

# SQL SUM() Function

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## The SQL SUM() Function

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

### Example

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Return the sum of all `Quantity` fields in the `OrderDetails` table:

```
SELECT SUM(Quantity)
FROM OrderDetails;
```

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### Syntax

```
SELECT SUM(column_name)
FROM table_name
WHERE condition;
```

### Demo Database

Below is a selection from the **OrderDetails** table used in the examples:

OrderDetailID	OrderID	ProductID	Quantity
1	10248	11	12
2	10248	42	10
3	10248	72	5
4	10249	14	9
5	10249	51	40

---

## Add a Where Clause

You can add a **WHERE** clause to specify conditions:

### Example

Return the number of orders made for the product with **ProductID** 11:

```
SELECT SUM(Quantity)
FROM OrderDetails
WHERE ProductId = 11;
```

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## Use an Alias

Give the summarized column a name by using the **AS** keyword.

### Example

Name the column "total":

```
SELECT SUM(Quantity) AS total  
FROM OrderDetails;
```

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## SUM() With an Expression

The parameter inside the **SUM()** function can also be an expression.

If we assume that each product in the **OrderDetails** column costs 10 dollars, we can find the total earnings in dollars by multiply each quantity with 10:

### Example

Use an expression inside the **SUM()** parenthesis:

```
SELECT SUM(Quantity * 10)  
FROM OrderDetails;
```

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We can also join the `OrderDetails` table to the `Products` table to find the actual amount, instead of assuming it is 10 dollars:

## Example

Join `OrderDetails` with `Products`, and use `SUM()` to find the total amount:

```
SELECT SUM(Price * Quantity)
FROM OrderDetails
LEFT JOIN Products ON OrderDetails.ProductID = Products.ProductID;
```

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You will learn more about [Joins](#) later in this tutorial.

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## Test Yourself With Exercises

### Exercise:

Use an SQL function to calculate the sum of all the `Price` column values in the `Products` table.

```
SELECT
FROM Products;
```

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[Start the Exercise](#)