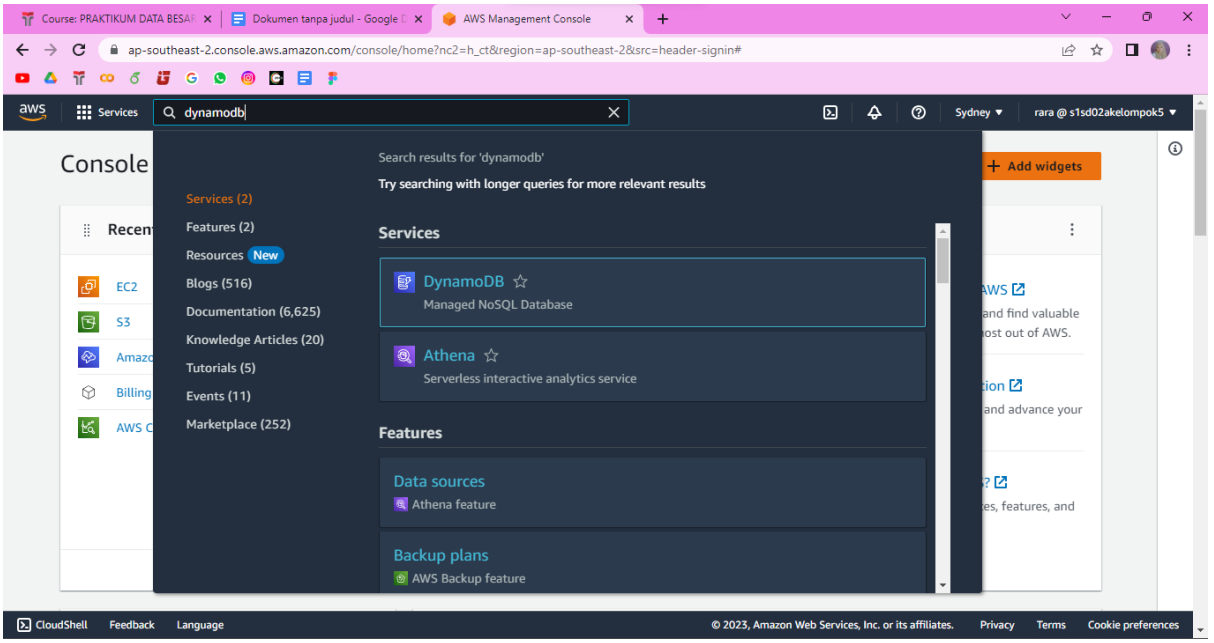
Creating, Importing, Querying, and Exporting Data with Amazon DynamoDB

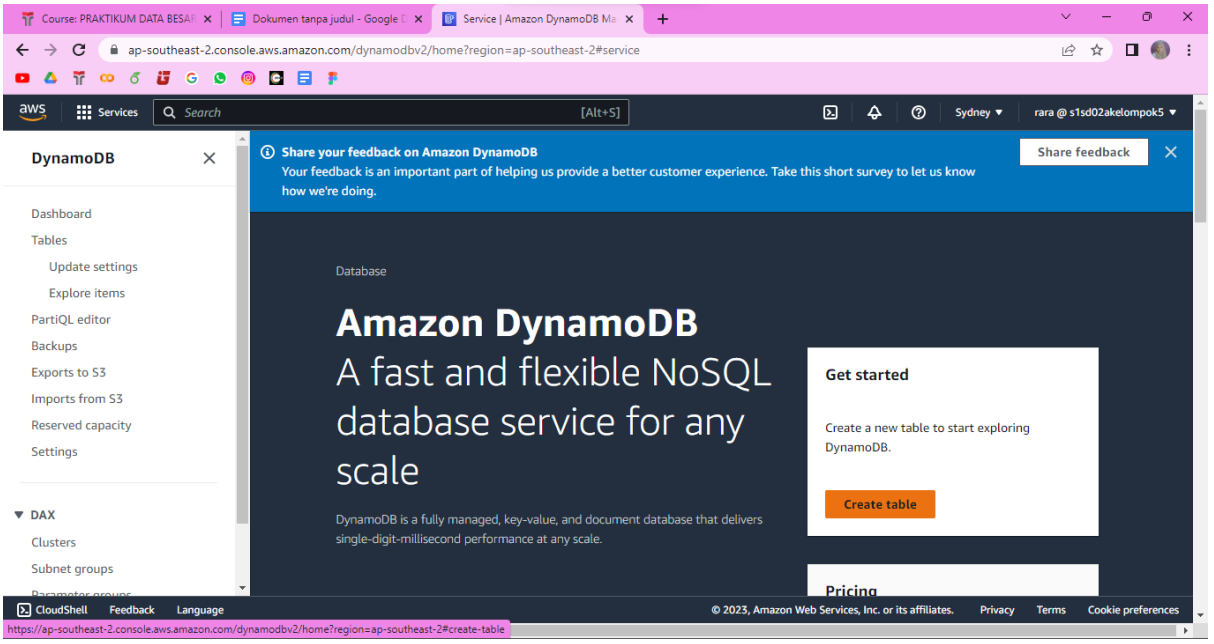
In this tutorial, we will explore how to use the Amazon DynamoDB service to create a table, import data from a CSV file, perform queries or scans with filters, and export the results. DynamoDB is a fully managed NoSQL database service provided by Amazon Web Services (AWS), known for its scalability, performance, and low latency. By the end of this tutorial, you will have a clear understanding of how to work with DynamoDB for basic data operations.

Step 1: Creating a DynamoDB Table:

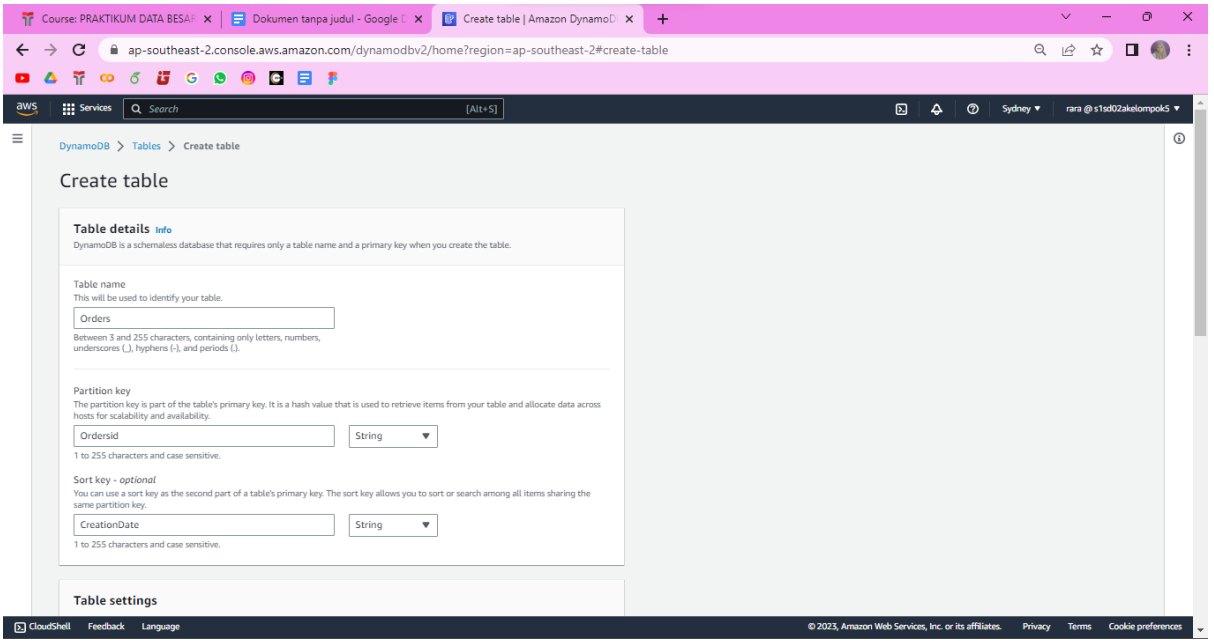
1. Launch the AWS Management Console and navigate to the DynamoDB service.



