INTRODUCTION TO QUERY CRITERIA

A criterion is similar to a formula — it is a string that may consist of field references, operators, and constants. Query criteria are also referred to as expressions in Access.

The following tables shows some sample criteria and explains how they work.

Criteria	Description
>25 and <50	This criterion applies to a Number field, such as Price or UnitsInStock. It includes only those records where the Price or UnitsInStock field contains **a value greater than 25 and less than 50**.
DateDiff ("yyyy", [BirthDate], Date()) > 30	This criterion applies to a Date/Time field, such as BirthDate. Only records where **the number of years between a person's birthdate and today's date is greater than 30** are included in the query result.
Is Null	This criterion can be applied to any type of field to show records where **the field value is null**.

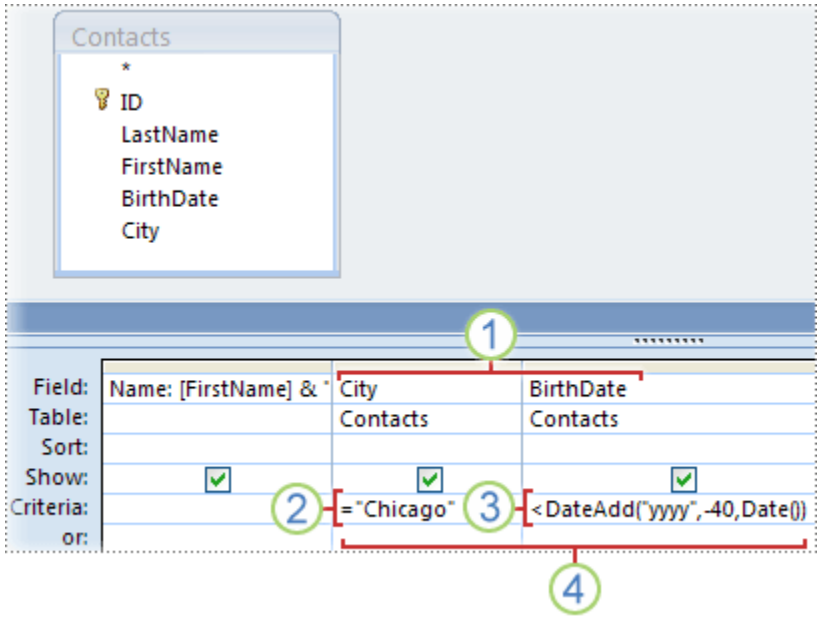
As you can see, criteria can look very different from each other, depending on the data type of the field to which they apply and your specific requirements. Some criteria are simple, and use basic operators and constants. Others are complex, and use functions, special operators, and include field references.

This topic lists several commonly used criteria by data type. If the examples given in this topic do not address your specific needs, you might need to write your own criteria. To do that, you must first familiarize yourself with the full list of functions, operators, special characters, and the syntax for expressions referring to fields and literals.

Here, you will see where and how you add the criteria. To add a criteria to a query, you must open the query in Design view. You then identify the fields for which you want to specify criteria. If the field is not already in the design grid, you add it by either dragging it from the query design window to the field grid, or by double-clicking the field (Double-clicking the field automatically adds it to the next empty column in the field grid.). Finally, you type the criteria in the **Criteria** row

Criteria that you specify for different fields in the **Criteria** row are combined by using the AND operator. In other words, the criteria specified in the City and BirthDate fields are interpreted like this:

City = "Chicago" AND BirthDate < DateAdd (" yyyy ", -40, Date())



1. The City and BirthDate fields include criteria.

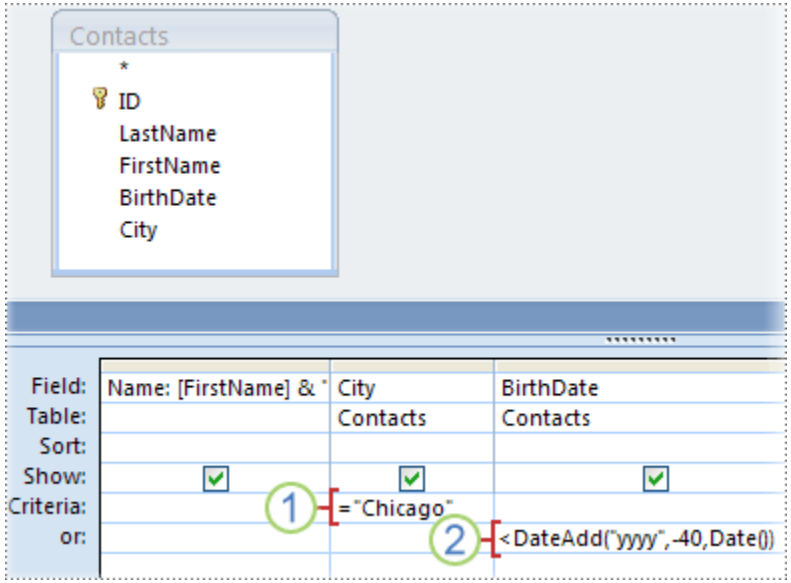
2. Only records where the value of the City field is Chicago will satisfy this criterion.

3. Only records of those who are at least 40 years old will satisfy this criterion.

4. Only records that meet both criteria will be included in the result.

What if you want only one of these conditions to be met? In other words, if you have alternate criteria, how do you enter them?

If you have alternate criteria, or two sets of independent criteria where it is sufficient to satisfy one set, you use both the **Criteria** and the **or** rows in the design grid.



1. The City criterion is specified in the Criteria row.

2. The BirthDate criterion is specified in the or row.

Criteria specified in the **Criteria** and **or** rows are combined using the OR operator, as shown below:

City = "Chicago" OR BirthDate < DateAdd (" yyyy ", -40, Date())

If you need to specify more alternatives, use the rows below the **or** row.

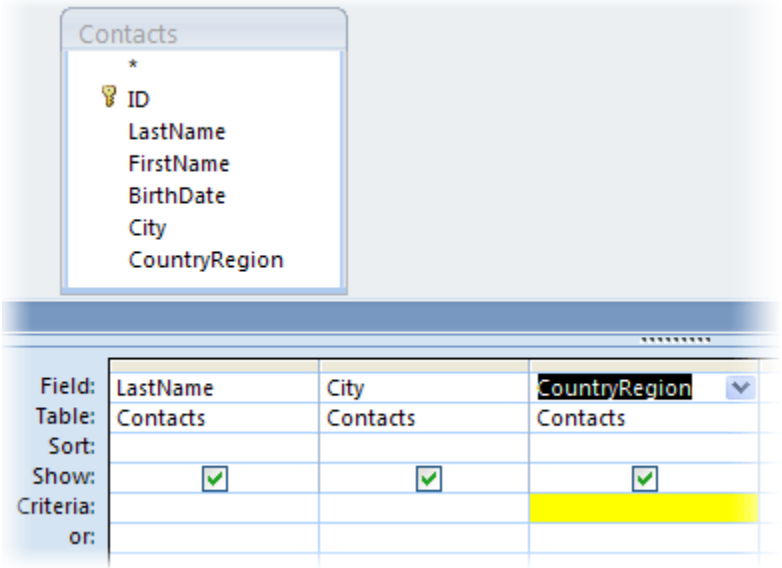
Before you continue with the examples, note the following:

- If the criteria is temporary or changes often, you can filter the query result instead of frequently modifying the query criteria. A filter is a temporary criterion that changes the query result without altering the design of the query. For more information about filters, see the article Filter: Limit the number of records in a view.
- If the criteria fields don't change, but the values you are interested in do change frequently, you can create a parameter query. A parameter query prompts the user for field values, and then uses those values to create the query criteria. For more information about parameter queries, see the article Use parameters in queries and reports.

Criteria for Text, Memo, and Hyperlink fields

Note: Beginning in Access 2013, Text fields are now named **Short Text** and Memo fields are now named **Long Text.**

The following examples are for the CountryRegion field in a query that is based on a table that stores contacts information. The criterion is specified in the **Criteria** row of the field in the design grid.



A criterion that you specify for a Hyperlink field is, by default, applied to the display text portion of the field value. To specify criteria for the destination Uniform Resource Locator (URL) portion of the value, use the **HyperlinkPart** expression. The syntax for this expression is

as follows: **HyperlinkPart([Table1].[Field1],1) = "http://www.microsoft.com/"**, where Table1 is the name of the table containing the hyperlink field, Field1 is the hyperlink field, and http://www.microsoft.com is the URL you want to match.

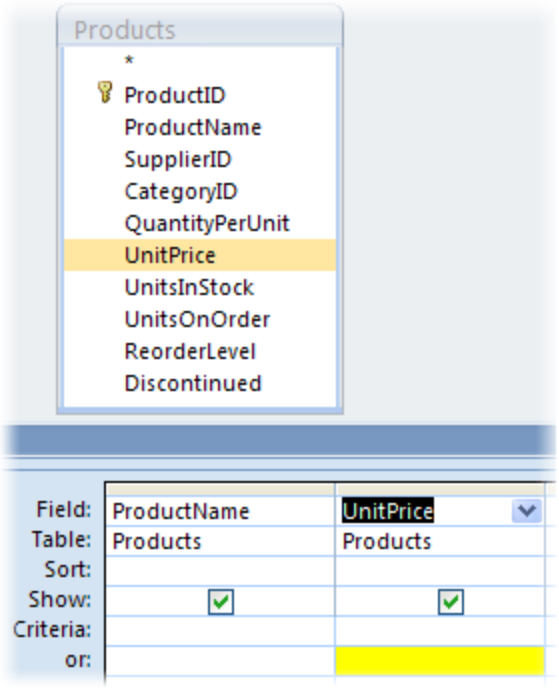
To include records that...	Use this criterion	Query result
Exactly match a value, such as China	"China"	Returns records where the CountryRegion field is set to China.
Do not match a value, such as Mexico	Not "Mexico"	Returns records where the CountryRegion field is set to a country/region other than Mexico.
Begin with the specified string, such as U	Like U*	Returns records for all countries/regions whose names start with "U", such as UK, USA, and so on. **Note:** When used in an expression, the asterisk (*****) represents any string of characters — it is also called a wildcard character. For a list of such characters, see the article Access wildcard character reference.
Do not begin with the specified string, such as U	Not Like U*	Returns records for all countries/regions whose names start with a character other than "U".
Contain the specified string, such as Korea	Like "*Korea*"	Returns records for all countries/regions that contain the string "Korea".
Do not contain the specified string, such as Korea	Not Like "*Korea*"	Returns records for all countries/regions that do not contain the string "Korea".
End with the specified string, such as "ina"	Like "*ina"	Returns records for all countries/regions whose names end in "ina", such as China and Argentina.
Do not end with the specified string, such as "ina"	Not Like "*ina"	Returns records for all countries/regions that do not end in "ina", such as China and Argentina.

To include records that...	Use this criterion	Query result
Contain null (or missing) values	Is Null	Returns records where there is no value in the field.
Do not contain null values	Is Not Null	Returns records where the value is not missing in the field.
Contain zero-length strings	"" (a pair of quotes)	Returns records where the field is set to a blank (but not null) value. For example, records of sales made to another department might contain a blank value in the CountryRegion field.
Do not contain zero-length strings	Not ""	Returns records where the CountryRegion field has a nonblank value.
Contains null values or zero-length strings	"" Or Is Null	Returns records where there is either no value in the field, or the field is set to a blank value.
Is not empty or blank	Is Not Null And Not ""	Returns records where the CountryRegion field has a nonblank, non-null value.
Follow a value, such as Mexico, when sorted in alphabetical order	>= "Mexico"	Returns records of all countries/regions, beginning with Mexico and continuing through the end of the alphabet.
Fall within a specific range, such as A through D	Like "[A-D]*"	Returns records for countries/regions whose names start with the letters "A" through "D".
Match one of two values, such as USA or UK	"USA" Or "UK"	Returns records for USA and UK.
Contain one of the values in a list of values	In("France", "China", "Germany", "Japan")	Returns records for all countries/regions specified in the list.

To include records that...	Use this criterion	Query result
Contain certain characters at a specific position in the field value	Right([CountryRegion], 1) = "y"	Returns records for all countries/regions where the last letter is "y".
Satisfy length requirements	Len([CountryRegion]) > 10	Returns records for countries/regions whose name is more than 10 characters long.
Match a specific pattern	Like "Chi??"	Returns records for countries/regions, such as China and Chile, whose names are five characters long and the first three characters are "Chi". **Note:** The characters **?** and **_**, when used in an expression, represent a single character — these are also called wildcard characters. The character **_** cannot be used in the same expression with the **?** character, nor can it be used in an expression with the ***** wildcard character. You may use the wildcard character **_** in an expression that also contains the **%** wildcard character.

Criteria for Number, Currency, and AutoNumber fields

The following examples are for the UnitPrice field in a query that is based on a table that stores products information. The criterion is specified in the **Criteria** row of the field in the query design grid.



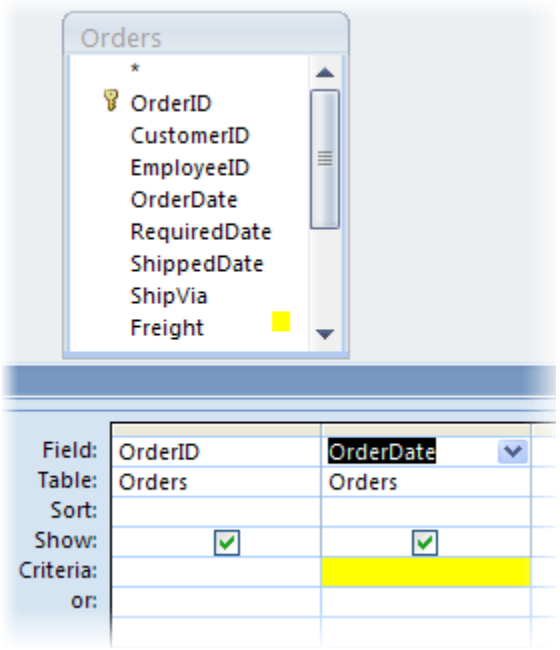
To include records that...	Use this criterion	Query Result
Exactly match a value, such as 100	100	Returns records where the unit price of the product is $100.
Do not match a value, such as 1000	Not 1000	Returns records where the unit price of the product is not $1000.
Contain a value smaller than a value, such as 100	< 100 <= 100	Returns records where the unit price is less than $100 (<100). The second expression (<=100) displays records where the unit price is less than or equal to $100.

To include records that...	Use this criterion	Query Result
Contain a value larger than a value, such as 99.99	>99.99 >=99.99	Returns records where the unit price is greater than $99.99 (>99.99). The second expression displays records where the unit price is greater than or equal to $99.99.
Contain one of the two values, such as 20 or 25	20 or 25	Returns records where the unit price is either $20 or $25.
Contain a value that falls with a range of values	>49.99 and <99.99 -or- Between 50 and 100	Returns records where the unit price is between (but not including) $49.99 and $99.99.
Contain a value that falls outside a range	<50 or >100	Returns records where the unit price is not between $50 and $100.
Contain one of many specific values	In(20, 25, 30)	Returns records where the unit price is either $20, $25, or $30.
Contain a value that ends with the specified digits	Like "*4.99"	Returns records where the unit price ends with "4.99", such as $4.99, $14.99, $24.99, and so on. **Note:** The characters ***** and **%**, when used in an expression, represent any number of characters — these are also called wildcard characters. The character **%** cannot be used in the same expression with the ***** character, nor can it be used in an expression with the **?** wildcard character. You may use the wildcard character **%** in an expression that also contains the _ wildcard character.
Contain null null (or missing) values	Is Null	Returns records where no value is entered in the UnitPrice field.

To include records that...	Use this criterion	Query Result
Contain non-null values	Is Not Null	Returns records where the value is not missing in the UnitPrice field.

Criteria for Date/Time fields

The following examples are for the OrderDate field in a query based on a table that stores Orders information. The criterion is specified in the **Criteria** row of the field in the query design grid.



