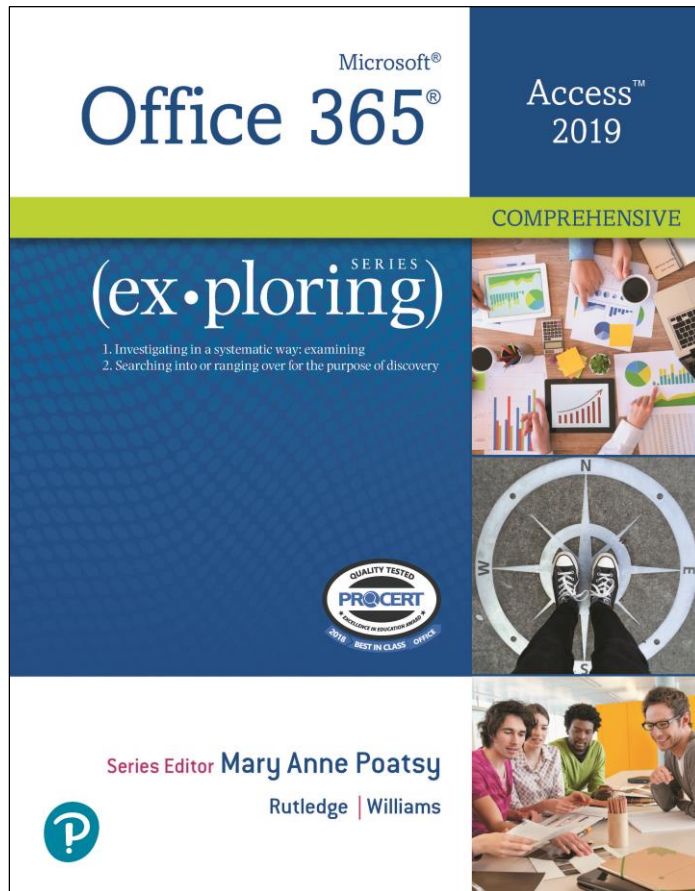


Microsoft® Office 365® Access™ 2019 Comprehensive



Chapter 6

Action and Specialized Queries

Learning Objectives (1 of 2)

6.1 Determine When to Use an Action Query

6.2 Update Data with an Update Query

6.3 Add Records to a Table with an Append Query

6.4 Create a Table with a Make Table Query

Learning Objectives (2 of 2)

6.5 Delete Records with a Delete Query

6.6 Summarize Data with a Crosstab Query

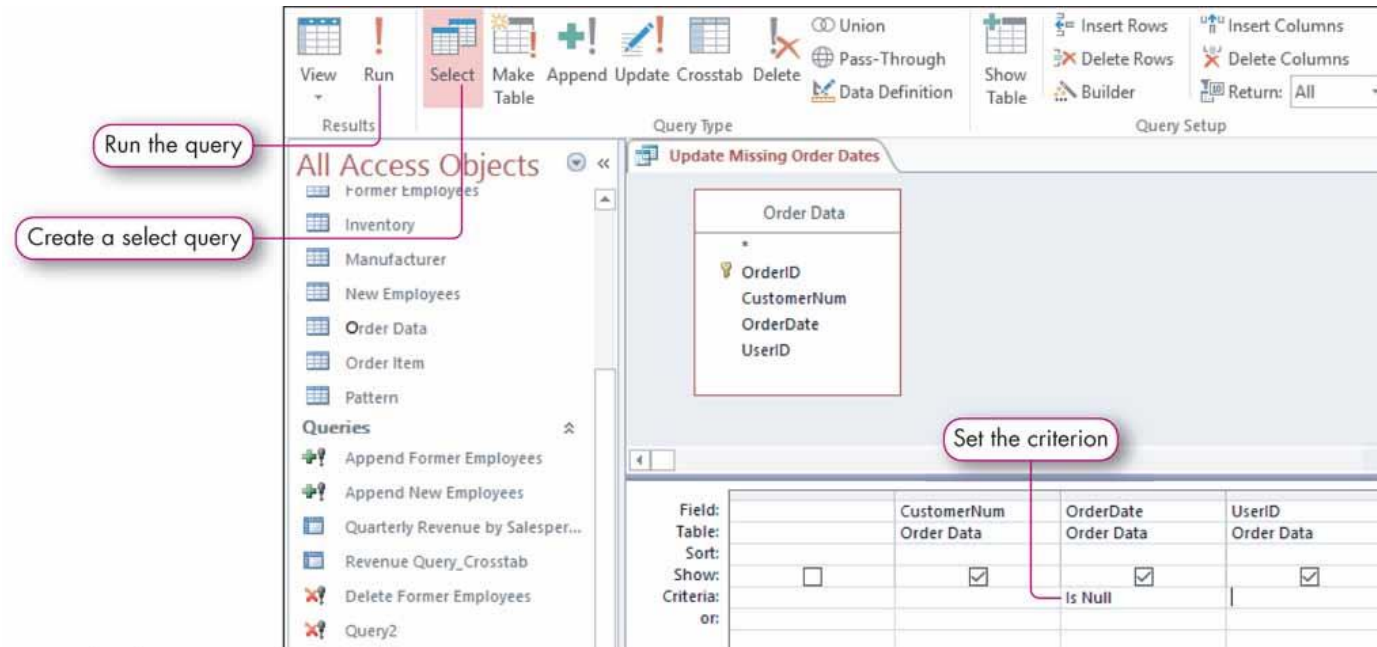
6.7 Find Duplicate Records with a Query

6.8 Find Unmatched Records with a Query

Determining When to Use an Action Query (1 of 2)

- Update query—updates or changes data automatically based on specified criteria
- Append query—adds records to an existing table
- Make table query—automatically creates a new table from data that already exists in a database
- Delete query—automatically removes records from a table based on selected criteria

Determining When to Use an Action Query (2 of 2)



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Records with missing order date data

OrderID	CustomerNum	OrderDate	UserID
44747423540	0510850		8580
44747876440	0510850		8580
44748630740	0510850		8580
44749119240	0510850		8580
44752565640	0520450		8580
*			

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Update Data with an Update Query

(1 of 2)

Update Missing Order Dates

Order Data

*

OrderID

CustomerNum

OrderDate

UserID

Field: OrderID CustomerNum OrderDate UserID

Table: Order Data Order Data Order Data Order Data

Update To: Date() Is Null

Criteria: Is Null

or:

Select query criterion remains

Update To row is added

Current date inserted
into OrderDate

Select query criterion remains

Update To row is added

Update Data with an Update Query

(2 of 2)

Update Missing Order Dates

Order Data

* OrderID
CustomerNum
OrderDate
UserID

a06Replace

Five records will be updated

 **You are about to update 5 row(s).**
Once you click Yes, you can't use the Undo command to reverse the changes.
Are you sure you want to update these records?

Field:	OrderID	CustomerNum	OrderDate	UserID
Table:	Order Data	Order Data	Order Data	Order Data
Update To:			Date()	
Criteria:			Is Null	
or:				

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Update queries display a warning message

Update Missing Order Dates

	OrderID	CustomerNum	OrderDate	UserID
*				

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No records with missing order dates

Adding Records to a Table with an Append Query (1 of 4)

Append Former Employees								
UserID	TitleID	LastName	FirstName	Address	City	TermDate	State	
81125880	0628866	Gray	Paul	107 ISLAND DR	RALEIGH	4/1/2018	NC	
856480	06666	Sadja	Diane	10071 KINGS RE	SOUTHPORT	8/1/2018	NC	
8728480	0614066	Hartis	Nancy	1105 CASTALIA	RALEIGH	12/1/2018	NC	
8772880	0614066	Hudspeth	Marianne	11029 SOUTHW	RALEIGH	2/1/2018	NC	
*								

Only records with a termination date

Four records will be appended

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Adding Records to a Table with an Append Query (2 of 4)

Specify a destination table

Append

Append To

Table Name: **Former Employees**

☒ Current Database

☐ Another Database:

File Name:

Browse...

OK

Cancel

Field:	UserID	TitleID	LastName	FirstName	Address	City
Table:	Employees	Employees	Employees	Employees	Employees	Employees
Sort:						
Show:	☒	☒	☒	☒	☒	☒
Criteria:						

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Adding Records to a Table with an Append Query (3 of 4)

Append Former Employees

Employees

- UserID
- TitleID
- LastName
- FirstName
- Address
- City
- State

Source field

Destination field

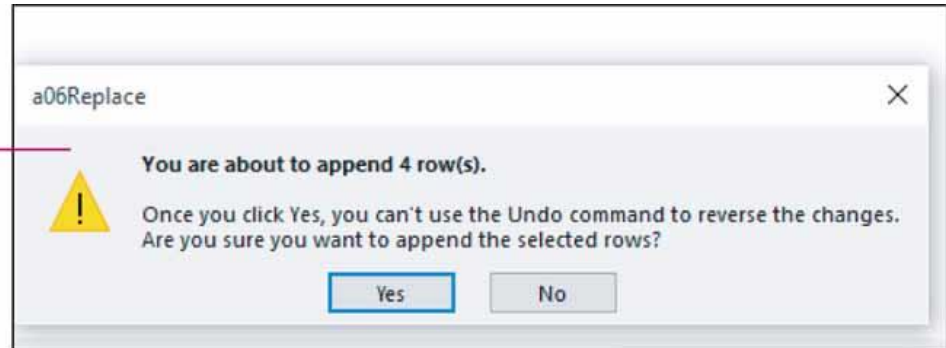
Append To row

Field:	UserID	TitleID	LastName	FirstName	Address	City
Table:	Employees	Employees	Employees	Employees	Employees	Employees
Sort:						
Append To:	UserID	TitleID	LastName	FirstName	Address	City
Criteria:						
or:						

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Adding Records to a Table with an Append Query (4 of 4)

Append Query warning message indicates only four rows will be appended



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Creating a Table with a Make Table Query

Query3

Customer

- * CustomerNum
- LastName
- FirstName
- BillingAddress
- ShippingAddress
- City
- State
- PostalCode
- Phone

Order Data

- * OrderID
- CustomerNum
- OrderDate
- UserID

Order Item

- * OrderID
- LineNum
- Qty

Make Table

Make New Table

Table Name: Customer Order Totals

☒ Current Database

☐ Another Database:

File Name:

Browse...

OK

Cancel

Field:	LastName	FirstName	Extended: [Qty]*[F]		
Table:	Customer	Customer			
Total:	Group By	Group By	Expression		
Sort:					
Show:	☒	☒	☒	☐	☐
Criteria:					
or:					

Make Table dialog box

Enter the table name

Data source is created from aggregate data

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Deleting Records with a Delete Query

Query2

Order Data

*

OrderID
CustomerNum
OrderDate
UserID

Field:	OrderID	CustomerNum	OrderDate	UserID
Table:	Order Data	Order Data	Order Data	Order Data
Delete:	Where	Where	Where	Where
Criteria:			#6/10/2019#	
or:				

Delete row added

Add criteria as needed

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Specialized Queries

Specialized queries:

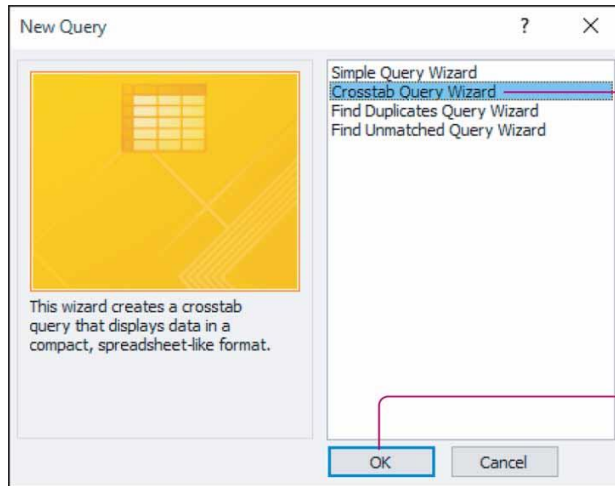
- Crosstab query—calculates data using a sum, average, or other function, and groups values
- Find unmatched query—identifies mismatched records
- Find duplicates query—identifies duplicate records

Summarizing Data with a Crosstab Query (1 of 6)

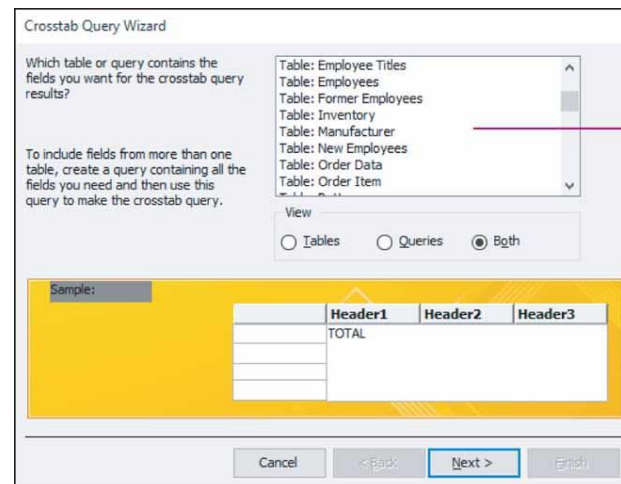
Crosstab query—summarizes a data source into a grid of rows and columns

- Row heading—displays values from a selected field
- Column heading—displays values from another selected field
- Summarizing or aggregating data—displays the intersection of the rows and columns

Summarizing Data with a Crosstab Query (2 of 6)



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Summarizing Data with a Crosstab Query (3 of 6)

Crosstab Query Wizard

Which fields' values do you want as row headings?

You can select up to three fields.

Select fields in the order you want information sorted. For example, you could sort and group values by Country and then Region.

Available Fields:

- Qty
- Price
- LongPatName
- ProdCategoryID
- Description
- DESCR
- State
- OrderDate
- Alias
- Revenue

Selected Fields:

- LastName
- FirstName

Sample:

LastName	FirstName	Header1	Header2	Header3
LastName1	FirstName1	TOTAL		
LastName2	FirstName2			
LastName3	FirstName3			
LastName4	FirstName4			

Cancel < Back Next > Finish

Select fields for row headings

Add One Field button

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Crosstab Query Wizard

Which field's values do you want as column headings?

For example, you would select Employee Name to see each employee's name as a column heading.

Qty

Price

LongPatName

ProdCategoryID

Description

DESCR

State

OrderDate

Alias

Revenue

Sample:

LastName	FirstName	OrderDate1	OrderDate2	OrderDate3
LastName1	FirstName1	TOTAL		
LastName2	FirstName2			
LastName3	FirstName3			
LastName4	FirstName4			

Cancel < Back Next > Finish

Select field for column headings

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Summarizing Data with a Crosstab Query

Query (4 of 6)

Crosstab Query Wizard

By which interval do you want to group your Date/Time column information?

For example, you could summarize Order Amount by month for each country and region.

Year
Quarter
Month
Date
Date/Time

Sample:

LastName	FirstName	Qtr1	Qtr2	Qtr3
LastName1	FirstName1	TOTAL		
LastName2	FirstName2			
LastName3	FirstName3			
LastName4	FirstName4			

Cancel < Back Next > Finish

Select an interval for the Date/Time field

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Crosstab Query Wizard

What number do you want calculated for each column and row intersection?

For example, you could calculate the sum of the field Order Amount for each employee (column) by country and region (row).

Do you want to summarize each row?
☒ Yes, include row sums.

Fields:

Qty
Price
LongPatName
ProdCategoryID
Description
DESCR
State
Alias
Revenue

Functions:

Avg
Count
First
Last
Max
Min
StDev
Sum
Var

Sample:

LastName	FirstName	Qtr1	Qtr2	Qtr3
LastName1	FirstName1	Sum(Revenue)		
LastName2	FirstName2			
LastName3	FirstName3			
LastName4	FirstName4			

Cancel < Back Next > Finish

Select a function

Select a field

Results display at the intersection of each column/row

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Summarizing Data with a Crosstab Query (5 of 6)

Quarterly Revenue by Salesperson_Crosstab

Employee last names	LastName	FirstName	Total Of Rev	Qtr 2	Qtr 3
	Abdel-Hameed	W ROBERT	19.995	19.995	
	Adams	Suzanne	244.9	244.9	
	Adams	Teresa	56.47		56.47
	Albee	Sue	148.95	90.98	57.97
	Allen	Sandra	398.855	351.865	46.99
	Alphin	Rich	391.68	309.72	81.96
	Alphin	Rick	339.415	311.92	27.495
	Austin	JOY	1397.435	1397.435	
	Austin	Judy	1299.215	844.35	454.865
	Bailey	Jeanette	383.05	174.925	208.125
	Bantel	Dick	26.995		26.995
	Behnke	Zack	787.21	384.53	402.68
	Behrend	Wynn	256.32	256.32	
	Bolick	Violet	908.36	547.535	360.825
	Bourbeau	Trevor	0	0	
	Bremer	Tim	174.75	174.75	
	Chesson	Susan	2956.375	2498.02	458.355
	Chut Jr.	Susan	2104.9	451.185	1653.715
	Cowan	Sherol	62.735		62.735
	Dietz	Sally	37.975	37.975	
	Dunn	Rudy	76.48	76.48	
	Eichler	Ron	1337.635	225.17	1112.465
	Eklund	Ron	589.535	392.67	196.865
	Faggart	Robert	43.22	43.22	
	Fairbanks	Rob	26.995	26.995	
	Ferguson	Richard	207.34	150.275	57.065
	Frantz	Rev. Charlie	117.42	108.44	8.98

Total revenue produced for the entire year

Revenue produced each quarter

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Summarizing Data with a Crosstab Query (6 of 6)

Quarterly Revenue by Salesperson_Crosstab

Revenue Query

- *
- LastName
- FirstName
- Qty
- Price
- LongPatName

Field: ProdCategoryID
Table: Revenue Query
Total: Group By
Crosstab: Row Heading
Sort:
Criteria:
or:

Group By: "Qtr" & Format([OrderDate], "Qtr")
Column Heading: Revenue
Value: Sum
Total Of Revenue: Revenue

OrderDate (by Quarter) is the column heading field

ProdCategoryID is now the row heading field

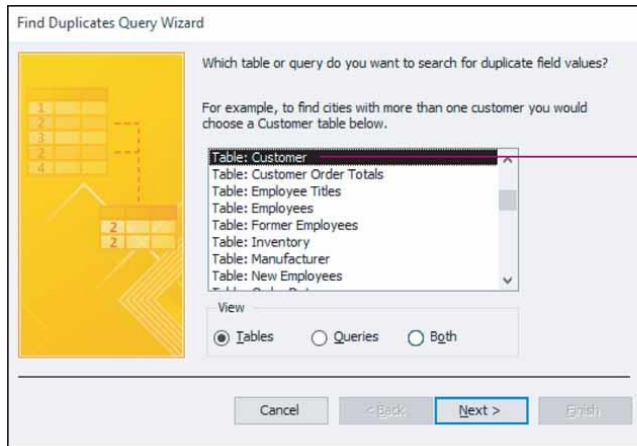
Revenue is the value field that is summed

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Quarterly Revenue by Salesperson_Crosstab				
ProdCategoryID	Total Of Revenue	Qtr 2	Qtr 3	
1	\$31,114.33	\$18,198.41	\$12,915.93	
2	\$26,744.52	\$14,471.53	\$12,272.99	
3	\$15,026.88	\$7,878.41	\$7,148.46	

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Finding Duplicate Records with a Query (1 of 3)



Find Duplicates Query Wizard

Which table or query do you want to search for duplicate field values?

For example, to find cities with more than one customer you would choose a Customer table below.

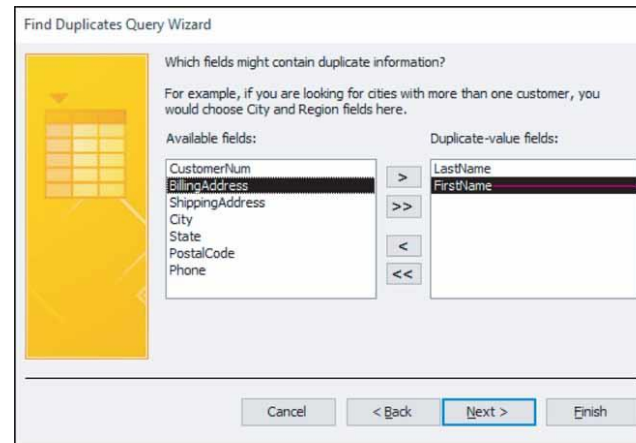
Table: Customer
Table: Customer Order Totals
Table: Employee Titles
Table: Employees
Table: Former Employees
Table: Inventory
Table: Manufacturer
Table: New Employees

View
☒ Tables ☐ Queries ☐ Both

Cancel < Back Next > Finish

Select a table or query to search for duplicate values

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Find Duplicates Query Wizard

Which fields might contain duplicate information?

For example, if you are looking for cities with more than one customer, you would choose City and Region fields here.

Available fields:
CustomerNum
BillingAddress
ShippingAddress
City
State
PostalCode
Phone

Duplicate-value fields:
LastName
FirstName

Cancel < Back Next > Finish

Choose field(s) that might have duplicates

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Finding Duplicate Records with a Query (2 of 3)

Find Duplicates Query Wizard

Do you want the query to show fields in addition to those with duplicate values?

For example, if you chose to look for duplicate City values, you could choose CustomerName and Address here.

Available fields:

- CustomerNum
- ShippingAddress
- PostalCode
- Phone

Additional query fields:

- BillingAddress
- City
- State

Buttons: Cancel, < Back, Next >, Finish

Add fields to the query results

Find Duplicates Query Wizard

What do you want to name your query?

Find duplicates for Customer

Do you want to view the query results, or modify the query design?

☒ View the results.

☐ Modify the design.

Buttons: Cancel, < Back, Next >, Finish

Name the query

Finding Duplicate Records with a Query (3 of 3)

Duplicate customer Susan Agner

Find duplicates for Customer					
LastName	FirstName	CustomerNo	BillingAddress	City	State
Agner	Susan	0517750	6503 BARWICK	CORNELIUS	NC
Agner	Susan	0518850	6503 BARWICK	CORNELIUS	NC
Beaver	Beth	0525850	1227 GENEVA A	WILMINGTON	NC
Beaver	Beth	0582050	4209 FROST CT	HARRISBURG	NC
Blade	Wanda	510986	776 LEWISVILLE	CHARLOTTE	NC
Blade	Wanda	0520250	PO BOX 391	AUSTIN	TX
Bolick	Vicki	0526750	6020-103 WINT	FAYETTEVILLE	NC
Bolick	Vicki	0522050	6026 BELLOW S	FAYETTEVILLE	NC
Bowman	Tommy	511029	5916 PRESCOTT	FAYETTEVILLE	NC
Bowman	Tommy	511012	5947 DIXON DR	FAYETTEVILLE	NC
Boyer	Tom	566655	7220 RABBIT R	CHARLOTTE	NC
Boyer	Tom	0529850	4603 WHITBY P	GREENSBORO	NC
Carlson	Sylvia	557051	5312 NEWHALL	GRAHAM	NC
Carlson	Sylvia	557653	609 ELLYNN DR	ELON	NC
Cates	Susan	0537050	3513 LAYTON R	KINGS MOUNT.	NC
Cates	Susan	520993	3507 CHIPPENC	KINGS MOUNT.	NC
Cline	Sue	0567050	136 WESTVIEW	WASHINGTON	NC
Cline	Sue	0569950	5205 HUNTERS	GREENSBORO	NC
Cogan	Steve	0537950	4731 JAMESFOI	GREENSBORO	NC
Cogan	Steve	510899	929 LYNNVIEW	BURNSVILLE	MN
Coleman	Steve	510868	PO BOX 915	ALAMANCE	NC
Coleman	Steve	610991	3687 WILLOW L	KANNAPOLIS	NC
Cook	Shirley	0582150	514 BARTLING I	GREENSBORO	NC
Cook	Shirley	586754	514 I AVENUE	GREENSBORO	NC
Cormier	Sherry	610987	105 CANTERIE	WILMINGTON	NC

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Finding Unmatched Records with a Query (1 of 3)

Find Unmatched Query Wizard

The query you create will list records in the table you select below that have no related records in the table you select on the next screen. For example, you can find customers that have no orders.

Which table or query contains records you want in the query results?

Table: Alumni
Table: Customer
Table: Customer Order Totals
Table: Employee Titles
Table: Employees
Table: Former Employees
Table: Inventory
Table: Manufacturer

View

☒ Tables ☐ Queries ☐ Both

Cancel < Back Next > Finish

Select a table that contains records you want in the query results

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Find Unmatched Query Wizard

Which table or query contains the related records?

For example, if you've already selected customers and you're looking for customers without orders, you would choose orders here.

Table: Employee Titles
Table: Employees
Table: Former Employees
Table: Manufacturer
Table: New Employees
Table: Order Data
Table: Order Item
Table: Pattern

View

☒ Tables ☐ Queries ☐ Both

Cancel < Back Next > Finish

Select the table with related records

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Finding Unmatched Records with a Query (2 of 3)

Find Unmatched Query Wizard

What piece of information is in both tables?
For example, a Customers and an Orders table may both have a CustomerID field. Matching fields may have different names.
Select the matching field in each table and then click the <=> button.

Select the common field

Matching Fields button

Fields in 'Inventory':

PatID
SKU
PieceName
RIPceCode
OnHandQty
Retail
ProdCategoryID

Fields in 'Order Item':

OrderID
LineNum
Qty
Price
SKU
ProdCategoryID

Matching fields: SKU <=> SKU

Cancel < Back Next > Finish

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Find Unmatched Query Wizard

What fields do you want to see in the query results?

Add fields to the query results

Available fields:

PieceName
RIPceCode
Retail
ProdCategoryID

Selected fields:

PatID
SKU
OnHandQty

Cancel < Back Next > Finish

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Finding Unmatched Records with a Query (3 of 3)

Inventory Without Matching Order Items		
PatID	SKU	OnHandQty
032478530	2100085620	58
032478530	2100173920	0
032478530	2100177320	0
039569030	2100369520	0
033116630	2100451020	0
039650530	2100534520	59
039650530	2100534620	0
039650530	2100534720	0
032478530	2100723720	0
038497930	2100763720	0
038497930	2100790120	0
039569030	2100987220	0
038497930	2101412420	0
031144030	2101465120	0
031144030	2101495220	0

Inventory items
that have not sold

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