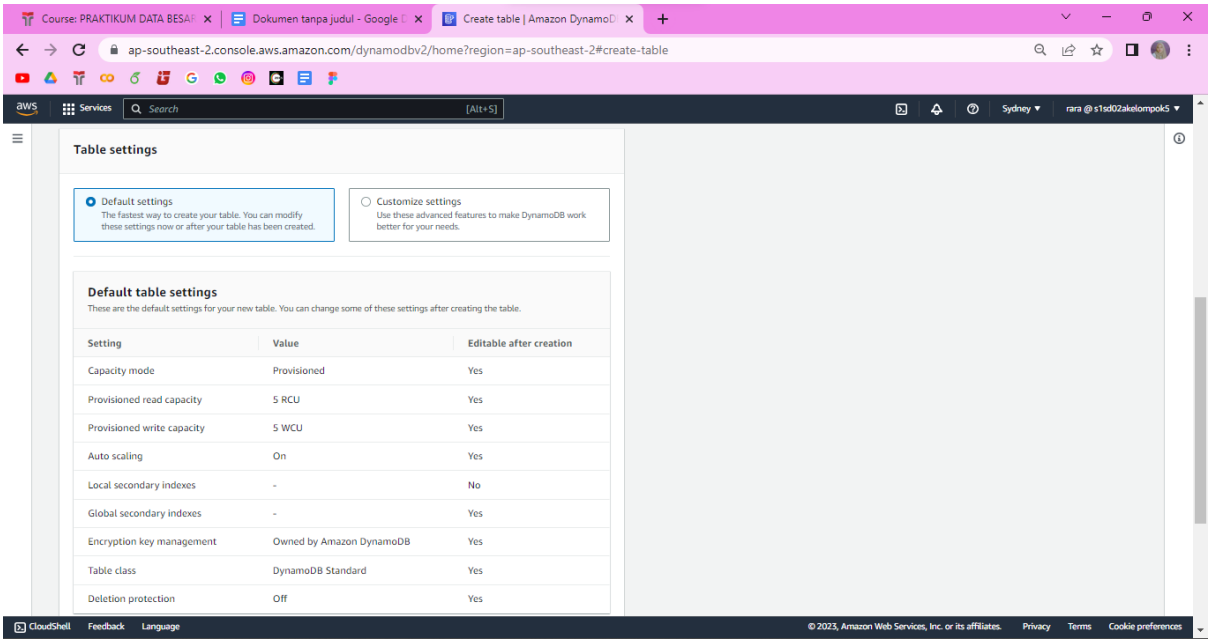
2. Click on "Create table" and provide a suitable table name.



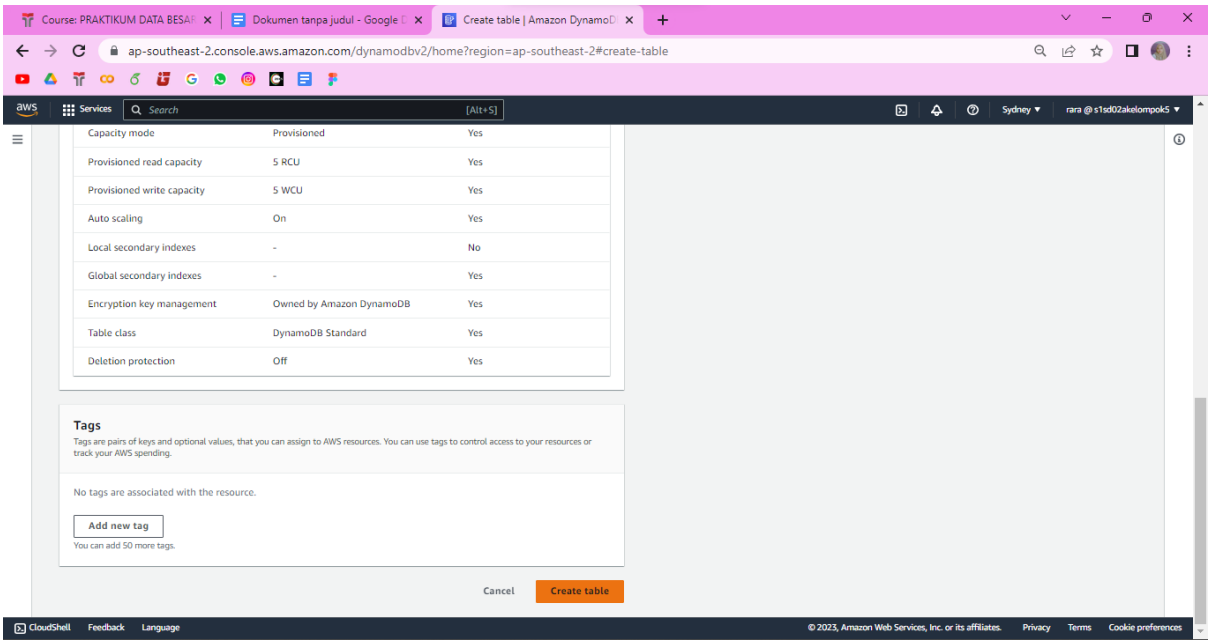
3. Specify the primary key attributes (partition key and optionally a sort key) for your table.



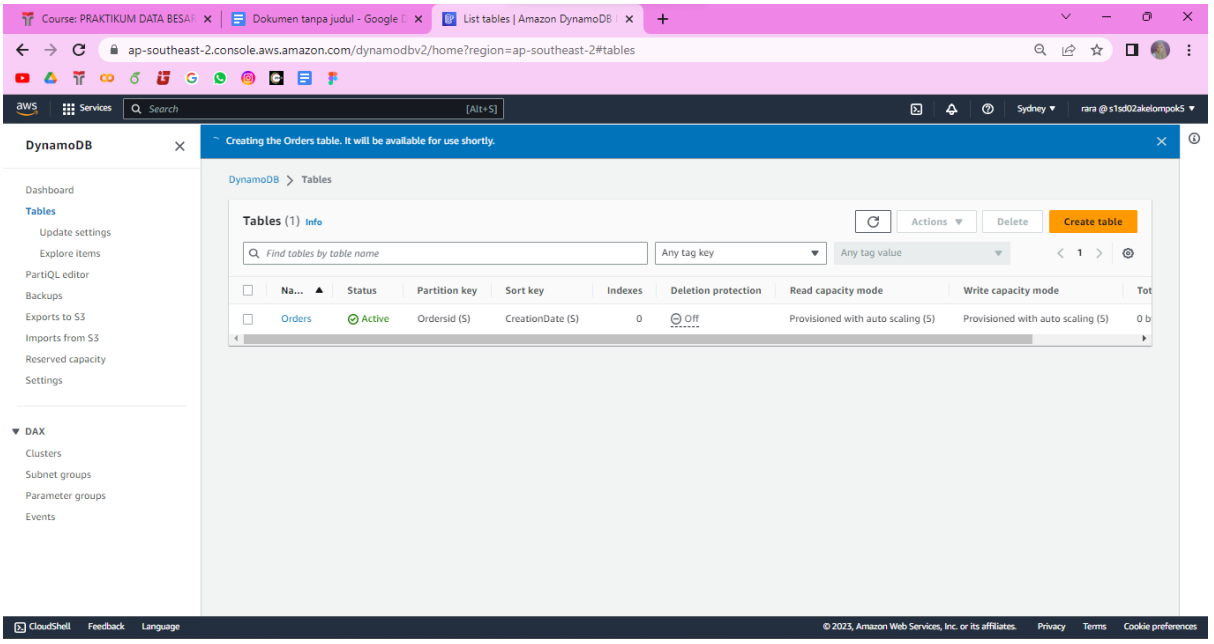
4. In the Table Settings section, select "Default Settings".



