

Access Queries 1: Select Queries & Criteria



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1.0 hour

Filters.....	3
Filter with the Filter Arrow	3
Filter by Selection	3
Queries.....	4
Create a Query in the Design View.....	4
Custom Sort Orders	5
Individual Fields.....	5
* Field	5
Create Query with Simple Query Wizard	6
Using Multiple Criteria for Exact Values	6
OR (multiple rows)	6
AND (single row).....	6
ANDs and ORs.....	7
Enter Data Prompt/Missing Parameter Value.....	7
Using Multiple Criteria for a Range of Values	8
Join Fields with &.....	8



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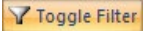
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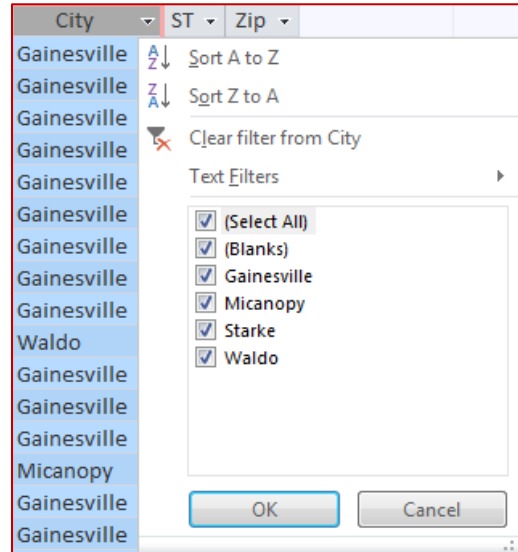
Filters

The Tables and Queries have filter arrows next to each column heading in the Datasheet view. The filter tools allow you to create a temporary "query" based on criteria you set.

If we did not want to see the people in Gainesville uncheck "Gainesville" and click OK. Access will filter out, hide, the records all of the Gainesville records. You can filter by as many fields as you would like, and Access will continue to limit the displayed dataset based on your filters.

The filtered fields show a small funnel next to in the column heading, and **Filtered** appears next to the navigation buttons at the bottom of the window.

Click on **Filtered** at the bottom of the table to clear the filter. Use this button to toggle between your last filter and all the records, or use the  button on in the **Sort & Filter** section of the **Home** tab.



Filter with the Filter Arrow

- 1. Open Table Patients (76 records)
- 2. Click on Filter Arrow for City field
 - Uncheck Gainesville, OK (21 records)

Filter by Selection

- 1. In the City column, Right-click on a "Micanopy"
 - Choose **Does Not Equal "Micanopy"** (12 records)
- 2. Press the Toggle Filter button on the Home tab (76 records)
- 3. In the Address column, Select and then Right-click on an "Ave"
 - Choose **Contains "Ave"** (13 records)
- 4. Close and Save with only the 13 records showing
- 5. Open Table Patients (76 records)
- 6. Toggle Filter (13 records)

If you save the table, Access will remember the most current filter. When you open the database object, toggle the filter from the home tab, or the navigation area at the bottom of the window.

As soon as you make a new filter, Access will forget about the previous one. To create a 'permanent' filter, make a Query.

Queries

The top half of the query window shows the tables and queries used as your record source. If there are relationships already set, you will see the tables are connected. If not, you can drag and drop from one record source to another.

The bottom half of the Query window shows the fields for the dataset of your query.

To add a field to the bottom half of the screen, you can:

- Click and drag the field name from the Table in the top half of the window to the field row
 - Use the Shift key to select multiple connected fields
 - Use the Ctrl key to select/unselect specific field
- Double-click on the field from the table (Access will place it at the end of all the fields)
- Choose the field name from the drop-down list provided
- The * field at the top of the tables and queries, will select all the fields in the record

