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Load Data into DynamoDB

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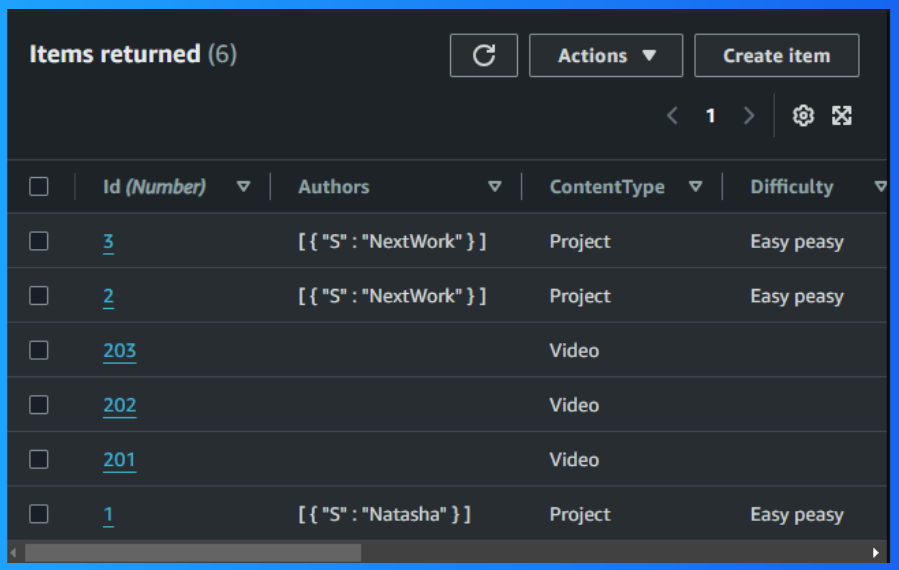

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Introducing Today's Project!

What is Amazon DynamoDB?

DynamoDB is described as a NoSQL database or a key-value database. A NoSQL database is useful because it means you would not use SQL to query it while key-value is a specific way to store data that's flexible and efficient.

How I used Amazon DynamoDB in this project

Today's project I used Amazon DynamoDB to create tables and its items inside. Also I learned how to add attributes to the items though the AWS console. All this can be done using the AWS cloudshell as well with commands.

One thing I didn't expect in this project was...

One thing I didnt expect was that tables with items and attributes can be added to AWS Dynamo DB using the cloudshell.

This project took me...

I took 2 hours with this project.

