Lecture 6 - EMPLOY BOOLEAN OPERATORS

What are Boolean operators?

Boolean operators are expressions such as AND, OR, NEITHER, and NOR that allow you to add multiple criteria to a query. They take their name from George Boole, the mathematician who first used them.

If you had a T-shirt store with an Access database, for instance, and you wanted to find out how many of your California customers had ordered blue T-shirts, you'd employ the **AND** operator in your query:

customers from California
AND
who also bought blue T-shirts

If you wanted to see how many customers were from California (these California customers could have bought T-shirts of any color),

and how many customers bought blue T-shirts (these blue T-shirt customers could be from anywhere),

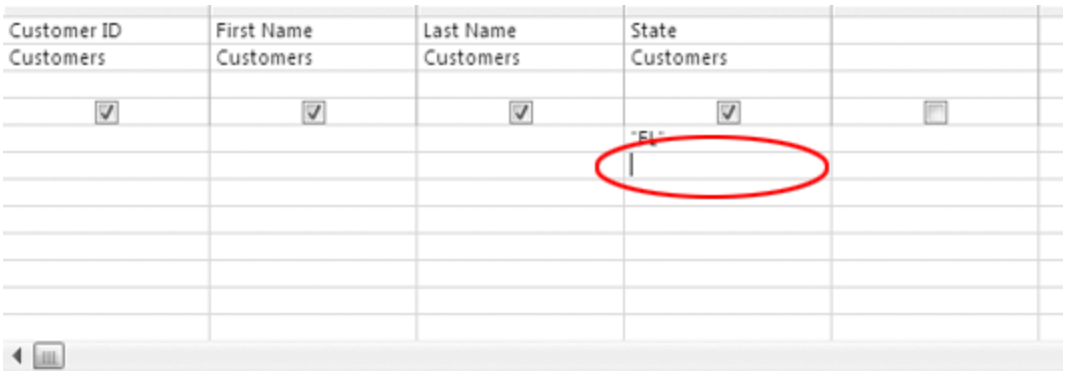
you'd employ the **OR** operator:

customers from California
OR
customers who bought blue T-shirts

Employ the OR operator

1. Return to Design View.

2. In the **State** field, click in the **or** row under the criterion **"FL"**.

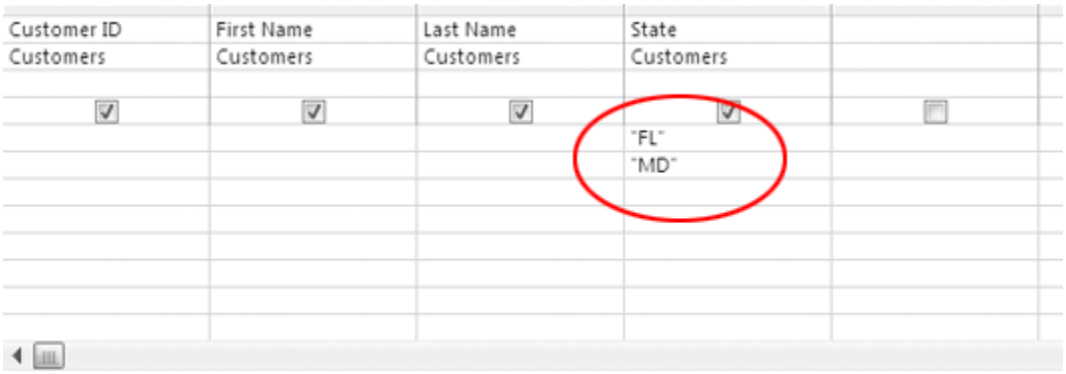


3. Type:

   MD

   then press the **ENTER** key.

   The design grid should look like this:



TIP: *The two common Boolean operators are AND and OR. They're easily confused. If you don't know which to use, ask yourself the purpose of the query:*

Do I want to find customers with a state of both Florida AND Maryland?

