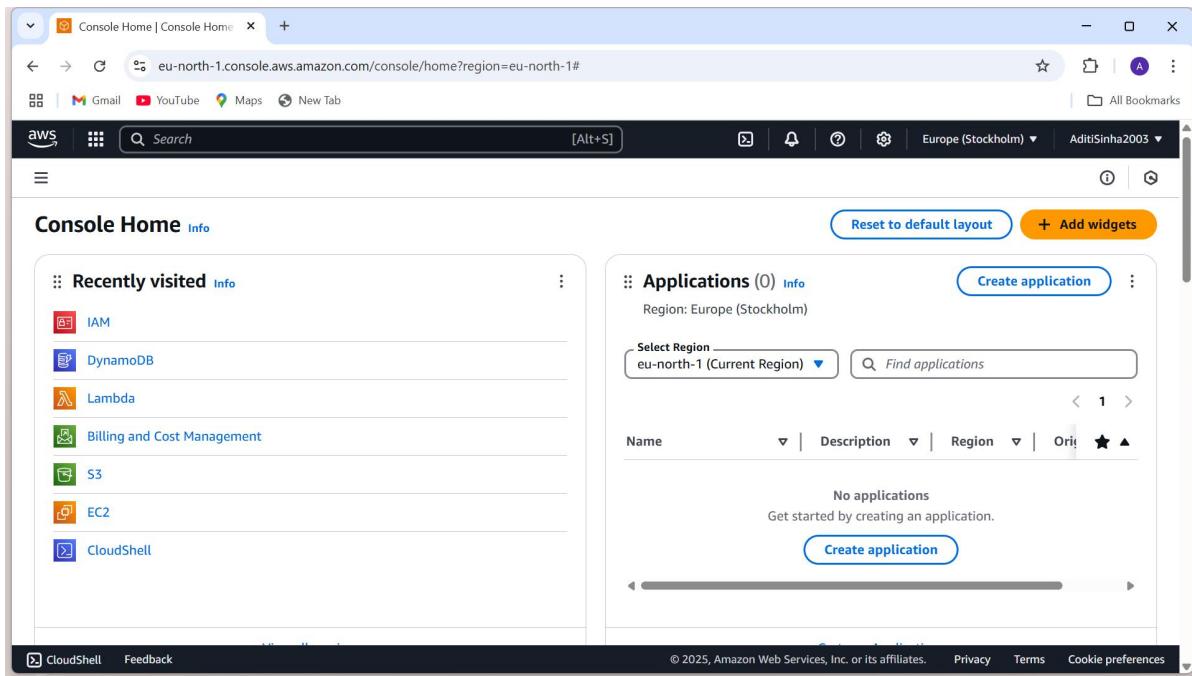


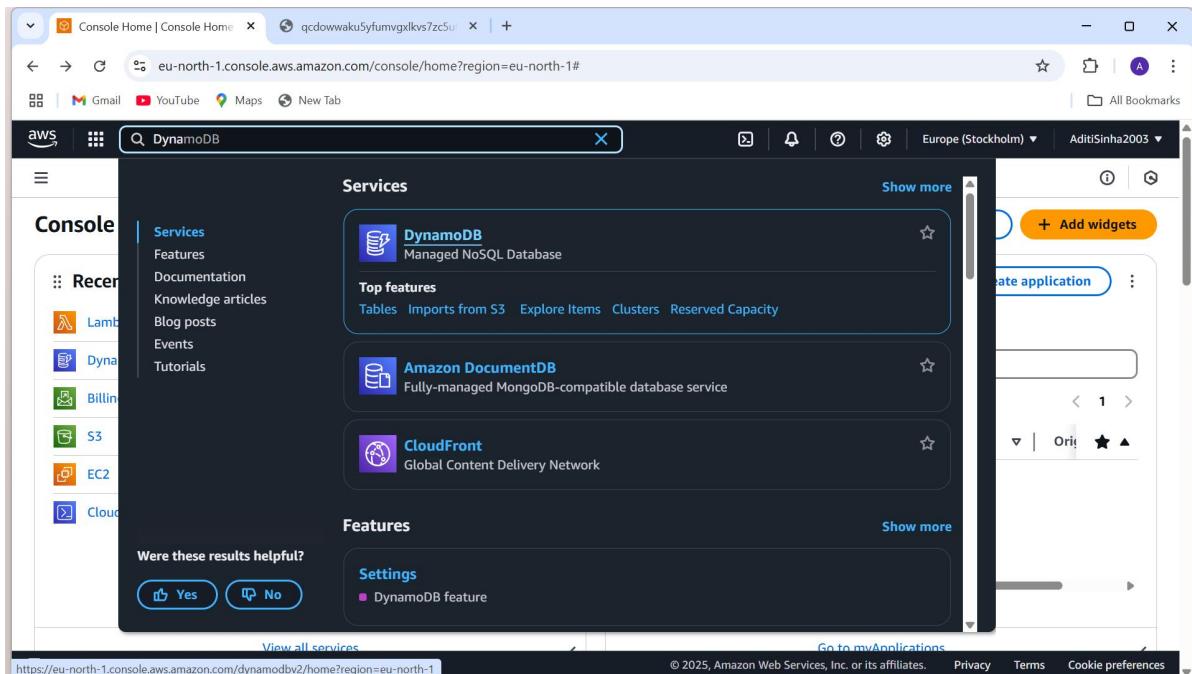
PROGRAM 3: Working with Amazon Dynamo-DB

Steps for creating Table:

Step:1 Login to AWS account.



