

MIN() AND MAX() FUNCTIONS

The SQL MIN() and MAX() functions are the aggregate functions in SQL, that operate on group of data and return one output.

The **SQL Min() function** returns the minimum value of the selected columns, and the **SQL MAX()** function is used to return the maximum value of the selected columns.

In this article, we will understand the concept of MIN() and MAX() functions in SQL with examples.

SQL MIN() Function

SQL MIN() function returns the smallest value in the column. It can be used with various data types, including numbers, strings, and dates.

The MIN() function can be used with the DISTINCT keyword to return the minimum value among unique values in a column. It allows for efficiently finding the minimum value in a dataset, making it essential for data manipulation and analysis.

Syntax

```
SELECT MIN(column_name)
FROM table_name
WHERE condition;
```

SQL MAX() Function

SQL MAX() function returns the largest value in the column. It can be used with various data types, including numbers, strings, and dates.

The MAX() function in SQL can be used in combination with other **SQL clauses** and functions, such as **GROUP BY**, **HAVING**, and subqueries which can be useful for data analysis and reporting.

Syntax

```
SELECT MAX(column_name)
FROM table_name
WHERE condition;
```

SQL MIN() and MAX() Function Examples

Let's look at some examples of MIN() and MAX() functions in SQL to understand the concept better.

We will be using the following table to in the examples. To create this table, write the given SQL queries.

Demo SQL Table

```
CREATE TABLE Customer(  
    CustomerID INT PRIMARY KEY,  
    CustomerName VARCHAR(50),  
    LastName VARCHAR(50),  
    Country VARCHAR(50),  
    Age INT(2),  
    Phone INT(10)  
);  
-- Insert some sample data into the Customers table  
INSERT INTO Customer (CustomerID, CustomerName, LastName,  
Country, Age, Phone)  
VALUES  
    (1, 'Shubham', 'Thakur', 'India', 23, 'xxxxxxxxxx'),  
    (2, 'Aman', 'Chopra', 'Australia', 21, 'xxxxxxxxxx'),  
    (3, 'Naveen', 'Tulasi', 'Sri Lanka', 24, 'xxxxxxxxxx'),  
    (4, 'Aditya', 'Arpan', 'Austria', 21, 'xxxxxxxxxx'),  
    (5, 'Nishant. Salchichas S.A.', 'Jain', 'Spain', 22,  
    'xxxxxxxxxx');
```

Output

CustomerID	CustomerName	LastName	Country	Age	Phone
1	Shubham	Thakur	India	23	xxxxxxxxxx
2	Aman	Chopra	Australia	21	xxxxxxxxxx
3	Naveen	Tulasi	Sri lanka	24	xxxxxxxxxx
4	Aditya	Arpan	Austria	21	xxxxxxxxxx
5	Nishant. Salchichas S.A.	Jain	Spain	22	xxxxxxxxxx

Demo SQL Table

SQL MIN() function Example

In this MIN() function example, we will fetch the details of customer with minimum age:

Query

```
SELECT MIN(Age)  
FROM Customer;
```

Output

MIN(Age)
21

SQL MAX() function Example

In this MAX() function example, we will find customer details with the highest Age.

Query

```
SELECT MAX(Age)
FROM Customer;
```

Output

MAX(Age)
24

Using MIN() and MAX() with Other Columns Example

Suppose we want to fetch a person's name with min age as column min_age then we can use the following query.

Query

```
SELECT CustomerName,
       MIN(Age) AS min_age
FROM Customer;
```

Output

CustomerName	min_age
Aman	21

Using MIN() or MAX() functions In the HAVING Clause

Suppose we want to fetch a person's name with max age as column max_age then we can use the following query but with some conditions like min age at least 22.

Query

```
SELECT CustomerName ,
       MAX(Age) AS max_age
FROM Customer
HAVING MIN(Age) > 22 ;
```

Output

CustomerName	max_age
Shubham	23
Naveen	24

Important Points About SQL MIN() and MAX() Functions

- The MIN() function returns the minimum value in a selected column, while the MAX() function returns the maximum value.
- The MIN() and MAX() functions can be used with various data types, including numbers, strings, and dates.
- The MIN() and MAX() functions are considered aggregate functions, as they operate on a set of rows and return a single value.
- The MIN() and MAX() functions can be used in combination with other SQL clauses and functions, such as GROUP BY, HAVING, and subqueries.
- The MIN() and MAX() functions are powerful tools in SQL that are essential for data manipulation and analysis.