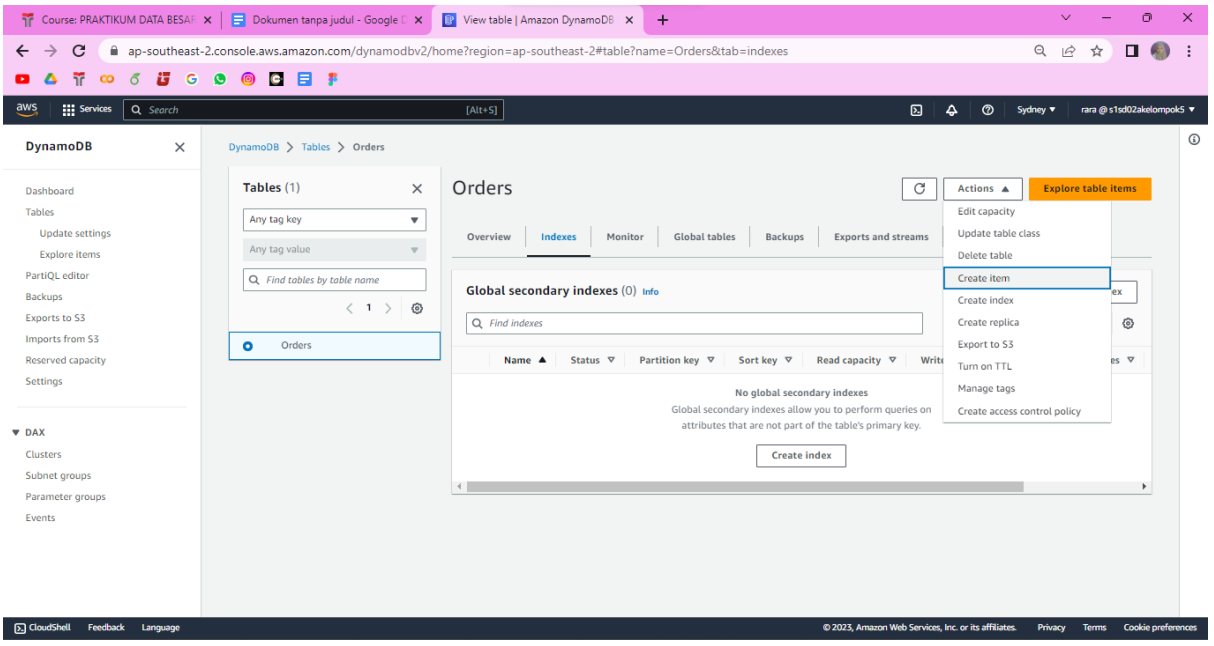
5. Click on "Create" to create the table.



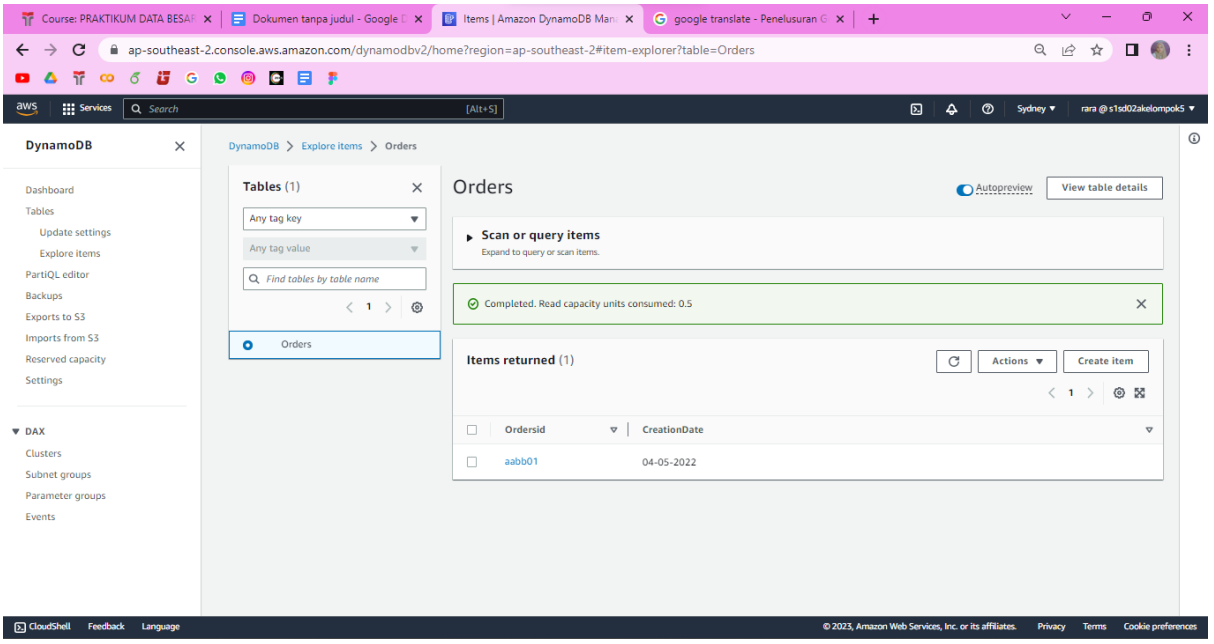
6. Wait a few moments until the table named 'Orders' is successfully created and the status appears as 'Active'.



7. After that, click on 'Orders'. Open the 'Actions' menu and select 'Create Item'.

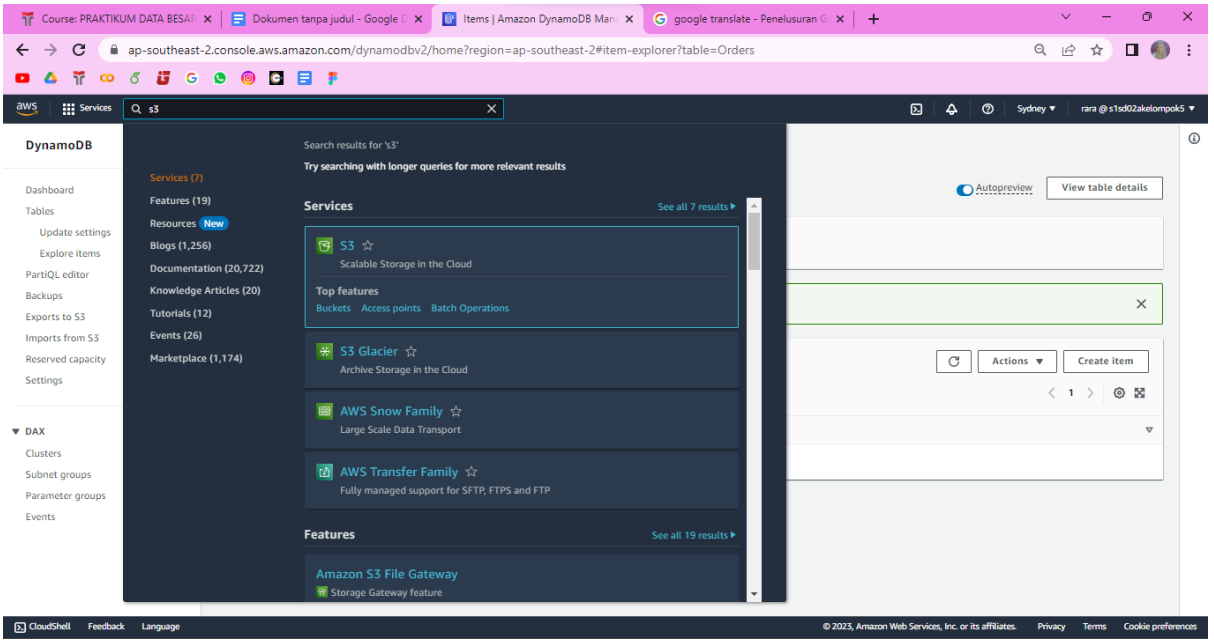


8. Fill in the values for the attributes that we created earlier in the 'Orders' table, then click on 'Create Item'. Here is the display of attribute values in the 'Tabel_Mahasiswa' table that have been inputted.

