Congratulations! You passed!
Grade received 100%To pass 100% or higher

To pass this practice quiz, you must receive 100%, or 1 out of 1 point, by completing the following activity. Learn more about graded and practice items in the course overview

Activity Overview

In this activity, you will use BigQuery to partition data and create an index. Partitions and indexes help you optimize a database by creating shortcuts to specific rows and divi datasets into smaller, more manageable tables.
By creating partitions and indexes, you can make faster and more efficient databases. This will make it easier to pull your data when you need to analyze or visualize it.

Be sure to complete this activity before moving on. The next course item will provide you with a completed exemplar to compare to your own work. You will not be able to acc exemplar until you have completed this activity.

Scenario

Review the following scenario. Then complete the step-by-step instructions.

You are a BI analyst for a grocery store chain that monitors dietary trends affecting in-store purchases. Your company wants you to examine which types of Hass avocados a purchased most often. The avocados are categorized as one of four sizes: small, medium, large, and extra large. In addition to the average price and total volume of each av date of each sale is also recorded.
Using this data, you will create a historical table that illustrates how indexes and partitions work. This will allow you to practice creating partitions and clustered tables and der how to use them.
Your goal is to use partitions and clusters to answer the following question: What is the distribution of avocado sales from 2015 to 2021?

Step-By-Step Instructions

Follow the instructions to complete each step of the activity. Then, answer the questions at the end of the activity before going to the next course item to compare your work t completed exemplar.

Part 1: Set up in BigQuery
Step 1: Access the data
To use the data for this course item, download the dataset from Kaggle - Avocado Sales 2015-2021 (US centric).

avocado cleaned
CSV File

Step 2: Open the BigQuery console

Navigate to your BigQuery console.

Step 3: Create a dataset

Step 4: Load the avocado data into a table

Part 2: Create tables with partitions and clusters

Step 1: Create a table without a partition or cluster

Step 2: Create a table with a partition

Step 3: Create a table with a partition and a cluster

Part 3: Query the tables and compare performance

Step 1: Query the table without a partition or cluster

Step 2: Query the partitioned table

Step 3: Query the partitioned and clustered table

What to Include in Your Response

You should record the following in your SQL code results:

A screenshot of the Details pane of the avocados_partitioned table

A screenshot of the Details pane of the avocados_clustered table

A screenshot of the Execution Details pane of the avocados_partitioned table

A screenshot of the Execution Details pane of the avocados_clustered table

In addition to this criteria, in a business role you might consider including a report that describes the distribution of avocados over the six-year time period and if there are any relationships between avocado size, type, and total volume sold. You could also share your recommendations based on any trends you find in the data, in order to anticipate demand.

1. Did you complete this activity?
   - (●) Yes
   - ( ) No

   Correct
   Thank you for completing this activity! Using clusters and partitions will help you optimize your database performance. Your data will be faster and simpler to work with in your BI analyses. Please complete the following quiz questions and review the feedback. Then go to the next course item to compare your work to a completed exemplar.

2. How can partitions and indexes help optimize a database? Select all that apply.
   - [x] Divide large datasets into smaller, more manageable tables

   Correct
   Partitions and indexes help optimize a database by creating shortcuts to specific rows and dividing large datasets into smaller, more manageable tables. In addition, partitions and indexes enable faster and more efficient databases, which makes it easier to pull data for analysis or visualization.

   - [x] Enable a faster and more efficient database

Correct
Partitions and indexes help optimize a database by creating shortcuts to specific rows and dividing large datasets into smaller, more manageable tables. In addition, partitions and indexes enable faster and more efficient databases, which makes it easier to pull data for analysis or visualization.

- [x] Create shortcuts to specific rows

Correct
Partitions and indexes help optimize a database by creating shortcuts to specific rows and dividing large datasets into smaller, more manageable tables. In addition, partitions and indexes enable faster and more efficient databases, which makes it easier to pull data for analysis or visualization.

- [ ] Use a system's memory to save time retrieving frequently used data

3. Fill in the blank: A query on a table with partitions and indexes processes _____ a table that is not partitioned or indexed.

- (•) fewer records than
- ( ) more records than
- ( ) the same number of records as

Correct
Together or individually, partitions and clusters restructure the data in a way so that only the relevant records are scanned when a query is run. Therefore, a query on a table with partitions and indexes processes fewer records than a table that is not partitioned or indexed, optimizing database performance while minimizing processing costs.