Access 2013 **Unit B**

Building and Using Queries

CASE Samantha Hooper, tour developer for U.S. group travel at Quest Specialty Travel, has several questions about the customer and tour information in the Quest database. You'll develop queries to provide Samantha with up-to-date answers.

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Unit Objectives

After completing this unit, you will be able to:

- Use the Query Wizard
- Work with data in a query
- Use Query Design View
- Sort and find data
- Filter data
- Apply AND criteria
- Apply OR criteria
- Format a datasheet

Files You Will Need

QuestTravel-B.accdb
Recycle-B.accdb
Membership-B.accdb
Congress-B.accdb
Vet-B.accdb
Baseball-B.accdb

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Use the Query Wizard

Learning Outcomes
- Describe the purpose for a query
- Create a query with the Simple Query Wizard

A **query** answers a question about the information in the database. A query allows you to select a subset of fields and records from one or more tables and then present the selected data as a single datasheet. A major benefit of working with data through a query is that you can focus on only the specific information you need to answer a question, rather than navigating through all the fields and records from many large tables. You can enter, edit, and navigate data in a query datasheet just like a table datasheet. However, keep in mind that Access data is physically stored only in tables, even though you can select, view, and edit it through other Access objects such as queries and forms. Because a query doesn't physically store the data, a query datasheet is sometimes called a **logical view** of the data. Technically, a query is a set of **SQL (Structured Query Language)** instructions, but because you can use Access query tools such as Query Design View to create and modify the query, you are not required to know SQL to build or use Access queries. **CASE** *You use the Simple Query Wizard to create a query that displays fields from the Tours and Customers tables in one datasheet.*

STEPS

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1. **Start Access, open the QuestTravel-B.accdb database, enable content if prompted, then maximize the window**

   Access provides several tools to create a new query. One way is to use the **Simple Query Wizard**, which prompts you for the information it needs to create a new query.

2. **Click the CREATE tab on the Ribbon, click the Query Wizard button in the Queries group, then click OK to start the Simple Query Wizard**

   The Simple Query Wizard dialog box opens, prompting you to select the fields you want to view in the new query. You can select fields from one or more existing tables or queries.

3. **Click the Tables/Queries list arrow, click Table: Tours, double-click TourName, double-click City, double-click Category, then double-click Price**

   So far, you've selected four fields from the Tours table to display basic tour information in this query. You also want to add the first and last name information from the Customers table so you know which customers purchased each tour.

TROUBLE
Click the Remove Single Field button [<] if you need to remove a field from the Selected Fields list.

4. **Click the Tables/Queries list arrow, click Table: Customers, double-click FName, then double-click LName**

   You've selected four fields from the Tours table and two from the Customers table for your new query, as shown in **FIGURE B-1**.

5. **Click Next, click Next to select Detail, select Tours Query in the title text box, type TourCustomerList as the name of the query, then click Finish**

   The TourCustomerList datasheet opens, displaying four fields from the Tours table and two from the Customers table, as shown in **FIGURE B-2**. The query can show which customers have purchased which tours because of the one-to-many table relationships established in the Relationships window.

