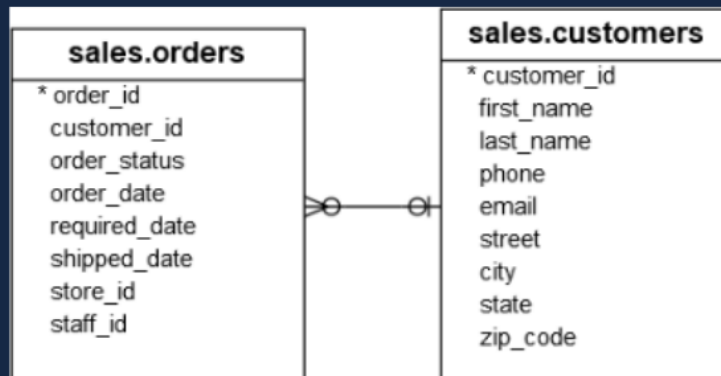


SQL Server

Sub Query

A subquery is a query nested inside another statement such as SELECT, INSERT, UPDATE, or DELETE.

Consider the orders and customers tables from the sample database.



Sub Query

```
SELECT order_id, order_date, customer_id
FROM sales.orders
WHERE customer_id IN (
    SELECT customer_id
    FROM sales.customers
    WHERE city = 'New York' )
ORDER BY order_date DESC;
```

result

order_id	order_date	customer_id
1510	2018-04-09	16
1351	2018-01-16	1016
1020	2017-07-23	16
572	2016-11-24	178
514	2016-10-19	927
352	2016-08-03	16
274	2016-06-17	411
182	2016-04-18	854
120	2016-03-14	327

SQL Server

Nesting subquery

A subquery can be nested within another subquery. SQL Server supports up to 32 levels of nesting.

subquery types

We can use a subquery in many places:

- In place of an expression
- With IN or NOT IN
- With ANY or ALL
- With EXISTS or NOT EXISTS
- In UPDATE, DELETE, or INSERT statement
- In the **FROM** clause

subquery is used with IN operator

A subquery that is used with the IN operator returns a set of zero or more values. After the subquery returns values, the outer query makes use of them.

subquery is used with EXISTS or NOT EXISTS

- The EXISTS operator returns **TRUE** if the subquery return results; otherwise, it returns **FALSE**.
- The NOT EXISTS negates the EXISTS operator.

SQL Server

ANY Operator

The ANY operator is a logical operator that compares a scalar value with a single-column set of values returned by a subquery.

All Operator

The SQL Server ALL operator is a logical operator that compares a scalar value with a single-column list of values returned by a subquery.

Correlated Subquery

A correlated subquery is a subquery that uses the values of the outer query. In other words, the correlated subquery depends on the outer query for its values.

- Because of this dependency, a correlated subquery cannot be executed independently as a simple subquery.

INTERSECT

- Moreover, a correlated subquery is executed repeatedly, once for each row evaluated by the outer query. The correlated subquery is also known as a repeating subquery.

SQL Server

CROSS APPLY clause

The CROSS APPLY clause works like an INNER JOIN clause. But instead of joining two tables, the CROSS APPLY clause joins a table with a table-valued function or a correlated subquery.

OUTER APPLY clause

The OUTER APPLY clause works like a LEFT JOIN clause. However, instead of joining two tables, the OUTER APPLY clause joins a table with a table-valued function or a correlated subquery.

**Stay tuned for updates and
feel free to engage, ask
questions and more
THANK YOU**