

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".

Customer ID	First Name	Last Name	State	
Customers	Customers	Customers	Customers	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			"FL"	

3. Type:

MD

then press the **ENTER** key.

The design grid should look like this:

Customer ID	First Name	Last Name	State	
Customers	Customers	Customers	Customers	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			"FL"	
			"MD"	

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:

Customer ID	First Name	Last Name	State
1	John	Smith	FL
2	Jane	Doe	FL
4	Klaus	Hoffmeister	MD
*	(New)		

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:

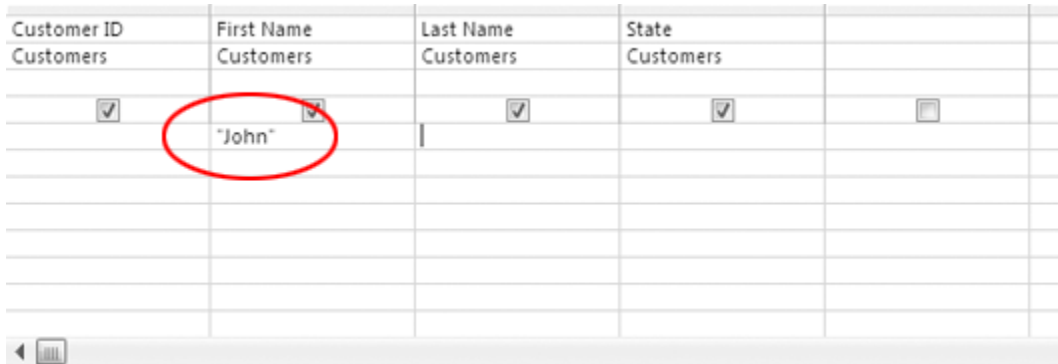
Customer ID	First Name	Last Name	State
Customers	Customers	Customers	Customers
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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

3. Type:

John

then press the **ENTER** key.



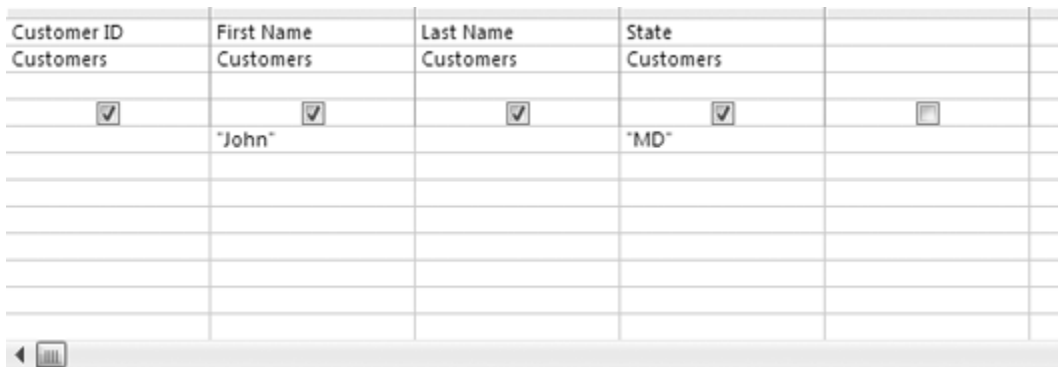
Customer ID	First Name	Last Name	State	
Customers	Customers	Customers	Customers	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> "John"	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

MD

in the **Criteria** row

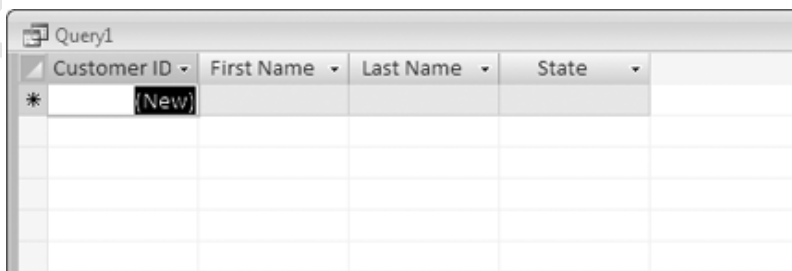
then press the **ENTER** key.