Step 2: Search for DynamoDB and open it.



Step 3: Click on Tables option present in the left panel and Create Table

The screenshot shows the AWS DynamoDB console. On the left, there's a sidebar with 'DynamoDB' selected. Under 'Tables', it lists 'Explore items', 'PartiQL editor', 'Backups', 'Exports to S3', 'Imports from S3', 'Integrations', 'Reserved capacity', and 'Settings'. Below that is a section for 'DAX' with 'Clusters', 'Subnet groups', 'Parameter groups', and 'Events'. The main content area is titled 'Tables (0) Info' and shows a message: 'You have no tables in this account in this AWS Region.' with a prominent blue 'Create table' button.

Step 4: Provide the Table name as ‘student’ and partition key(primary key) with ‘USN’. Scroll down to find the table settings and click on Customize Table. Below that select Dynamo-DB Standard 1A . Click on Create Table.

The screenshot shows the 'Create table' wizard. It's on the 'Table details' step. The 'Table name' field contains 'student'. The 'Partition key' section shows 'USN' in the input field and 'String' in the dropdown menu. The 'Sort key - optional' section has an empty input field and a dropdown menu set to 'String'. At the bottom, there are buttons for 'Next Step' and 'Create table'.

The screenshot shows the 'Create table' wizard in the AWS DynamoDB console. The configuration details are as follows:

Global secondary indexes	-	Yes
Encryption key management	Owned by Amazon DynamoDB	Yes
Deletion protection	Off	Yes
Resource-based policy	Not active	Yes

Tags
Tags are pairs of keys and optional values, that you can assign to AWS resources. You can use tags to control access to your resources or track your AWS spending.
No tags are associated with the resource.

Add new tag
You can add 50 more tags.

Create table

Step 5: The Table successfully created

The screenshot shows the 'List tables' page in the AWS DynamoDB console. A green success message at the top states: "The student table was created successfully." The 'Tables' section shows one table named 'student' with the following details:

Name	Status	Partition key	Sort key	Indexes	Replication Regions	Deletion protection
student	Active	USN (\$)	-	0	0	Off

DynamoDB

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

DAX

- Clusters
- Subnet groups
- Parameter groups

CloudShell Feedback

Steps for creating table.

Step 1: Once the table is created, click on the ‘student’ table and select Explore Table Items present on the right top corner.

The screenshot shows the AWS DynamoDB console with the 'student' table selected. On the left, the navigation menu includes 'Tables' (which is currently selected), 'Explore items', 'PartiQL editor', 'Backups', 'Exports to S3', 'Imports from S3', 'Integrations', 'Reserved capacity', and 'Settings'. Below this is a section for 'DAX' with 'Clusters' and 'Subnet groups'. At the bottom are links for 'CloudShell' and 'Feedback'. The main area displays the 'Tables (1)' section with a search bar and a table containing one item: 'student'. To the right, the 'student' table details are shown with tabs for 'Settings' (selected), 'Indexes', 'Monitor', 'Global tables', and 'Backups'. A callout box provides information about protecting the table from accidental writes and deletes. Below this is the 'General information' section, which includes fields for 'Partition key' (USN, String), 'Capacity mode' (On-demand), 'Sort key' (empty), and 'Table status' (Active). A 'Get live item count' button is also present. The footer contains copyright information and links for 'Privacy', 'Terms', and 'Cookie preferences'.

Step 2: Click on ‘Create Item’ to add items into the table.

The screenshot shows the 'Explore items' page for the 'student' table. The left sidebar has 'Explore items' selected. The main area displays a message box stating 'Completed · Items returned: 0 · Items scanned: 0 · Efficiency: 100% · RCUs consumed: 2'. Below this is a table summary for 'Table: student - Items returned (0)'. It shows a 'Scan started on April 10, 2025, 17:11:37' message and a 'No items' message. A 'Create item' button is available. The footer includes standard AWS links for 'Privacy', 'Terms', and 'Cookie preferences'.

Step 3: Give the value to the partition key ('USN').

Attribute name	Value	Type
USN - Partition key	1BI22CS008	String

Step 4: Select 'Add New Attribute' to add new attributes with attribute name and corresponding value. Create the Attribute names as 'Name', 'Department', 'Semester', 'Section', 'Batch' with their respective data types as String or Number.

Attribute name	Value	Type
USN - Partition key	1BI22CS008	String
Name	Aditi Sinha	String
Dept	CSE	String
Sem	6	Number
Sec	A	String
Batch	2022	Number

Step 5: Click on Create Item and check for the Item created

The screenshot shows the Amazon DynamoDB console with the 'student' table selected. On the left, the navigation menu includes 'Explore items'. A success message at the top right says 'Completed - Items returned: 0 - Items scanned: 0 - Efficiency: 100% - RCU consumed: 2'. The main area displays the table data with one item:

	USN (String)	Batch	Dept	Name
	1B122CS008	2022	CSE	Aditi Sinha

Step 6: The item can also be created in JSON View. In the left Panel, click on Tables option and click on ‘student’ table. Click on Explore Table Item and Create Item. On the Top Right corner click on JSON View .

