

LAB - OR Operator

In this lab, you will learn how to use the SQL Server `OR` operator to combine two Boolean expressions.

The SQL Server `OR` is a logical operator that allows you to combine two Boolean expressions. It returns `TRUE` when either of the conditions evaluates to `TRUE`.

The following shows the syntax of the `OR` operator:

```
boolean_expression OR boolean_expression
```

In this syntax, the `boolean_expression` is any valid Boolean expression that evaluates to true, false, and unknown.

The following table shows the result of the `OR` operator when you combine `TRUE`, `FALSE`, and `UNKNOWN`:

	TRUE	FALSE	UNKNOWN
TRUE	TRUE	TRUE	TRUE
FALSE	TRUE	FALSE	UNKNOWN
UNKNOWN	TRUE	UNKNOWN	UNKNOWN

When you use more than one logical operator in a statement, SQL Server evaluates the `OR` operators after the `AND` operator. However, you can use the parentheses to change the order of evaluation.

OR operator examples

See the following `production.products` table

production.products
* product_id product_name brand_id category_id model_year list_price

A) Using OR operator example

The following example finds the products whose list price is less than 200 or greater than 6,000:

```
SELECT
    product_name,
    list_price
FROM
    production.products
WHERE
    list_price < 200
OR list_price > 6000
ORDER BY
    list_price;
```

product_name	list_price
Strider Classic 12 Balance Bike - 2018	89.99
Sun Bicycles Lil Kitt'n - 2017	109.99
Trek Girl's Kickster - 2017	149.99
Trek Boy's Kickster - 2015/2017	149.99
Trek Kickster - 2018	159.99
Trek Precaliber 12 Boys - 2017	189.99
Trek Precaliber 12 Girls - 2017	189.99
Trek Precaliber 12 Boy's - 2018	199.99
Trek Precaliber 12 Girl's - 2018	199.99
Trek Silque SLR 8 Women's - 2017	6499.99
Trek Domane SL Frameset - 2018	6499.99
Trek Domane SL Frameset Women's - 2018	6499.99
Trek Emonda SLR 8 - 2018	6499.99
Trek Domane SLR 8 Disc - 2018	7499.99
Trek Domane SLR 9 Disc - 2018	11999.99

B) Using multiple OR operators example

The following statement finds the products whose brand id is 1, 2, or 4:

```
SELECT
    product_name,
    brand_id
FROM
    production.products
WHERE
    brand_id = 1
OR brand_id = 2
OR brand_id = 4
ORDER BY
    brand_id DESC;
```

product_name	brand_id
Pure Cycles Vine 8-Speed - 2016	4
Pure Cycles Western 3-Speed - Women's - 2015/2016	4
Pure Cycles William 3-Speed - 2016	4
Haro Flightline One ST - 2017	2
Haro Flightline Two 26 Plus - 2017	2
Haro Shift R3 - 2017	2
Haro SR 1.1 - 2017	2
Haro SR 1.2 - 2017	2
Haro SR 1.3 - 2017	2
Haro Downtown 16 - 2017	2
Haro Shredder 20 - 2017	2
Haro Shredder 20 Girls - 2017	2
Haro Shredder Pro 20 - 2017	2
Electra Girl's Hawaii 1 16" - 2017	1
Electra Moto 3i (20-inch) - Boy's - 2017	1

You can replace multiple **OR** operators by the **IN** operator as shown in the following query:

```
SELECT
    product_name,
    brand_id
FROM
    production.products
WHERE
    brand_id IN (1, 2, 3)
ORDER BY
    brand_id DESC;
```

C) Using **OR** operator with **AND** operator example

Consider the following example:

```
SELECT
    product_name,
    brand_id,
    list_price
FROM
    production.products
WHERE
    brand_id = 1
    OR brand_id = 2
    AND list_price > 500
ORDER BY
    brand_id DESC,
    list_price;
```

product_name	brand_id	list_price
Haro SR 1.1 - 2017	2	539.99
Haro Flightline Two 26 Plus - 2017	2	549.99
Haro SR 1.2 - 2017	2	869.99
Haro SR 1.3 - 2017	2	1409.99
Haro Shift R3 - 2017	2	1469.99
Electra Cruiser 1 (24-Inch) - 2016	1	269.99
Electra Girl's Hawaii 1 (16-inch) - 2015/2016	1	269.99
Electra Cruiser 1 (24-Inch) - 2016	1	269.99
Electra Girl's Hawaii 1 (16-inch) - 2015/2016	1	269.99
Electra Cruiser 1 - 2016/2017/2018	1	269.99
Electra Cruiser 1 Ladies' - 2018	1	269.99
Electra Cruiser 1 Tall - 2016/2018	1	269.99
Electra Cyclosaurus 1 (16-inch) - Boy's - 20...	1	279.99
Electra Soft Serve 1 (16-inch) - Girl's - 2018	1	279.99
Electra Starship 1 16" - 2018	1	279.99
Electra Straight 8 1 (16-inch) - Boy's - 2018	1	279.99

In this example, we used both `OR` and `AND` operators. As always, SQL Server evaluated the `AND` operator first. Therefore, the query returned the products whose brand id is 2 and the list price is greater than 500 or the products whose brand id is 1.

To find the products whose brand id is 1 or 2 and list price is greater than 500, you use the parentheses as shown in the following query:

```
SELECT
    product_name,
    brand_id,
    list_price
FROM
    production.products
WHERE
    (brand_id = 1 OR brand_id = 2)
    AND list_price > 500
ORDER BY
    brand_id;
```

product_name	brand_id	list_price
Haro SR 1.1 - 2017	2	539.99
Haro Flightline Two 26 Plus - 2017	2	549.99
Haro SR 1.2 - 2017	2	869.99
Haro SR 1.3 - 2017	2	1409.99
Haro Shift R3 - 2017	2	1469.99
Electra Moto 1 - 2016	1	529.99
Electra Cruiser Lux 3i Ladies' - 2018	1	529.99
Electra Cruiser Lux 3i - 2018	1	529.99
Electra Townie Original 21D - 2016	1	549.99
Electra Townie Original 21D - 2016	1	549.99
Electra Townie Original 21D - 2018	1	559.99
Electra Townie Original 21D Ladies' - 2018	1	559.99
Electra Townie Original 21D - 2018	1	559.99
Electra Townie Original 21D Ladies' - 2018	1	559.99
Electra Townie Original 7D EQ - 2018	1	599.99

In this lab, you have learned how to use the SQL Server **OR** operator to form a condition by combining two Boolean expressions.