**Order By, AND, OR, NOT Operator**

/\*The SQL ORDER BY

The ORDER BY keyword is used to sort the result-set in ascending or descending order.

DESC

The ORDER BY keyword sorts the records in ascending order by default. To sort the records in descending order, use the DESC keyword.

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SELECT \* FROM Products

ORDER BY Price; -- default (asc)

SELECT \* FROM Products

ORDER BY Price DESC;

-- Order Alphabetically For string values the ORDER BY keyword will order alphabetically:

SELECT \* FROM Products

ORDER BY ProductName;

-- Alphabetically DESC To sort the table reverse alphabetically, use the DESC keyword:

SELECT \* FROM Products

ORDER BY ProductName DESC;

-- ORDER BY Several Columns The following SQL statement selects all customers from the "Customers" table, sorted by the "Country"

-- and the "CustomerName" column. This means that it orders by Country, but if some rows have the same Country, it orders them by CustomerName:

SELECT \* FROM Customers

ORDER BY Country asc, CustomerName asc;

-- Using Both ASC and DESC

-- The following SQL statement selects all customers from the "Customers" table, sorted ascending by the "Country" and descending by the "CustomerName" column:

SELECT \* FROM Customers

ORDER BY Country ASC, CustomerName DESC;

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-- The SQL AND Operator

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/\*The WHERE clause can contain one or many AND operators.

AND vs OR

The AND operator displays a record if all the conditions are TRUE.

The OR operator displays a record if any of the conditions are TRUE.

A B R

TRUE TRUE TRUE

TRUE FALSE FALSE

FALSE TRUE FALSE

FALSE FALSE FALSE

\*/

-- The AND operator is used to filter records based on more than one condition, like if you want to return all customers from Spain that starts with the letter 'G':

-- Select all customers from Spain that starts with the letter 'G':

SELECT \*

FROM Customers

WHERE Country = 'Spain' AND CustomerName LIKE 'G%';

-- All Conditions Must Be True

-- The following SQL statement selects all fields from Customers where Country is "Brazil" AND City is "Rio de Janeiro" AND CustomerID is higher than 50:

SELECT \* FROM Customers

WHERE Country = 'Brazil'

AND City = 'Rio de Janeiro'

AND CustomerID > 50;

SELECT \* FROM Customers

WHERE Country = 'Spain' AND (CustomerName LIKE 'G%' OR CustomerName LIKE 'R%');

SELECT \* FROM Customers

WHERE Country = 'Spain' AND CustomerName LIKE 'G%' OR CustomerName LIKE 'R%';

-----------------------------------------------------------------------

-- The SQL OR Operator

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/\*The WHERE clause can contain one or more OR operators.

The OR operator is used to filter records based on more than one condition

A B R

TRUE TRUE TRUE

TRUE FALSE TRUE

FALSE TRUE TRUE

FALSE FALSE FALSE

\*/

SELECT \*

FROM Customers

WHERE Country = 'India' OR Country = 'Spain';

-- At Least One Condition Must Be True

-- The following SQL statement selects all fields from Customers where either City is "Berlin", CustomerName starts with the letter "G" or Country is "Norway":

SELECT \* FROM Customers

WHERE City = 'HYD' OR CustomerName LIKE 'G%' OR Country = 'Norway';

-- Combining AND and OR

-- You can combine the AND and OR operators.

-- The following SQL statement selects all customers from Spain that starts with a "G" or an "R".

-- Make sure you use parenthesis to get the correct result.

-- Select all Spanish customers that starts with either "G" or "R":

SELECT \* FROM Customers

WHERE Country = 'Spain' AND (CustomerName LIKE 'G%' OR CustomerName LIKE 'R%');

-- Select all customers that either:

-- are from Spain and starts with either "G", or

-- starts with the letter "R":

SELECT \* FROM Customers

WHERE Country = 'Spain' AND CustomerName LIKE 'G%' OR CustomerName LIKE 'R%';

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-- SQL NOT Operator

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-- The NOT Operator

-- The NOT operator is used in combination with other operators to give the opposite result, also called the negative result.

-- In the select statement below we want to return all customers that are NOT from Spain:

-- Select only the customers that are NOT from Spain:

SELECT \* FROM Customers

WHERE NOT Country = 'Spain';

-- NOT LIKE

-- Select customers that does not start with the letter 'A':

SELECT \* FROM Customers

WHERE CustomerName NOT LIKE 'A%';

-- NOT BETWEEN

-- Select customers with a customerID not between 10 and 60:

SELECT \* FROM Customers

WHERE CustomerID NOT BETWEEN 10 AND 60;

-- NOT IN

-- Select customers that are not from Paris or London:

SELECT \* FROM Customers

WHERE City NOT IN ('Paris', 'London');

-- NOT Greater Than

-- Select customers with a CustomerId not greater than 50:

SELECT \* FROM Customers

WHERE NOT CustomerID > 50; -- Inclusive

-- NOT Less Than

-- Select customers with a CustomerID not less than 50:

SELECT \* FROM Customers

WHERE NOT CustomerId < 50; -- Inclusive

SELECT \* FROM Customers

WHERE CustomerId > 50 -- Exclusive