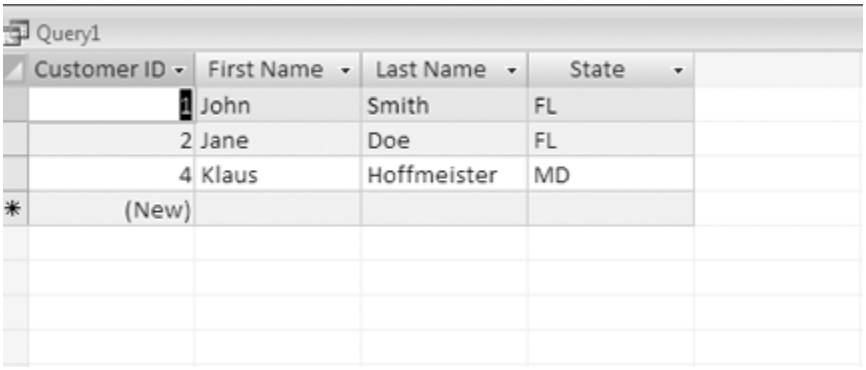
No—a customer can't be in two places at once.

Do I want to find customers with a state of either Florida OR Maryland?

That makes sense, so this query would use the OR operator.

4. In the Ribbon, click **Run**.

The query results should look like this:



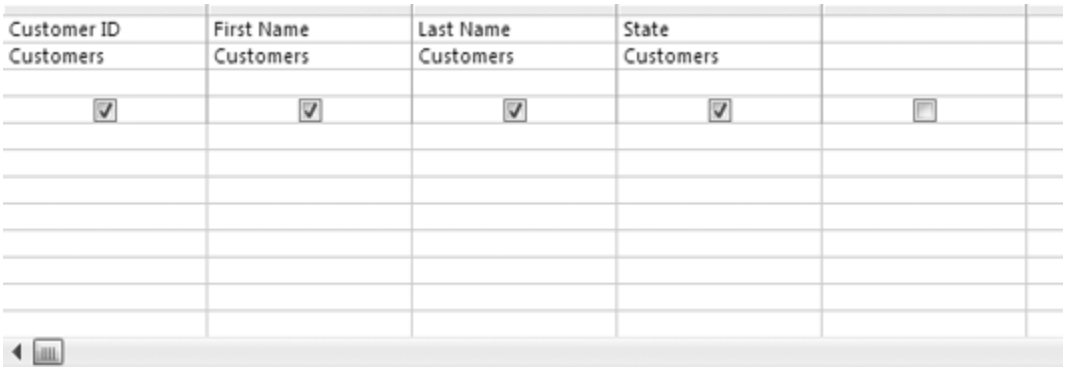
Employ the AND operator

1. Return to Design View.

2. Remove the query criteria from the **State** field.

(Highlight them, then press the **DELETE** key.)

The **Criteria** row in the design grid should be blank:

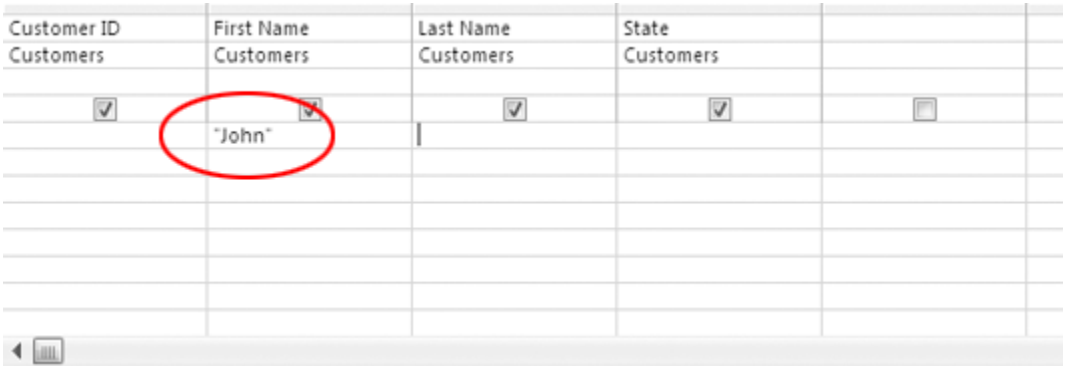


2. In the **First Name** field, click in the **Criteria** row.

3. Type:

John

then press the **ENTER** key.