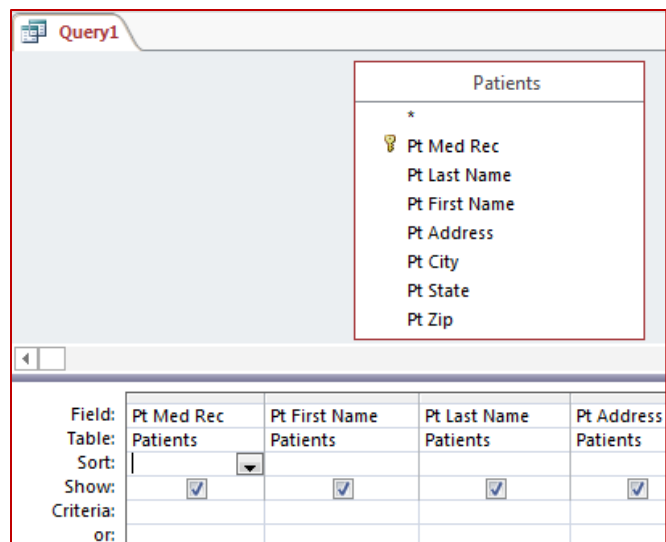
To delete a field from the bottom half of the screen, you can:

- Erase the field name from the field line with the Backspace or Delete key
- Use the Delete Column button in the Design tab
- Right-click on the selection bar at the top of the field and choose Cut

Create a Query in the Design View



1. From the Create tab choose Query Design
2. Add the Table Patients and close the Show Table window
3. Add the fields below using different methods
 - Double-click *Pt Med Rec #*
 - Double-click *Pt Last Name*
 - Drag and Drop *Pt First Name* onto the *Pt Last Name* in the bottom of the Query, this should put it before Pt Last Name
 - Change next blank column/field to Pt Address from drop down list
 - Click on Pt City, Ctrl-click on Pt Zip
 - ~ This will pick up Pt City and Pt Zip
 - ~ Click in an empty space next to table to drop selection
 - Click on City, shift click on Zip
 - ~ This will pick up Pt City, Pt State, and Pt Zip
 - Drag all three to next blank



Custom Sort Orders

Individual Fields

By default, Access sorts the dataset by the Primary Key field.



1. View the Datasheet
2. Set a Sort Order
 - Sort Ascending by Pt Last Name
 - Sort Descending by Pt City

3. Clear Sort

4. In the Design View, set a Custom Sort Order

- Sort by Pt Last Name Ascending
- Sort by Pt City Descending

Field:	Pt City	Pt Med Rec	Pt First Name	Pt Last Name
Table:	Patients	Patients	Patients	Patients
Sort:	Descending			Ascending
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:				
or:				

~ If you double-click in the Sort row, Access will toggle through the options

5. View the Datasheet

- When we run the query, Access sorts by the Pt Last Name and then the Pt City

6. In the Design view, move the Pt City field to the front of the fields

7. View the Datasheet

- The data is sorted by Pt City and then Pt Last Name
- If desired, you can move the Pt City in the datasheet view, without changing the design

8. Close and save as **Patients Sort 1**

* Field



1. Create Query in Design view, Patients
2. Move * field down (double-click or drag)
3. Move down Pt City and set the sort to Descending
4. In the Datasheet view, notice two City Fields (Patient.Pt City and Field0)
5. In the Design View, turn off the **Show** option for the Pt City
6. Move down Pt Last Name field and set the sort order to Ascending, turn off the **Show** option
7. Close and save as **Patients Sort 2**

Field:	Pt Med Rec	Pt City	Pt Last Name
Table:	Patients	Patients	Patients
Sort:		Descending	Ascending
Show:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Criteria:			
or:			

Create Query with Simple Query Wizard

- 1. From the Create tab choose Query Wizard
- 2. Select the Simple Query Wizard
- 3. Use the table patients and add all the fields (next)
- 4. Name the Query as **Patients Query** and choose **Modify the design view** (finish)
 - Notice brackets around field names
- 5. Close Query

- 6. Right-click on Patients Query in the Navigation Pane and Choose Design View
 - Notice brackets are gone
 - ~ The brackets are necessary when we are building expressions
 - Set a Criteria for the Pt City field to be "Waldo"
- 7. Go to the Datasheet view..... (9 records)
- 8. Go to the SQL View
 - SQL = Structured Query Language. This is the most common language for building queries within relational databases. We will not work in the code.
 - `SELECT Patients.[Pt Med Rec], Patients.[Pt Last Name], Patients.[Pt First Name], Patients.[Pt Address], Patients.[Pt City], Patients.[Pt State], Patients.[Pt Zip]`
`FROM Patients WHERE (((Patients.[Pt City])="Waldo"));`

Using Multiple Criteria for Exact Values

OR (multiple rows)

- 1. Set the first line of the Criteria for Pt City to Waldo
- 2. Set the second line of the Criteria (OR) to Starke
- 3. Go to the Datasheet view..... (12 records)
- 4. Clear the criteria lines