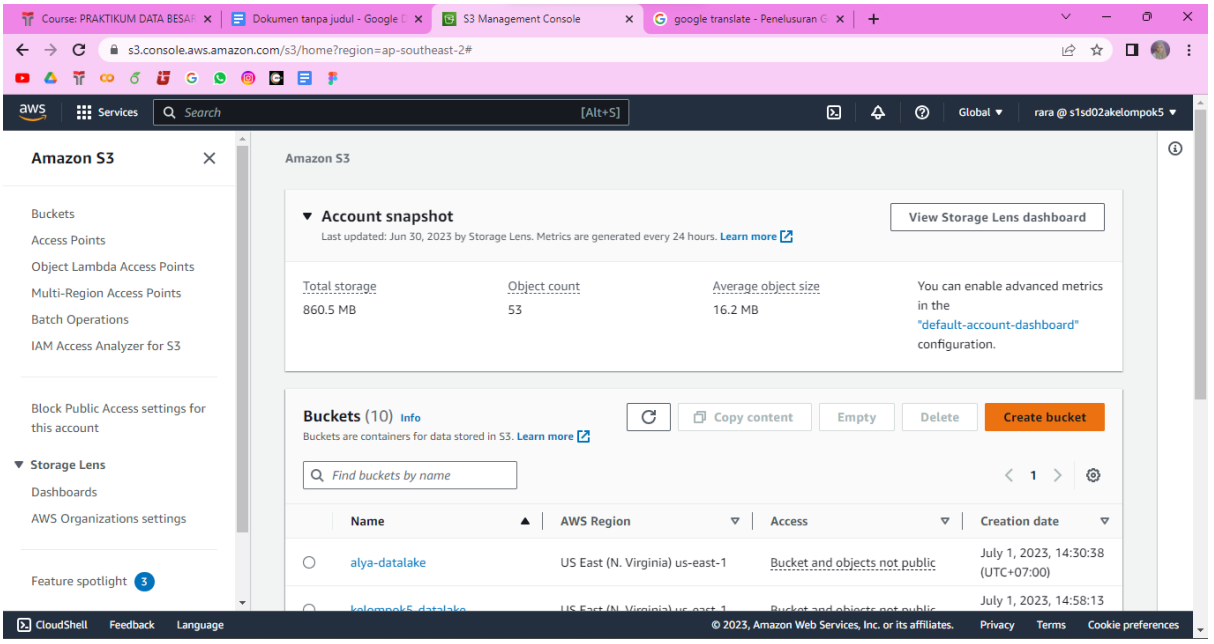


Step 2: Importing Data from a CSV file:

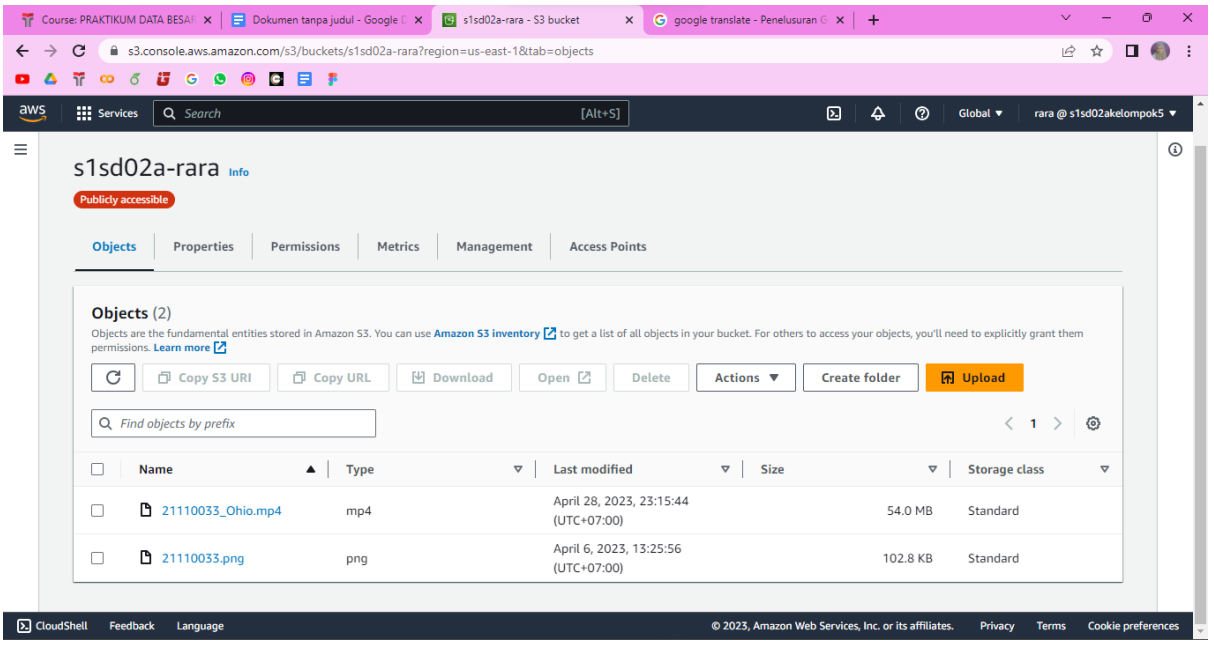
1. Search for the "S3" menu.



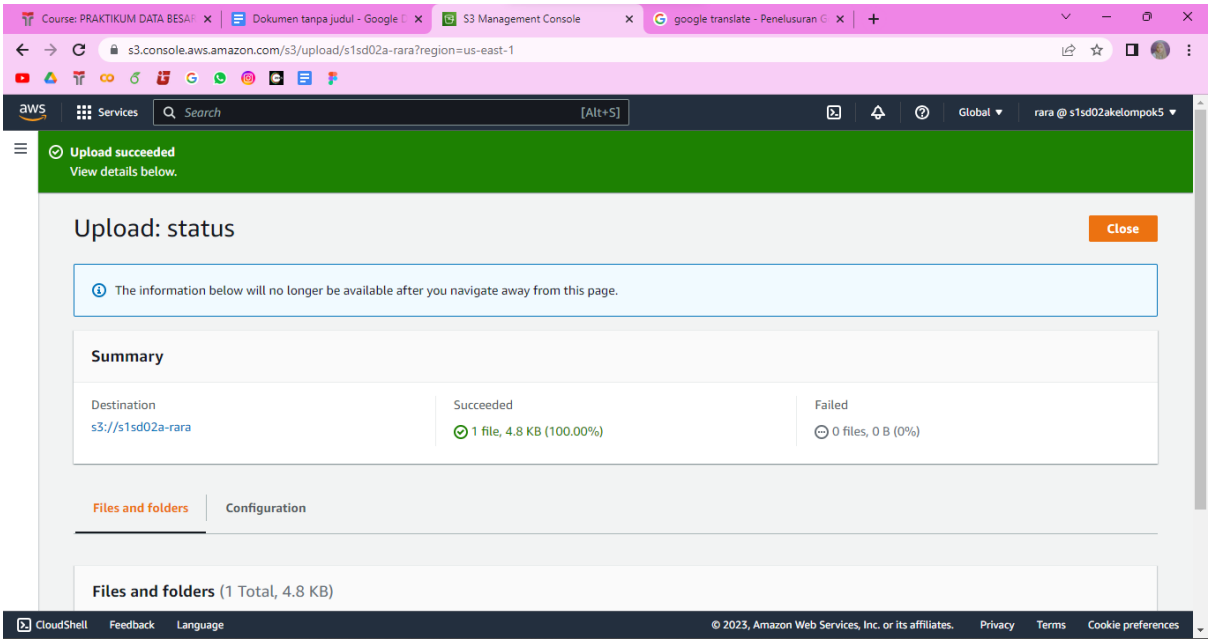
2. Open the "Amazon S3" menu and navigate to "Buckets". Here, I have already created a bucket. If you haven't created one yet, you can do so by clicking on "Create Bucket".