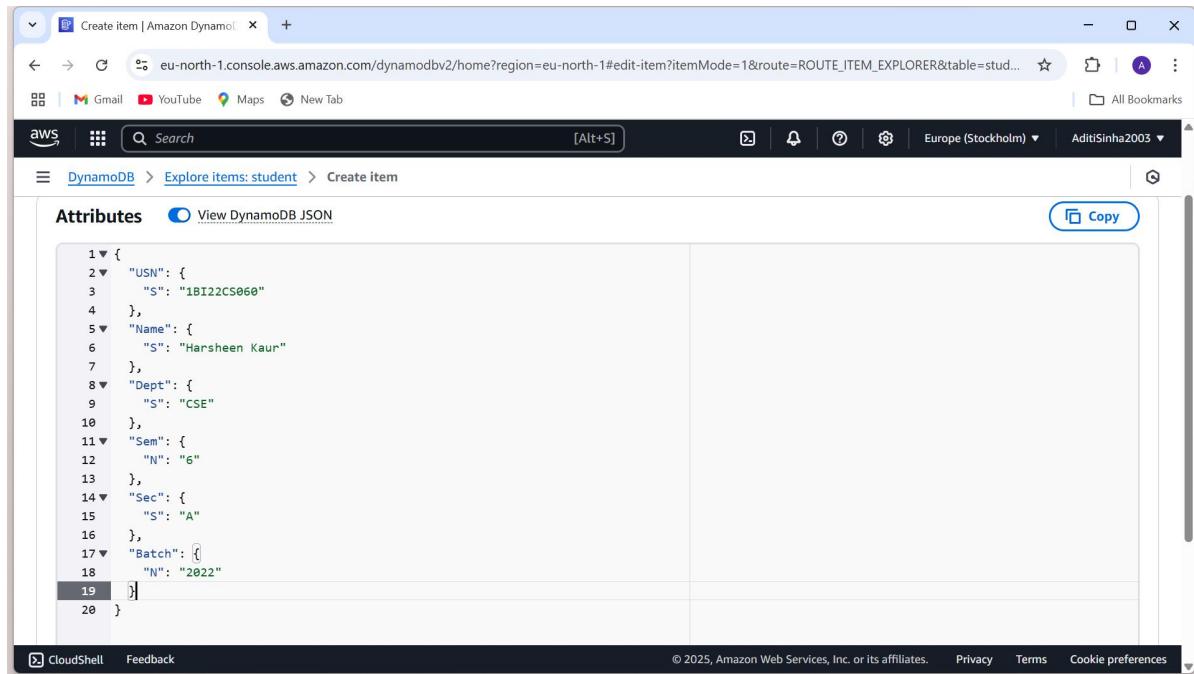
The screenshot shows the 'Create item' page for the 'student' table. The top navigation bar has 'JSON view' selected. The 'Attributes' section contains the following JSON object:

```

1 {
2   "USN": {
3     "S": ""
4   }
5 }

```

Step 7: Fill up the corresponding attribute name and value created earlier. After each Attribute put a comma to avoid errors. Click on Create Item.

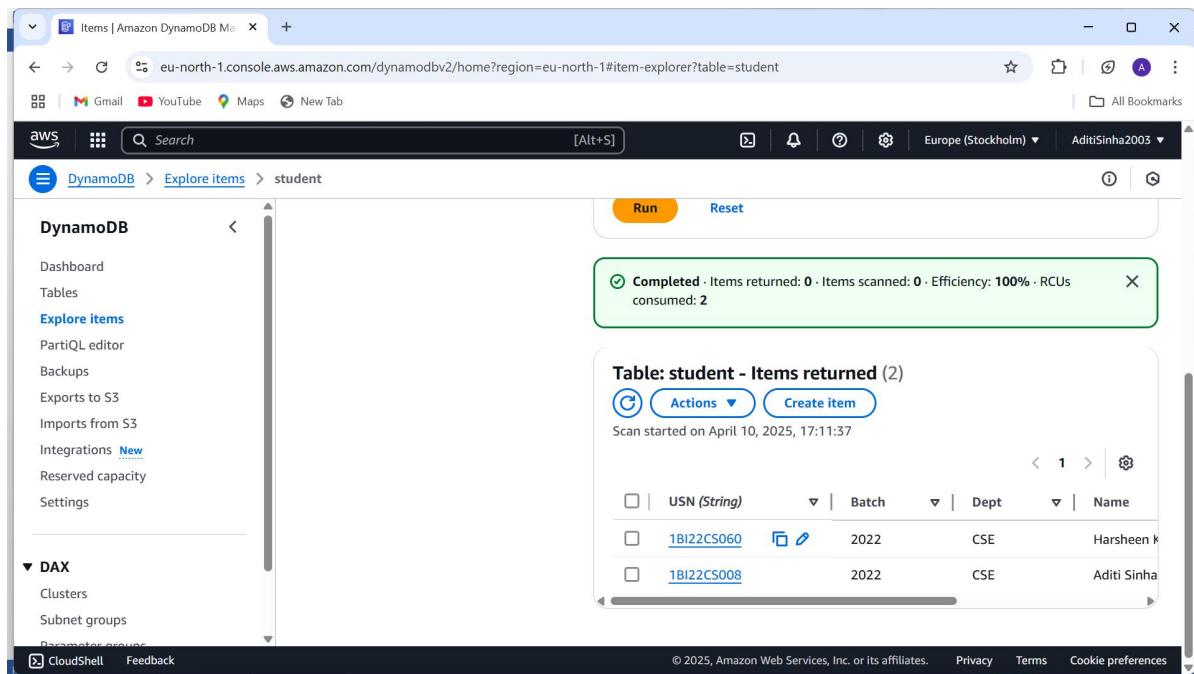


```

1 ▼ {
2   "USN": {
3     "S": "1BI22CS060"
4   },
5   "Name": {
6     "S": "Harsheen Kaur"
7   },
8   "Dept": {
9     "S": "CSE"
10 },
11  "Sem": {
12    "N": "6"
13 },
14  "Sec": {
15    "S": "A"
16 },
17  "Batch": [
18    {
19      "N": "2022"
20    }
]
}

