SQL COUNT()

In this tutorial, we'll learn about the SQL COUNT() function with the help of various examples.

The `COUNT()` function returns the number of rows in the result set. For example,

```
SELECT COUNT(*)
FROM Customers;
```

Run Code »

Here, the SQL command count rows and returns the total number of rows of the `Customers` table.

Table: Customers

customer_id	first_name	last_name	age	country
1	John	Doe	31	USA
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE

```
SELECT COUNT(*)
FROM Customers;
```

COUNT(*)
5

Example: SQL COUNT() Function

Aliases with COUNT()

In the above example, the field name in the result set is `COUNT(*)` .

It is also possible to give custom names to these fields using the `AS` keyword. For example,

```
SELECT COUNT(*) AS total_customers
FROM Customers;
```

Run Code »

Here, the field name `COUNT(*)` is replaced with `total_customers` in the result set.

Table: Customers

customer_id	first_name	last_name	age	country
1	John	Doe	31	USA
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE

```
SELECT COUNT(*) AS total_customers
FROM Customers;
```

total_customers
5

Example: COUNT() in SQL with Alias

COUNT() with WHERE

Let's take an example,

```
SELECT COUNT(country) AS customers_in_UK
FROM Customers
WHERE country = 'UK';
```

Run Code »

Here, the SQL command returns the count of customers whose country is **UK**.

Table: Customers

customer_id	first_name	last_name	age	country
1	John	Doe	31	USA
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE

```
SELECT COUNT(country) AS customers_in_UK
FROM Customers
WHERE country = 'UK';
```

customers_in_UK
2

Example: SQL COUNT() Function with WHERE

COUNT() with DISTINCT

If we need to count the number of unique rows, we can use the `COUNT()` function with the `DISTINCT` clause. For example,

```
SELECT COUNT(DISTINCT country)
FROM Customers;
```

Run Code »

Here, the SQL command returns the count of unique countries.

Table: Customers

customer_id	first_name	last_name	age	country
1	John	Doe	31	USA
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE

```
SELECT COUNT(DISTINCT country)
FROM Customers;
```

COUNT(DISTINCT country)
3

Example: Counting unique countries

COUNT() with GROUP BY

The `COUNT()` function can be used with the GROUP BY clause to count the rows with similar values. For example,

```
SELECT country, COUNT(*) AS customers
FROM Customers
GROUP BY country;
```

Run Code »

Here, the SQL command returns the number of customers in each country.

Table: Customers

customer_id	first_name	last_name	age	country
1	John	Doe	31	USA
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE

```
SELECT country, COUNT(*) AS customers
FROM Customers
GROUP BY country;
```

country	customers
UAE	1
UK	2
USA	2

Example: SQL COUNT() Function with GROUP BY

COUNT() With HAVING Clause

Let's take an example,

```
SELECT COUNT(customer_id), country
FROM Customers
GROUP BY country
HAVING COUNT(customer_id) > 1;
```

Run Code »

Here, the SQL command:

1. counts the number of rows by grouping them by `country`
2. returns the result set if their **count** is greater than 1.

To learn more, visit SQL HAVING Clause.

COUNT() With NULL Values

1. `SELECT COUNT(*)` returns the **count of all records** in the result set regardless of NULL values.
2. `SELECT COUNT(attribute)` returns the **count of records containing non-NULL values** of the specified column.

Previous Tutorial: SQL MIN() and MAX()
Next Tutorial: SQL SUM() and AVERAGE()

Related Tutorials

Programming — SQL GROUP BY
Programming — SQL SELECT DISTINCT Statement
Programming — SQL HAVING Clause
Programming — SQL UNIQUE Constraint