FIGURE B-1: Selecting fields using the Simple Query Wizard

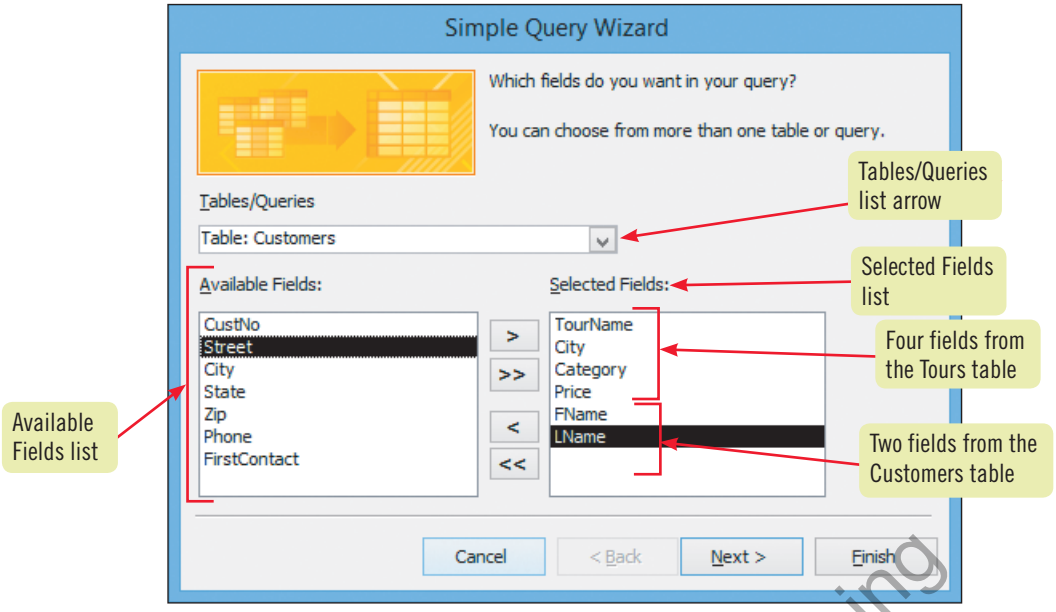
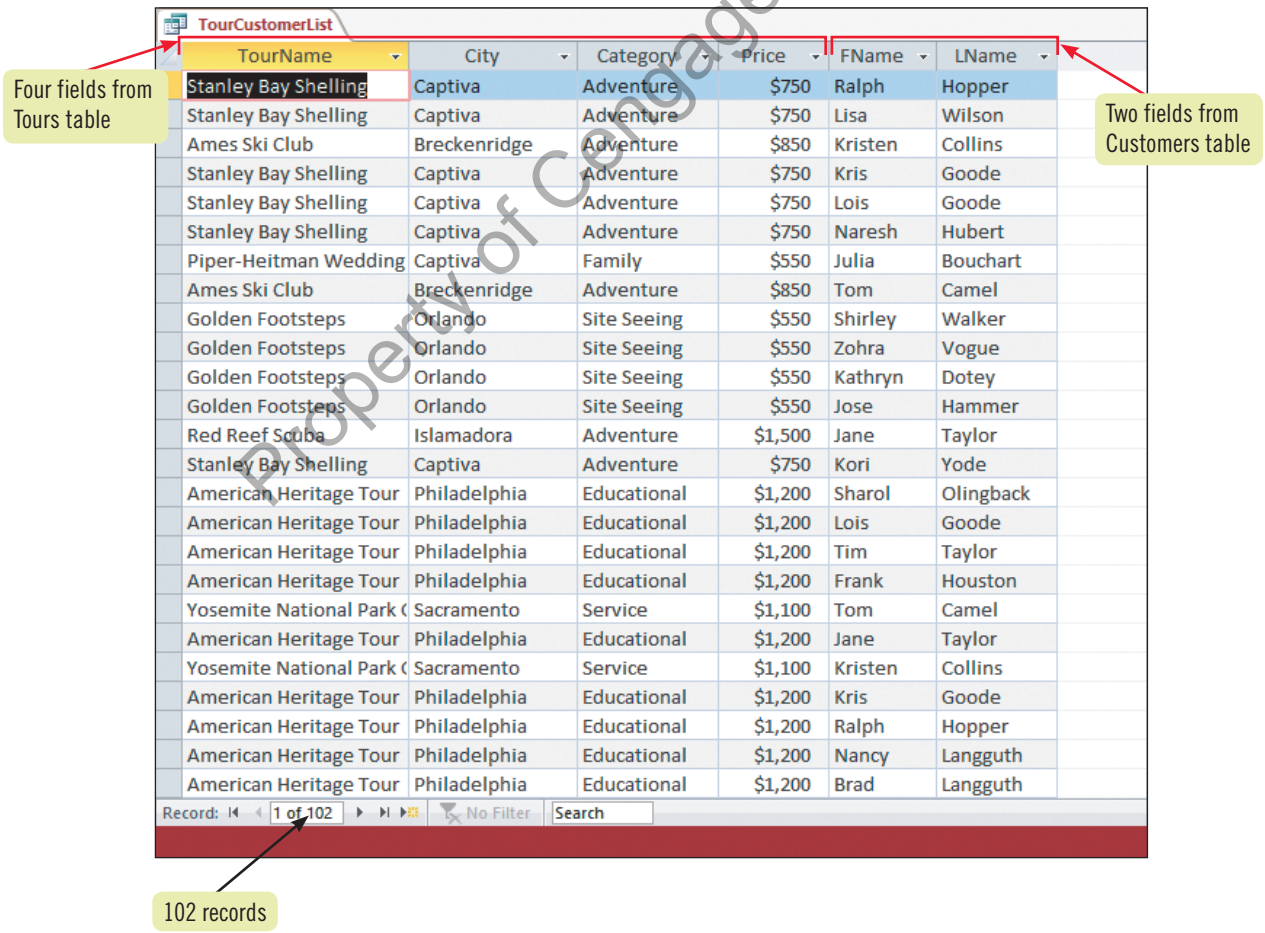


FIGURE B-2: TourCustomerList datasheet



TourName	City	Category	Price	FName	LName
Stanley Bay Shelling	Captiva	Adventure	$750	Ralph	Hopper
Stanley Bay Shelling	Captiva	Adventure	$750	Lisa	Wilson
Ames Ski Club	Breckenridge	Adventure	$850	Kristen	Collins
Stanley Bay Shelling	Captiva	Adventure	$750	Kris	Goode
Stanley Bay Shelling	Captiva	Adventure	$750	Lois	Goode
Stanley Bay Shelling	Captiva	Adventure	$750	Naresh	Hubert
Piper-Heitman Wedding	Captiva	Family	$550	Julia	Bouchart
Ames Ski Club	Breckenridge	Adventure	$850	Tom	Camel
Golden Footsteps	Orlando	Site Seeing	$550	Shirley	Walker
Golden Footsteps	Orlando	Site Seeing	$550	Zohra	Vogue
Golden Footsteps	Orlando	Site Seeing	$550	Kathryn	Dotey
Golden Footsteps	Orlando	Site Seeing	$550	Jose	Hammer
Red Reef Scuba	Islamadora	Adventure	$1,500	Jane	Taylor
Stanley Bay Shelling	Captiva	Adventure	$750	Kori	Yode
American Heritage Tour	Philadelphia	Educational	$1,200	Sharol	Olingback
American Heritage Tour	Philadelphia	Educational	$1,200	Lois	Goode
American Heritage Tour	Philadelphia	Educational	$1,200	Tim	Taylor
American Heritage Tour	Philadelphia	Educational	$1,200	Frank	Houston
Yosemite National Park (	Sacramento	Service	$1,100	Tom	Camel
American Heritage Tour	Philadelphia	Educational	$1,200	Jane	Taylor
Yosemite National Park (	Sacramento	Service	$1,100	Kristen	Collins
American Heritage Tour	Philadelphia	Educational	$1,200	Kris	Goode
American Heritage Tour	Philadelphia	Educational	$1,200	Ralph	Hopper
American Heritage Tour	Philadelphia	Educational	$1,200	Nancy	Langguth
American Heritage Tour	Philadelphia	Educational	$1,200	Brad	Langguth

