MySQLTUTORIAL

MySQL IN

Summary: in this tutorial, you will learn how to use MySQL `IN` operator to determine if a specified value matches any value in a list of values.

Introduction to the MySQL IN operator

The `IN` operator allows you to determine if a value matches any value in a list of values. Here’s the syntax of the `IN` operator:

```
value IN (value1, value2, value3,...)
```

The `IN` operator returns 1 (true) if the `value` equals any value in the list (`value1` , `value2` , `value3` ,...). Otherwise, it returns 0.

In this syntax:

- First, specify the value to test on the left side of the `IN` operator. The value can be a column or an expression.
- Second, specify a comma-separated list of values to match in the parentheses.

The `IN` operator is functionally equivalent to the combination of multiple `OR (https://www.mysqltutorial.org/mysql-or/)` operators:

```
value = value1 OR value = value2 OR value = value3 OR ...
```

The following example returns 1 because 1 is in the list:

```
SELECT 1 IN (1,2,3);
```

```
+--------------+
| 1 IN (1,2,3) |
+--------------+
|            1 |
+---------------+
1 row in set (0.00 sec)
```

The following example returns 0 because 4 is not in the list:

```
SELECT 4 IN (1,2,3);
```

```
+---------------+
| 4 IN (1,2,3) |
+---------------+
|            0 |
+---------------+
1 row in set (0.00 sec)
```

In practice, you'll use the `IN` operator to form conditions in a `WHERE (https://www.mysqltutorial.org/mysql-where/)` clause of the `SELECT (https://www.mysqltutorial.org/mysql-select-statement-query-data.aspx)` , `DELETE (https://www.mysqltutorial.org/mysql-delete-statement.aspx)` , and `UPDATE (https://www.mysqltutorial.org/mysql-update-data.aspx)` statements. Also, you'll use the `IN` operator in a query that contains a subquery (https://www.mysqltutorial.org/mysql-subquery/) .

MySQL IN operator and NULL

Generally, the `IN` operator returns `NULL` in two cases:

- The `value` on the left side of the operator is NULL.
- The value doesn't equal any value in the list and one of values in the list is NULL.

The following example returns NULL because the value of the left side of the IN operator is NULL:

```
SELECT NULL IN (1,2,3);
```

```
+------------------+
| NULL IN (1,2,3) |
+------------------+
|            NULL |
+------------------+
1 row in set (0.00 sec)
```

The following example also returns NULL because the 0 is not equal to any value in the list and the list has one NULL:

```
SELECT 0 IN (1 , 2, 3, NULL);
```

```
+-----------------------+
| 0 IN (1 , 2, 3, NULL) |
+-----------------------+
|                  NULL |
+-----------------------+
1 row in set (0.00 sec)
```

The following example also returns NULL because NULL is not equal to any value in the list and the list has one NULL. Note that NULL is not equal to NULL.

```
SELECT NULL IN (1 , 2, 3, NULL);
```

MySQL IN operator examples

See the following `offices` table from the sample database (https://www.mysqltutorial.org/mysql-sample-database.aspx) :

The following example uses the `IN` operator to find the offices located in the USA and France:

```
SELECT
    officeCode,
    city,
    phone,
    country
FROM
    offices
```

```
WHERE
    country IN ('USA' , 'France');
```

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```
+------------+---------------+------------------+---------+
| officeCode | city          | phone            | country |
+------------+---------------+------------------+---------+
| 1          | San Francisco | +1 650 219 4782  | USA     |
| 2          | Boston        | +1 215 837 0825  | USA     |
| 3          | NYC           | +1 212 555 3000  | USA     |
| 4          | Paris         | +33 14 723 4404  | France  |
+------------+---------------+------------------+---------+
4 rows in set (0.01 sec)
```

You can also get the same result with the `OR (https://www.mysqltutorial.org/mysql-or/)` operator like this:

```
SELECT
    officeCode,
    city,
    phone
FROM
    offices
WHERE
    country = 'USA' OR country = 'France';
```

Try It Out ❯

In case the list has many values, you need to construct a very long statement with multiple `OR` operators. Hence, the `IN` operator allows you to shorten the query and make it more readable.

Summary

- Use the `IN` operator to check if a value is in a set of values.
- Use the `IN` operator to form a condition for the `WHERE` clause.