

# **Module 03 – Row Restriction and Sorting Data**

## **Module Objectives**

Limit the result set retrieved from a query

List the comparison operators used in row restriction

List the logical operators used in row restriction

Sort the result set retrieved from a query

## Limit the result set retrieved from a query

Restrict the rows that are returned in your result set by using a WHERE clause.

The WHERE clause contains a test condition that must be met in order for the row of data to be returned in the result set.

The test condition of a WHERE clause is composed of column names, expressions, constants, and a comparison operator.

The WHERE clause can compare values in columns, literal values, arithmetic expressions, or functions.

The WHERE clause consists of three basic elements:

column name

comparison operator

column name, constant, or list of values



When using a WHERE clause in My SQL there are few differences you should note, compared to the other dialects.

1. The default date display is YYYY-MM-DD.
2. Character searches ARE NOT case sensitive.
3. Character strings and dates in a WHERE clause may be enclosed in single or double quotation marks.



When using a WHERE clause in Oracle there are few differences you should note, compared to the other dialects.

1. The default date display is DD-MON-YYYY.
2. Character searches ARE case sensitive.
3. Character strings and dates in a WHERE clause must be enclosed in single quotation marks.



When using a WHERE clause in MS SQL there are few differences you should note, compared to the other dialects.

1. The default date display is YYYY-MM-DD.
2. Character searches ARE NOT case sensitive.
3. Character strings and dates in a WHERE clause must be enclosed in single quotation marks.

## Comparison Operators

=	Equal To
>	Greater Than
>=	Greater Than or Equal To
<	Less Than
<=	Less Than or Equal To
<>	Not Equal To ( <i>!= is also a usable operator</i> )

## Additional Comparison Operators

**BETWEEN...AND...** *Between two values (inclusive)*

You should specify the lower limit first in the range of values used in the BETWEEN ...AND ... operators.

**IN (list)** *Match any of a list of values*

The IN operator can be used with any datatype.

If multiple values are in the list, a comma must separate them.

**LIKE** *Match a character pattern*

The LIKE operator allows you to perform a search based upon a character pattern. You can use wildcards to build the search string. There are two wildcard symbols available to use % (*percent sign*) and \_ (*underscore*).

The % symbol represents any sequence of zero or more characters.

The \_ symbol represents any single character.

If you need to search for a “%” or a “\_”, you can use the ESCAPE identifier to complete your search string.

**IS NULL** *Is a null value*

The IS NULL operator test for values that are null. A null value means the value is unavailable, unassigned, unknown, or inapplicable. This means that you cannot test with a traditional = symbol because a null value will never be equal or unequal to any value.

## Logical Operators

AND	Returns TRUE if both test conditions are TRUE
OR	Returns TRUE if either test condition is TRUE
NOT	Returns TRUE if the test condition is FALSE

## Rules of Precedence

1 <sup>st</sup>	All comparison operators
2 <sup>nd</sup>	NOT
3 <sup>rd</sup>	AND
4 <sup>th</sup>	OR

Remember that precedence can be overridden by using parentheses.

## **Sort the result set retrieved from a query**

The order in which a result set is displayed is undefined. With the ORDER BY clause, you can sort the order of the displayed rows in the sequence that you need.

The ORDER BY clause is always the last clause in your SQL statement.

In the ORDER BY clause, you list the columns or expressions in the order you want the data to be sorted. The default format is ASCending order; however, you can reverse that order by using the DESCending command.

The ORDER BY clause has no effect on the actual data in the table; it only affects the order in which the data is displayed in the result set.