The SQL AND/OR Operator

The WHERE clause can contain one or many AND operators.

The AND operator is used to filter records based on more than one condition, like if you want to return all customers from Spain that starts with the letter 'G':

2. OR Operator

The OR operator in SQL is used to filter records **when at least one condition is TRUE**.

Key Differences Between AND and OR

Feature	AND Operator	OR Operator
Condition Evaluation	**All conditions must be TRUE**	**At least one condition must be TRUE**
Result Set	**Fewer rows** (More restrictive)	**More rows** (Less restrictive)
Use Case	When filtering with multiple strict conditions	When selecting records that match at least one condition

```
SELECT column1, column2, ...
FROM table_name
WHERE condition1 AND condition2 AND condition3 ...;
```

AND vs OR

The AND operator displays a record if *all* the conditions are TRUE.

The OR operator displays a record if *any* of the conditions are TRUE.

Clarification on AND and OR Operators in SQL WHERE Clause

✓ AND Operator:

- Used to filter records **based on multiple conditions**, but it **should not be applied to the same column twice** in a contradictory way.
- All conditions **must be true** for a row to be included in the result.

✓ OR Operator:

- Used to filter records **where at least one condition is true**.
- It can be used with **multiple columns** or **the same column twice** with different values.

❌ 2. AND Incorrect Use – Applying to the Same Column Twice

◆ Find customers where `Age > 30` AND `Age < 25`

```sql
SELECT * FROM Customers
WHERE Age > 30 AND Age < 25;
```

🚫 **This will return no results** because no single value of `Age` can satisfy both conditions at the same time.

✅ 1. AND Example – Working with Multiple Columns

◆ Find customers from `Chicago` who are older than `25`

```sql
SELECT * FROM Customers
WHERE City = 'Chicago' AND Age > 25;
```

✅ Output:

CustomerID	Name	City	Age	Email
5	David Lee	Chicago	28	david@example.com

✅ 3. OR Example – Working with Multiple Columns

◆ Find customers from `Chicago` OR those older than `30`

```sql
SELECT * FROM Customers
WHERE City = 'Chicago' OR Age > 30;
```

✅ Output:

CustomerID	Name	City	Age	Email
2	Alice Smith	Chicago	25	alice@example.com
3	Bob Brown	New k	40	bob@example.com

✅ 4. `OR` Example – Applying to the Same Column Twice

♦ **Find customers whose** `City` **is** `New York` **OR** `Miami`

```sql
sql                                                    ⧉ Copy    ✐ Edit


SELECT * FROM Customers
WHERE City = 'New York' OR City = 'Miami';
```

✅ Output:

CustomerID	Name	City	Age	Email
1	John Doe	New York	30	john@example.com
3	Bob Brown	New York	40	bob@example.com
4	Eva Green	Miai...	35	eva@example.com

Key Takeaways:

✓ AND **should be used with different columns** and requires all conditions to be true.
✓ OR **can be used with multiple columns or the same column twice**, and at least one condition must be true.

All Conditions Must Be True

The following SQL statement selects all fields from `Customers` where `Country` is "Germany" AND `City` is "Berlin" AND `PostalCode` is higher than 12000:

Example

```
SELECT * FROM Customers
WHERE Country = 'Germany'
AND City = 'Berlin'
AND PostalCode > 12000;
```