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Work with Data in a Query

Learning Outcomes
- Edit records in a query
- Delete records in a query

You enter and edit data in a query datasheet the same way you do in a table datasheet. Because all data is stored in tables, any edits you make to data in a query datasheet are actually stored in the underlying tables and are automatically updated in all views of the data in other queries, forms, and reports. **CASE** *You want to change the name of one tour and update a customer name. You can use the TourCustomerList query datasheet to make these edits.*

STEPS

1. **Double-click Stanley in the TourName field of the first or second record, type Breeze, then click any other record**

   All occurrences of Stanley Bay Shelling automatically update to Breeze Bay Shelling because this tour name value is stored only once in the Tours table. See **FIGURE B-3**. The tour name is selected from the Tours table and displayed in the TourCustomerList query for each customer who purchased this tour.

2. **Double-click Orlando in the City field of any record for the Golden Footsteps tour, type Kissimmee, then click any other record**

   All occurrences of Orlando automatically update to Kissimmee because this value is stored only once in the City field of the Tours table for the Golden Footsteps record. The Golden Footsteps tour is displayed in the TourCustomerList query for each customer who purchased the tour.

3. **Click the record selector button to the left of the first record, click the HOME tab, click the Delete button in the Records group, then click Yes**

   You can delete records from a query datasheet the same way you delete them from a table datasheet. Notice that the navigation bar now indicates you have 101 records in the datasheet, as shown in **FIGURE B-4**.

4. **Right-click the TourCustomerList query tab, then click Close**

   Each time a query is opened, it shows a current view of the data. This means that as new tours, customers, or sales are recorded in the database, the next time you open this query, the information will include all updates.

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FIGURE B-3: Working with data in a query datasheet

Record selector button for first record

Updating Stanley to Breeze in one record updates all records

TourCustomerList

TourName	City	Category	Price	FName	LName
Breeze Bay Shelling	Captiva	Adventure	$750	Ralph	Hopper
Breeze Bay Shelling	Captiva	Adventure	$750	Lisa	Wilson
Ames Ski Club	Breckenridge	Adventure	$850	Kristen	Collins
Breeze Bay Shelling	Captiva	Adventure	$750	Kris	Goode
Breeze Bay Shelling	Captiva	Adventure	$750	Lois	Goode
Breeze Bay Shelling	Captiva	Adventure	$750	Naresh	Hubert
Piper-Heitman Wedding	Captiva	Family	$550	Julia	Bouchart
Ames Ski Club	Breckenridge	Adventure	$850	Tom	Camel
Golden Footsteps	Orlando	Site Seeing	$550	Shirley	Walker
Golden Footsteps	Orlando	Site Seeing	$550	Zohra	Vogue
Golden Footsteps	Orlando	Site Seeing	$550	Kathryn	Dotey
Golden Footsteps	Orlando	Site Seeing	$550	Jose	Hammer
Red Reef Scuba	Islamadora	Adventure	$1,500	Jane	Taylor
Breeze Bay Shelling	Captiva	Adventure	$750	Kori	Yode
American Heritage Tour	Philadelphia	Educational	$1,200	Sharol	Olingback

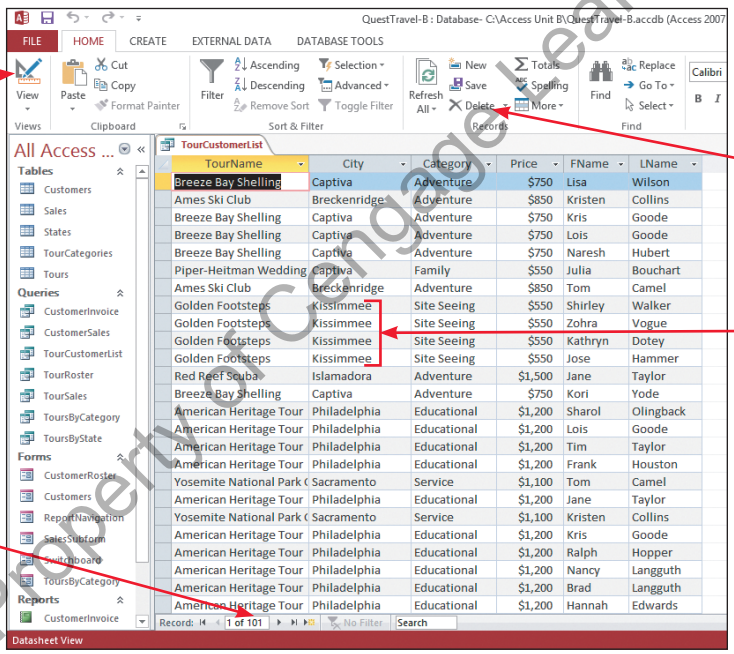
FIGURE B-4: Final TourCustomerList datasheet

(Design) View button

Delete button

Updating Orlando to Kissimmee in one record updates all records

101 records in the datasheet



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Hiding and unhiding fields in a datasheet

To hide a field in a datasheet, right-click the field name at the top of the datasheet and click the Hide Fields option on the shortcut menu. To unhide a field, right-click any field name, click Unhide Fields, and check the hidden field's check box in the Unhide Columns dialog box.