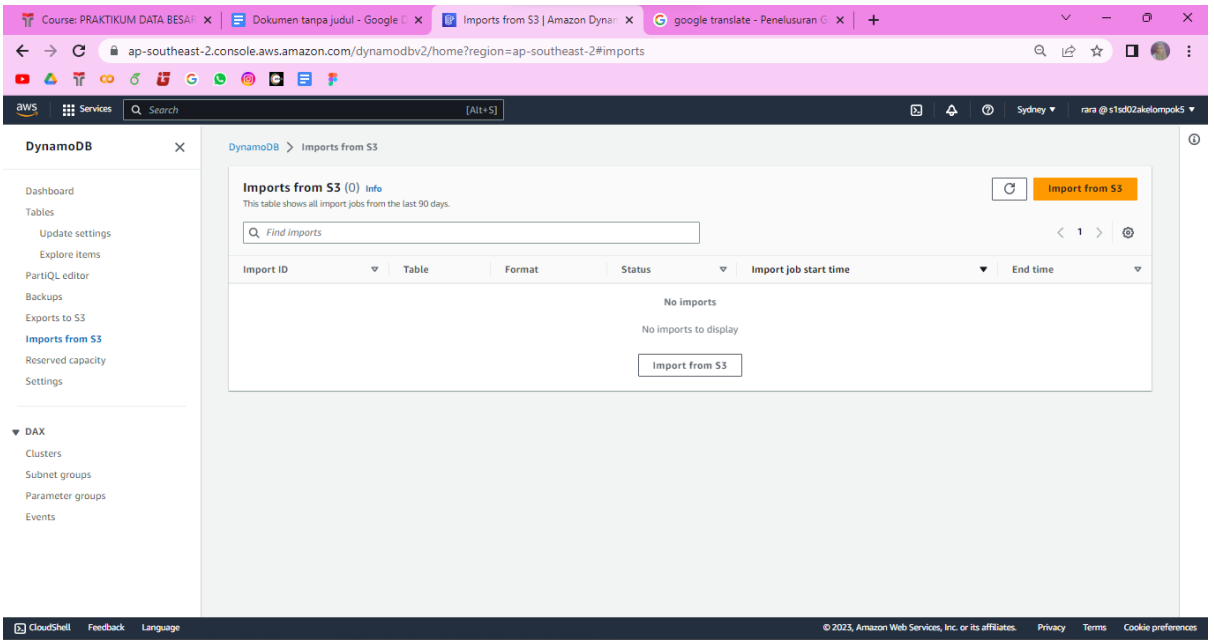
3. Open the created bucket.



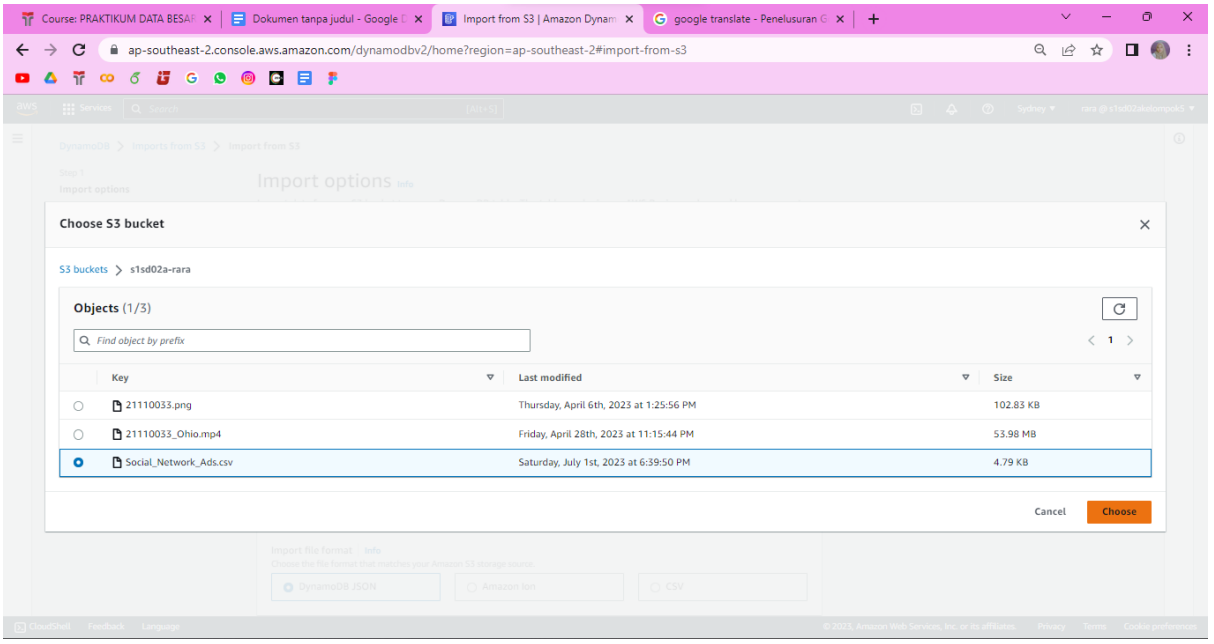
4. Upload the CSV file by clicking on "Upload" > "Add Files" > Select the CSV file > "Upload". Wait for a few moments until the file is successfully uploaded.



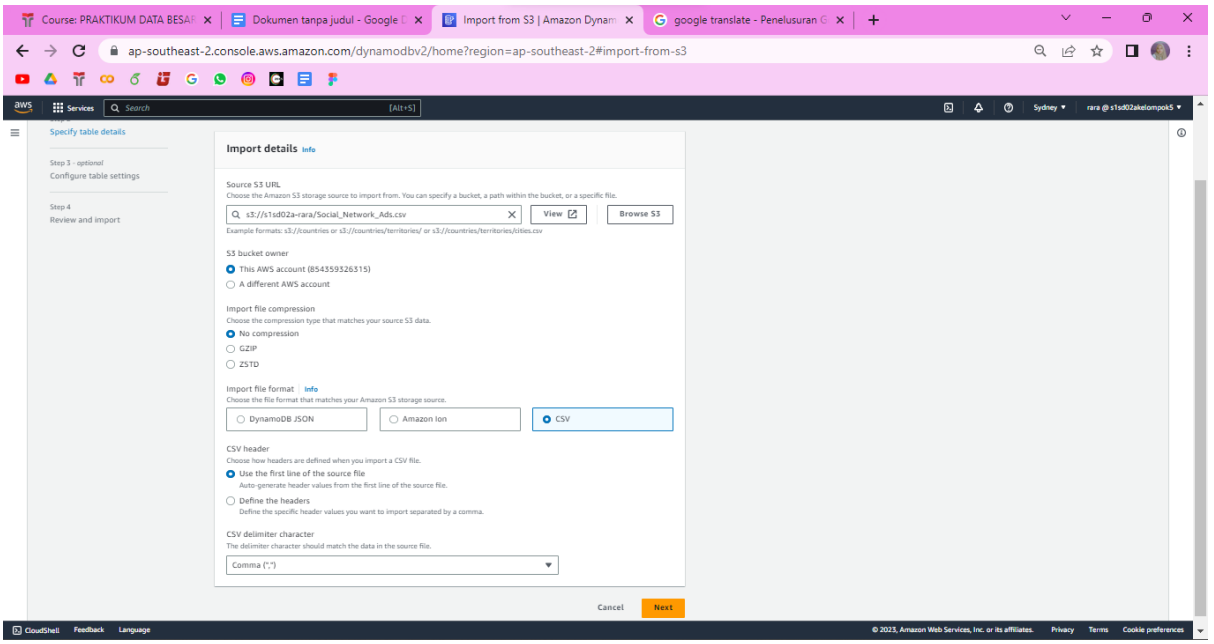
5. Search for the "DynamoDB" menu and navigate to "Import from S3".