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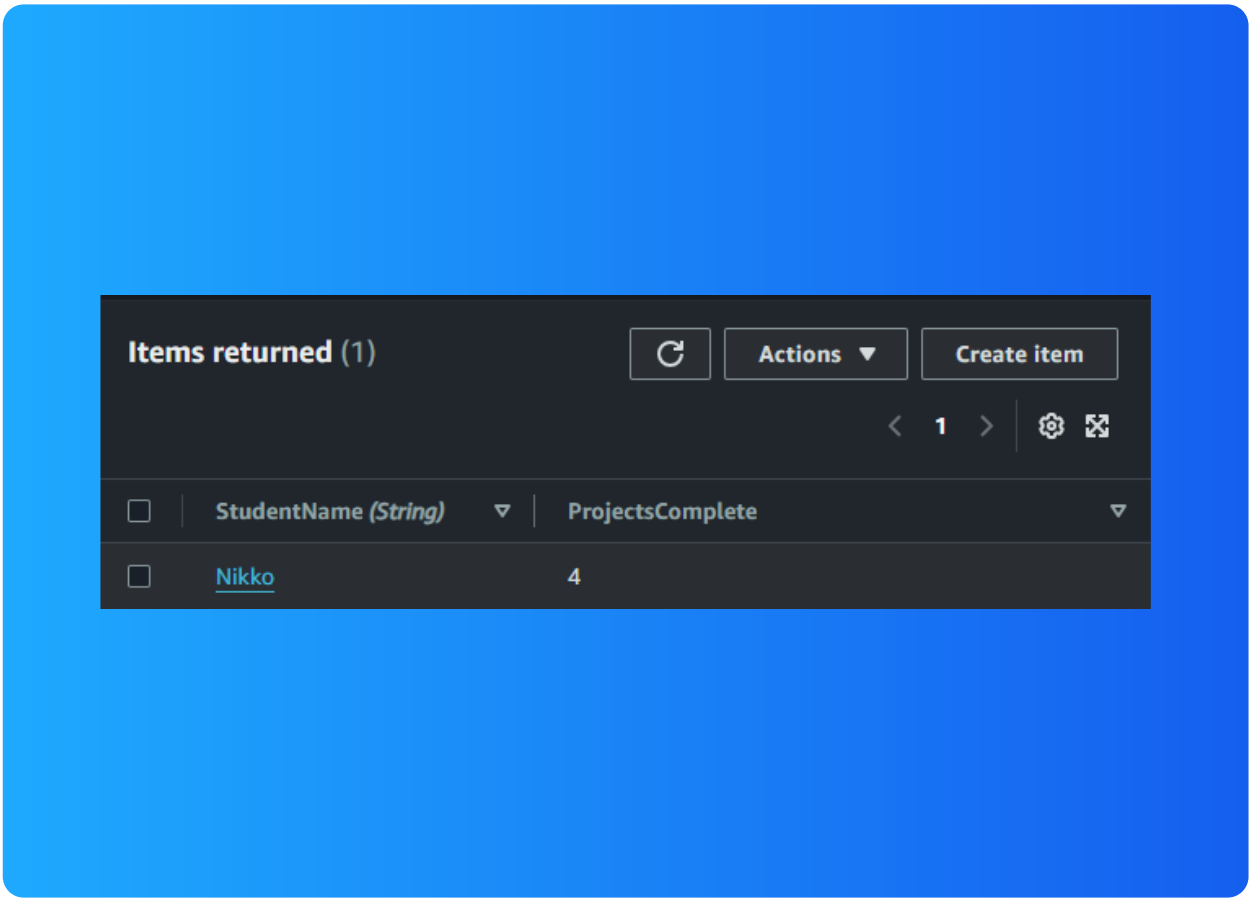
Create a DynamoDB table

DynamoDB tables organises data using primary keys which consist of partition keys and optional sort keys allowing for efficient data retrieval and scalability.

An attribute is like a piece of data about an item. In this case our item is Nikko and the attribute is the number of projects Nikko completed.



