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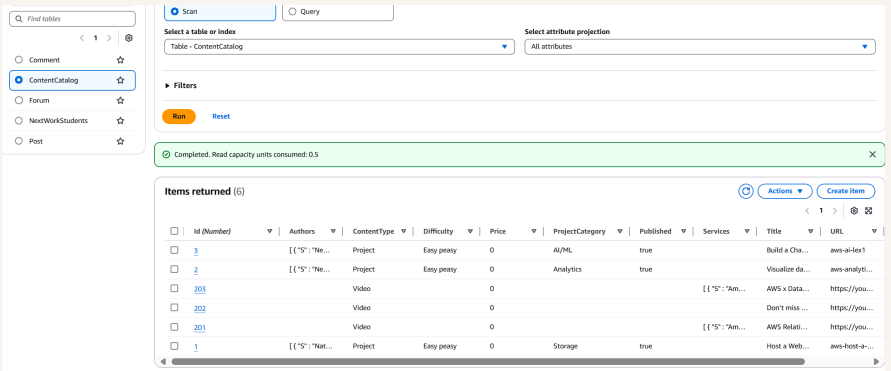
# Load and Query DynamoDB Tables

HARI NATH REDDY



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# Introducing Today's Project!

## What is Amazon DynamoDB?

Amazon DynamoDB is a non-relational database service. Non-relational databases use structures other than rows and columns to organise data.

## How I used Amazon DynamoDB in this project

In today's project, I used Amazon DynamoDB to create live tables! I used CloudShell and CLI to load data into my tables quickly.

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

one thing I didn't expect in this project was that we can perform a lot of actions using AWS CLI instead of the console. e.g creating tables, loading data, deleting tables.

## This project took me...

This project took me 2 Hours to complete include documentation.

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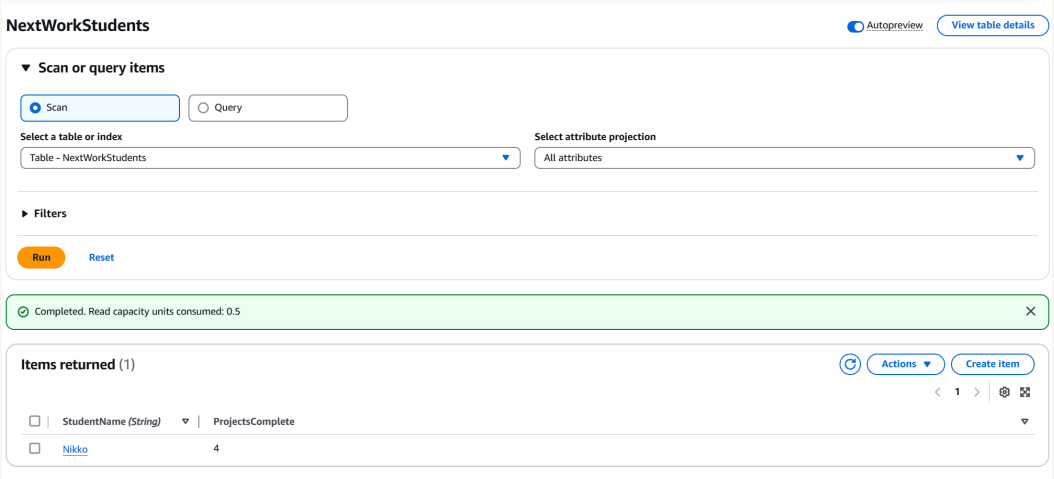
# Create a DynamoDB table

DynamoDB tables organises data using items and attributes! Every single item is recorded with a set of attributes. Items can have any number of attributes (minimum 1, for the partition key value.)

In DynamoDB, 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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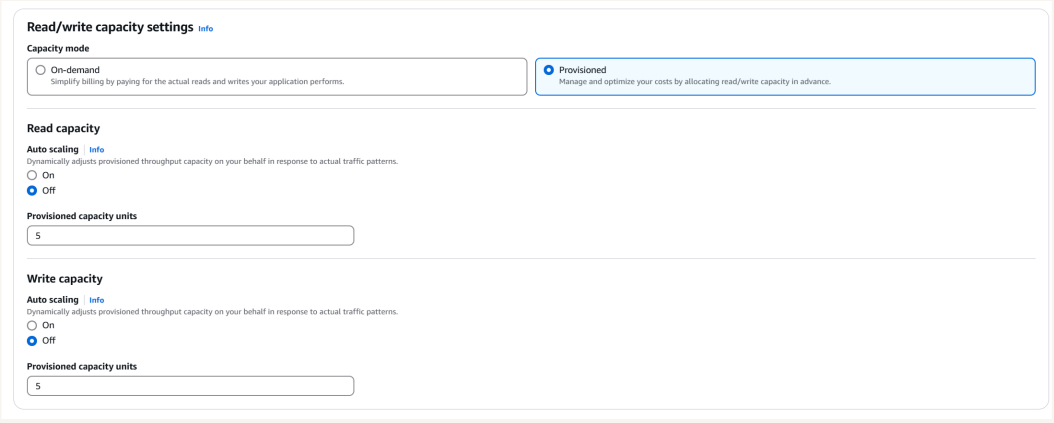
# Read and Write Capacity

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

Amazon DynamoDB's Free Tier covers 25GB of data storage, plus 25 Write and 25 Read Capacity Units (WCU, RCU) I turned off auto scaling because this can result in higher charges if DynamoDB automatically scales up my operations.



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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! The awesome thing about AWS CloudShell is that it already has AWS CLI pre-installed.

AWS CLI (Command Line Interface) is a 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 four new tables in AWS DynamoDB, each with specific attributes and settings.

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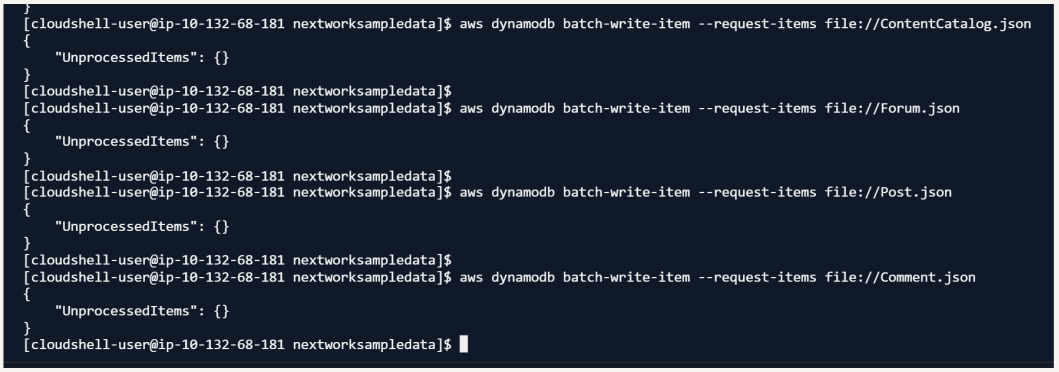
# Loading Data with CLI

I ran a CLI command in AWS CloudShell(aws dynamodb batch-write-item) that load multiple pieces of data into the DynamoDB tables. I set up in the previous step.



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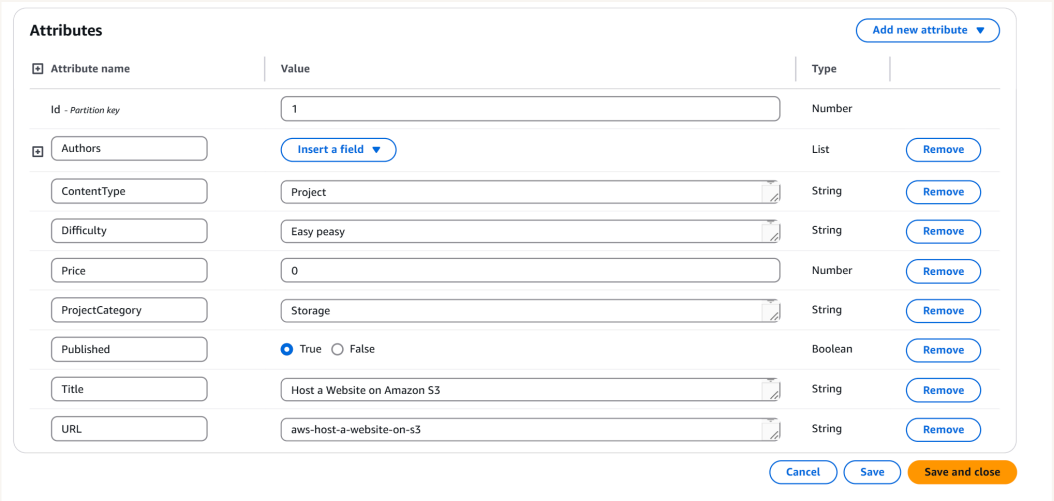
# Observing Item Attributes




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

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

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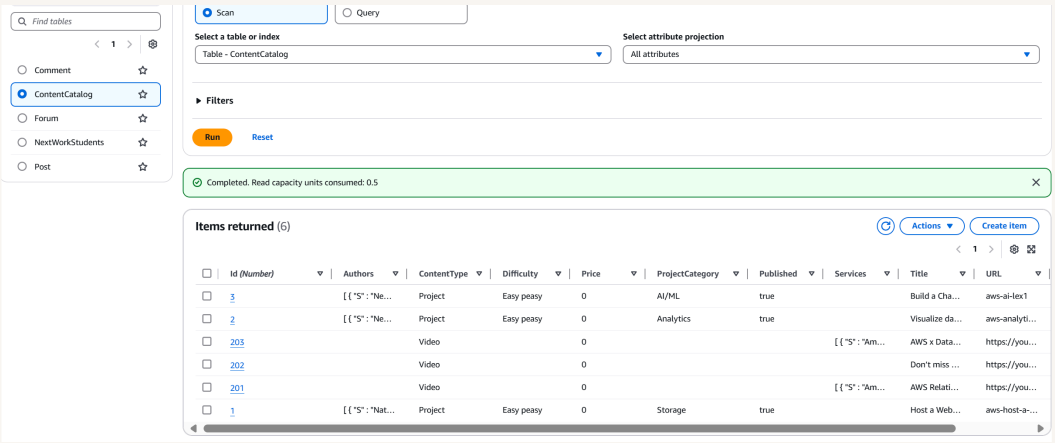
# Benefits of DynamoDB

A benefit of DynamoDB over relational databases is flexibility, because every item having their own unique set of attributes is a huge advantage when items in a table could look different from each other.

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, which can



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