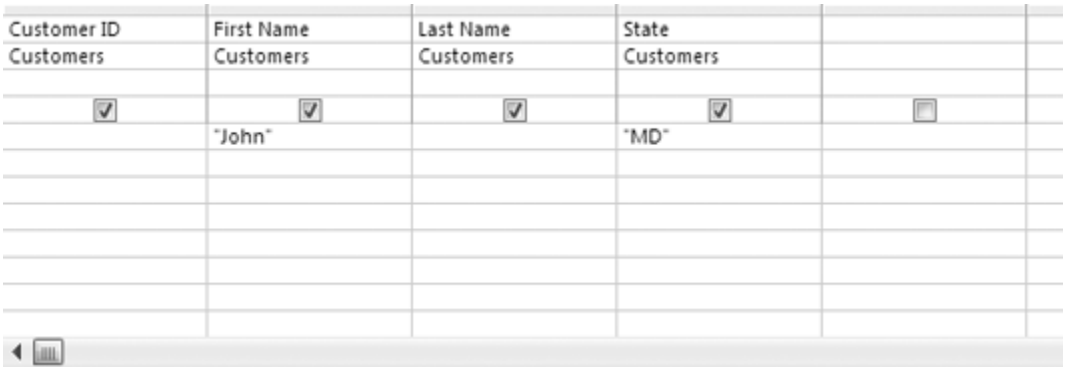


4. In the **State** field, type:

MD

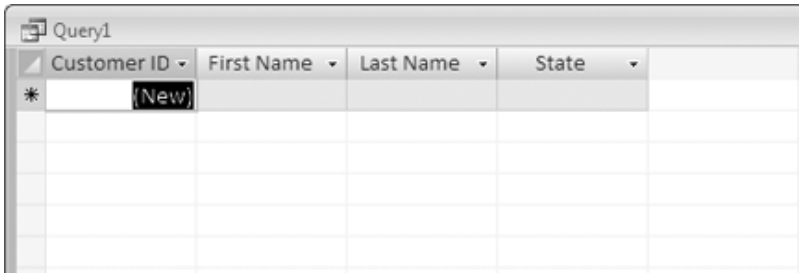
in the **Criteria** row

then press the **ENTER** key.



5. In the Ribbon, click **Run**.

The query results should look like this:



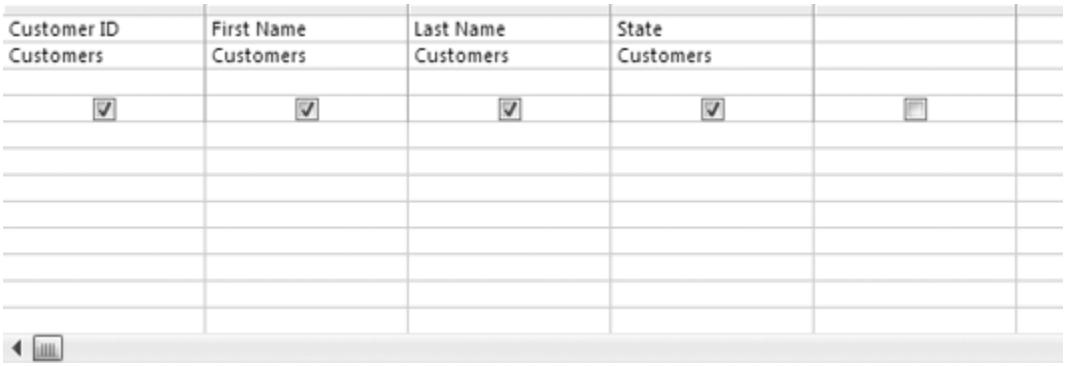
No records were returned, because there's no one in the table whose first name is John AND lives in Maryland.

Employ a Wild Card character

1. Return to Design View.

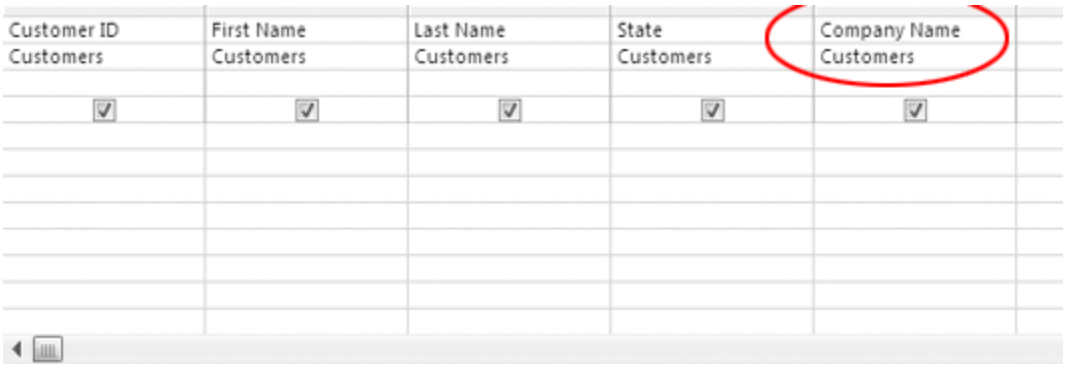
2. Remove all query criteria from all fields.

