

SQL: BETWEEN

The BETWEEN keyword allows to filter within a range of values:

```
SELECT column1, column2, ... FROM table_name WHERE column BETWEEN value1 AND value2;
```

Note that the between keyword is sensitive to the order of the arguments !
When use it ?

- more readable
- Easier to maintain.

Examples of Using BETWEEN

Let's look at some examples to understand how the BETWEEN operator works.

Example Table: Orders

order_id	customer_id	order_date	total_amount
1	101	2024-01-05	250.00
2	102	2024-01-10	150.00
3	103	2024-01-15	400.00
4	104	2024-02-01	100.00
5	105	2024-02-10	300.00

1. Filtering by a Numeric Range:

Suppose you want to find all orders where the `total_amount` is between 150 and 300:

```
SELECT order_id, customer_id, total_amount
FROM Orders
WHERE total_amount BETWEEN 150 AND 300;
```

Result:

order_id	customer_id	total_amount
2	102	150.00

5	105	300.00
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This query returns all orders where the `total_amount` is between 150 and 300, inclusive.

2. Filtering by a Date Range:

Suppose you want to find all orders placed between January 1, 2024, and January 31, 2024:

```
SELECT order_id, customer_id, order_date
FROM Orders
WHERE order_date BETWEEN '2024-01-01' AND '2024-01-31';
```

Result:

order_id	customer_id	order_date
1	101	2024-01-05
2	102	2024-01-10
3	103	2024-01-15

This query returns all orders where the `order_date` falls between January 1, 2024, and January 31, 2024, inclusive.

3. Filtering by a Text Range:

Suppose you want to select all records where the `customer_id` falls within a specific text range (alphabetically, depending on the data type):

```
SELECT order_id, customer_id
FROM Orders
WHERE customer_id BETWEEN '102' AND '104';
```

Result:

order_id	customer_id
2	102
3	103
4	104

This query returns all records where the `customer_id` is alphabetically or numerically between '102' and '104'.

Key Points

- **Inclusive:** The `BETWEEN` operator includes both boundary values (`value1` and `value2`), so the result set will contain rows where the column value is exactly `value1` or `value2` .
- **Data Types:** `BETWEEN` works with different data types, including numbers, dates, and strings, making it versatile for filtering data.
- **Readable:** Using `BETWEEN` can make your SQL queries more readable and concise, especially when you want to check for ranges.

The `BETWEEN` operator is a convenient way to filter data by a range, providing a clear and efficient way to handle ranges in SQL queries.