# **SQL Basics**

# **SQL Clauses**

Unlock the power of SQL Clauses with this SQL tutorial. Here in this section, you will learn how to use SELECT, WHERE, JOIN, GROUP BY, and more to query databases effectively.

### **SQL WHERE Clause**

### **SQL WITH Clause**

### **SQL HAVING Clause**

### **SQL ORDER By Clause**

### **SQL Group By Clause**

### **SQL LIMIT Clause**

# **SQL Operators**

SQL Operators” refers to the fundamental symbols and keywords within the SQL that enable users to perform various operations and SQL AND, OR, LIKE, NOT, and more operators on databases. Here, we have discussed all the SQL operators in a detailed manner with examples.

### **SQL AND Operator**

### **SQL OR Operator**

### **SQL LIKE Operator**

### **SQL IN Operator**

### **SQL NOT Operator**

### **SQL NOT EQUAL Operator**

### **SQL IS NULL Operator**

### **SQL UNION Operator**

### **SQL UNION ALL Operator**

### **SQL EXCEPT Operator**

### **SQL BETWEEN Operator**

### **SQL ALL Operator**

### **SQL ANY Operator**

### **SQL INTERSECT Operator**

### **SQL EXISTS Operator**

### **SQL CASE Operator**

# **SQL Aggregate Functions**

Whether you are calculating the total sales revenue for a particular product, finding the average age of customers, or determining the highest value in a dataset, SQL Aggregate Functions make these tasks straightforward and manageable.

### **SQL Aggregate Function**

Agg Function is used where value of multiple row are grouped as input to get a single value result.

SQL Aggregate functions are mostly used with the GROUP BY clause of the SELECT statement.

### **SQL Count() Function**

Example Database: Employees

|  |  |  |
| --- | --- | --- |
| EmployeeName | EmployeeDepartment | EmployeeSalary |
| Rahul | Financial Services | 30000 |
| Sonam | Customer Support | 22000 |
| Rakesh | Human Resources | 40000 |
| Bhanvi | Front Office | 20000 |
| Shivani | Cloud Data | 35000 |
| Vaibhav | Business Administrator | null |

Count(\*): Returns the total number of records.

|  |  |  |
| --- | --- | --- |
| Query | Output | Explanation |
| SELECT COUNT(\*) AS TotalRecords  FROM Employees; | | TotalRecords |  | 6 | There are a total of 6 records in the table. |

Count(salary): Return the number of Non-Null values over the column salary.

|  |  |  |
| --- | --- | --- |
| Query | Output | Explanation |
| SELECT COUNT(EmployeeSalary) AS NonNullSalaries  FROM Employees; | | NonNullSalaries |  | 5 | There are 5 non-null salary values (excluding the null value). |

Count(Distinct Salary): Return the number of distinct Non-Null values over the column salary.

|  |  |  |
| --- | --- | --- |
| Query | Output | Explanation |
| SELECT COUNT(DISTINCT EmployeeSalary) AS DistinctNonNullSalaries  FROM Employees; | DistinctNonNullSalaries  | 4 | There are 4 distinct non-null salary values (30000, 22000, 40000, 35000). |

### **SQL SUM() Function**

The SUM() function provides the total sum of a numeric column.

**SUM(salary):** Sum all Non-Null values of Column salary i.e., 310

|  |  |  |
| --- | --- | --- |
| Query | Output | Explanation |
| SELECT COUNT(DISTINCT EmployeeSalary) AS DistinctNonNullSalaries  FROM Employees; | DistinctNonNullSalaries  | 4 | There are 4 distinct non-null salary values (30000, 22000, 40000, 35000). |

**SUM(Distinct salary):**Sum of all distinct Non-Null values i.e., 250.

### **SQL MIN() Function**

### **SQL MAX() Function**

### **SQL AVG() Function**

# **SQL Data Constraints**

# **SQL Joining Data**

# **SQL Functions**

# **SQL Views**

# **SQL Indexes**

# **SQL Miscellaneous Topics**