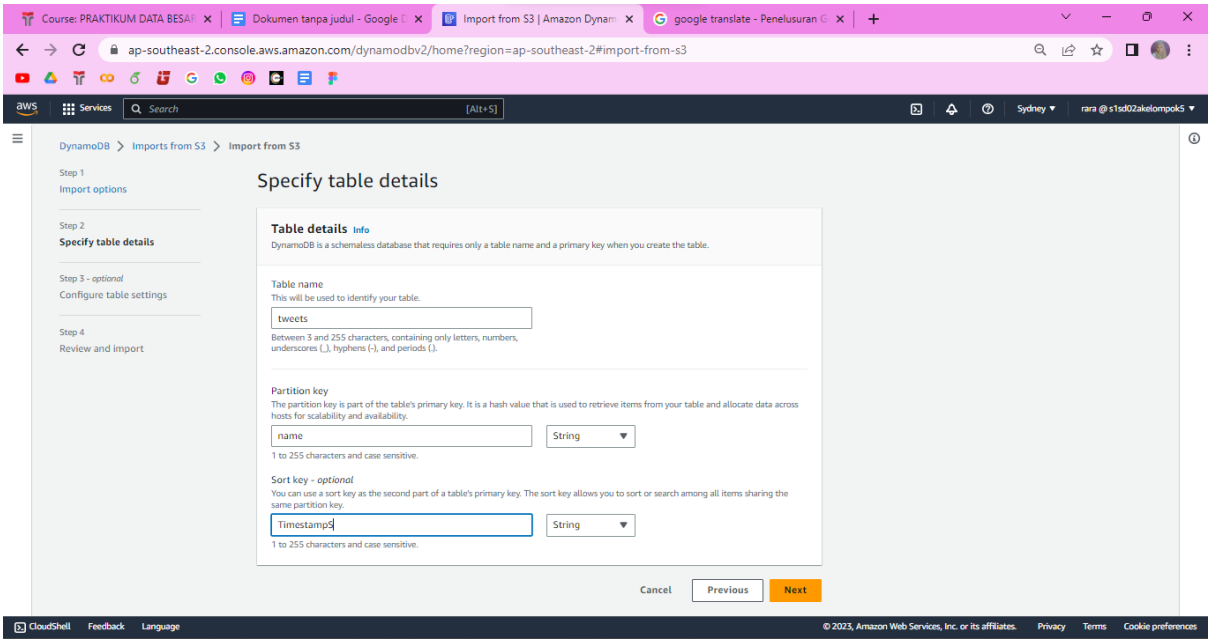
6. Click on "Import from S3" > search for the uploaded CSV file > Browse S3 > select the bucket containing the targeted CSV file > choose the desired CSV file > select.



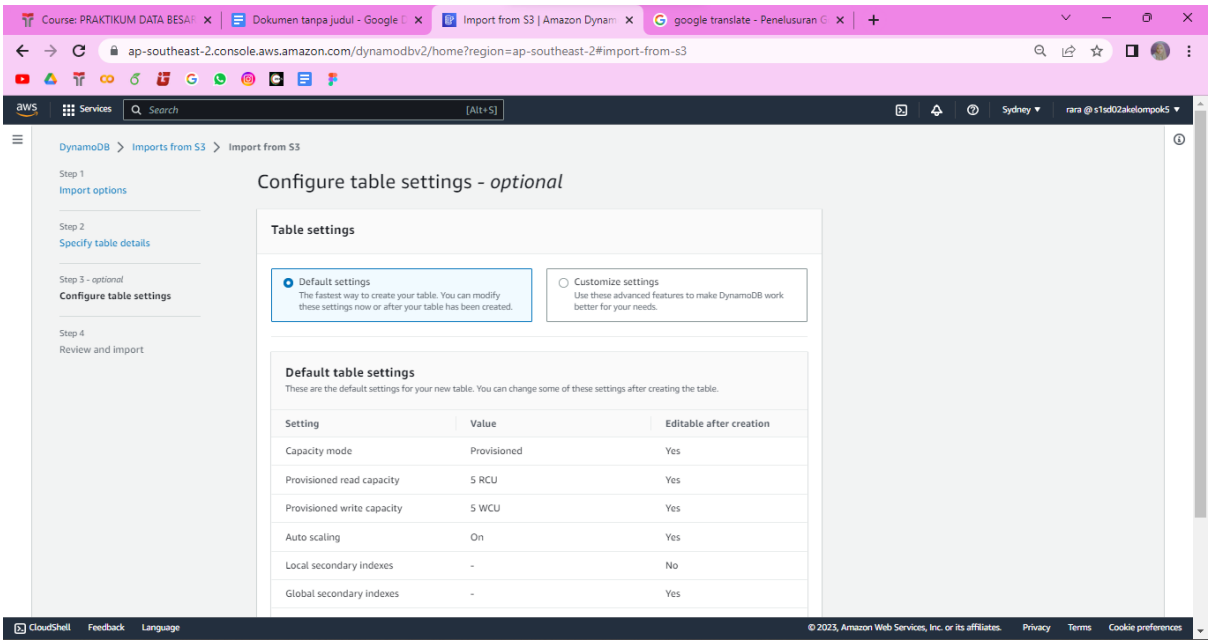
7. Configure the Import Details settings as follows, then click Next.



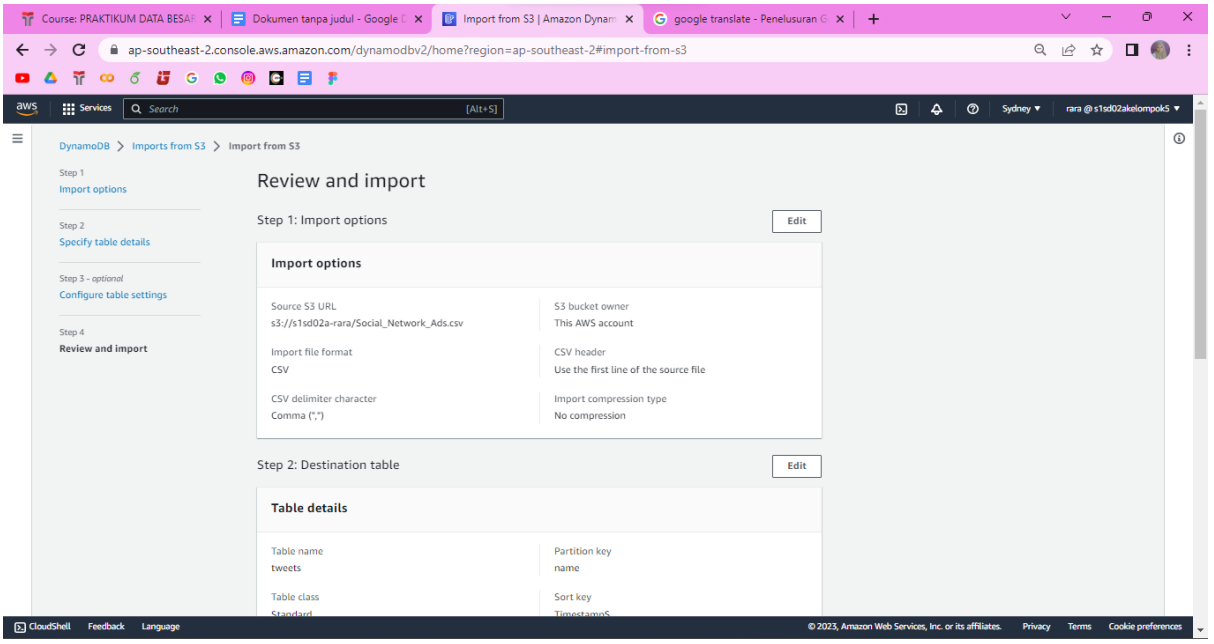
8. In the Table Details section, enter the Table Name, Partition Key, and Optional Sort Key.