Freezing and unfreezing fields in a datasheet

In large datasheets, you may want to freeze certain fields so that they remain on the screen at all times. To freeze a field, right-click its field name in the datasheet, and then click Freeze Fields. To unfreeze a field, right-click any field name and click Unfreeze All Fields.

Use Query Design View

Learning Outcomes
- Work in Query Design View
- Add criteria to a query

You use **Query Design View** to add, delete, or move the fields in an existing query; to specify sort orders; or to add **criteria** to limit the number of records shown in the resulting datasheet. You can also use Query Design View to create a new query from scratch. Query Design View presents the fields you can use for that query in small windows called **field lists**. If you use the fields of two or more related tables in the query, the relationship between two tables is displayed with a **join line** (also called a **link line**) identifying which fields are used to establish the relationship. **CASE** *Samantha Hooper asks you to produce a list of tours in Florida. You use Query Design View to modify the existing ToursByState query to meet her request.*

STEPS

1. **Double-click the ToursByState query in the Navigation Pane to review the datasheet**
   The ToursByState query contains the StateName field from the States table and the TourName, TourStartDate, and Price fields from the Tours table. This query contains two ascending sort orders: StateName and TourName. All records in California, for example, are further sorted by the TourName value.

QUICK TIP
Drag the lower edge of the field list to view more fields.

2. **Click the View button on the HOME tab to switch to Query Design View**
   Query Design View displays the tables used in the query in the upper pane of the window. The link line shows that one record in the States table may be related to many records in the Tours table. The lower pane of the window, called the **query design grid** (or query grid for short), displays the field names, sort orders, and criteria used within the query.

QUICK TIP
Query criteria are not case sensitive, so Florida equals FLORIDA equals florida.

3. **Click the first Criteria cell for the StateName field, then type Florida as shown in FIGURE B-5**
   Criteria are limiting conditions you set in the query design grid. In this case, the condition limits the selected records to only those with "Florida" in the StateName field.
4. **Click the View button in the Results group to switch to Datasheet View**
   Now only nine records are selected, because only nine of the tours have "Florida" in the StateName field, as shown in **FIGURE B-6**. You want to save this query with a different name.
5. **Click the FILE tab, click Save As, click Save Object As, click the Save As button, type FloridaTours, then click OK**
   In Access, the **Save As command** on the FILE tab allows you to save the entire database (and all objects it contains) or just the current object with a new name. Recall that Access saves *data* automatically as you move from record to record.
6. **Right-click the FloridaTours query tab, then click Close**

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FIGURE B-5: ToursByState query in Design View

