



# SQL Operators



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Pre-requisites: [What is SQL?](#)

Structured Query Language is a computer language that we use to interact with a relational database. In this article we will see all types of SQL operators.

In simple operator can be defined as an entity used to perform operations in a table.

Operators are the foundation of any programming language. We can define operators as symbols that help us to perform specific mathematical and logical computations on operands. In other words, we can say that an operator operates the operands. SQL operators have three different categories.

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## Types of SQL Operators

- [Arithmetic operator](#)
- [Comparison operator](#)
- [Logical operator](#)

## Arithmetic Operators

We can use various arithmetic operators on the data stored in the tables. Arithmetic Operators are:

Operator	Description
+	The addition is used to perform an addition operation on the data values.

Operator	Description
–	This operator is used for the subtraction of the data values.
/	This operator works with the 'ALL' keyword and it calculates division operations.
*	This operator is used for multiplying data values.
%	Modulus is used to get the remainder when data is divided by another.

### Example Query:

```
SELECT * FROM employee WHERE emp_city NOT LIKE 'A%';
```

### Output:

Results		Messages		
	emp_id	emp_name	emp_city	emp_country
1	101	Utkarsh Tripathi	Varanasi	India
2	102	Abhinav Singh	Varanasi	India
3	103	Utkarsh Raghuvanshi	Varanasi	India
4	106	Ashutosh Kumar	Patna	India

## Comparison Operators

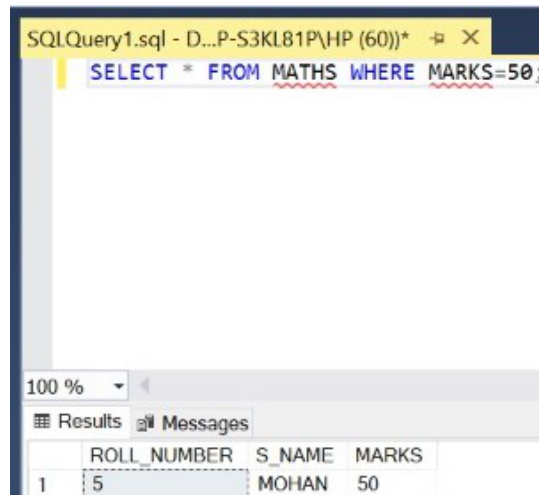
Another important operator in SQL is a [comparison operator](#), which is used to compare one expression's value to other expressions. SQL supports different types of comparison operator, which is described below:

Operator	Description
=	Equal to.
>	Greater than.
<	Less than.
>=	Greater than equal to.
<=	Less than equal to.

Operator	Description
<>	Not equal to.

**Example Query:**

```
SELECT * FROM MATHS WHERE MARKS=50;
```

**Output:**

## Logical Operators

The Logical operators are those that are true or false. They return true or false values to combine one or more true or false values.

Operator	Description
<u>AND</u>	Logical AND compares two Booleans as expressions and returns true when both expressions are true.
<u>OR</u>	Logical OR compares two Booleans as expressions and returns true when one of the expressions is true.
<u>NOT</u>	Not takes a single Boolean as an argument and change its value from false to true or from true to false.

**Example Query:**

```
SELECT * FROM employee WHERE emp_city =  
'Allahabad' AND emp_country = 'India';
```

**Output:**

Results		Messages		
	emp_id	emp_name	emp_city	emp_country
1	104	Utkarsh Singh	Allahabad	India
2	105	Sudhanshu Yadav	Allahabad	India

## Special Operators

Operators	Description
<u><a href="#">ALL</a></u>	ALL is used to select all records of a SELECT STATEMENT. It compares a value to every value in a list of results from a query. The ALL must be preceded by the comparison operators and evaluated to TRUE if the query returns no rows.
<u><a href="#">ANY</a></u>	ANY compares a value to each value in a list of results from a query and evaluates to true if the result of an inner query contains at least one row.
<u><a href="#">BETWEEN</a></u>	The SQL BETWEEN operator tests an expression against a range. The range consists of a beginning, followed by an AND keyword and an end expression.
<u><a href="#">IN</a></u>	The IN operator checks a value within a set of values separated by commas and retrieves the rows from the table that match.
<u><a href="#">EXISTS</a></u>	The EXISTS checks the existence of a result of a subquery. The EXISTS subquery tests whether a subquery fetches at least one row. When no data is returned then this operator returns 'FALSE'.
<u><a href="#">SOME</a></u>	SOME operator evaluates the condition between the outer and inner tables and evaluates to true if the final result returns any one row. If not, then it evaluates to false.
UNIQUE	The UNIQUE operator searches every unique row of a specified table.

**Example Query:**

```
SELECT * FROM employee WHERE emp_id BETWEEN 101 AND 104;
```

**Output:**

Results		Messages		
	emp_id	emp_name	emp_city	emp_country
1	101	Utkarsh Tripathi	Varanasi	India
2	102	Abhinav Singh	Varanasi	India
3	103	Utkarsh Raghuvanshi	Varanasi	India
4	104	Utkarsh Singh	Allahabad	India

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