To include records that ...	Use this criterion	Query result
Exactly match a value, such as 2/2/2006	#2/2/2006#	Returns records of transactions that took place on Feb 2, 2006. Remember to surround date values with the # character so that Access can distinguish between date values and text strings.
Do not match a value, such as 2/2/2006	Not #2/2/2006#	Returns records of transactions that took place on a day other than Feb 2, 2006.
Contain values that fall before a certain date, such as 2/2/2006	< #2/2/2006#	Returns records of transactions that took place before Feb 2, 2006. To view transactions that took place on or before this date, use the **<=** operator instead of the **<** operator.
Contain values that fall after a certain date, such as 2/2/2006	> #2/2/2006#	Returns records of transactions that took place after Feb 2, 2006. To view transactions that took place on or after this date, use the **>=** operator instead of the **>** operator.
Contain values that fall within a date range	>#2/2/2006# and <#2/4/2006#	Returns records where the transactions took place between Feb 2, 2006 and Feb 4, 2006. You can also use the **Between** operator to filter for a range of values, including the end points. For example, Between #2/2/2006# and #2/4/2006# is the same as >=#2/2/2006# and <=#2/4/2006# .

To include records that ...	Use this criterion	Query result
Contain values that fall outside a range	<#2/2/2006# or >#2/4/2006#	Returns records where the transactions took place before Feb 2, 2006 or after Feb 4, 2006.
Contain one of two values, such as 2/2/2006 or 2/3/2006	#2/2/2006# or #2/3/2006#	Returns records of transactions that took place on either Feb 2, 2006 or Feb 3, 2006.
Contain one of many values	In (#2/1/2006#, #3/1/2006#, #4/1/2006#)	Returns records where the transactions took place on Feb 1, 2006, March 1, 2006, or April 1, 2006.
Contain a date that falls in a specific month (irrespective of year), such as December	DatePart("m", [SalesDate]) = 12	Returns records where the transactions took place in December of any year.
Contain a date that falls in a specific quarter (irrespective of year), such as the first quarter	DatePart("q", [SalesDate]) = 1	Returns records where the transactions took place in the first quarter of any year.
Contain today's date	Date()	Returns records of transactions that took place on the current day. If today's date is 2/2/2006, you see records where the OrderDate field is set to Feb 2, 2006.
Contain yesterday's date	Date()-1	Returns records of transactions that took place the day before the current day. If today's date is 2/2/2006, you see records for Feb 1, 2006.

To include records that ...	Use this criterion	Query result
Contain tomorrow's date	Date() + 1	Returns records of transactions that took place the day after the current day. If today's date is 2/2/2006, you see records for Feb 3, 2006.
Contain dates that fall during the current week	DatePart("ww", [SalesDate]) = DatePart("ww", Date()) and Year([SalesDate]) = Year(Date())	Returns records of transactions that took place during the current week. A week starts on Sunday and ends on Saturday.
Contain dates that fell during the previous week	Year([SalesDate])* 53 + DatePart("ww", [SalesDate]) = Year(Date())* 53 + DatePart("ww", Date()) - 1	Returns records of transactions that took place during the last week. A week starts on Sunday and ends on Saturday.
Contain dates that fall during the following week	Year([SalesDate])* 53+DatePart("ww", [SalesDate]) = Year(Date())* 53+DatePart("ww", Date()) + 1	Returns records of transactions that will take place next week. A week starts on Sunday and ends on Saturday.
Contain a date that fell during the last 7 days	Between Date() and Date()-6	Returns records of transactions that took place during the last 7 days. If today's date is 2/2/2006, you see records for the period Jan 24, 2006 through Feb 2, 2006.
Contain a date that belongs to the current month	Year([SalesDate]) = Year(Now()) And Month([SalesDate]) = Month(Now())	Returns records for the current month. If today's date is 2/2/2006, you see records for Feb 2006.
Contain a date that belongs to the previous month	Year([SalesDate])* 12 + DatePart("m", [SalesDate]) = Year(Date())* 12 + DatePart("m", Date()) - 1	Returns records for the previous month. If today's date is 2/2/2006, you see records for Jan 2006.
Contain a date that belongs to the next month	Year([SalesDate])* 12 + DatePart("m", [SalesDate]) = Year(Date())* 12 + DatePart("m", Date()) + 1	Returns records for the next month. If today's date is 2/2/2006, you see records for Mar 2006.