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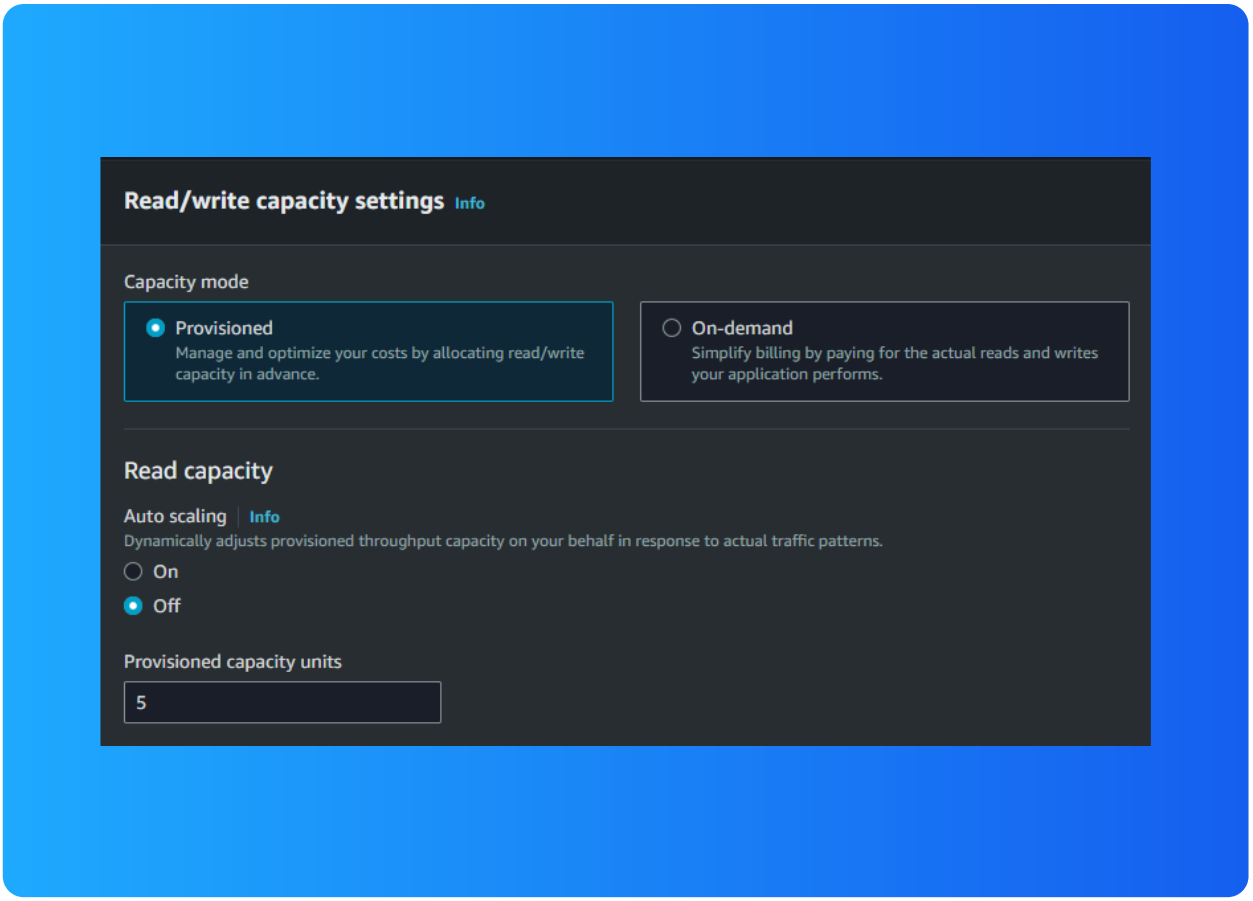
Read and Write Capacity

Read capacity units (RCUs) are a measure of how many engines DynamoDB is using to operate. Write capacity units (WCUs) are just like read capacity units but they give your DynamoDB tables the engines to edit/update/delete data.

Amazon DynamoDB's Free Tier covers up to 200M requests. I turned off auto scaling because I dont want to adjust dynamically the capacity throughput behalf in response to actual traffic patterns.



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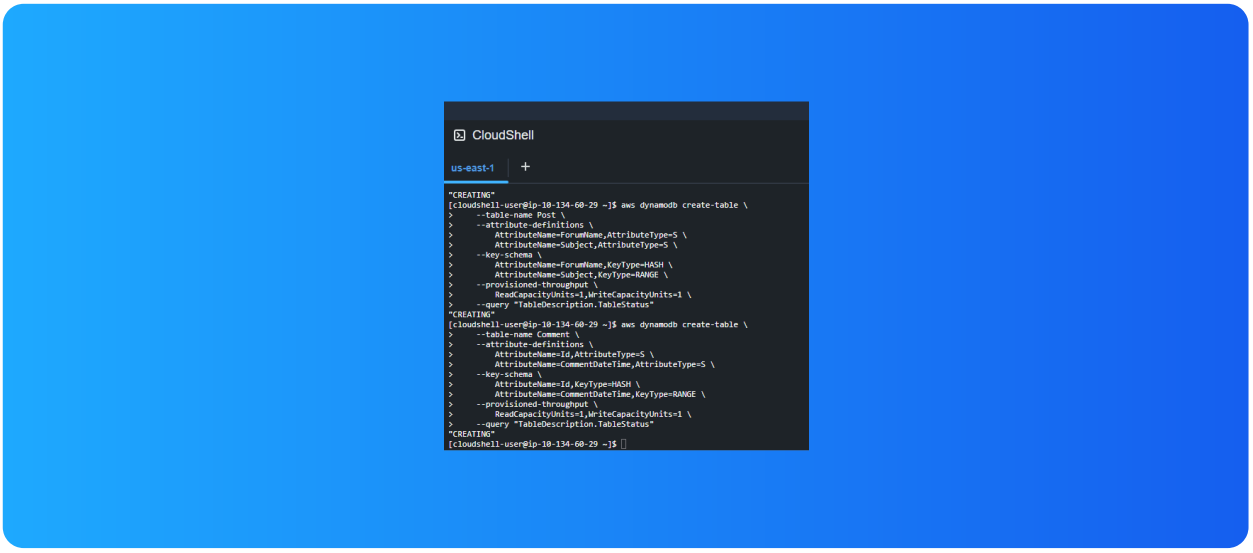
Using CLI and CloudShell

AWS CloudShell is shell in your AWS Management Console which means it's a space for you to run code. AWS CloudShell already has AWS CLI pre-installed.

AWS CLI is software that lets you create, delete and update AWS resources with commands instead of clicking through your console.

I ran a CLI command in AWS CloudShell that created new tables.



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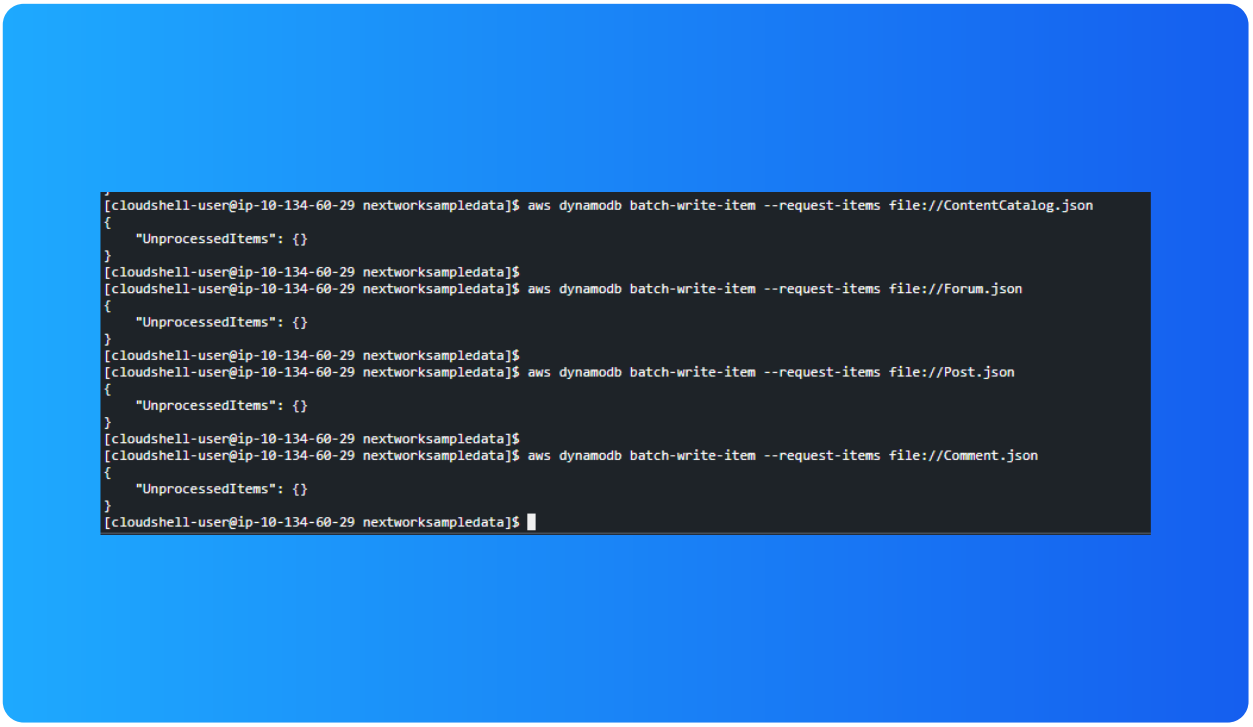
Loading Data with CLI

I ran a CLI command in AWS CloudShell that download and unzip a zip file with data. Then I load the data of all four files into DynamoDB using AWS CLI's batch-write-item command.