   The design grid should be blank:



3. Add the **Company Name** field to the query:

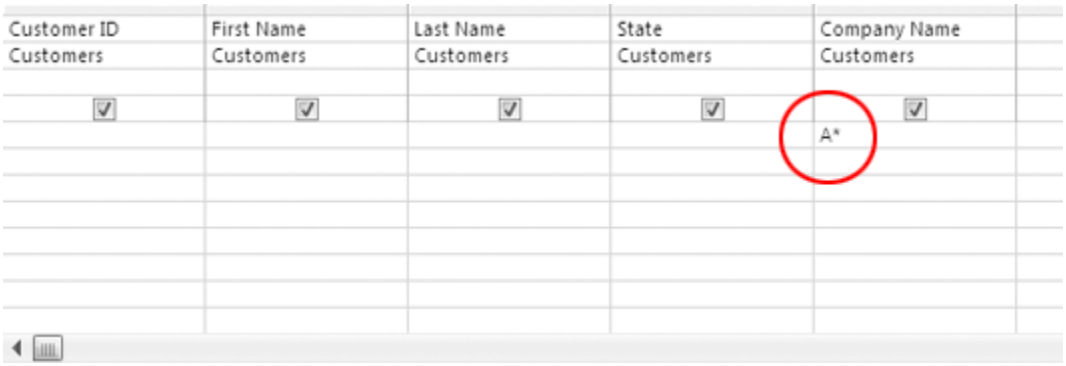
   Drag it from the field list in the **Customers** table and drop it in the blank field to the right of the **State** field.



4. In the **Company Name** field, click in the **Criteria** row.

5. Type:

A*

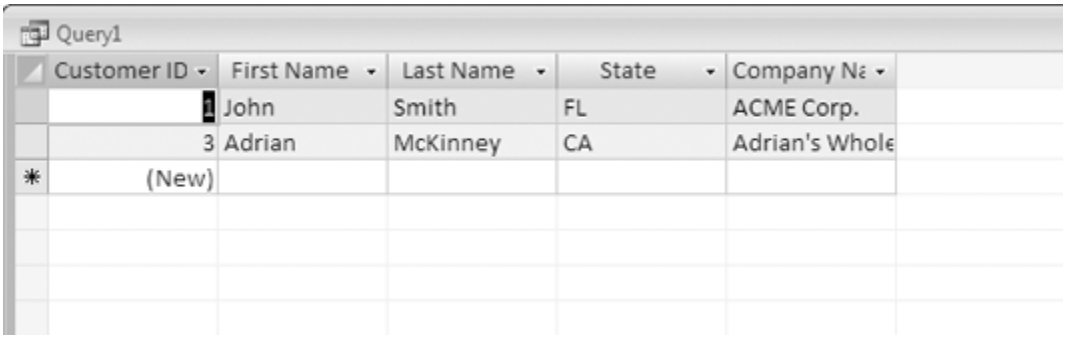


then press the **ENTER** key.

TIP: *An asterisk (*) stands for any character or combination of characters. For instance, Ap* would match Ape, Aptitude, Apparent, etc.*

6. In the Ribbon, click **Run**.

The query results should look like this:



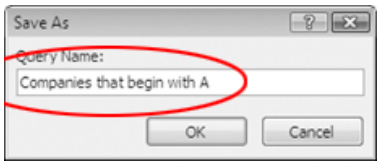
The query shows all companies whose names begin with **A**.

7. In the Title Bar, click the icon.

8. When the **Save As** window appears, type:

Companies that begin with A

in the **Query Name** box.



