What Are the Types of SQL Operators?

Generally, there are three types of operators that are used in SQL.

Arithmetic Operators

Comparison Operators

Logical Operators

Now, let’s look at each one of them in detail.

1. Arithmetic SQL Operators

Arithmetic operators are used to perform arithmetic operations such as addition, subtraction, division, and multiplication. These operators usually accept numeric operands. Different operators that come under this category are given below-

Operator `& Operation

Description

+ Addition - Adds operands on either side of the operator

-Subtraction - Subtracts the right-hand operand from the left-hand operand

\*Multiplication - Multiplies the values on each side

/Division - Divides left-hand operand by right-hand operand

%Modulus - Divides left-hand operand by right-hand operand and returns the remainder

2. Comparison SQL Operators

Comparison operators in SQL are used to check the equality of two expressions. It checks whether one expression is identical to another. Comparison operators are generally used in the WHERE clause of a SQL query. The result of a comparison operation may be TRUE, FALSE or UNKNOWN. When one or both the expression is NULL, then the operator returns UNKNOWN. These operators could be used on all types of expressions except expressions that contain a text, ntext or an image. The table below shows different types of comparison operators in SQL:

Operator & Operation

Description

=Equal to - Checks if both operands have equal value, if yes, then returns TRUE

>

Greater than - Checks if the value of the left-hand operand is greater than the right-hand operand or not

< Less than - Returns TRUE if the value of the left-hand operand is less than the value of the right-hand operand

>=Greater than or equal to - It checks if the value of the left-hand operand is greater than or equal to the value of the right-hand operand, if yes, then returns TRUE

<=Less than or equal to - Examines if the value of the left-hand operator is less than or equal to the right-hand operand

<> or !=Not equal to - Checks if values on either side of the operator are equal or not. Returns TRUE if values are not equal

!>Not greater than - Used to check if the left-hand operator’s value is not greater than or equal to the right-hand operator’s value

!<Not less than - Used to check if the left-hand operator’s value is not less than or equal to the right-hand operator’s value

3. Logical SQL Operators

Logical operators are those operators that take two expressions as operands and return TRUE or False as output. While working with complex SQL statements and queries, comparison operators come in handy and these operators work in the same way as logic gates do. Different logical operations available in SQL are given in the below table.

Operator

Description

ALL - Compares a value to all other values in a set

AND - Returns the records if all the conditions separated by AND are TRUE

ANY - Compares a specific value to any other values in a set

SOME - Compares a value to each value in a set. It is similar to ANY operator

LIKE - It returns the rows for which the operand matches a specific pattern

IN - Used to compare a value to a specified value in a list

BETWEEN - Returns the rows for which the value lies between the mentioned range

NOT - Used to reverse the output of any logical operator

EXISTS - Used to search a row in a specified table in the database

OR - Returns the records for which any of the conditions separated by OR is true

NULL - Returns the rows where the operand is NULL