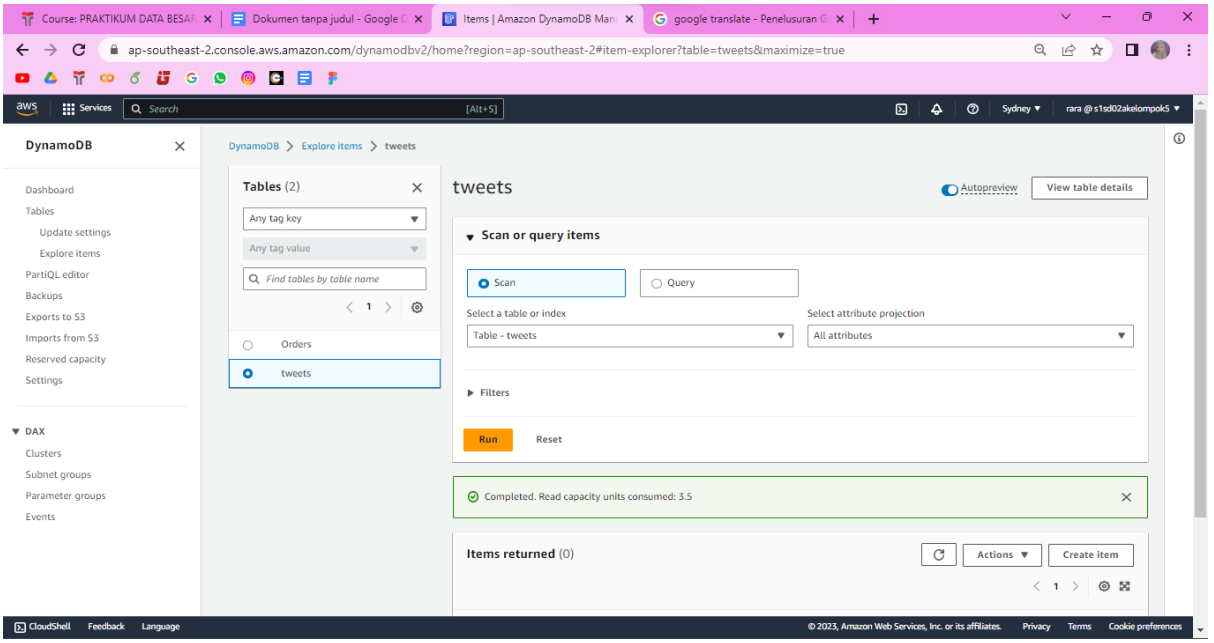
9. In the Optional Table Configuration section, select "Default settings" and click Next.



10. Review the Import and Review section carefully, then click on Import to proceed.

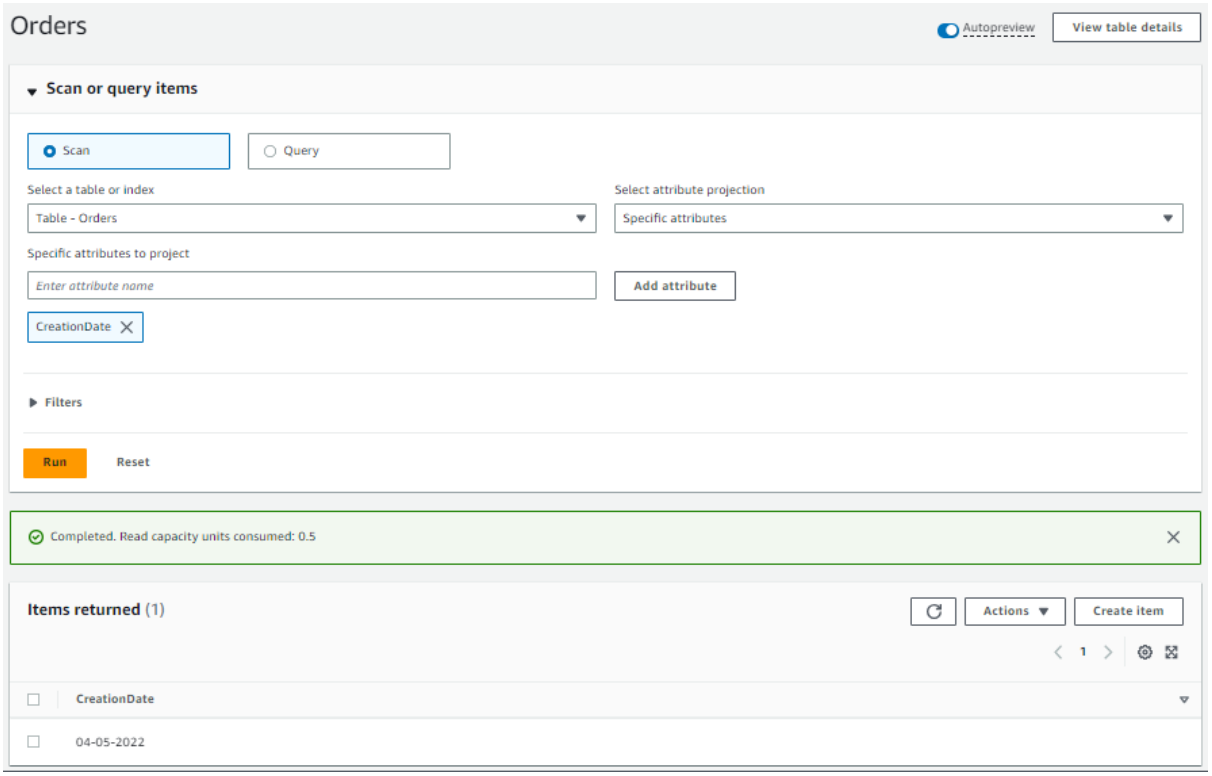


11. After the CSV file has been successfully imported, go back to the DynamoDB menu > Tables > select the uploaded CSV file > Explore Table Items. Here is the content of the imported CSV file.

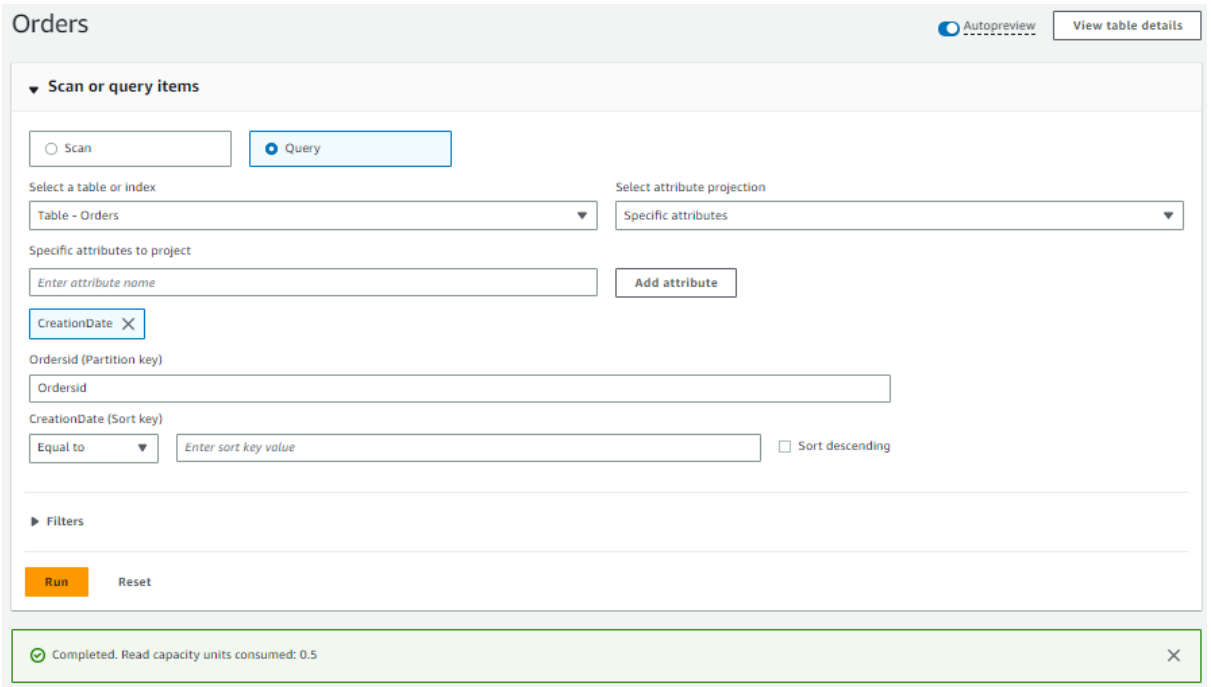


Step 3: Querying and Scanning Data with Filters:

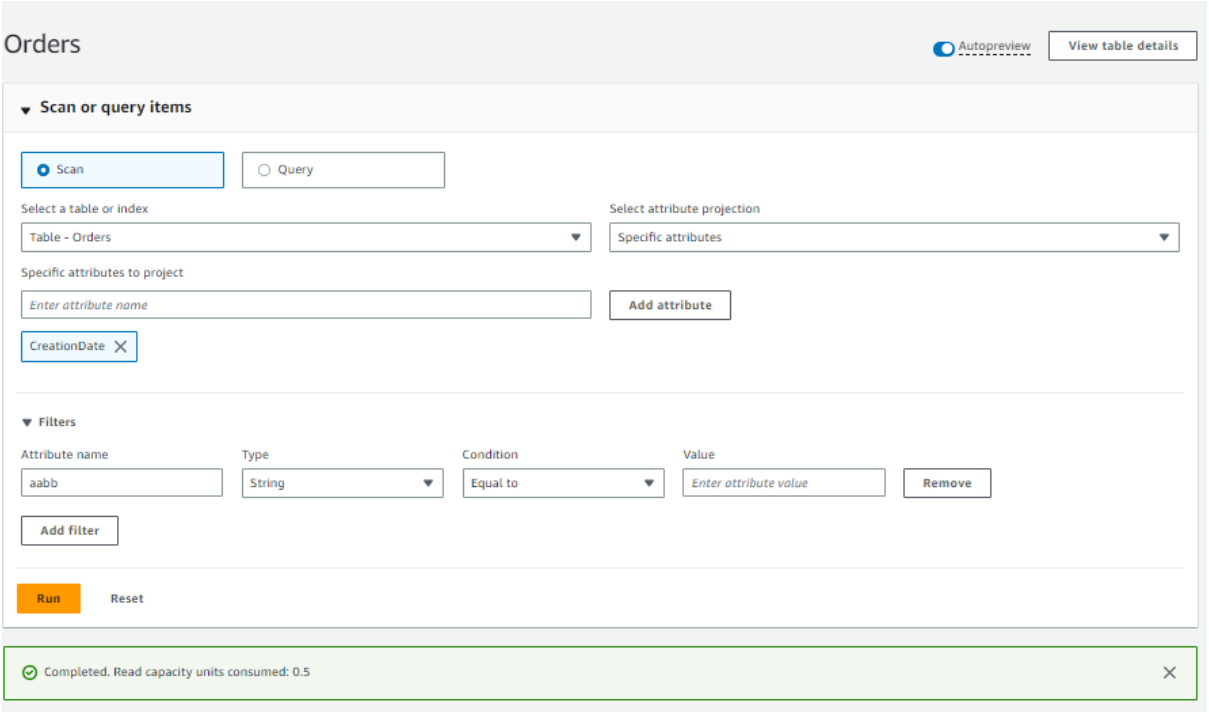
1. SCAN



2. Query

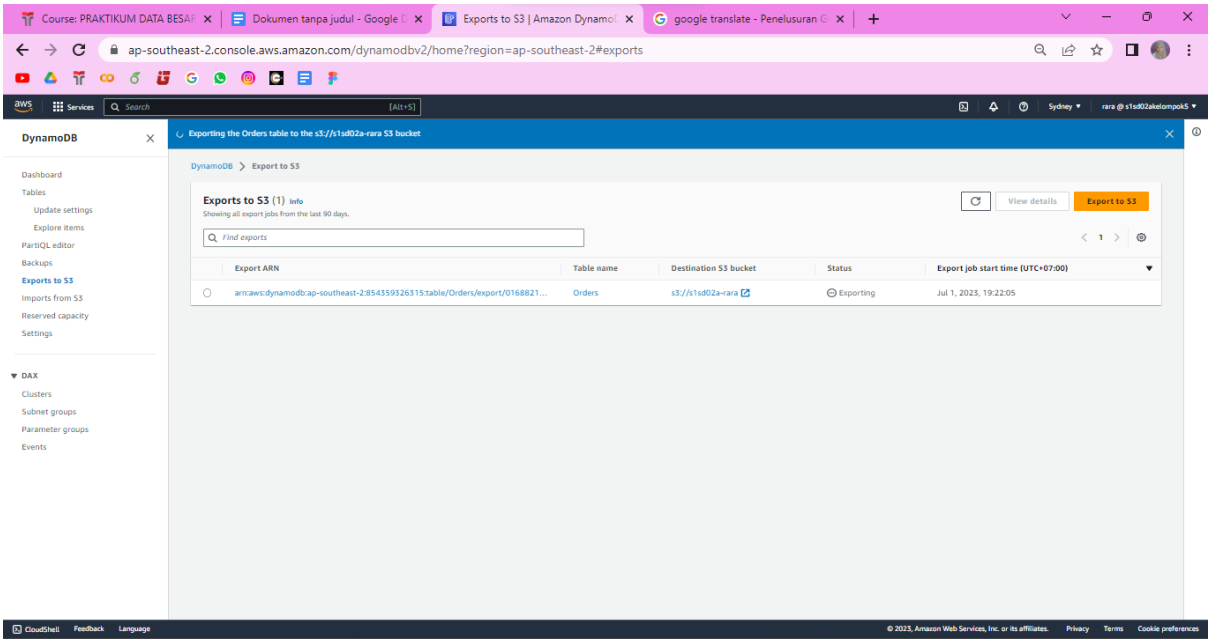


3. Filter

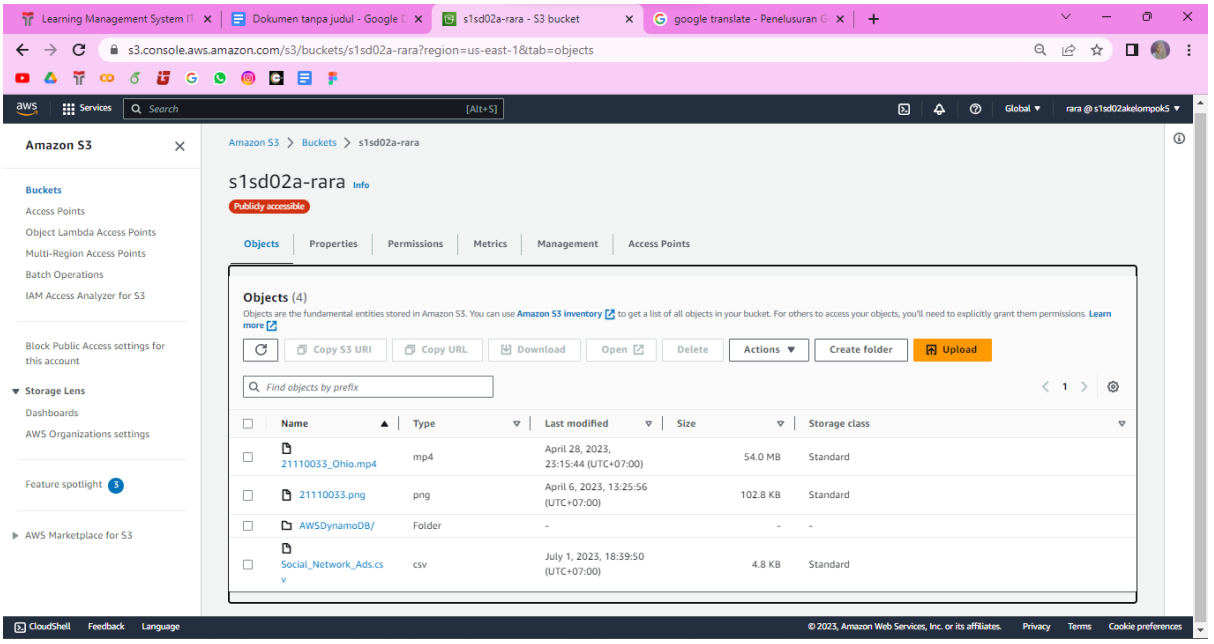


Step 4: Exporting Results:

1. Search for the "DynamoDB" menu and navigate to "Export to S3". Select "Orders" as the table, fill in the Destination S3 Bucket with the bucket you created earlier, and click "Export". Wait for the export process to complete until the Status shows "Completed".



2. Verify if the table that was created has been successfully exported by navigating to Amazon S3 > Bucket > select the created bucket. You should see a folder named "AWSDynamoDB/". This folder represents the exported data from the created table.



Conclusion:

In this tutorial, we have covered the essential steps to create a DynamoDB table, import data from a CSV file, perform queries and scans with filters, and export the results. Amazon DynamoDB offers a highly scalable and fully managed NoSQL database solution, empowering developers to build robust and high-performance applications. With the skills acquired from this tutorial, you can leverage the power of DynamoDB for various use cases in your projects.

Remember to clean up any resources (such as tables) you have created to avoid unnecessary costs in your AWS account.