How to Create SQL Inner and Outer Joins

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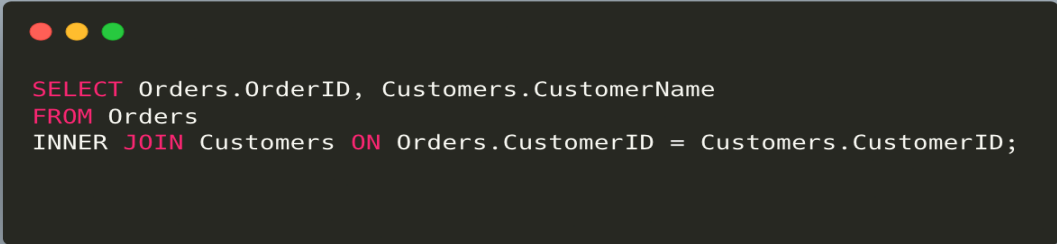
How to Create SQL Inner and Outer Joins

Introduction

Query structured language (SQL) is a tool for relational database querying and management. The most important feature of SQL is retrieving data from several sources by joining tables. However, its application would need a more profound understanding of SQL inner and outer joins.

Inner Joins

SQL inner join returns rows with matching values in both tables. The feature is useful when retrieving data from two or more tables based on a common column. For instance, in tables like 'orders' and 'customers,' the inner join can create a list of orders with their respective customer data. The code below uses the common 'CustomerId' column, and the results will include rows where matches are found in the tables.
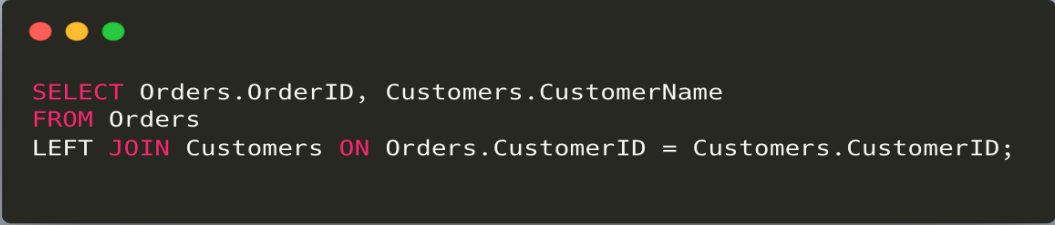
```
SELECT Orders.OrderID, Customers.CustomerName
FROM Orders
INNER JOIN Customers ON Orders.CustomerID = Customers.CustomerID;
```

Outer Joins

The left outer join returns data from the left table and the matched data from the right table. The query returns null values if there is no matched data from the right table. The code

below applies the left outer join to the 'orders' and 'customers' tables:

```
SELECT Orders.OrderID, Customers.CustomerName
FROM Orders
LEFT JOIN Customers ON Orders.CustomerID = Customers.CustomerID;
```

Right and Full Outer Joins

The Right outer join returns all data from the right table and the matched data from the left, while the full outer join combines the results of both the left and right outer joins. Full outer join returns all data from both tables with null values for non-matching rows. The operations allow us to get, organize, and analyze data efficiently.

Reference

Simon, M. (2023). Table Relationships and Joins. In *Leveling Up with SQL: Advanced Techniques for Transforming Data into Insights* (pp. 59-104). Berkeley, CA: Apress.