```

Step 8: Add the required number of items in the table.



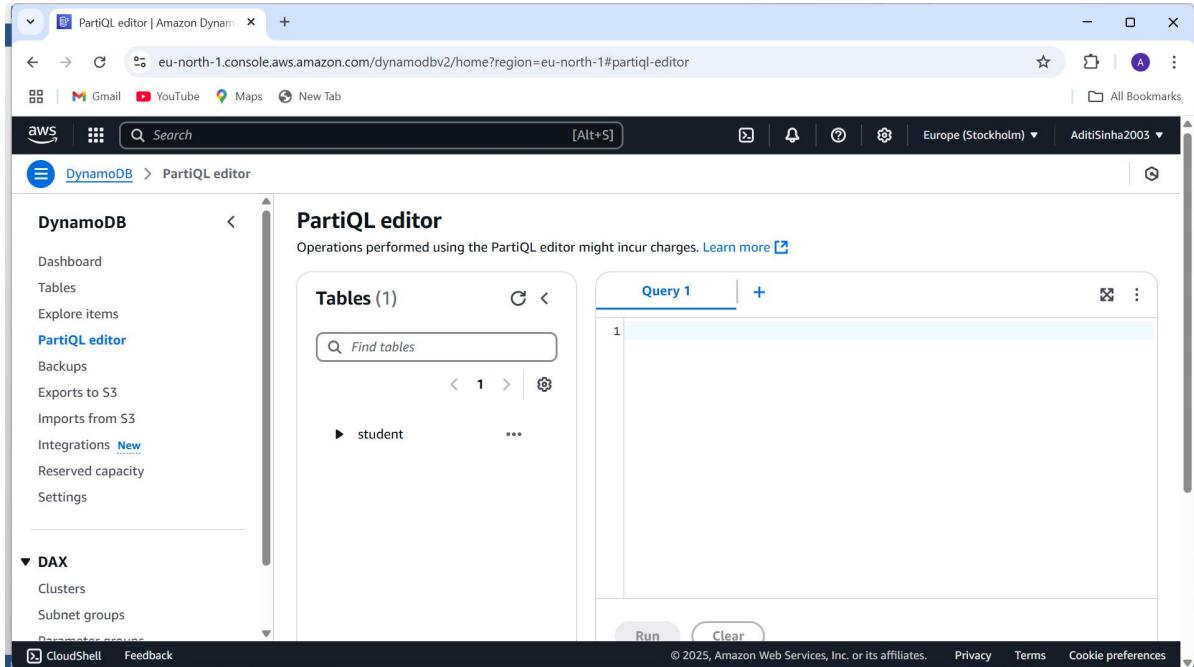
Completed - Items returned: 0 - Items scanned: 0 - Efficiency: 100% - RCU consumed: 2

Table: student - Items returned (2)

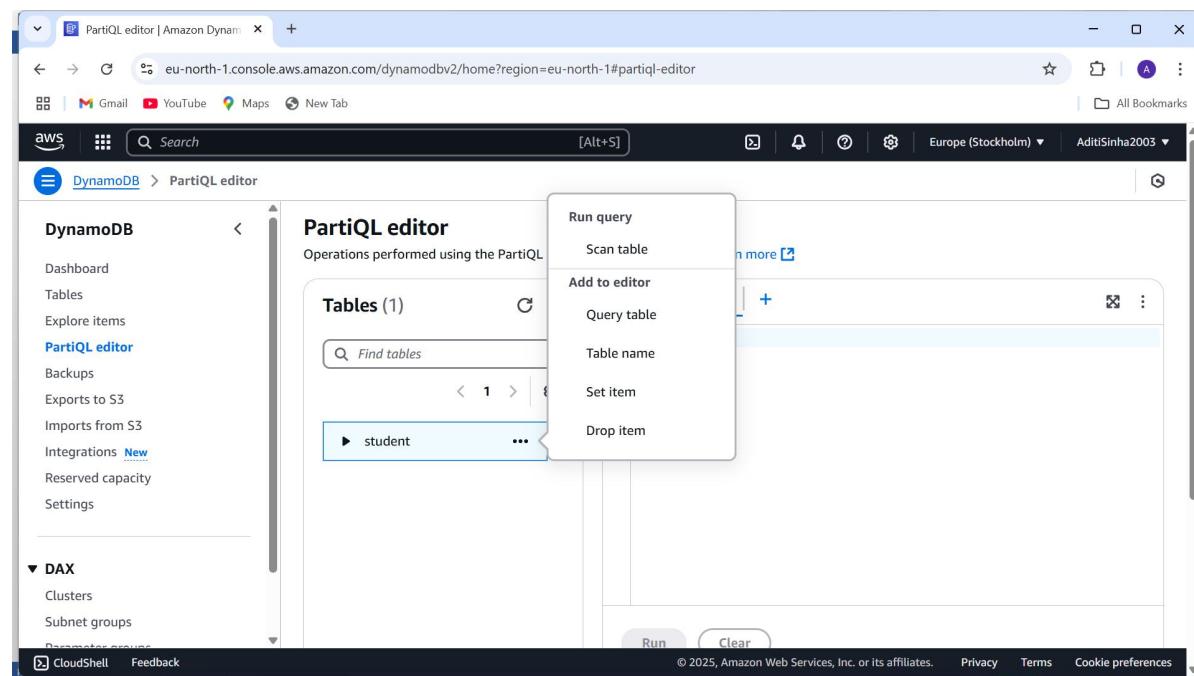
	USN (String)	Batch	Dept	Name
<input type="checkbox"/>	1BI22CS060	2022	CSE	Harsheen Kaur
<input type="checkbox"/>	1BI22CS008	2022	CSE	Aditi Sinha

