PLEASE SILENCE ALL CELL PHONES

Access Queries

Instructor: Sean Luster

Introduction

Queries help Access users to make sense of their records, to search for particular information, to update or delete large numbers of entries, and to interact (through user prompts) with the data. This course is intended to examine Queries in detail to help the student become comfortable creating and managing this important feature of MS Access.

Types of Queries

Select Query

The simplest and most common query, it finds and displays the data searched for from one or more tables or queries.

Parameter Query

Prompts the user for specific information every time the query is run.

Crosstab Query

Summarizes data in a table format that makes it easy to read and compare information.

The following queries perform some task (aka Action Queries):

Make-Table Query

Creates a new table from all or part of the data in one or more tables. Useful for backing up and exporting information.

Append Query

Appends or adds selected records from one table to another table. Useful for importing information into a table.

Delete Query

Deletes selected records from one or more tables. Useful for removing duplicates from tables.

Update Query

Updates selected information in a table. For example, you could raise the price on all trips to Europe by 15 percent.

Union Query

Combines fields from two or more tables or queries into one field and is written directly in SQL.

Create a Query

Creating a basic query in design view

1. Click the Queries icon
2. Double-click the "Create query in Design view" icon
3. Select the table or query you want to work off of and left-click Add
4. Double-click each field you want to include from the field list
5. Enter the criteria you want met for each field
6. Click the Sort box for each field and select sort order
7. Close the query window
8. Choose to save the query and give it a name

Criteria Operators

=	=”bob”	Finds records equal to bob
<>	<>”bob”	Finds records not equal to bob
<	<4	Finds records valued at less than 4
>	>4	Finds records whose value is greater than 4
<=	<=4	Finds records whose value is less than or equal to 4
>=	>=	Finds records whose value is greater than or equal to 4
BETWEEN	BETWEEN 1/1/01 AND 1/15/01	Finds records between the given values
LIKE	LIKE “S*”	Finds text beginning with the letter S (wildcard ‘*’)
NOT	NOT “bob”	Finds records not equal to bob
IS NULL	IS NULL	Finds empty records
IS NOT NULL	IS NOT NULL	Finds records who contain value in this field

Creating a Multiple Table Query

1. Queries icon….Create query in Design view
2. Select all Tables and Queries you wish to include

3. If there are relationships between the tables/queries Access will automatically include/display them. If not you can drag the field from one table to another to create the necessary relationships.
4. From this point on it becomes a normal query (select the fields/criteria you want, select sorting methods, etc.)

Creating a Calculated Field

When you don't want to just find information, you want to create new information to display, performing calculations in queries can be a great option.

1. Once in design view add the appropriate tables and queries
2. In the column where you wish to add a calculated field follow these rules:

   -Type the field name with a colon after it like this -> Cost:

   -When using existing fields type their names with brackets surrounding them -> [Price]

   -use mathematical operators (+ ,-,*,/) or text operators (&, "")

3. When finished creating calculated and normal fields click the Run button () to view query results

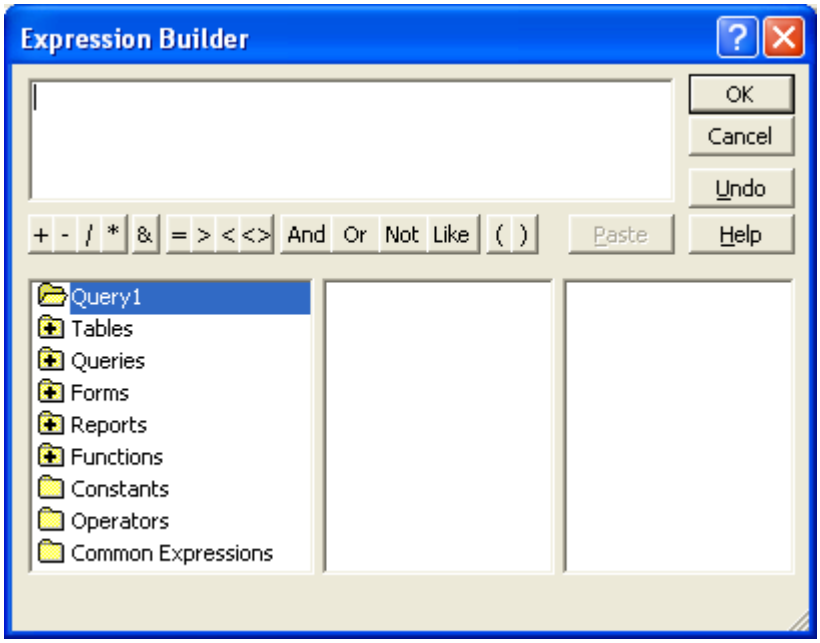
Parameter Queries

Instead of modifying a parameter every time you need to apply a new criteria parameter queries give the option of having the user of the query define exactly what parameters they wish to apply to the search.

To add a parameter request to your query replace the field name (e.g. [Cost]) with the prompt you would like users to see (e.g. [What is the maximum amount you'd like to pay for the tour?]). Each query can have multiple parameter requests.

Expression Builder

The expression builder is a tool to help you create complex criteria. Left clicking this icon:  opens this window:



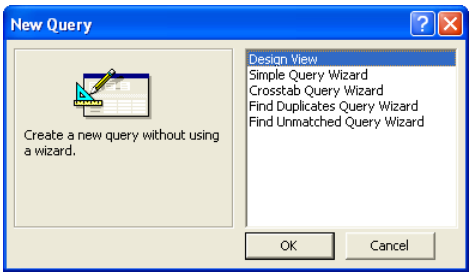
Looking at the above window you can see buttons provided to quickly access fields from tables and queries, commonly used operators (+,-,*,And, etc.), and some common

constants and expressions. There's nothing that you can do here that couldn't be done from the query design screen, but this tool often helps with speed and clarity.

Bonus Examples

(To be discussed in class if time allows)

Finding Duplicate Records

1. From the Database window, click the Queries icon in the objects bar then click the "New" button
2. From this screen: 

select "Find Duplicates Query Wizard"
3. Follow the wizard's steps (telling it which table/query to search for duplicates and which field(s) might contain duplicates
4. It will ask what other information we want displayed for the duplicates it finds, select the appropriate fields and finish wizard's steps

Delete Queries

1. Create new query in design mode
2. Select tables/queries needed for data
3. Select fields required
4. Click the Query Type button on the toolbar ()

5. Choose “Delete Query”
6. Drag the asterisk from the top of the table/query you wish to delete from to the field you wish to delete from
7. Enter the criteria that you want to find and delete
8. Click “Run”
9. You will be warned about the number of rows about to be deleted, this cannot be undone.

Update Queries

You can use an update query to change a number of records at the same time. To do so follow the steps below:

1. Create a query in design view
2. Choose the appropriate table/query to work with
3. Click the query type button and choose Update Query
4. Double-click the fields you want to see in your query
5. Enter the equation for updating the appropriate information in the “Update to:” field
6. Select the criteria required for this update to happen
7. Click “Run”