
Lesson 9: Filter results with WHERE

So far, your queries have mostly worked with every record in a table, the exception being the ones that used the TOP keyword to limit the number of results returned.

The WHERE keyword is used to filter your query results and is often the most complex part of a query. The WHERE statement comes after the FROM statement.

- 1 Open SSMS and connect to your SQL Server (if you haven't already done this).
- 2 Write a query to extract all records from the *Orders* table.

```
SELECT *
FROM Northwind.dbo.Orders
```

- 3 Modify the query to only show orders made by *EmployeeID* 5.

The WHERE statement lets you add filtering rules to a query. Modify the query to:

```
SELECT *
FROM Northwind.dbo.Orders
WHERE EmployeeID=5
```

This tells the database that you only want to see orders for EmployeeID 5.

- 4 Execute the query.

	OrderID	CustomerID	EmployeeID	OrderDate	RequiredDate
1	10248	VINET	5	1996-07-04 00:00:00.000	1996-08-01 00:00:00.000
2	10254	CHOPS	5	1996-07-11 00:00:00.000	1996-08-08 00:00:00.000
3	10269	WHITC	5	1996-07-31 00:00:00.000	1996-08-14 00:00:00.000
4	10297	BLONP	5	1996-09-04 00:00:00.000	1996-10-16 00:00:00.000
5	10320	WARTH	5	1996-10-03 00:00:00.000	1996-10-17 00:00:00.000

All orders for EmployeeID 5 are displayed.

- 5 Modify the query to only show orders made to *CustomerID* 'VINET'.

To specify a textual value in SQL code, you need to enclose it in single quotes. The query should be:

```
SELECT *
FROM Northwind.dbo.Orders
WHERE CustomerID='VINET'
```

The word *VINET* is highlighted in red, but that doesn't mean you've made a mistake. The red highlight is how SSMS color codes textual values for clarity.

- 6 Execute the query.

The 5 orders made to the CustomerID *VINET* are shown:

	OrderID	CustomerID	EmployeeID	OrderDate	RequiredDate
1	10248	VINET	5	1996-07-04 00:00:00.000	1996-08-01 00:00:00.000
2	10274	VINET	6	1996-08-06 00:00:00.000	1996-09-03 00:00:00.000
3	10295	VINET	2	1996-09-02 00:00:00.000	1996-09-30 00:00:00.000
4	10737	VINET	2	1997-11-11 00:00:00.000	1997-12-09 00:00:00.000
5	10739	VINET	3	1997-11-12 00:00:00.000	1997-12-10 00:00:00.000

- 7 Modify the query to show orders with a *Freight* value greater than or equal to 500.

You can use the greater than (>) and less than (<) symbols in the WHERE statement, as well as other mathematical operators. You'll cover mathematical operators in more depth in: *Lesson 11: Use simple mathematical operators and custom column names.*

Modify the query to:

```
SELECT *
FROM Northwind.dbo.Orders
WHERE Freight >= 500
```

- 8 Execute the query.

The 13 orders with a freight value of 500 or more are shown:

	OrderID	CustomerID	EmployeeID	OrderDate	RequiredDate
1	10372	QUEEN	5	1996-12-04 00:00:00.000	1997-01-01 00:00:00.000
2	10479	RATTC	3	1997-03-19 00:00:00.000	1997-04-16 00:00:00.000
3	10514	ERNSH	3	1997-04-22 00:00:00.000	1997-05-20 00:00:00.000
4	10540	QUICK	3	1997-05-19 00:00:00.000	1997-06-16 00:00:00.000
5	10612	SAVEA	1	1997-07-28 00:00:00.000	1997-08-25 00:00:00.000

- 9 Modify the query to show orders with an *OrderDate* on or later than the 1st of January 1998.

SQL code allows dates to be entered in several different ways (see sidebar).

Modify the query to:

```
SELECT *
FROM Northwind.dbo.Orders
WHERE OrderDate >= '01 Jan 1998'
```

You will cover more advanced date filtering later in the course.

- 10 Execute the query.

All sales on or after the 1st of January 1998 are displayed.

	OrderID	CustomerID	EmployeeID	OrderDate	RequiredDate
1	10808	OLDWO	2	1998-01-01 00:00:00.000	1998-01-29 00:00:00.000
2	10809	WELLI	7	1998-01-01 00:00:00.000	1998-01-29 00:00:00.000
3	10810	LAUGB	2	1998-01-01 00:00:00.000	1998-01-29 00:00:00.000
4	10811	LINOD	8	1998-01-02 00:00:00.000	1998-01-30 00:00:00.000
5	10812	REGGC	5	1998-01-02 00:00:00.000	1998-01-30 00:00:00.000

note

Different ways to enter dates

SQL Server stores dates in the format Year/Month/Day. It will recognize dates in several different formats, but it's advisable to use the format shown in this lesson to avoid any ambiguity.

The following are all valid ways to enter the date:

```
'01 Jan 1998'
'01 January 1998'
'1998/Jan/01'
'1998-01-01'
'1998/01/01'
```