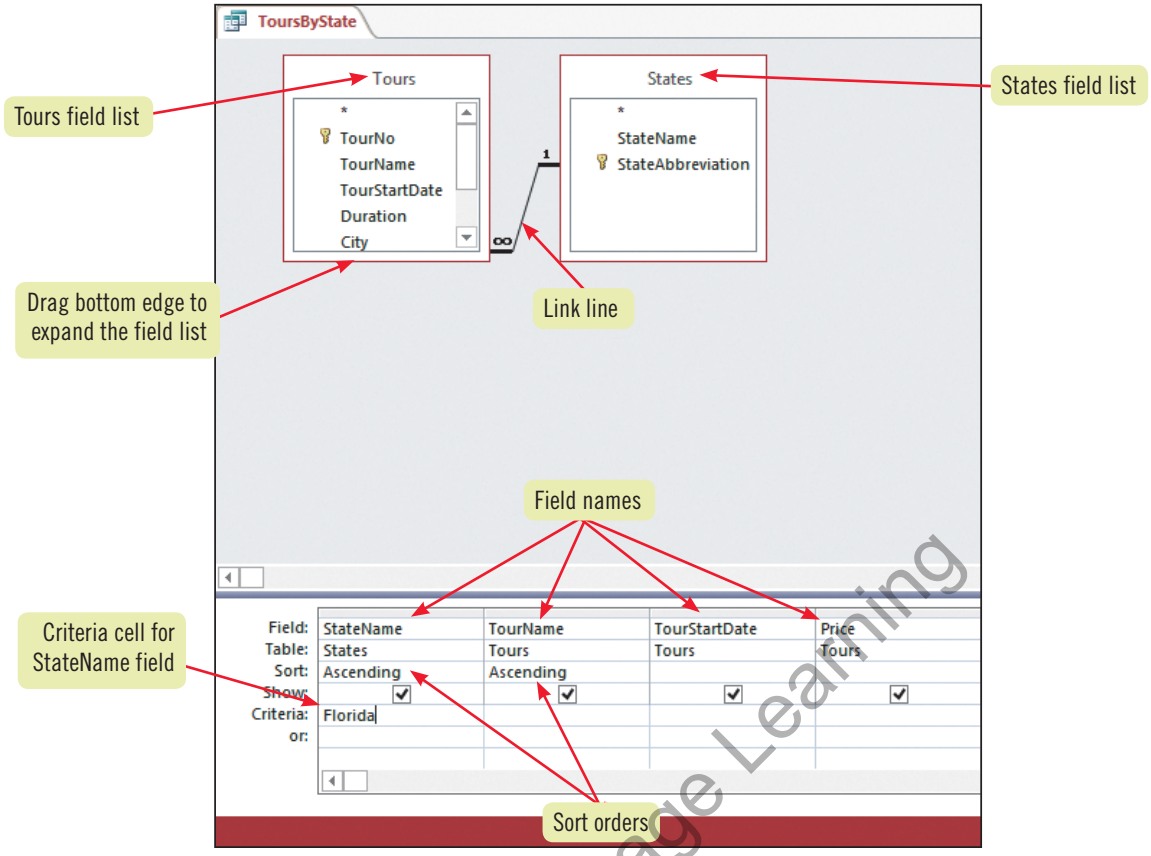
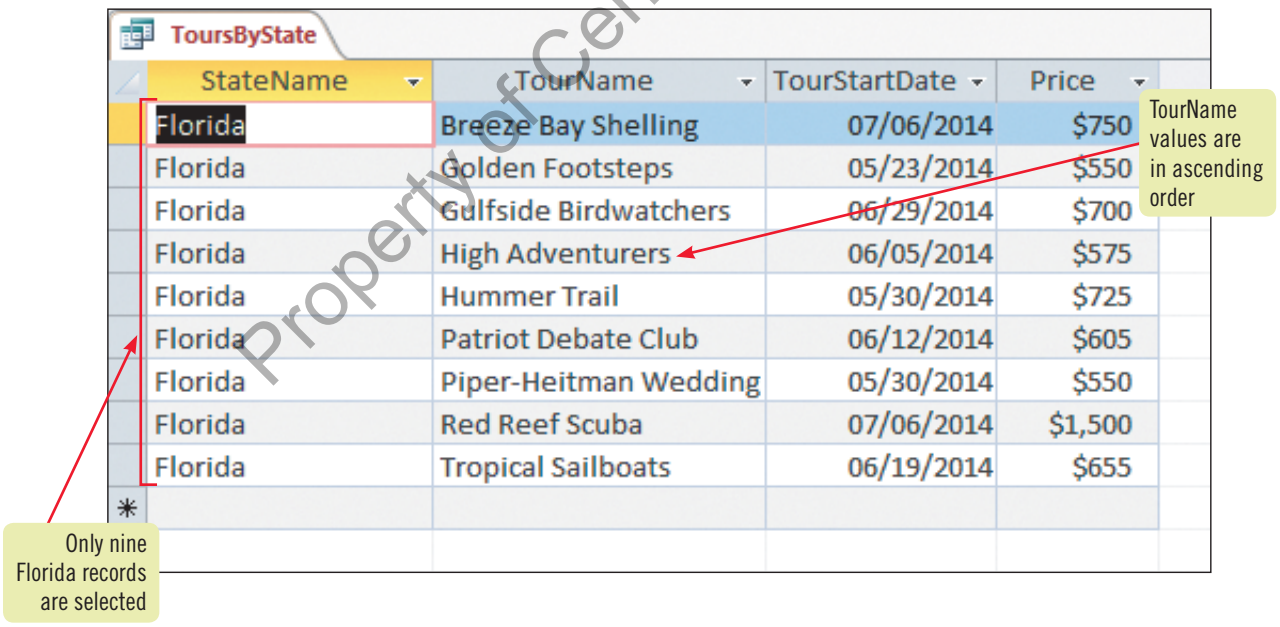


FIGURE B-6: ToursByState query with Florida criterion



StateName	TourName	TourStartDate	Price
Florida	Breeze Bay Shelling	07/06/2014	$750
Florida	Golden Footsteps	05/23/2014	$550
Florida	Gulfside Birdwatchers	06/29/2014	$700
Florida	High Adventurers	06/05/2014	$575
Florida	Hummer Trail	05/30/2014	$725
Florida	Patriot Debate Club	06/12/2014	$605
Florida	Piper-Heitman Wedding	05/30/2014	$550
Florida	Red Reef Scuba	07/06/2014	$1,500
Florida	Tropical Sailboats	06/19/2014	$655

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Adding or deleting a table in a query

You might want to add a table's field list to the upper pane of Query Design View to select fields from that table for the query. To add a new table to Query Design View, drag it from the Navigation Pane to Query Design View, or click the Show Table button on the Design tab, then add the desired table(s). To delete an unneeded table from Query Design View, click its title bar, then press [Delete].

Sort and Find Data

Learning Outcomes
- Apply sort orders to a query
- Find and replace data in a query
- Undo edits in a query

The Access sort and find features are handy tools that help you quickly organize and find data in a table or query datasheet. **TABLE B-1** describes the Sort and Find buttons on the HOME tab. Besides using these buttons, you can also click the list arrow on the field name in a datasheet, and then click a sorting option. **CASE** *Samantha asks you to provide a list of tours sorted by TourStartDate, and then by Price. You'll modify the ToursByCategory query to answer this query.*

STEPS

1. **Double-click the ToursByCategory query in the Navigation Pane to open its datasheet**
   The ToursByCategory query currently sorts tours by Category, then by TourName. You'll add the Duration field to this query, then change the sort order for the records.

QUICK TIP
Drag a selected field selector right or left to move the column to a new position in the query grid.

2. **Click the View button in the Views group to switch to Design View, then double-click the Duration field in the Tours field list**
   When you double-click a field in a field list, Access inserts it in the next available column in the query grid. You can also drag a field from a field list to a specific column of the query grid. To select a field in the query grid, you click its field selector. The **field selector** is the thin gray bar above each field in the query grid. If you want to delete a field from a query, click its field selector, then press [Delete]. Deleting a field from a query does not delete it from the underlying table; the field is only deleted from the query's logical view.