Steps to create PartiQL Editor

Step 1: In the Left Panel, click on PartiQL editor option. Click on the three dots present beside student table.



Step 2: Click on Scan Table.



Step 3: Run the Table. It shows Scanning Completed.

The screenshot shows the PartiQL editor interface. On the left, there is a sidebar titled "Tables (1)" with a single entry: "student". In the main area, there is a "Query 1" tab containing the following SQL-like query:

```
1 SELECT * FROM "student"
```

Below the query, there are two buttons: "Run" (highlighted in orange) and "Clear". At the bottom of the interface, there is a footer bar with links for "CloudShell", "Feedback", and copyright information: "© 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences".

The screenshot shows the PartiQL editor interface after running the query. The "Table view" tab is selected, displaying the results of the scan. The results are as follows:

Dept	Sec	Sem	Batch	USN	Name
CSE	A	6	2022	1BI22CS008	Aditi Sinha
CSE	A	6	2022	1BI22CS060	Harsheen Kaur

At the top of the results area, it says "Completed" and provides timing information: "Started on 4/10/2025, 5:38:28 PM" and "Elapsed time 2971ms". There is also a "Download results to CSV" button. The footer bar at the bottom includes "CloudShell", "Feedback", and copyright information: "© 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences".

Step 4: Again choose Query Table option from the drop down list.

The screenshot shows the Amazon DynamoDB PartiQL editor interface. On the left, there's a sidebar with navigation links like Dashboard, Tables, Explore items, PartiQL editor (which is currently selected), Backups, Exports to S3, Imports from S3, Integrations, Reserved capacity, and Settings. Below that is a DAX section with Clusters and Subnet groups. At the bottom of the sidebar are CloudShell and Feedback buttons. The main area has a title 'PartiQL editor' and a sub-section 'Operations performed using the PartiQL editor'. It shows 'Tables (1)' with a single table named 'student'. A dropdown menu is open over the table list, with 'Query table' highlighted. Other options in the menu include Run query, Scan table, Add to editor, Table name, Set item, and Drop item. At the bottom right of the main area are Run and Clear buttons. The footer of the browser window includes links for Privacy, Terms, and Cookie preferences, along with a copyright notice for 2025, Amazon Web Services, Inc. or its affiliates.

Step 5: In the SELECT query, give the partition key (USN) already created.

This screenshot shows the same PartiQL editor interface as the previous one, but now with a query entered in the main editor area. The query is: `1 SELECT * FROM "student" WHERE "USN" = '1IB122CS008'`. The 'Run' button at the bottom is highlighted in yellow. The rest of the interface is identical to the previous screenshot, including the sidebar navigation and the dropdown menu over the table list.

Step 6: Click on Run option. It shows the command has been executed successfully. Clear the screen.

The screenshot shows the PartiQL editor interface within the AWS Lambda console. The browser address bar indicates the URL is eu-north-1.console.aws.amazon.com/dynamodbv2/home?region=eu-north-1#partiql-editor. The main area displays the results of a query. At the top, there are 'Run' and 'Clear' buttons. Below them, tabs for 'Table view' and 'JSON view' are shown, with 'Table view' being selected. A green status message says 'Completed'. The query was started on 4/10/2025, 5:41:51 PM, and took 787ms. The results table shows one item returned:

