



MySQL IS NULL

Summary: in this tutorial, you will learn how to use the MySQL `IS NULL` operator to test whether a value is `NULL` or not.

Introduction to MySQL IS NULL operator

To test whether a value is `NULL` or not, you use the `IS NULL` operator. Here's the basic syntax of the `IS NULL` operator:

```
value IS NULL
```

If the value is `NULL`, the expression returns true. Otherwise, it returns false.

Note that MySQL does not have a built-in `BOOLEAN` (<https://www.mysqltutorial.org/mysql-boolean/>) type. It uses the `TINYINT(1)` (<https://www.mysqltutorial.org/mysql-int/>) to represent the `BOOLEAN` values i.e., true means 1 and false means 0.

Because the `IS NULL` is a comparison operator, you can use it anywhere that an operator can be used e.g., in the `SELECT` (<https://www.mysqltutorial.org/mysql-select-statement-query-data.aspx>) or `WHERE` (<https://www.mysqltutorial.org/mysql-where/>) clause.

See the following example:

```
SELECT 1 IS NULL, -- 0
       0 IS NULL, -- 0
       NULL IS NULL; -- 1
```

To check if a value is not `NULL`, you use `IS NOT NULL` operator:

```
value IS NOT NULL
```

This expression returns true (1) if the value is not `NULL`. Otherwise, it returns false (0).

Consider the following example:

```
SELECT 1 IS NOT NULL, -- 1
       0 IS NOT NULL, -- 1
       NULL IS NOT NULL; -- 0
```

MySQL IS NULL examples

We will use the `customers` table in the [sample database](https://www.mysqltutorial.org/mysql-sample-database.aspx) (<https://www.mysqltutorial.org/mysql-sample-database.aspx>) for the demonstration.

The following query uses the `IS NULL` operator to find customers who do not have a sales representative:

```
SELECT
    customerName,
    country,
    salesrepemployeenumber
FROM
    customers
WHERE
    salesrepemployeenumber IS NULL
ORDER BY
    customerName;
```

This example uses the `IS NOT NULL` operator to get the customers who have a sales representative:

```
SELECT
    customerName,
    country,
    salesrepemployeenumber
FROM
    customers
WHERE
    salesrepemployeenumber IS NOT NULL
ORDER BY
    customerName;
```

MySQL IS NULL – specialized features

To be compatible with ODBC programs, MySQL supports some specialized features of the `IS NULL` operator.

1) Treatment of date '0000-00-00'

1) If a `DATE` (<https://www.mysqltutorial.org/mysql-date/>) or `DATETIME` (<https://www.mysqltutorial.org/mysql-datetime/>) column has a `NOT NULL` (<https://www.mysqltutorial.org/mysql-not-null-constraint/>) constraint and contains a special date `'0000-00-00'`, you can use the `IS NULL` operator to find such rows.

First, create a table called `projects` :

```
CREATE TABLE IF NOT EXISTS projects (  
    id INT AUTO_INCREMENT,  
    title VARCHAR(255),  
    begin_date DATE NOT NULL,  
    complete_date DATE NOT NULL,  
    PRIMARY KEY(id)  
);
```

Second, insert some rows into the `projects` table:

```
INSERT INTO projects(title,begin_date, complete_date)  
VALUES('New CRM','2020-01-01','0000-00-00'),  
      ('ERP Future','2020-01-01','0000-00-00'),  
      ('VR','2020-01-01','2030-01-01');
```

Third, use the `IS NULL` operator to select rows with the values in the `complete_date` column is `'0000-00-00'`.

```
SELECT *  
FROM projects  
WHERE complete_date IS NULL;
```

2) Influence of @@sql_auto_is_null variable

If the variable `@@sql_auto_is_null` is set to 1, you can get the value of an [auto_increment column](https://www.mysqltutorial.org/mysql-sequence/) (<https://www.mysqltutorial.org/mysql-sequence/>) after executing an `INSERT` (<https://www.mysqltutorial.org/mysql-insert-statement.aspx>) statement by using the `IS NULL` operator.

Note that by default the variable `@@sql_auto_is_null` is 0. Consider the following example.

First, set the variable `@@sql_auto_is_null` to 1.

```
SET @@sql_auto_is_null = 1;
```

Second, insert a new row into the `projects` table:

```
INSERT INTO projects(title,begin_date, complete_date)
VALUES('MRP III','2010-01-01','2020-12-31');
```

Third, use the `IS NULL` operator to get the generated value of the `id` column:

```
SELECT
    id
FROM
    projects
WHERE
    id IS NULL;
```

Summary

- Use the `IS NULL` operator to test if a value is `NULL` or not. The `IS NULL` operator returns one if a value is `NULL`.
- The `IS NOT NULL` returns one if a value is not `NULL`.