Customer ID	First Name	Last Name	State	
Customers	Customers	Customers	Customers	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> "John"	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> "MD"	<input type="checkbox"/>

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

The query results should look like this:



Customer ID	First Name	Last Name	State
*	[New]		

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:

Customer ID	First Name	Last Name	State	
Customers	Customers	Customers	Customers	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

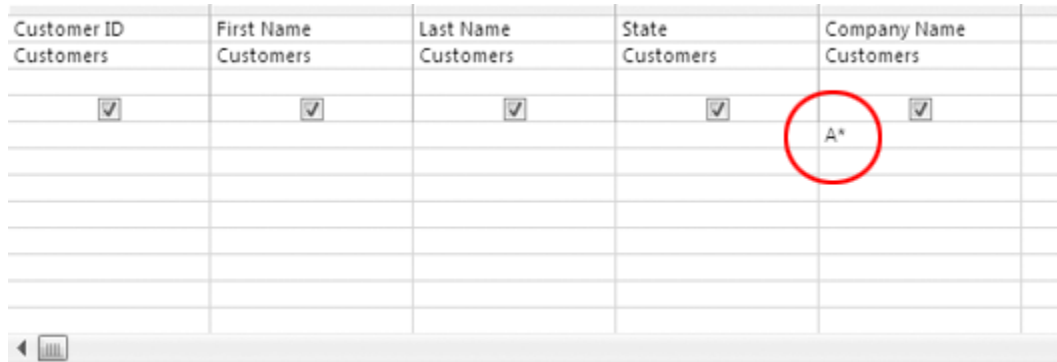
Drag it from the field list in the **Customers** table and drop it in the blank field to the right of the **State** field.

Customer ID	First Name	Last Name	State	Company Name
Customers	Customers	Customers	Customers	Customers
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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

5. Type:

A*



A screenshot of a data grid with five columns: Customer ID, First Name, Last Name, State, and Company Name. Each column has a checkmark icon in the first row. The text 'A*' is entered in the Company Name cell of the first row and is circled in red. The grid has a scroll bar at the bottom.

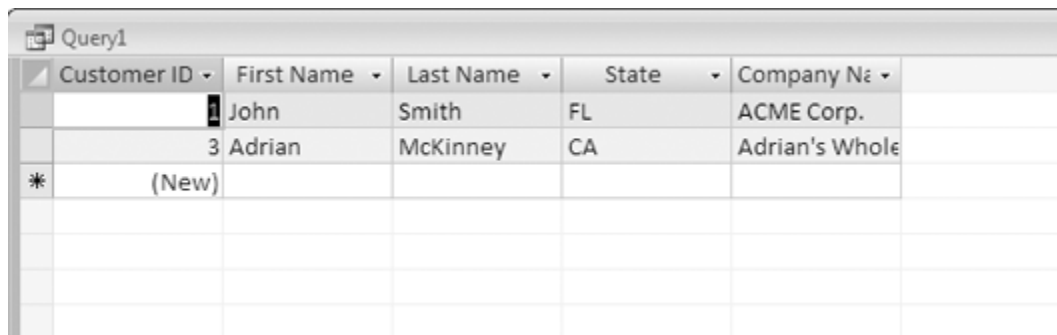
Customer ID	First Name	Last Name	State	Company Name
Customers	Customers	Customers	Customers	Customers
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> A*

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:



A screenshot of a query results window titled 'Query1'. The window shows a table with five columns: Customer ID, First Name, Last Name, State, and Company Name. The first two rows are visible: one for John Smith in FL at ACME Corp., and one for Adrian McKinney in CA at Adrian's Whole. A third row is marked with an asterisk and '(New)'. The table has a scroll bar on the right.

Customer ID	First Name	Last Name	State	Company Name
	John	Smith	FL	ACME Corp.
3	Adrian	McKinney	CA	Adrian's Whole
*	(New)			

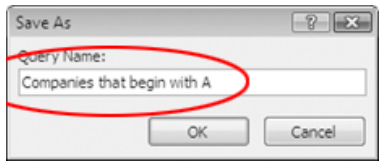
The query shows all companies whose names begin with **A**.

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.



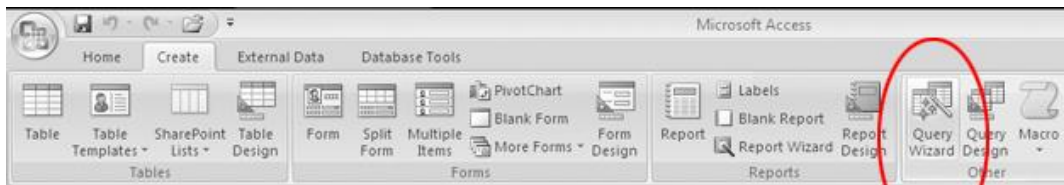
9. Click the **OK** button.