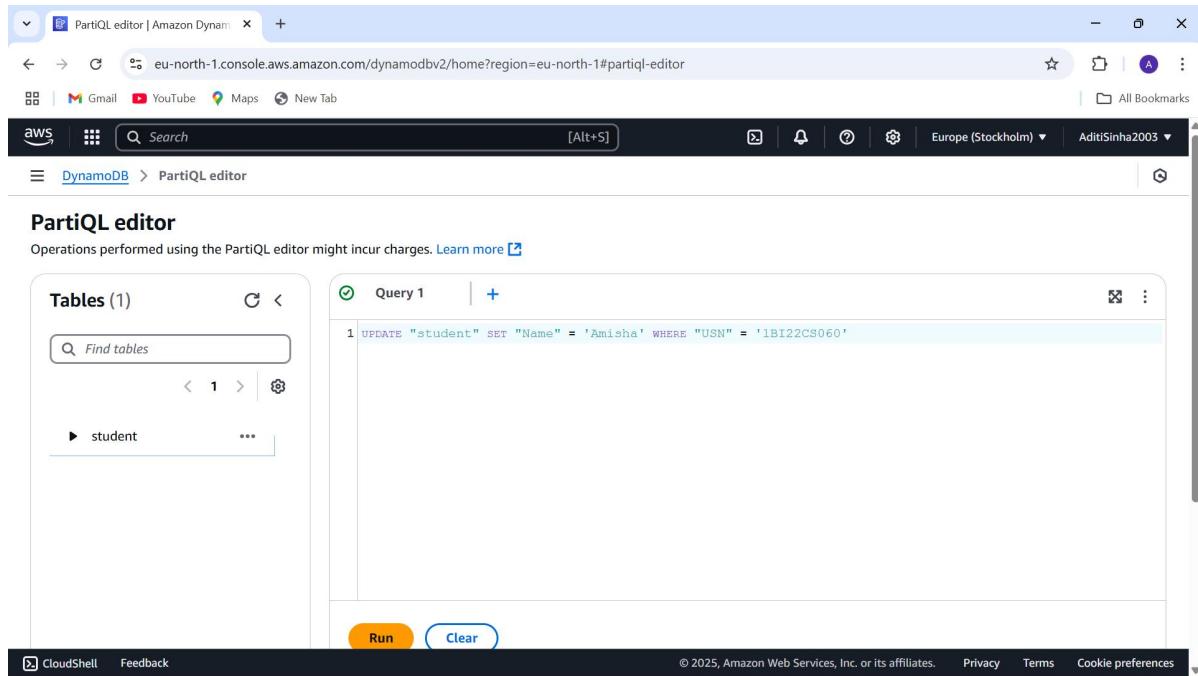
Dept	Sec	Sem	Batch	USN	Name
CSE	A	6	2022	1BI22CS008	Aditi Sinha

There is a 'Download results to CSV' button. The bottom of the page includes standard AWS navigation links like CloudShell, Feedback, Privacy, Terms, and Cookie preferences.

Step 7: Next, Choose the Set Item option to alter a particular item in the table.

The screenshot shows the PartiQL editor interface within the AWS Lambda console. The browser address bar indicates the URL is eu-north-1.console.aws.amazon.com/dynamodbv2/home?region=eu-north-1#partiql-editor. On the left, the navigation sidebar is visible with options like Dashboard, Tables, Explore items, PartiQL editor (which is selected), Backups, Exports to S3, Imports from S3, Integrations, Reserved capacity, and Settings. The main area shows a table named 'student' with one item: 'student'. A context menu is open over this item, listing options: Run query, Scan table, Add to editor, Query table, Table name, Set item (which is highlighted in blue), and Drop item.

Step 8: Change the attribute_name and corresponding USN in the UPDATE Query. Run the Command . It shows the command has been executed successfully. Clear the screen.