   Currently, the ToursByCategory query is sorted by Category and then by TourName. Access evaluates sort orders from left to right. You want to change the sort order so that the records sort first by TourStartDate then by Price.

3. **Click Ascending in the Category Sort cell, click the list arrow, click (not sorted), click Ascending in the TourName Sort cell, click the list arrow, click (not sorted), double-click the TourStartDate Sort cell to specify an Ascending sort, then double-click the Price Sort cell to specify an Ascending sort**
   The records are now set to be sorted in ascending order, first by TourStartDate, then by the values in the Price field, as shown in **FIGURE B-7**. Because sort orders always work from left to right, you might need to rearrange the fields before applying a sort order that uses more than one field. To move a field in the query design grid, click its field selector, then drag it left or right.

4. **Click the View button in the Results group**
   The new datasheet shows the Duration field in the fifth column. The records are now sorted in ascending order by the TourStartDate field. If two records have the same TourStartDate, they are further sorted by Price. Your next task is to replace all occurrences of "Site Seeing" with "Cultural" in the Category field.

5. **Click the Find button on the HOME tab, type Site Seeing in the Find What box, click the Replace tab, click in the Replace With box, then type Cultural**
   The Find and Replace dialog box is shown in **FIGURE B-8**.

TROUBLE
If your find-and-replace effort did not work correctly, click the Undo button and repeat Steps 5 and 6.

6. **Click the Replace All button in the Find and Replace dialog box, click Yes to continue, then click Cancel to close the Find and Replace dialog box**
   Access replaced all occurrences of "Site Seeing" with "Cultural" in the Category field, as shown in **FIGURE B-9**.

7. **Right-click the ToursByCategory query tab, click Close, then click Yes to save changes**

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FIGURE B-7: Changing sort orders for the ToursByCategory query