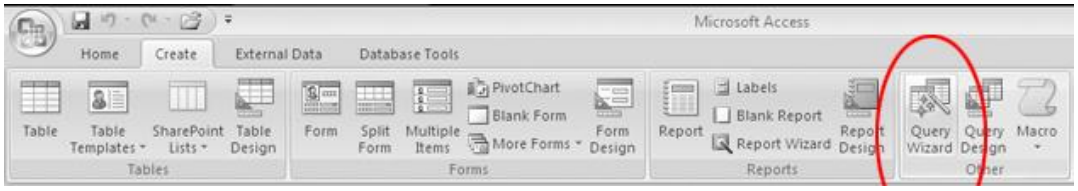
9. Click the OK button.

10. Close the query window.

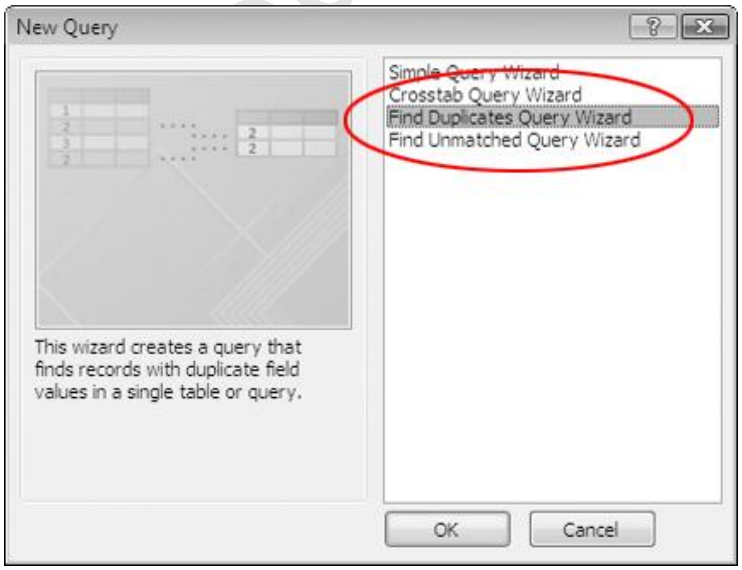
FIND DUPLICATE RECORDS

1. Click the **Create** tab.

   In the Ribbon, click **Query Wizard**.