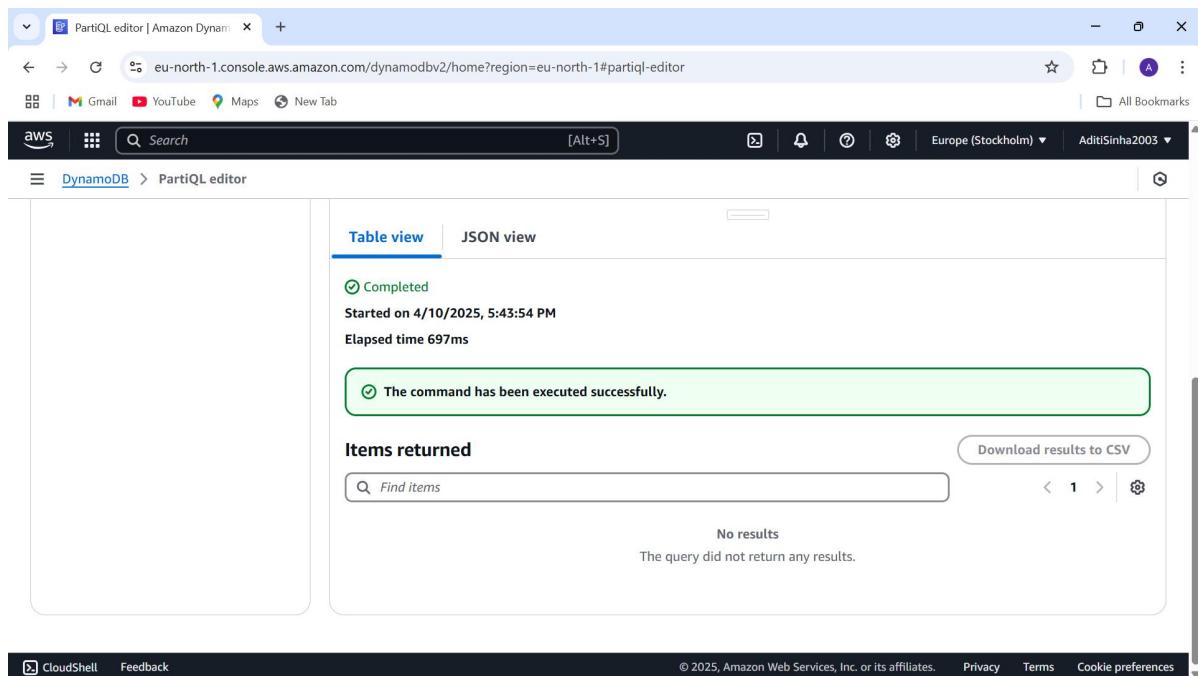


The screenshot shows the PartiQL editor interface. On the left, there is a sidebar titled "Tables (1)" with a search bar and a list containing "student". In the main area, there is a "Query 1" tab with the following code:

```
1 UPDATE "student" SET "Name" = 'Amisha' WHERE "USN" = '1BI22CS060'
```

Below the code are two buttons: "Run" and "Clear". At the bottom of the editor, there are links for "CloudShell", "Feedback", "Privacy", "Terms", and "Cookie preferences".

Step 9: With the help of scan table command the changes made to the table can be verified.



The screenshot shows the PartiQL editor interface. On the left, there is a sidebar titled "Tables (1)" with a search bar and a list containing "student". In the main area, there is a "Table view" tab with the following information:

- Completed**
- Started on 4/10/2025, 5:43:54 PM
- Elapsed time 697ms

A green message box states: "The command has been executed successfully." Below this, there is a section titled "Items returned" with a search bar and a message: "No results" and "The query did not return any results." At the bottom, there is a "Download results to CSV" button. At the very bottom, there are links for "CloudShell", "Feedback", "Privacy", "Terms", and "Cookie preferences".

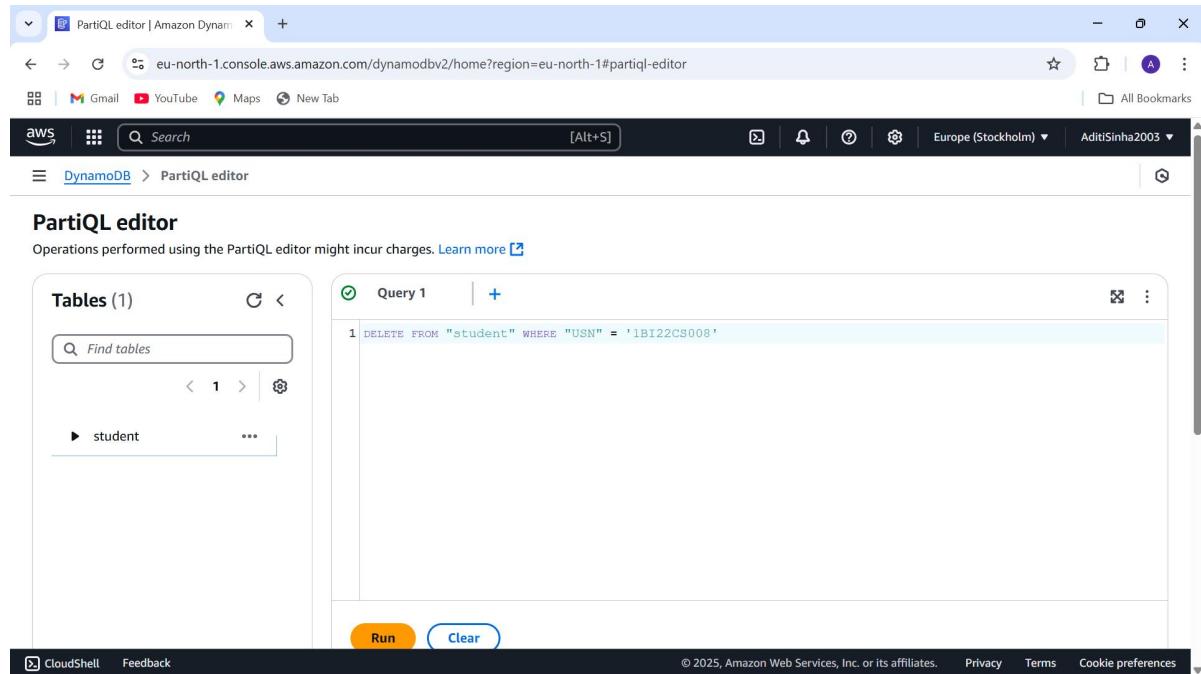
The screenshot shows the PartiQL editor interface on the Amazon DynamoDB console. The results of a query are displayed in a table format. The table has columns: Dept, Sec, Sem, Batch, USN, and Name. There are two rows of data:

Dept	Sec	Sem	Batch	USN	Name
CSE	A	6	2022	1BI22CS008	Aditi Sinha
CSE	A	6	2022	1BI22CS060	Amisha

Step 10: Lastly, choose the Drop Item Option from the drop down menu.

The screenshot shows the PartiQL editor interface with a context menu open over a row in the 'Tables' list. The menu options include: Run query, Scan table, Add to editor, Query table, Table name, Set item, and Drop item. The 'Drop item' option is highlighted.

Step 11: Change the USN to delete the particular record in the DELETE Query. Run the Command. It shows the command has been executed successfully. Clear the screen.

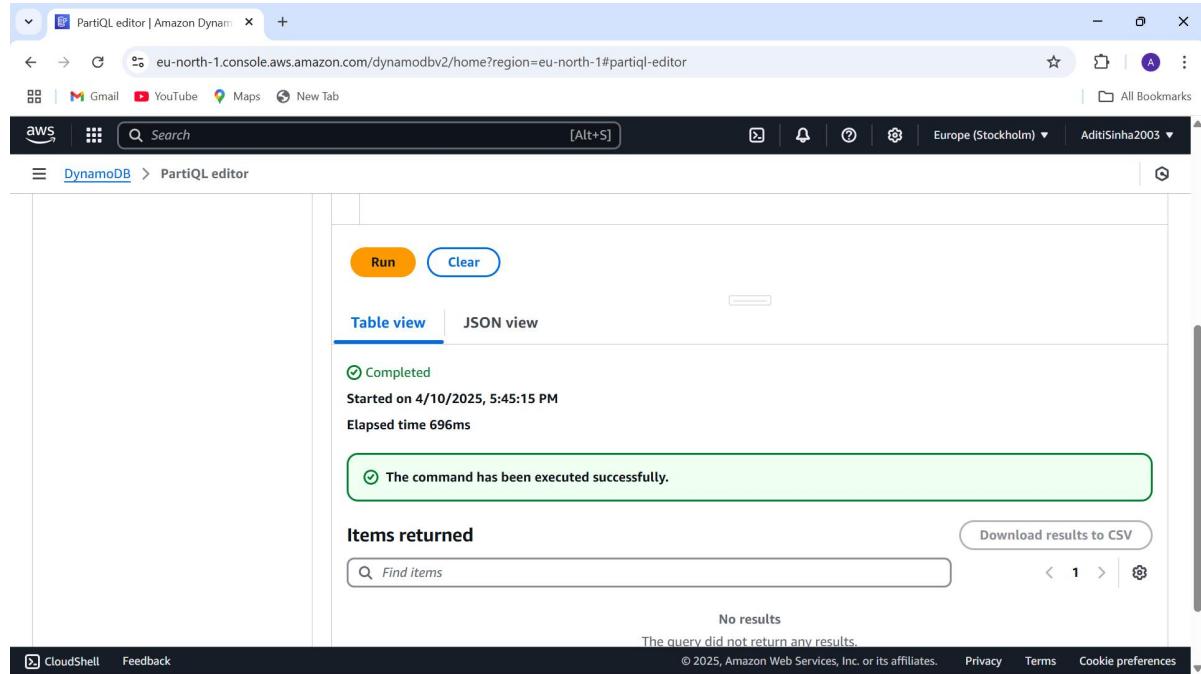


The screenshot shows the PartiQL editor interface within a web browser. The URL is `eu-north-1.console.aws.amazon.com/dynamodbv2/home?region=eu-north-1#partiql-editor`. The left sidebar shows a single table named "student". The main area contains a query editor with the following content:

```
1 DELETE FROM "student" WHERE "USN" = '1BI122CS008'
```

Below the query are two buttons: "Run" (highlighted in orange) and "Clear". The status bar at the bottom indicates the command was completed successfully.

Step 12: The deleted item can be verified using the scan table command.



The screenshot shows the PartiQL editor interface within a web browser. The URL is `eu-north-1.console.aws.amazon.com/dynamodbv2/home?region=eu-north-1#partiql-editor`. The main area displays the results of a scan command:

Table view

- Completed
- Started on 4/10/2025, 5:45:15 PM
- Elapsed time 696ms
- The command has been executed successfully.

Items returned

No results
The query did not return any results.

Download results to CSV

CloudShell Feedback

The screenshot shows the PartiQL editor interface within the AWS DynamoDB console. The status bar indicates the query was completed successfully on 4/10/2025 at 5:45:30 PM with an elapsed time of 571ms. One item was returned, showing details like Dept (CSE), Sec (A), Sem (6), Batch (2022), USN (1BI22CS060), and Name (Amisha).

Step 13: After all the above steps are executed the table needs to be deleted. In the left Panel, click on Table. Select the student table and click on delete.

The screenshot shows the 'List tables' page in the AWS DynamoDB console. A confirmation dialog box is open, asking if you want to delete the 'student' table in Europe (Stockholm). It includes a warning message, checkboxes for CloudWatch alarms and on-demand backup, and a field to type 'confirm' to proceed. A cartoon robot icon is present in the background of the dialog.

Step 14: Successfully deleted the Table. Check the Dashboard for empty panel. A user can sign-out from the AWS Account after all these steps

The screenshot shows the AWS DynamoDB console with the URL eu-north-1.console.aws.amazon.com/dynamodbv2/home?region=eu-north-1#tables. The browser interface includes tabs for Gmail, YouTube, Maps, and New Tab, and a bookmarks bar for All Bookmarks. The AWS logo is at the top left, followed by a search bar and navigation icons. The main content area displays a green success message: "The request to delete the 'student' table has been submitted successfully." Below this, the "Tables (0)" section is shown with a "Create table" button. A decorative illustration of a robot arm holding a wrench is centered above the message. At the bottom, there is a footer with links for CloudShell, Feedback, and legal information: "© 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences".