest attributes inside other attributes up to 32 levels deep. [Learn more](#)

Attributes

Attribute name	Value	Type	Remove
Artist - Partition key	Pink Floyd	String	
Song - Sort key	Money	String	
Album	The Dark Side of the Moon	String	Remove
Year	1973	Number	Remove

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The screenshot shows the AWS DynamoDB console interface. On the left, the navigation menu includes 'Explore items' under the 'Tables' section. The main area displays the 'Mokgadi_Selepe_Music' table. A green success message at the top states: 'The item has been saved successfully.' Below it, the table configuration shows 'Scan or query items' with 'Scan' selected. The table name is 'Table - Mokgadi_Selepe_Music' and the attribute projection is 'All attributes'. A message box indicates 'Completed - Items returned: 1 - Items scanned: 1 - Efficiency: 100% - RCU consumed: 2'. At the bottom, there is a table titled 'Table: Mokgadi_Selepe_Music - Items returned (1)' with one item listed: 'Artist - Partition key: John Lennon, Song - Sort key: Imagine, Imagine: 1971, Genre: Soft rock'. The next part of the screenshot shows the 'Create item' dialog for the same table. It lists attributes: 'Artist - Partition key' (value: John Lennon), 'Song - Sort key' (value: Imagine), 'Imagine' (value: 1971), and 'Genre' (value: Soft rock). The 'Create item' button is highlighted in orange. The final part of the screenshot shows the table again with a message: 'The item has been saved successfully.' and the same table scan results as before.

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Table: Mokgadi_Selepe_Music - Items returned (2)

Scan started on November 10, 2025, 13:43:06

Actions | Create item

	Artist (String)	Song (String)	Album	Genre	Imagine	
<input type="checkbox"/>	John Lennon	Imagine		Soft rock	1971	1
<input type="checkbox"/>	Pink Floyd	Money	The Dark Si...			1

aws | Search [Alt+S] | Account ID: 7316-3561-5008 | United States (Oregon) | voclabs/user4473058=Mokgadi_Selepe

DynamoDB > Explore items: Mokgadi_Selepe_Music > Create item

Create item

You can add, remove, or edit the attributes of an item. You can nest attributes inside other attributes up to 32 levels deep. Learn more ↗

Form | JSON view

Attributes

Attribute name	Value	Type	Remove
Artist - Partition key	Psy	String	
Song - Sort key	Gangnam Style	String	
Album	Psy 6 (Six Rules), Part 1	String	Remove
Year	2011	Number	Remove
LengthSeconds	219	Number	Remove

Add new attribute | Cancel | Create item

Table: Mokgadi_Selepe_Music - Items returned (3)

Scan started on November 10, 2025, 13:43:06

Actions | Create item

	Artist (String)	Song (String)	Album	Genre	Imagine	
<input type="checkbox"/>	Psy	Gangnam Style	Psy 6 (Six R...			2
<input type="checkbox"/>	John Lennon	Imagine		Soft rock	1971	
<input type="checkbox"/>	Pink Floyd	Money	The Dark Si...			

I've added some music to my DynamoDB table!

Here's what I did:

- I opened my Music table and clicked "Create item" to add a new song.
- I entered the artist name "Pink Floyd" and song title "Money", which are the required fields.
- I added more info about the song, like the album title "The Dark Side of the Moon" and the release year "1973".
- I created two more songs, one by John Lennon and one by Psy, each with their own unique attributes.
- I noticed that each song can have different attributes, like "Genre" or "LengthSeconds", without needing to define them beforehand.

Think of it like adding songs to a digital music library:

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- I added Pink Floyd's "Money" to my library, with details like album and release year.
- I added John Lennon's "Imagine" and Psy's "Gangnam Style", each with their own unique info.
- My library is flexible and can handle different types of data for each song!

3: Modify an existing item

The screenshot shows two screenshots of the AWS DynamoDB console. The top screenshot displays the 'Tables' page with a single table named 'Mokgadi_Selepe_Music'. The bottom screenshot shows the 'Explore items' page for the same table, where a query has been run and the results are displayed.

Tables Page (Top Screenshot):

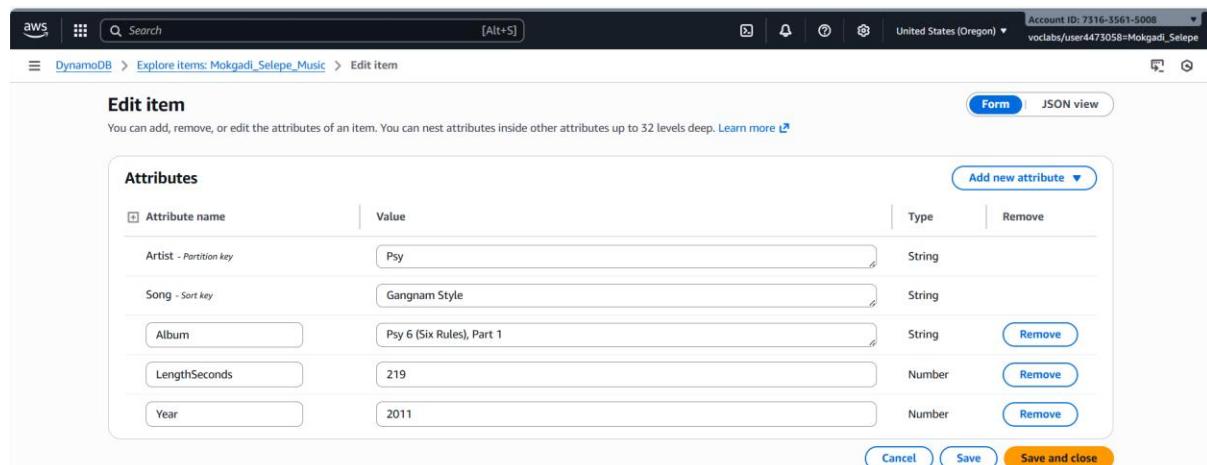
Name	Status	Partition key	Sort key	Indexes	Replication Regions	Deletion protection	Favorite	Read capacity
Mokgadi_Selepe_Music	Active	Artist (S)	Song (S)	0	0	Off		On-demand

Explore Items Page (Bottom Screenshot):

Completed - Items returned: 1 - Items scanned: 1 - Efficiency: 100% - RCU consumed: 2

Artist (String)	Song (String)	Album	Genre	Imagine
Psy	Gangnam Style	Psy 6 (Six R...	Soft rock	1971
John Lennon	Imagine			
Pink Floyd	Money	The Dark Si...		

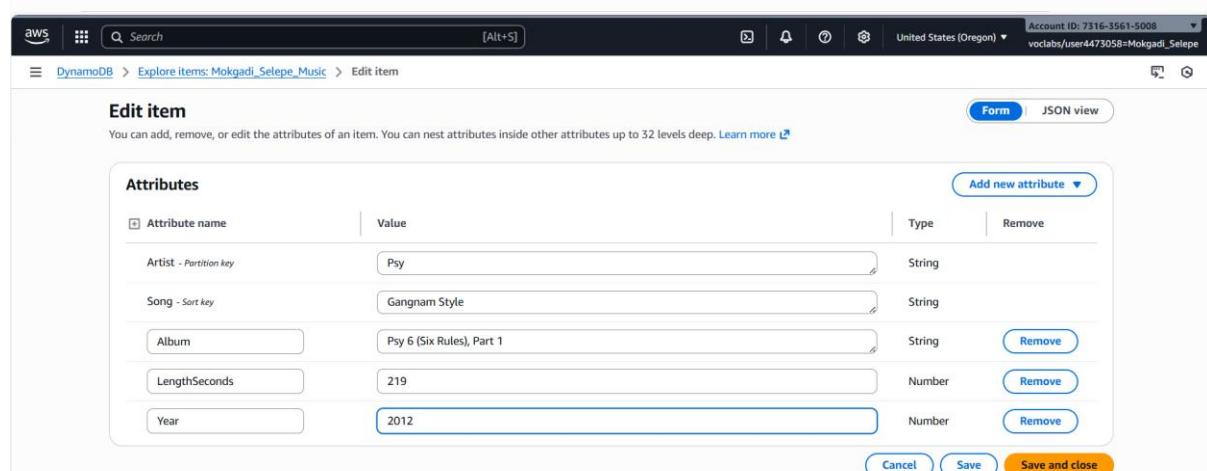
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The screenshot shows the AWS DynamoDB item editor for a music record. The record has the following attributes:

Attribute name	Type	Value
Artist - Partition key	String	Psy
Song - Sort key	String	Gangnam Style
Album	String	Psy 6 (Six Rules), Part 1
LengthSeconds	Number	219
Year	Number	2011

At the bottom, there are buttons for Cancel, Save, and Save and close.



The screenshot shows the AWS DynamoDB item editor for the same music record, but the year has been changed from 2011 to 2012.

Attribute name	Type	Value
Artist - Partition key	String	Psy
Song - Sort key	String	Gangnam Style
Album	String	Psy 6 (Six Rules), Part 1
LengthSeconds	Number	219
Year	Number	2012

At the bottom, there are buttons for Cancel, Save, and Save and close.

Table: Mokgadi_Selepe_Music - Items returned (3)

Scan started on November 10, 2025, 13:43:06

	Artist (String)	Genre	Imagine	LengthSeconds	Year
<input type="checkbox"/>	Psy	Pop	219	2012	
<input type="checkbox"/>	John Lennon	Soft rock	1971		
<input type="checkbox"/>	Pink Floyd	Rock	2013	1973	

I've fixed a mistake in my music library!

Here's what I did:

- I went back to my Music table and found the song by Psy.
- I noticed the release year was wrong, so I changed it from 2011 to 2012.
- I saved the changes, and now the info is up to date!

Think of it like updating a song's details in my music library - I corrected the mistake, and everything is now accurate!

8

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4: Query the table

The screenshot shows the AWS DynamoDB 'Explore items' interface. On the left, a sidebar lists navigation options: Dashboard, Tables, Explore items (which is selected), PartiQL editor, Backups, Exports to S3, Imports from S3, Integrations, Reserved capacity, and Settings. Below this is a 'DAX' section with Clusters, Subnet groups, Parameter groups, and Events.

The main area displays a table named 'Mokgadi_Selepe_Music'. It includes a search bar, filter dropdowns for 'Filter by tag' (Any tag key) and 'Filter by tag value' (Any tag value), and a 'Find tables' search input. A table summary shows '(1)' table(s).

The 'Scan or query items' section is active, indicated by a blue border around its controls. It contains:

- A radio button for 'Scan' (unchecked) and one for 'Query' (checked).
- 'Select a table or index': Set to 'Table - Mokgadi_Selepe_Music'.
- 'Select attribute projection': Set to 'All attributes'.
- 'Partition key: Artist': Input field with 'Enter partition key value'.
- 'Sort key: Song': Input field with 'Enter sort key value' and a dropdown menu showing 'E...'. A checkbox for 'Sort descending' is unchecked.
- 'Filters - optional': A section with a dropdown menu and an input field for 'Gangnam Style'.

At the bottom are 'Run' and 'Reset' buttons.

The URL in the browser is: `https://console.aws.amazon.com/dynamodb/home?region=us-west-2#/tables/Mokgadi_Selepe_Music`

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

Table: Mokgadi_Selepe_Music - Items returned (1)

Query started on November 10, 2025, 14:11:24

Actions | Create item

Artist (String)	Song (String)	Album	LengthSeconds	Year
Psy	Gangnam Style	Psy 6 (Six R...	219	2012

DynamoDB > Explore items > Mokgadi_Selepe_Music

Filters - optional

Attribute name	Condition	Type	Value
Year	Equal to	Number	2012

Run | Reset

Completed · Items returned: 1 · Items scanned: 3 · Efficiency: 33.33% · RCUs consumed: 2

Table: Mokgadi_Selepe_Music - Items returned (1)

Scan started on November 10, 2025, 14:18:11

Artist (String) | Song (String) | Album | LengthSeconds | Year

Psy	Gangnam Style	Psy 6 (Six R...	219	2012
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I've searched for songs in my music library!

Here's what I did:

- I used the "Query" feature to find a specific song by Psy called "Gangnam Style".
- I entered the artist name and song title, and it quickly found the song.
- I also used the "Scan" feature to find songs released in 1971.
- It searched through all the songs and found the one that matched.

Think of it like searching for songs in my music library:

- I searched for a specific song and found it fast.
- I also searched for songs from a specific year, and it found the one I was thinking of!

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5: Delete the table

The screenshot shows two views of the AWS DynamoDB console.

Top View: The 'Tables' page displays a single table named 'Mokgadi_Selepe_Music'. The table has one item: 'Artist (S)' with a value 'Song (S)'. It is set to 'Active' status and has 'On-demand' read capacity. The table was last updated on November 10, 2025, at 14:25 (UTC+2:00).

Bottom View: The 'Settings' tab for the 'Mokgadi_Selepe_Music' table is selected. A context menu is open over the table name, showing options like 'Create index', 'Create item', and 'Delete table'. Other visible tabs include 'Indexes', 'Monitor', and 'Global tables'. The 'General information' section shows the partition key 'Artist (String)', sort key 'Song (String)', and other details. The 'Read/write capacity' section indicates 0 bytes. The 'Actions' button is highlighted in orange.

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Delete table

Delete table Mokgadi_Selepe_Music in United States (Oregon) permanently? This action cannot be undone.

⚠ Proceeding with this action will delete the table and you won't be able to retrieve this data.

Delete all CloudWatch alarms for Mokgadi_Selepe_Music.

Create an on-demand backup of Mokgadi_Selepe_Music before deletion.

You can create an on-demand backup of your table for long-term retention and data archiving. You can then use this backup to restore your data to its exact state before table deletion. Additional charges apply for on-demand backup and restore. For more information see [Pricing ↗](#).

To avoid unintentional deletions, we ask you to provide additional confirmation.

To confirm this deletion, type "confirm".

confirm

Cancel **Delete**

Delete table

Delete table Mokgadi_Selepe_Music in United States (Oregon) permanently? This action cannot be undone.

Cancel **Delete**

aws Search [Alt+S] Account ID: 7316-3561-5008
DynamoDB > Tables United States (Oregon) volelabs/user4473058=Mokgadi_Selepe

DynamoDB The request to delete the "Mokgadi_Selepe_Music" table has been submitted successfully.

Tables (0) Info Last updated November 10, 2025, 14:29 (UTC+2:00) Actions Delete Create table

Filter by tag Any tag key Filter by tag value Any tag value

Name	Status	Partition key	Sort key	Indexes	Replication Regions	Deletion protection	Favorite	Read capacity mode	Write
You have no tables in this account in this AWS Region.									

Create table

I've deleted my music library!

Here's what I did:

- I went to the DynamoDB dashboard and selected the Music table.
- I chose to delete the table, which will remove all the songs and data I had stored.
- I confirmed that I wanted to delete it by typing "delete".

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- The table is now gone, and all my music data is deleted!

Think of it like throwing away my old music library:

- I decided I didn't need it anymore, so I deleted it.
 - It's gone now, and I can't get it back!
-

Conclusion

I've wrapped up my DynamoDB experiment!

Here's what I accomplished:

- I created a table in DynamoDB to store music data.
- I added songs to the table, like Pink Floyd and John Lennon.
- I searched for specific songs and found them quickly.
- I even deleted the table when I was done with it.

Think of it like I built a music library from scratch, added songs, played them, and then tore it all down! It was a great learning experience, and I'm ready to do more with DynamoDB!