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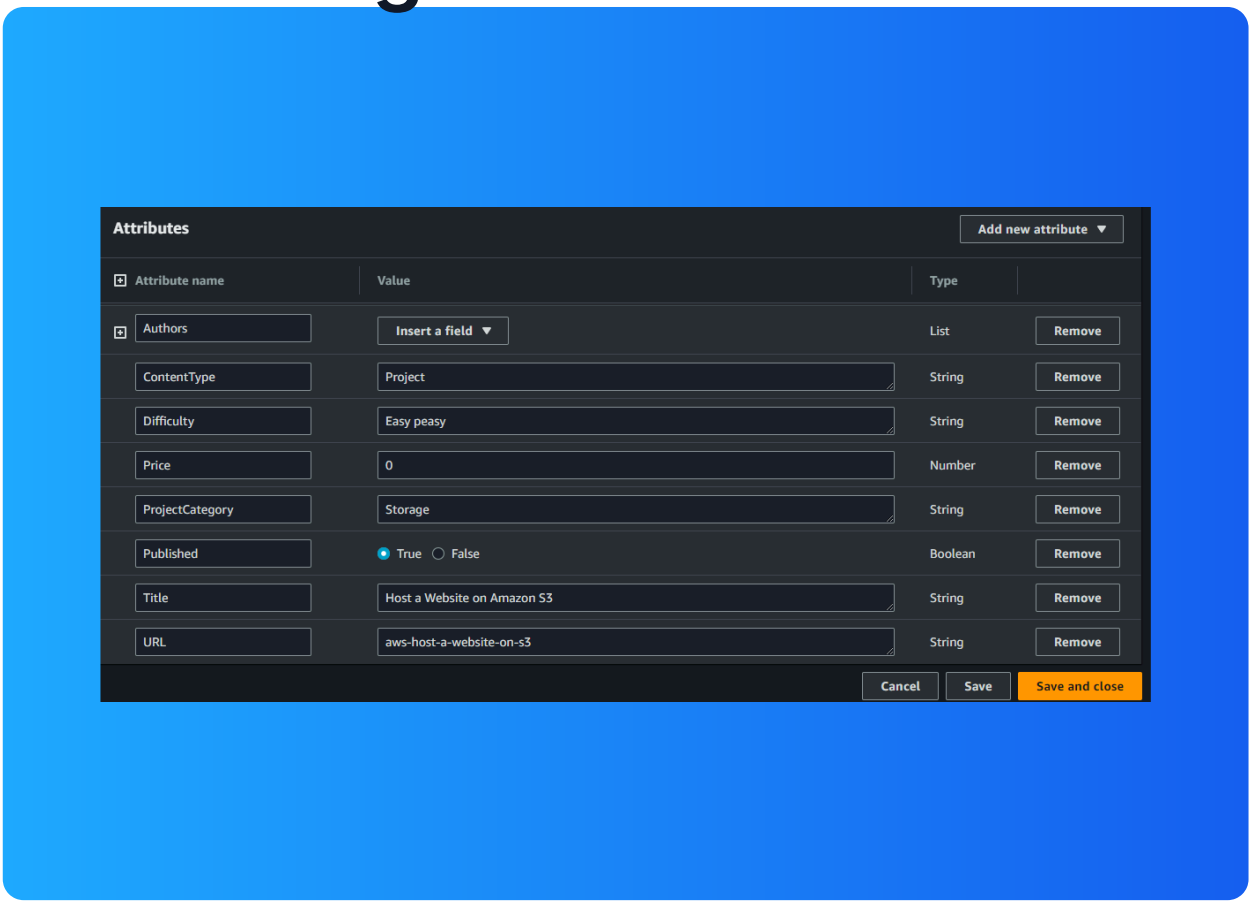
Observing Item Attributes



I checked a ContentCatalog item, which had the following attributes: Authors, ContentType, Difficulty, Price, ProjectCategory, Published, Title and URL.

I checked another ContentCatalog item, which had a different set of attributes: ContentType, Price, Services, Title, URL, VideoType.