CITY	ZIP
Patients	Patients
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
"Gainesville"	"32608"

AND (single row)

- 1. In the Design view, set the criteria for Pt Zip to "32608"
- 2. Go to the Datasheet view..... (12 records)
 - 32608 is a Gainesville zip code, but this is showing records for Micanopy
- 3. In the Design view, set the criteria for Pt City to "Gainesville"
 - Stay on the same line as the 32608 criteria under Pt Zip
- 4. Go to the Datasheet view..... (9 records)

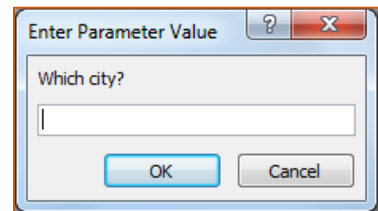
ANDs and ORs

CITY	ZIP
Patients	Patients
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
"Gainesville"	"32608"
"Waldo"	

1. In the Design view, on the OR line, set the criteria for Pt City to "Waldo"
 - Access sees: (Gainesville AND 32608) OR Waldo
2. Go to the Datasheet view..... (18 records)
3. Press the **F12** key to **Save As...**
4. Save as **Patients Criteria - Exact** and close the Query

Enter Data Prompt/Missing Parameter Value

Instead of changing the criteria every time we want a different set of data, we can set Access to prompt us for criteria by creating a missing parameter value. You will see the Enter Parameter Value window whenever a field is missing, so sometimes this highlights errors, but here we are doing it on purpose.



To create our own field, use the brackets around the text you want to see in the dialog box, be sure not to use a field name that already exists in your data set.

1. Create Query in Design view using the table Patients
2. Double-click on title of the Patients table to select everything in the table except the *
3. Drag the selection of fields into the bottom of the window
4. Set Criteria for Pt City to [Which city?]
 - Use the brackets
5. Go to the Datasheet view
6. Because there is not a field called **Which city?** Access will open a dialog box asking for the parameter value. Use the Refresh button on the Home tab to pull in a new set. Spelling counts!
 - Gainesville (55 records)
 - Micanopy (9 records)
 - Waldo (9 records)
 - Starke (3 records)
7. Close and Save as **Patients by City**
8. Open Query to test missing parameter value

Field:	CITY
Table:	Patients
Sort:	
Show:	<input checked="" type="checkbox"/>
Criteria:	[Which city?]
or:	

Examples

- [Enter the city you wish to view]
- Between [Enter First Date] and [Enter Last Date]
- Like [First letters of Last Name]&"*"

Using Multiple Criteria for a Range of Values

- 1. Create Query in Design view using the table Patients
- 2. Double-click on title of the Patients table to select everything in the table except the *
- 3. Drag the selection of fields into the bottom of the window

Clear each criteria before entering a new one.

- 4. Set the following Criteria for Pt Zip and view the Datasheet
 - >=32600 **OR** <= 32699 (76 records)
 - >=32600 **AND** <= 32699 (51 records)
 - **Between** 32600 **And** 32699 (51 records)
- 5. Wild Cards criteria for Pt Last Name: (* = Multiple Characters; ? = One Character)
 - j* (Like "j*") (10 records) Begins with J
 - *s (Like "*s")..... (21 records) Ends with S
 - j*s (Like "j*s") (6 records) Begins J & Ends S
 - *e* (Like "*e*") (42 records) Contains E
 - Like "?e*" (11 records) 2nd char is an E
- 6. Set Criteria for Pt Address
 - Like *box* (14 records)
 - Like *box * (12 records) with space
 - Not Like *box * (64 records)
- 7. Set all three of the criteria below
 - Pt Address: Not Like *box *
 - Pt Zip: Between 32600 and 32699
 - Pt Last Name: Like *e* (21 records)
- 8. Save as **Patients Criteria - Range**

Join Fields with &

- 1. Create Query in Design view, using the table Patients
- 2. In the first blank field blank type: [Pt First Name]&[Pt Last Name]
- 3. View Datasheet view
 - Title of column is Expr1 (expression)
 - No Spacing between the fields
- 4. In the Design view, right-click on expression and choose ZOOM
 - If desired, click on the **Font** button to make the text larger
 - Change the expression to **Patient Name: [Pt First Name] & " " & [Pt Last Name]**
- 5. Go to the Datasheet view
- 6. Close and save as **Patient Names**