10. Close the query window.

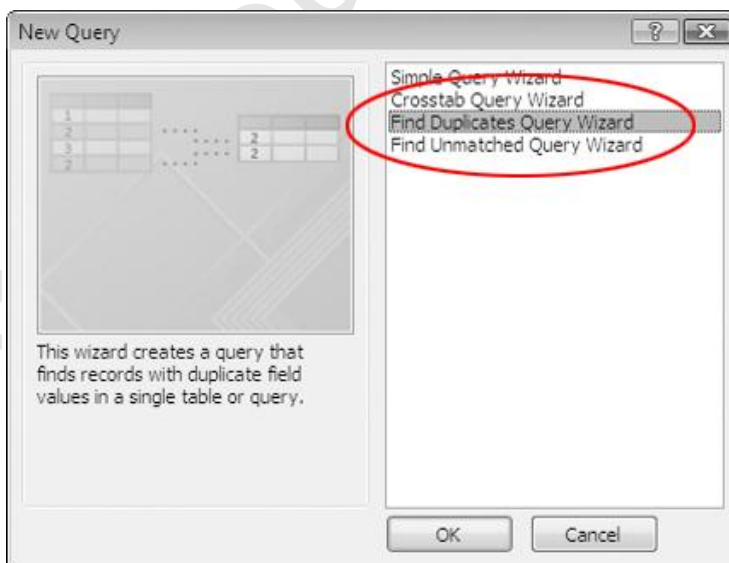
FIND DUPLICATE RECORDS

1. Click the **Create** tab.

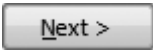
In the Ribbon, click **Query Wizard**.



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

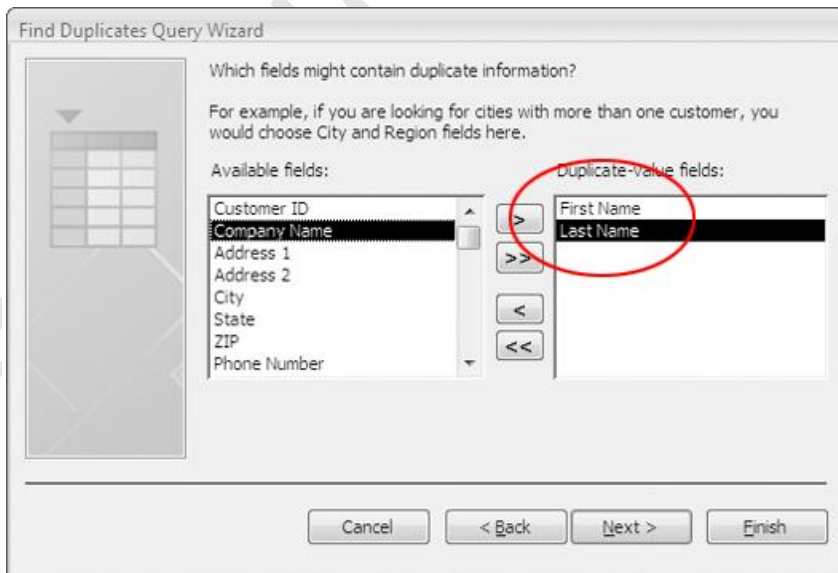


Then click the  button.


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



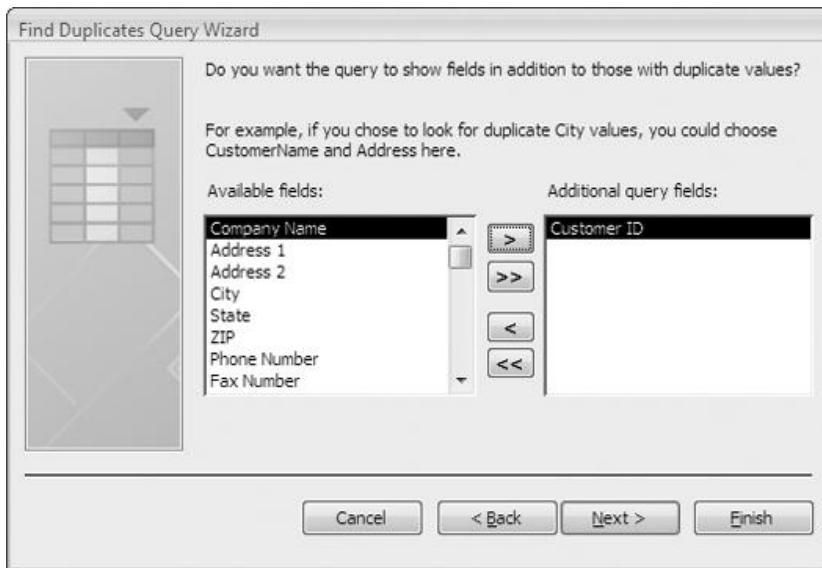
5. When the next screen appears, double-click **First Name**, then **Last Name** to add the fields to the query:

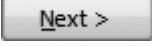


Then click the  button.

6. In the next screen, click the  button.

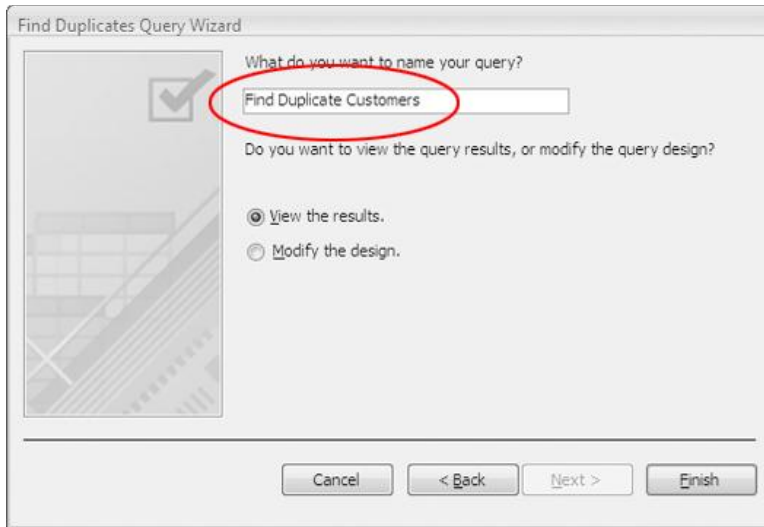
The screen should look like this:



Then click the  button.

7. When the final screen appears, type:

Find Duplicate Customers in the name box.



8. Click the  button.

The query should run, and look like this:

Find Duplicate Customers		
First Name	Last Name	Customer ID
Jane	Doe	7
Jane	Doe	2
*		(New)

