

# CORRELATED SUBQUERY

A correlated subquery is a type of subquery in SQL that depends on the outer query for its execution. In other words, the subquery refers to a column from the outer query and uses it to generate its result set. A correlated subquery is a subquery that refers to one or more columns of the outer query. It is used to retrieve data from multiple tables in a database. Correlated subqueries are often used to find rows in one table that match rows in another table. For example, you could use a correlated subquery to find all the customers who have placed an order in the last month.

To write a correlated subquery, you first need to identify the columns that you want to reference from the outer query. You can then use these columns in the subquery's `WHERE` clause. For example, the following subquery finds all the customers who have placed an order in the last month:

```
SELECT customer_id
FROM customers
WHERE customer_id IN (
    SELECT customer_id
    FROM orders
    WHERE order_date > NOW() - INTERVAL 1 MONTH
);
```

In this example, the `customer_id` column from the `orders` table is referenced in the `WHERE` clause of the `customer's` table. This ensures that only customers who have placed orders in the last month are returned.

Correlated subqueries can be a powerful tool for retrieving data from multiple tables in a database. However, they can also be difficult to understand and write. If you are not sure how to use correlated subqueries, it is best to consult with a database administrator or SQL expert.