SQL Subquery

In this tutorial, we'll learn about subqueries in SQL with the help of examples.

In SQL, it's possible to place a SQL query inside another query known as subquery. For example,

```
SELECT *
FROM Customers
WHERE age = (
  SELECT MIN(age)
  FROM Customers
);
```

Run Code »

In a subquery, the outer query's result is dependent on the result-set of the inner subquery. That's why subqueries are also called nested queries.

Here, the SQL command

1. executes the subquery first; selects minimum `age` from the `Customers` table.
2. executes the outer query; selects rows where `age` is **equal to the result of subquery.**

Example: SQL Subqueries

Example 2: SQL Subquery

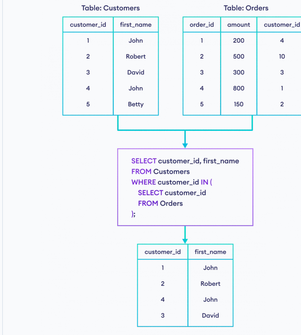
Suppose we want details of **customers** who have placed an **order**. Here's how we can do that using a subquery:

```
SELECT customer_id, first_name
FROM Customers
WHERE customer_id IN (
  SELECT customer_id
  FROM Orders
);
```

Run Code »

Here, the SQL command

1. selects `customer_id` from `Orders` table
2. select rows from `Customers` table where `customer_id` is in the result set of subquery



Example: SQL Subquery

SQL Subquery and JOIN

In some scenarios, we can get the same result set using a subquery and the JOIN clause. For example,

The result set of this query

```
SELECT DISTINCT Customers.customer_id, Customers.first_name
FROM Customers
INNER JOIN Orders
ON Customers.customer_id = Orders.customer_id
ORDER BY Customers.customer_id;
```

Run Code »

will be the same as

```
SELECT customer_id, first_name
FROM Customers
WHERE customer_id IN (
  SELECT customer_id
  FROM Orders
);
```

Run Code »

> **Note:** It's preferred to use the `JOIN` clause instead of a subquery whenever possible. It's because the execution speed of `JOIN` is faster and more optimized than a subquery.

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