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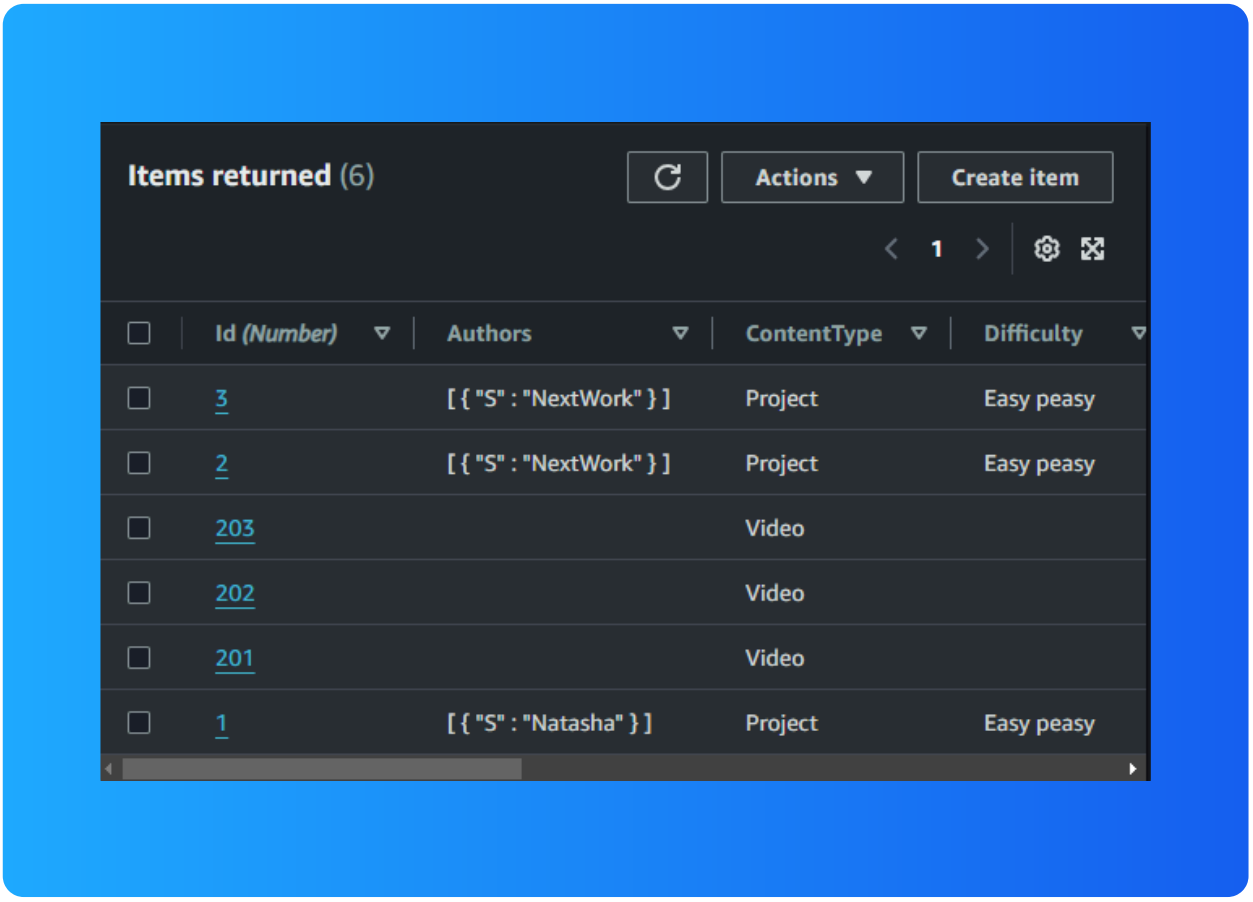
Benefits of DynamoDB

A benefit of DynamoDB over relational databases is flexibility, because it allows for schema-less data models making it easy to store and manage unstructured or semi-structured data.

Another benefit over relational databases is speed, because DynamoDB tables can use partition keys to split up a table and quickly find the items they're looking for. Relational databases have to scan through the entire table to find data.



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