To include records that ...	Use this criterion	Query result
Contain a date that fell during the last 30 or 31 days	Between Date( ) And DateAdd("M", -1, Date( ))	A month's worth of sales records. If today's date is 2/2/2006, you see records for the period Jan 2, 2006. to Feb 2, 2006
Contain a date that belongs to the current quarter	Year([SalesDate]) = Year(Now()) And DatePart("q", Date()) = DatePart("q", Now())	Returns records for the current quarter. If today's date is 2/2/2006, you see records for the first quarter of 2006.
Contain a date that belongs to the previous quarter	Year([SalesDate])*4+DatePart("q",[SalesDate]) = Year(Date())*4+DatePart("q",Date())- 1	Returns records for the previous quarter. If today's date is 2/2/2006, you see records for the last quarter of 2005.
Contain a date that belongs to the next quarter	Year([SalesDate])*4+DatePart("q",[SalesDate]) = Year(Date())*4+DatePart("q",Date())+1	Returns records for the next quarter. If today's date is 2/2/2006, you see records for the second quarter of 2006.
Contain a date that falls during the current year	Year([SalesDate]) = Year(Date())	Returns records for the current year. If today's date is 2/2/2006, you see records for the year 2006.
Contain a date that belongs to the previous year	Year([SalesDate]) = Year(Date()) - 1	Returns records of transactions that took place during the previous year. If today's date is 2/2/2006, you see records for the year 2005.
Contain a date that belongs to next year	Year([SalesDate]) = Year(Date()) + 1	Returns records of transactions with next year's date. If today's date is 2/2/2006, you see records for the year 2007.
Contain a date that falls between Jan 1 and today (year to date records)	Year([SalesDate]) = Year(Date()) and Month([SalesDate]) <= Month(Date()) and Day([SalesDate]) <= Day (Date())	Returns records of transactions with dates that fall between Jan 1 of the current year and today. If today's date is 2/2/2006, you see records for the period Jan 1, 2006 to to 2/2/2006.

To include records that ...	Use this criterion	Query result
Contain a date that occurred in the past	< Date()	Returns records of transactions that took place before today.
Contain a date that occurrs in the future	> Date()	Returns records of transactions that will take place after today.
Filter for null (or missing) values	Is Null	Returns records where the date of transaction is missing.
Filter for non-null values	Is Not Null	Returns records where the date of transaction is known.

Criteria for Yes/No fields

As an example, your Customers table has a Yes/No field named Active, used to indicate whether a customer's account is currently active. The following table shows how values entered in the Criteria row for a Yes/No field are evaluated.

Field value	Result
Yes, True, 1, or -1	Tested for a Yes value. A value of 1 or -1 is converted to "True" in the Criteria row after you enter it.
No, False, or 0	Tested for a No value. A value of 0 is converted to "False" in the Criteria row after you enter it.
No value (null)	Not tested
Any number other than 1, -1, or 0	No results if it's the only criteria value in the field
Any character string other than Yes, No, True, or False	Query fails to run due to Data type mismatch error

Criteria for other fields

Attachments In the **Criteria** row, type **Is Null** to include records that do not contain any attachments. Type **Is Not Null** to include records that contain attachments.

Lookup fields There are two types of Lookup fields: those that look up values in an existing data source (by using a foreign key), and those that are based on a list of values specified when the Lookup field is created.

Lookup fields that are based on a list of specified values are of the Text data type, and valid criteria are the same as for other text fields.

The criteria you can use in a Lookup field based on values from an existing datasource depend on the data type of the foreign key, rather than the data type of the data being looked up. For example, you may have a Lookup field that displays Employee Name, but uses a foreign key that is of the Number data type. Because the field stores a number instead of text, you use criteria that work for numbers; that is, **>2**.

If you do not know the data type of the foreign key, you can inspect the source table in Design view to determine the data types of the field. To do this: