Created by Ahsan Arif

SUM Function

The SUM function returns the summed value of an expression.

The syntax for the SUM function is:

SELECT SUM(*expression*)
FROM tables
WHERE predicates;

expression can be a numeric field or formula.

Simple Example

For example, you might wish to know how the combined total salary of all employees whose salary is above $25,000 / year.

SELECT SUM(salary) as "Total Salary"
FROM employees
WHERE salary > 25000;

In this example, we've aliased the sum(salary) field as "Total Salary". As a result, "Total Salary" will display as the field name when the result set is returned.

Example using DISTINCT

You can use the DISTINCT clause within the SUM function. For example, the SQL statement below returns the combined total salary of unique salary values where the salary is above $25,000 / year.

SELECT SUM(DISTINCT salary) as "Total Salary"
FROM employees
WHERE salary > 25000;

If there were two salaries of $30,000/year, only one of these values would be used in the SUM function.

Example using a Formula

The *expression* contained within the SUM function does not need to be a single field. You could also use a formula. For example, you might want the net income for a business. Net Income is calculated as total income less total expenses.

SELECT SUM(income - expenses) as "Net Income"
FROM gl_transactions;

You might also want to perform a mathematical operation within a SUM function. For example, you might determine total commission as 10% of total sales.

SELECT SUM(sales * 0.10) as "Commission"
FROM order_details;

Example using GROUP BY

In some cases, you will be required to use a GROUP BY clause with the SUM function.

For example, you could also use the SUM function to return the name of the department and the total sales (in the associated department).

SELECT department, SUM(sales) as "Total sales"
FROM order_details
GROUP BY department;

Because you have listed one column in your SELECT statement that is not encapsulated in the SUM function, you must use a GROUP BY clause. The department field must, therefore, be listed in the GROUP BY section.