

SQL Aggregate Functions

Aggregate functions in SQL perform calculations on a set of values and return a single summary value. They are commonly used with GROUP BY to aggregate data into meaningful results.

List of Aggregate Functions:

SUM(): Calculates the total sum of a column

AVG(): Computes the average (mean) of a column

COUNT(): Counts the number of rows

MIN(): Finds the minimum value

MAX(): Finds the maximum value

Examples of Aggregate Functions:

SUM() - Total Sum Calculation

```
SELECT SUM(sales_amount) AS total_sales FROM orders;
```

AVG() - Average Calculation

```
SELECT AVG(salary) AS avg_salary FROM employees;
```

COUNT() - Counting Rows

```
SELECT COUNT(*) AS total_orders FROM orders;
```

MIN() - Minimum Value

```
SELECT MIN(price) AS lowest_price FROM products;
```

MAX() - Maximum Value

```
SELECT MAX(order_amount) AS highest_order FROM orders;
```

Using Aggregate Functions with GROUP BY:

```
SELECT customer_id, SUM(sales_amount) AS total_spent
FROM orders
GROUP BY customer_id;
```

Using HAVING to Filter Aggregated Data:

```
SELECT customer_id, SUM(sales_amount) AS total_spent
FROM orders
GROUP BY customer_id
HAVING SUM(sales_amount) > 5000;
```