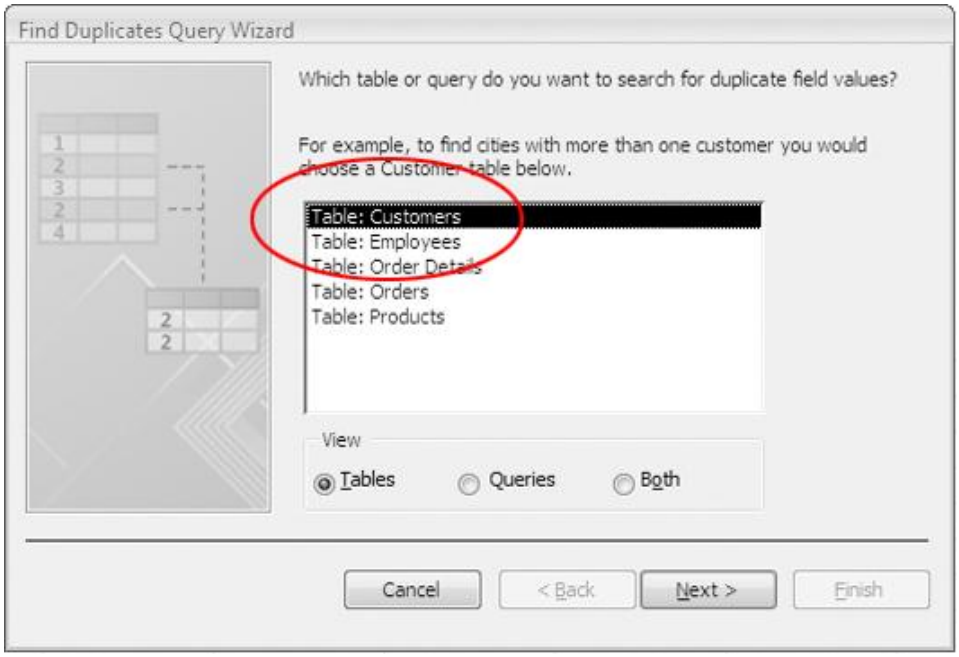


2. When the **New Query** window appears, click **Find Duplicates Query Wizard**.

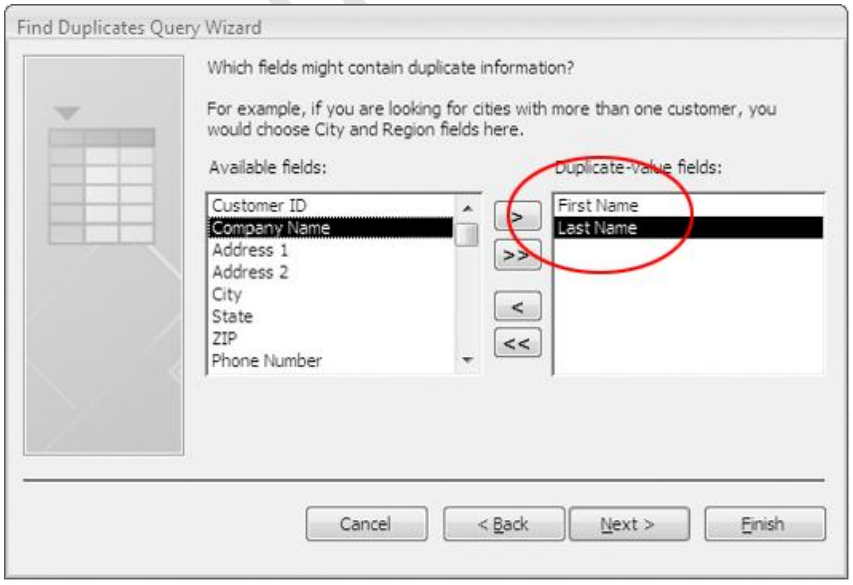


Then click the OK button.

4. When the next screen appears, click **Table: Customers**, then click the Next > button.



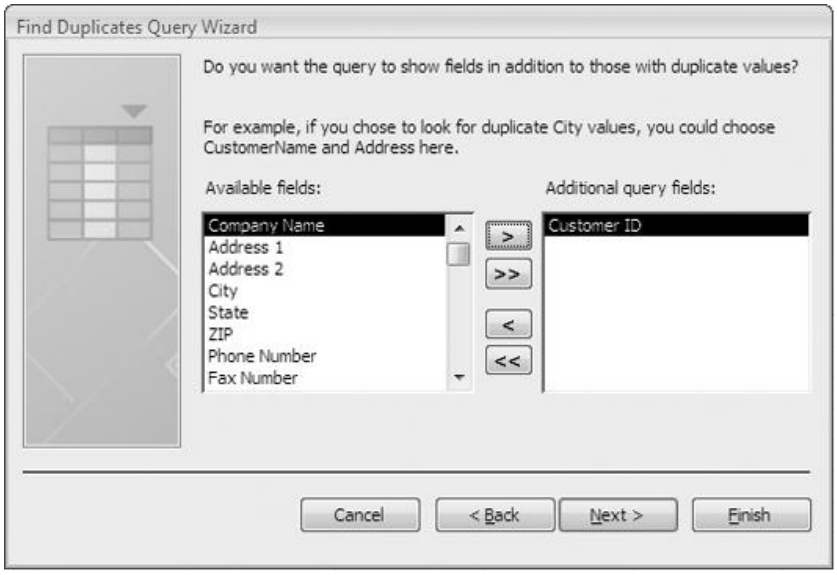
5. When the next screen appears, double-click **First Name**, then **Last Name** to add the fields to the query:



Then click the Next > button.

