MySQL COUNT(), AVG() and SUM() Functions

MySQL COUNT(), AVG() and SUM() Functions

The COUNT() function returns the number of rows that matches a specified criterion.

COUNT() Syntax

SELECT COUNT(*column_name*)
FROM *table_name*
WHERE *condition*;

The AVG() function returns the average value of a numeric column.

AVG() Syntax

SELECT AVG(*column_name*)
FROM *table_name*
WHERE *condition*;

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

SUM() Syntax

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

COUNT() Example

The following SQL statement finds the number of products:

Example

SELECT COUNT(ProductID)
FROM Products;

Note: NULL values are not counted.

AVG() Example

The following SQL statement finds the average price of all products:

Example

```
SELECT AVG(Price)
FROM Products;
```

SUM() Example

The following SQL statement finds the sum of the "Quantity" fields in the "OrderDetails" table:

Example

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

MySQL IN Operator

The MySQL IN Operator

The IN operator allows you to specify multiple values in a WHERE clause.

The IN operator is a shorthand for multiple OR conditions.

IN Syntax

```
SELECT column_name(s)
FROM table_name
WHERE column_name IN (value1, value2, ...);
```

or:

```
SELECT column_name(s)
FROM table_name
WHERE column_name IN (SELECT STATEMENT);
```

IN Operator Examples

The following SQL statement selects all customers that are located in "Germany", "France" or "UK":

Example

```
SELECT * FROM Customers
WHERE Country IN ('Germany', 'France', 'UK');
```

The following SQL statement selects all customers that are NOT located in "Germany", "France" or "UK":

Example

SELECT * FROM Customers
WHERE Country NOT IN ('Germany', 'France', 'UK');

The following SQL statement selects all customers that are from the same countries as the suppliers:

Example

SELECT * FROM Customers
WHERE Country IN (SELECT Country FROM Suppliers);
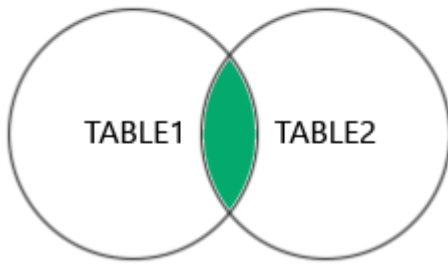

MySQL Joins

MySQL Joining Tables

A JOIN clause is used to combine rows from two or more tables, based on a related column between them.
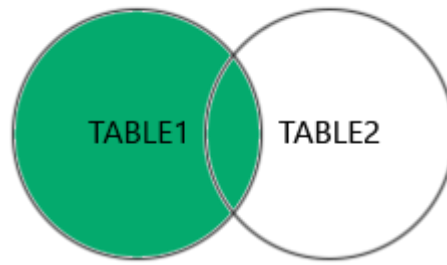

Supported Types of Joins in MySQL

- INNER JOIN: Returns records that have matching values in both tables
- LEFT JOIN: Returns all records from the left table, and the matched records from the right table
- RIGHT JOIN: Returns all records from the right table, and the matched records from the left table
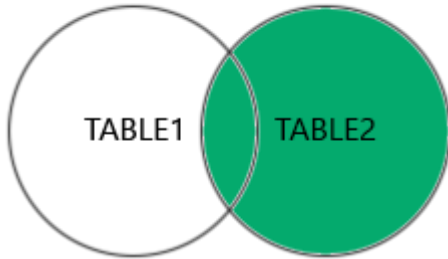- CROSS JOIN: Returns all records from both tables

INNER JOIN

LEFT JOIN

RIGHT JOIN

CROSS JOIN

TABLE1 TABLE2