Example of using a Criteria in Query: MS Access

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   1) =, >, <, >= , <= , <> (not equal) comparison operator1

These operators can be used for number, currency, date and text of data type field. The meaning is the same meaning for mathematic operator.

Operator	Meaning	Example use	Result
=	Equal to	= 500	Display only value equal to 500
>	Greater than	>#3/1/14#	Display date start from 3/2/14
<	Less than	< 100	Display all value that less than 100
>=	Greater than or equal to	>=500	Display all value that greater than or equal to 500
<=	Less than or equal to	<=500	Display all value that less than or equal to 500
<>	Not equal to	<>500	Display all value that not equal to 500

   2) Using "Is null"

It is used as a criteria to get the empty data of that field. For example, you want to get a list of task that has not completed or finished. You can put the "Is null" in the criteria on FinishDate field.

Field:	taskid	TaskName	StartDate	FinishDate
Table:	TaskDue	TaskDue	TaskDue	TaskDue
Sort:				
Show:	✓	✓	✓	✓
Criteria:				Is Null
or:				

TaskName	StartDate
Task 1	3/24/2014
Task 2	3/30/2014
Task # 6	4/17/2014

   3) Using "Is not null"

Is Not Null operator works in opposite direction from the "Is Null" operator. We can use to get a list of task completed by put "Is Not Null" on the criteria of FinishDate field as shown in the picture below:

4) Using Date() and Date()-1

Date() is used in criteria to get today date like put in the DueDate field to see if any task due today (4/28/14)

Date()-1 is today date -1 day is yesterday. If today is 4/28/14 then Date() -1 is 4/27/14.

5) Use # for Date data type

We use the pound sign (#) in the front and end of date to get the value from the date data type field. Example below is a criteria to get the list of task start from 3/1/14 until now.

Field:	TaskName	StartDate
Table:	TaskDue	TaskDue
Sort:		
Show:	✓	✓
Criteria:		>=#3/1/2014#
or:		

Query2

	taskid ▾	TaskName ▾	StartDate ▾	FinishDate ▾
	1	Task 1	3/24/2014	
	2	Task 2	3/30/2014	
	6	Task # 6	4/17/2014	
＊	(New)			

6) Create new field in query

A new field can be created with a new name followed by colon(:) and a reference a format to a main field name. for instance, creating a new field name YearOfStart from StartDate field with format as year 2014 and a Project Name as copy of field TaskName.

Field:	taskid	TaskName	StartDate	YearOfStart: Format([StartDate],"yyyy")	Project Name: [taskname]
Table:	TaskDue	TaskDue	TaskDue		TaskDue
Sort:					
Show:	✓	✓	✓	✓	✓
Criteria:					
or:					

Query2

	taskid ▾	TaskName ▾	StartDate ▾	YearOfStart ▾	Project Name ▾
	1	Task 1	3/24/2014	2014	Task 1
	2	Task 2	3/30/2014	2014	Task 2
	3	Task 3	1/27/2014	2014	Task 3
	4	Task 4	2/17/2014	2014	Task 4
	5	Task 5	2/20/2013	2013	Task 5
	6	Task # 6	4/17/2014	2014	Task # 6
＊	(New)				

7) Format month as 1, Jan, January

The previous example shows the year format as 4 digit of year number (2014). The format of month is similar method.

Field:	StartDate	MonthNumber: Format([StartDate],"mm")
Table:	TaskDue	
Sort:		Ascending
Show:	✓	✓
Criteria:		
or:		

Example of month format:

M = 1,2,3,..3

Mm = 01,02,03,….

Mmm = Jan, Feb, Mar, …

Mmmm = January, February, March, …

Sometime we want to sort the month from January to December as 1-12, we can use the format of "mm" to get a number of $01 - 12$ and sort it Ascending or Descending as shown on the above example.

8) Format Day "ddd" for Mon, Tue, Wed, … or "dddd" for Monday, Tuesday, Wednesday,…

9) Format Date as "d" = 1,8,15,27, or "dd" = 01,08,15,27

10) Enter parameter

We use a bracket […] and put a message inside the bracket for instruction what to do.

We put [Enter a year ex '2013'] to tell use to enter a year in the YearStart field that has a format of 4 digit year (2013).

Field:	TaskName	StartDate	YearStart: Format([StartDate],"yyyy")
Table:	TaskDue	TaskDue	
Sort:			Ascending
Show:	✓	✓	✓
Criteria:			[Enter a year ex '2013']
or:			

Enter Parameter Value

Enter a year ex '2013'

OK   Cancel

Query2

TaskNam ▾	StartDate ▾	YearStart ▾
Task # 6	4/17/2014	2014
Task 5	2/20/2014	2014
Task 2	3/30/2014	2014
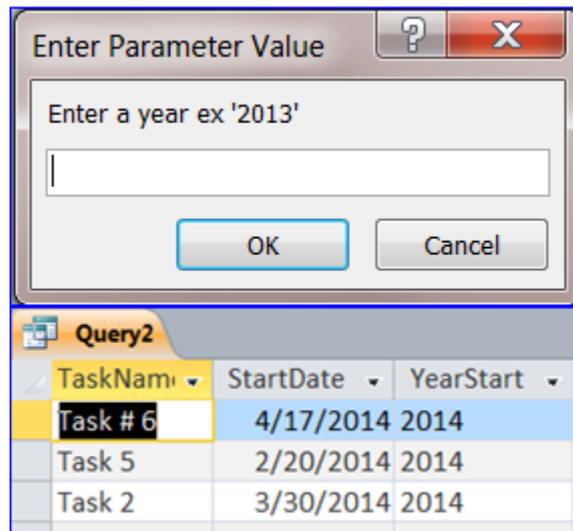
We can use two separate parameters on two separate fields in criteria. For instance, we want to get list of task that started and finished from the specific date and we want the users to enter their own date. Below is an example of using two parameter on date fields.

a. Enter two parameters on StartDate and FinishDate field

Field:	TaskName	StartDate	FinishDate
Table:	TaskDue	TaskDue	TaskDue
Sort:			
Show:	✓	✓	✓
Criteria:		>=[Enter a start date]	<=[Enter a finish date]
or:			

b. Enter a year number with a 4-digit number format as '2013'
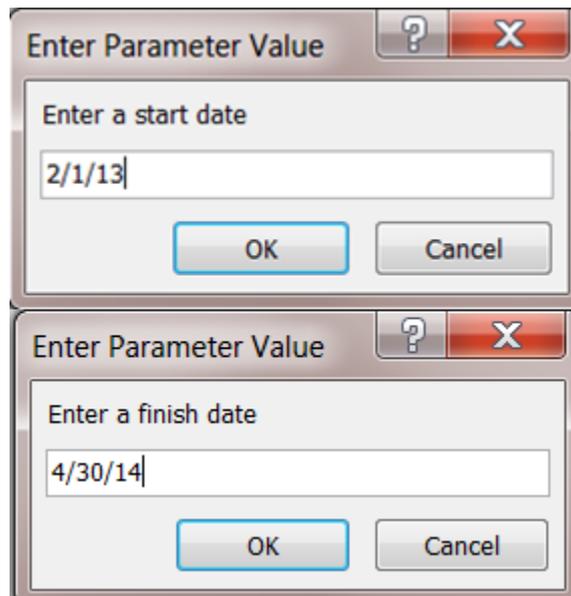
c. Get the result

11) "Like" operator

Like is mostly used in the text data field and follow by question mark (?) and the asterisk or star (*) in the front or back or both front and back of the keyword. The question mark (**?**) represents a single character only.
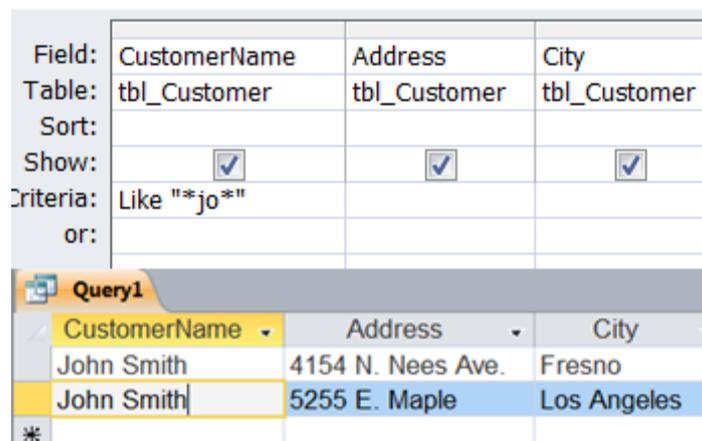
Like can also be used in the parameter entry as example below:

a. Enter like with parameter on the criteria

Field:	CustomerName			Address
Table:	tbl_Customer			tbl_Customer
Sort:				
Show:	✓			✓
Criteria:	Like [Enter a name start with] & "*"			
or:				

b. Enter "m" in the parameter

Enter Parameter Value   ?   X

Enter a name start with

m

OK   Cancel

c. Get result of customer list with name starts with "M" only

Query1

CustomerName	Address
Maple Church	3435 N. Maple Ave.
Masters Bob	1902 N. Phillips
Macy's Department	5216 Main St

12) "AND" operator

Field:	CustomerName	Address	State
Table:	tbl_Customer	tbl_Customer	tbl_Customer
Sort:			
Show:	✓	✓	✓
Criteria:	Like "M*"		"CA"
or:			

AND operator can be used for text, number and date field. The result of AND will be narrowed down to match the parameter in the criteria. AND can be used inside one field or on two or more fields. AND can be used by entering more than one criteria in the same line, but different field name as show below:

Query1

CustomerName	Address	State
Maple Church	3435 N. Maple Ave.	CA
Masters Bob	1902 N. Phillips	CA
Macy's Department	5216 Main St	CA

13) "OR" operator

Field:	CustomerName	Address	State
Table:	tbl_Customer	tbl_Customer	tbl_Customer
Sort:			
Show:	✓	✓	✓
Criteria:	Like "M*"		
or:			"CO"

OR operator can be used for text, number and date field. The result of OR will be combined from the result of either match the 1ˢᵗ criteria or the 2ⁿᵈ criteria. It can be used inside one field or on two or more fields. OR can be used by entering more than one criteria in different field in one query, but must entered in a different line for each criteria as show below:

Query1

CustomerName ▾	Address ▾	State ▾
Maple Church	3435 N. Maple Ave.	CA
Masters Bob	1902 N. Phillips	CA
Macy's Department	5216 Main St	CA
Department Of Defe	Clasified	CO

14) Between…..And

The Between…And can be used in the text, number and date field. The syntax of operator is like $>=$ x $<=$

Criteria Entry	Result
Between 1 and 100	Display a list that has number from 1 to 100
Between #1/1/14# and #12/31/14#	Display a list that has a date start from1/1/14 to 12/31/14 or whole year of 2014
Between "M*" And "T*"	Display a list of name that start with letter M to letter T

It can be used with the parameter entry from the user as shown on the example below:

Field:	TaskName	StartDate
Table:	TaskDue	TaskDue
Sort:		
Show:	✓	✓
Criteria:		Between [Enter a begin date] And [Enter the end date]
or:		

Enter Parameter Value

Enter a begin date

| |

OK   Cancel

15) Link to field on the opened form

The criteria of field in the query can be linked to that field in the form. The form that linked must be opened in order to have the query works. For instance, we need a query to show a record of the customer that shows in the Customer form, the criteria in the Customer_id will be "[Forms]![Customer]![Customer_id]." The query links the customer record to Customer form by Customer_id as screen shot below:

Customer	Query1
CustomerID	3
Customer Name	Maple Church
Address	3435 N. Maple Ave.
City	Fresno
State	CA
Zip	93720
Customer Phone	(559) 767-5665
Email	
Customer Type	Non-Profit
	Save

Field:	Customer_ID		CustomerName	Address
Table:	tbl_Customer		tbl_Customer	tbl_Customer
Sort:				
Show:	✓		✓	✓
Criteria:	[Forms]![Customer]![Customer_ID]			
or:				

Customer	Query1		
Customer_ID ▾	**CustomerName** ▾	**Address** ▾	**State** ▾
3	Maple Church	3435 N. Maple Ave.	CA
* (New)			

16) Rename field name:
A field name can changed in the query. The format of changing new name is a new name followed by colon (:) and the old field name as an example below of changing a field name CustomerName to Customer.

Field:	CustomerName	Customer: [customername]	State
Table:	tbl_Customer	tbl_Customer	tbl_Customer
Sort:			
Show:	✓	✓	✓
Criteria:			
or:			

Query1		
CustomerName ▾	**Customer** ▾	**State** ▾
Barney Rubble	Barney Rubble	CA
IRS	IRS	CA
Maple Church	Maple Church	CA
Kaiser Permanente	Kaiser Permanente	TX
Masters Bob	Masters Bob	CA