6. In the next screen, click the > button.

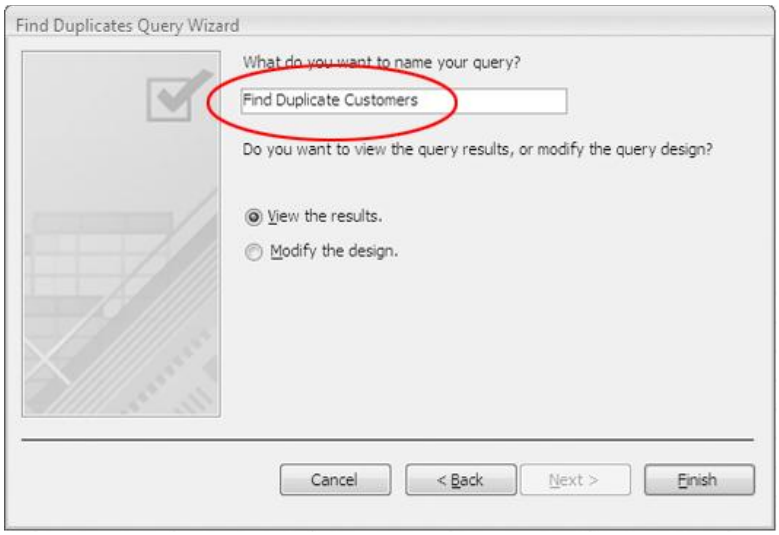
   The screen should look like this:



   Then click the Next > button.

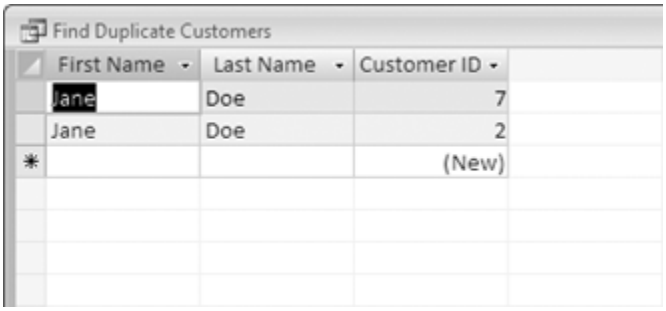
7. When the final screen appears, type:

   Find Duplicate Customers in the name box.



8. Click the Finish button.

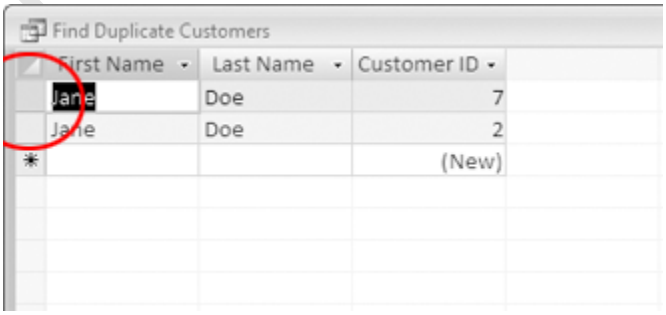
The query should run, and look like this:



There are two identical entries for Jane Doe in the database.

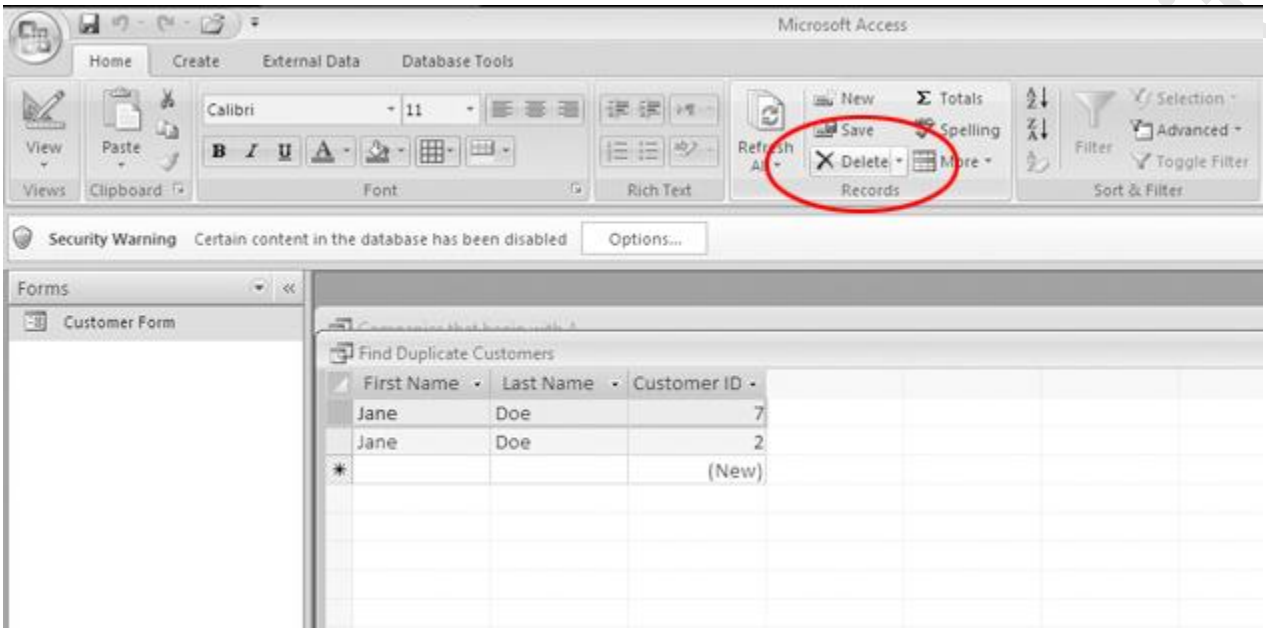
Remove duplicates

1. Click the row selector button for the Jane Doe record with the Customer ID of **7**.

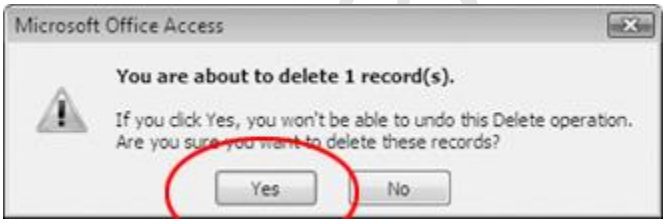


2. Click the **Home** tab.

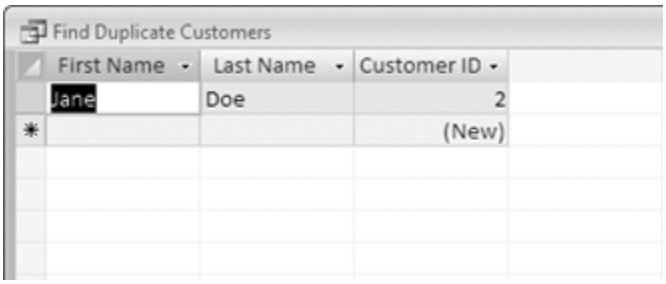
   In the Ribbon, click **Delete**.



3. When the alert window appears, click the Yes button.



   The query results should now look like this:



   Record number **7** is removed from the database.

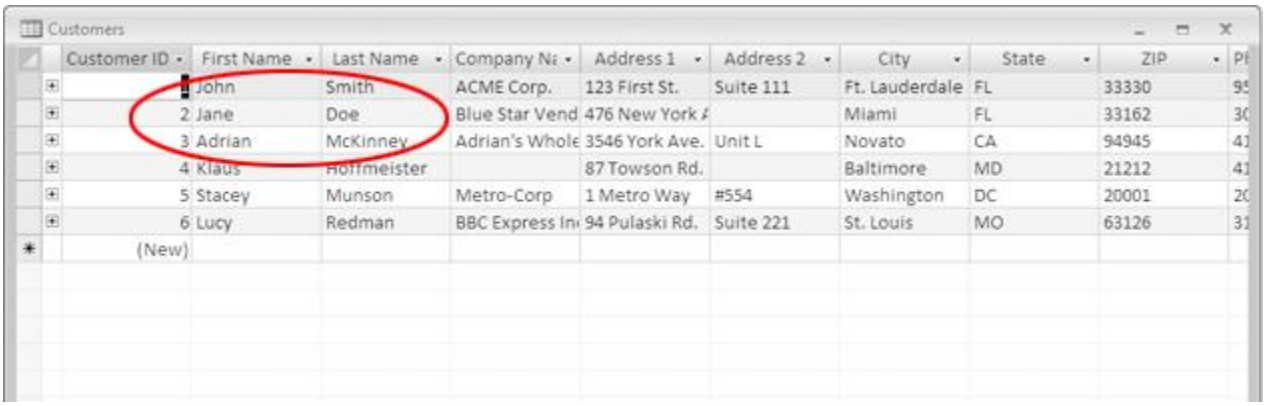
TIP: *Deleting a record from a query also deletes it from the table it was stored in.*

Verify results

1. Close the window.

2. Open the **Customers** table.

It should now look like this, with only one record for Jane Doe:



3. Close the **Customers** table.