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

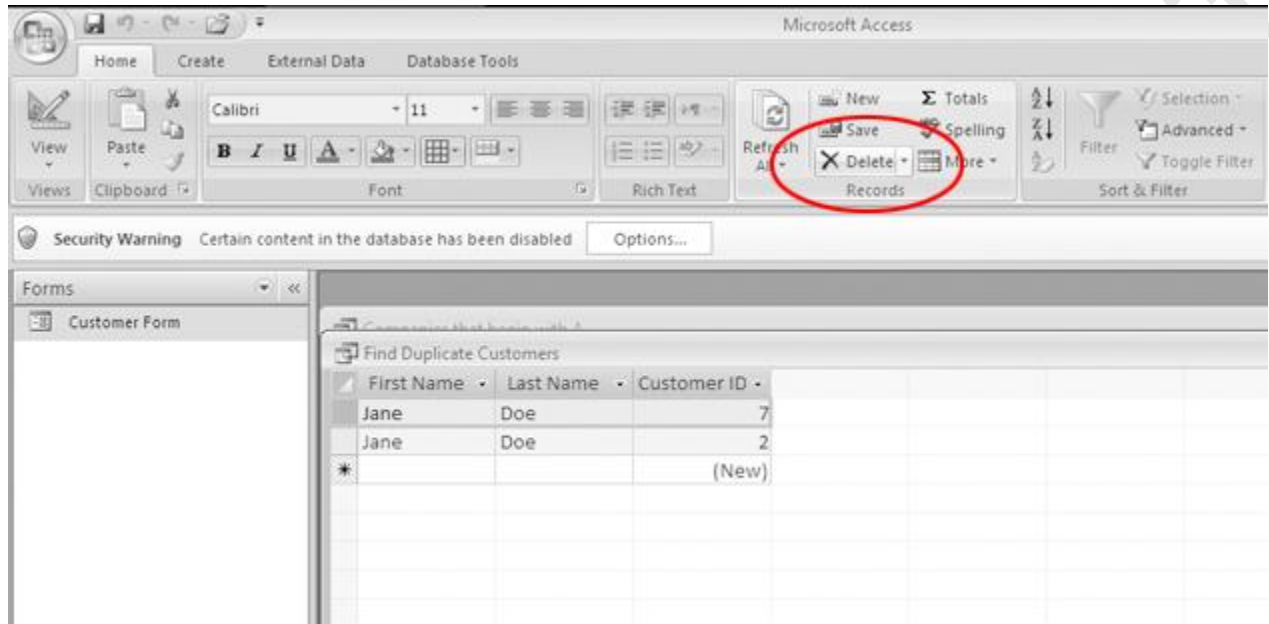
Remove duplicates

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

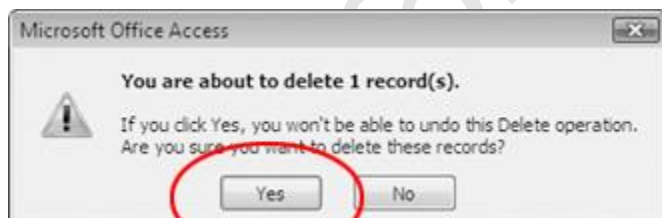
Find Duplicate Customers		
First Name	Last Name	Customer ID
<input checked="" type="checkbox"/>	Jane	Doe 7
<input type="checkbox"/>	Jane	Doe 2
*		(New)

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:

The screenshot shows the query results table after deleting a record. The data is as follows:

First Name	Last Name	Customer ID
Jane	Doe	2
*		(New)

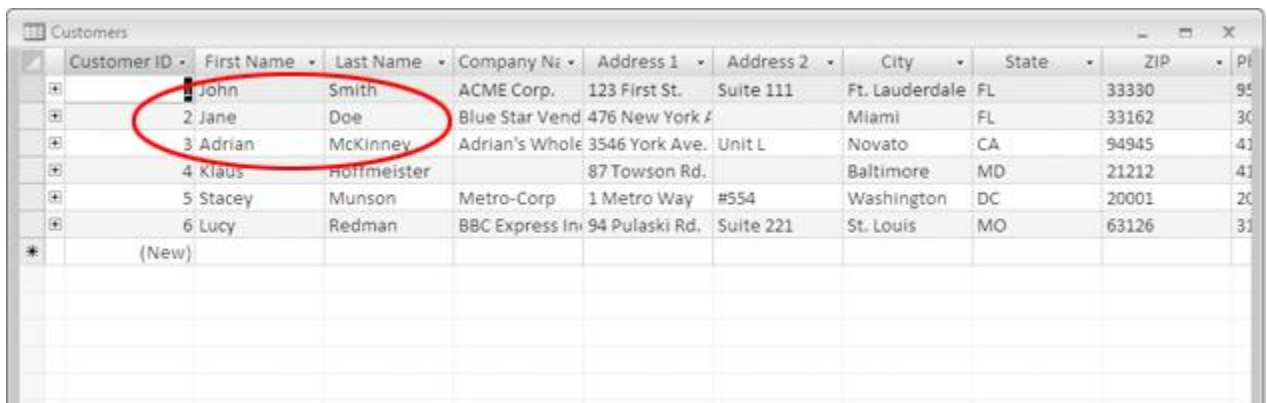
Record number **7** is removed from the database.

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:



Customer ID	First Name	Last Name	Company Name	Address 1	Address 2	City	State	ZIP	Phone
1	John	Smith	ACME Corp.	123 First St.	Suite 111	Ft. Lauderdale	FL	33330	954
2	Jane	Doe	Blue Star Vend	476 New York St		Miami	FL	33162	305
3	Adrian	McKinney	Adrian's Whole	3546 York Ave.	Unit L	Novato	CA	94945	415
4	Klaus	Hoffmeister		87 Towson Rd.		Baltimore	MD	21212	410
5	Stacey	Munson	Metro-Corp	1 Metro Way	#554	Washington	DC	20001	202
6	Lucy	Redman	BBC Express In	94 Pulaski Rd.	Suite 221	St. Louis	MO	63126	314
*	(New)								

3. Close the **Customers** table.

Thank you for trying PDF Suite