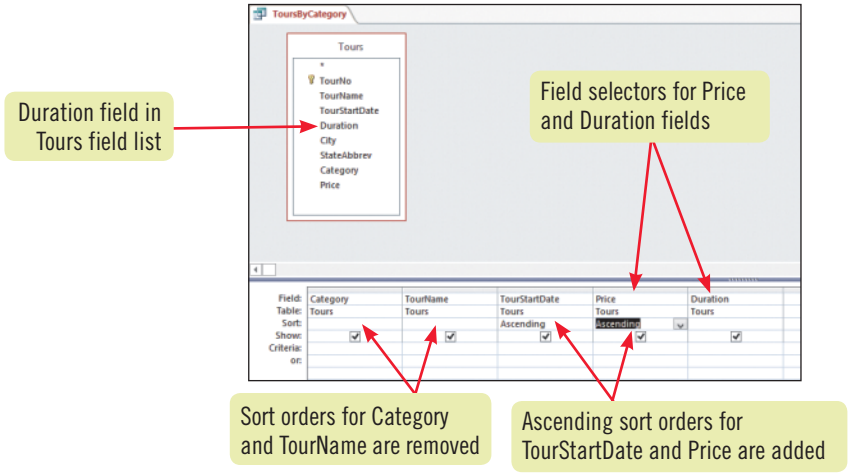

FIGURE B-8: Find and Replace dialog box

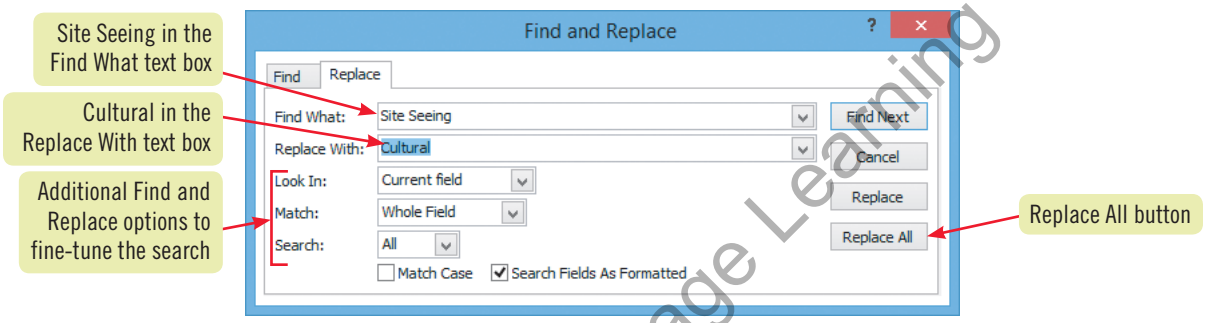

FIGURE B-9: Final ToursByCategory datasheet with new sort orders

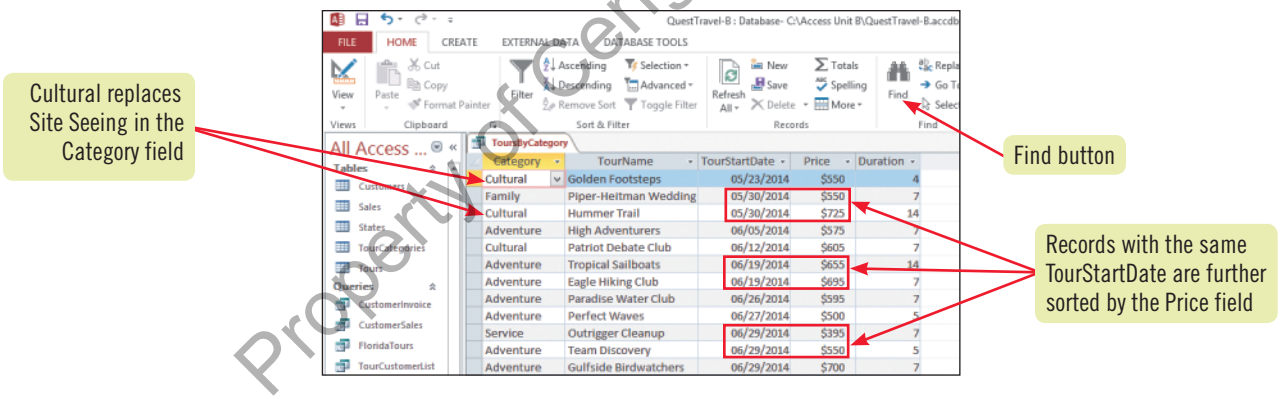

TABLE B-1: Sort and Find buttons

name	button	purpose
Ascending		Sorts records based on the selected field in ascending order (0 to 9, A to Z)
Descending		Sorts records based on the selected field in descending order (Z to A, 9 to 0)
Remove Sort		Removes the current sort order
Find		Opens the Find and Replace dialog box, which allows you to find data in a single field or in the entire datasheet
Replace		Opens the Find and Replace dialog box, which allows you to find and replace data
Go To		Helps you navigate to the first, previous, next, last, or new record
Select		Helps you select a single record or all records in a datasheet

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Filter Data

Learning Outcomes
- Apply and remove filters in a query
- Use wildcards in criteria

Filtering a table or query datasheet *temporarily* displays only those records that match given criteria. Recall that criteria are limiting conditions you set. For example, you might want to show only tours in the state of California, or only tours with a duration of 14 days. Although filters provide a quick and easy way to display a temporary subset of records in the current datasheet, they are not as powerful or flexible as queries. Most important, a query is a saved object within the database, whereas filters are temporary because Access removes them when you close the datasheet. **TABLE B-2** compares filters and queries. **CASE** *Samantha asks you to find all Adventure tours offered in the month of July. You can filter the Tours table datasheet to provide this information.*

STEPS

QUICK TIP
You can also apply a sort or filter by clicking the Sort and filter arrow to the right of the field name and choosing the sort order or filter values you want.

1. **Double-click the Tours table to open it, click any occurrence of Adventure in the Category field, click the Selection button in the Sort & Filter group on the HOME tab, then click Equals "Adventure"**

   Eighteen records are selected, some of which are shown in **FIGURE B-10**. A filter icon appears to the right of the Category field. Filtering by the selected field value, called **Filter By Selection**, is a fast and easy way to filter the records for an exact match. To filter for comparative data (for example, where TourStartDate is *equal to* or *greater than* 7/1/2014), you must use the **Filter By Form** feature. Filter buttons are summarized in **TABLE B-3**.

2. **Click the Advanced button in the Sort & Filter group, then click Filter By Form**

   The Filter by Form window opens. The previous Filter By Selection criterion, "Adventure" in the Category field, is still in the grid. Access distinguishes between text and numeric entries by placing "quotation marks" around text criteria.

QUICK TIP
To clear previous criteria, click the Advanced button, then click Clear All Filters.

3. **Click the TourStartDate cell, then type 7/*/2014 as shown in FIGURE B-11**

   Filter By Form also allows you to apply two or more criteria at the same time. An asterisk (*) in the day position of the date criterion works as a wildcard, selecting any date in the month of July (the 7th month) in the year 2014.

QUICK TIP
Be sure to remove existing filters before applying a new filter, or the new filter will apply to the current subset of records instead of the entire datasheet.

4. **Click the Toggle Filter button in the Sort & Filter group**

   The datasheet selects two records that match both filter criteria, as shown in **FIGURE B-12**. Note that filter icons appear next to the TourStartDate and Category field names as both fields are involved in the filter.

5. **Close the Tours datasheet, then click Yes when prompted to save the changes**

   Saving changes to the datasheet saves the last sort order and column width changes. Filters are not saved.

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Using wildcard characters

To search for a pattern, you can use a **wildcard** character to represent any character in the condition entry. Use a question mark (?) to search for any single character and an asterisk (*) to search for any number of characters. Wildcard characters are often used with the **Like** operator. For example, the criterion Like "12/*/13" would find all dates in December of 2013, and the criterion Like "F*" would find all entries that start with the letter F.

FIGURE B-10: Filtering the Tours table

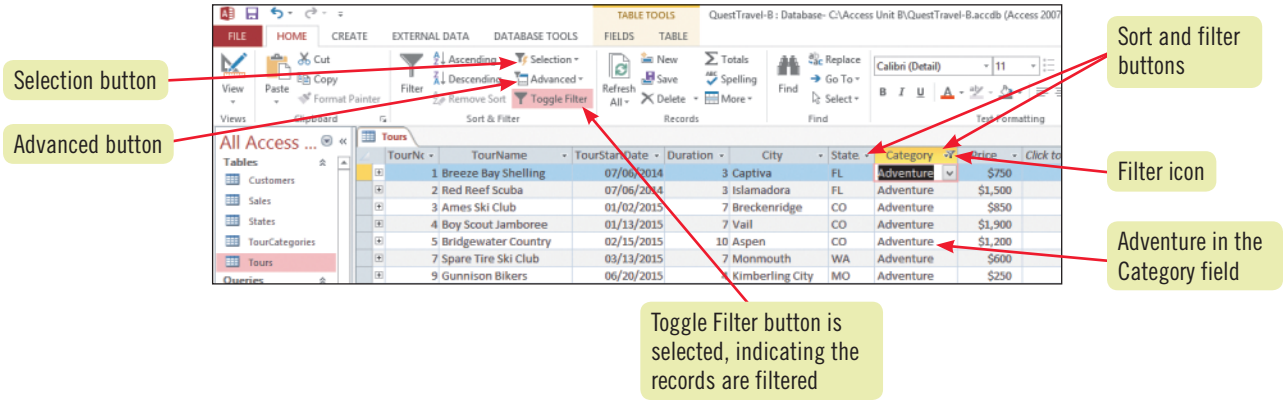

FIGURE B-11: Filtering By Form criteria

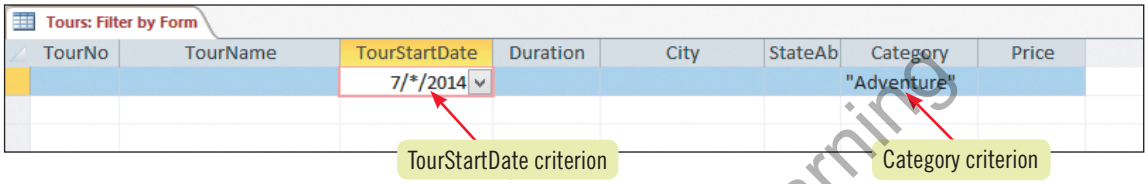

FIGURE B-12: Results of filtering by form

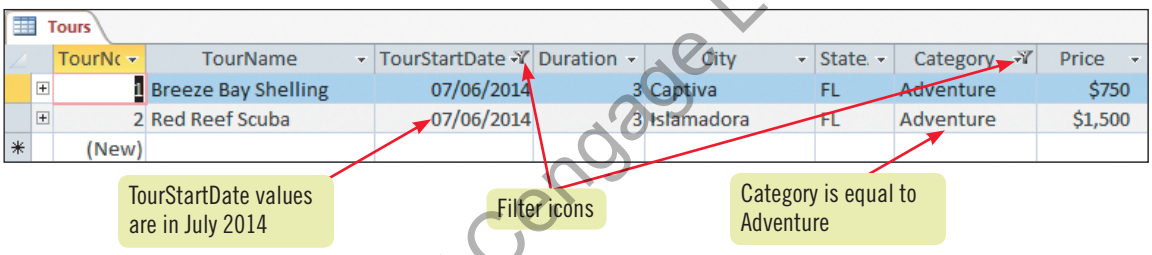

TABLE B-2: Filters vs. queries

characteristics	filters	queries
Are saved as an object in the database		•
Can be used to select a subset of records in a datasheet	•	•
Can be used to select a subset of fields in a datasheet		•
Resulting datasheet used to enter and edit data	•	•
Resulting datasheet used to sort, filter, and find records	•	•
Commonly used as the source of data for a form or report		•
Can calculate sums, averages, counts, and other types of summary statistics across records		•
Can be used to create calculated fields		•

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TABLE B-3: Filter buttons

name	button	purpose
Filter		Provides a list of values in the selected field that can be used to customize a filter
Selection		Filters records that equal, do not equal, or are otherwise compared with the current value
Advanced		Provides advanced filter features such as Filter By Form, Save As Query, and Clear All Filters
Toggle Filter		Applies or removes the current filter

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Apply AND Criteria

Learning Outcomes
- Enter AND criteria in a query
- Define criteria syntax
- Use comparison operators with criteria

You can limit the number of records that appear on a query datasheet by entering criteria in Query Design View. Criteria are tests, or limiting conditions, for which the record must be true to be selected for the query datasheet. To create **AND criteria**, which means that *all* criteria must be true to select the record, enter two or more criteria on the *same* Criteria row of the query design grid. **CASE** *Samantha Hooper asks you to provide a list of all Adventure tours in the state of Florida with a duration of 7 days or less. Use Query Design View to create the query with AND criteria to meet her request.*

STEPS

1. **Click the CREATE tab on the Ribbon, click the Query Design button, double-click Tours, then click Close in the Show Table dialog box**
   You want four fields from the Tours table in this query.
2. **Drag the bottom edge of the Tours field list down to display all of the fields, double-click TourName, double-click Duration, double-click StateAbbrev, then double-click Category to add these fields to the query grid**
   First add criteria to select only those records in Florida. Because you are using the StateAbbrev field, you need to use the two-letter state abbreviation for Florida, FL, as the Criteria entry.
3. **Click the first Criteria cell for the StateAbbrev field, type FL, then click the View button to display the results**
   Querying for only those tours in the state of Florida selects nine records. Next, you add criteria to select only the tours in Florida in the Adventure category.
4. **Click the View button, click the first Criteria cell for the Category field, type Adventure, then click the View button in the Results group**
   Criteria added to the same line of the query design grid are AND criteria. When entered on the same line, each criterion must be true for the record to appear in the resulting datasheet. Querying for both FL and Adventure tours narrows the selection to five records. Every time you add AND criteria, you *narrow* the number of records that are selected because the record must be true for *all* criteria.
5. **Click the View button, click the first Criteria cell for the Duration field, then type <=7, as shown in FIGURE B-13**
   Access assists you with **criteria syntax**, rules that specify how to enter criteria. Access automatically adds "quotation marks" around text criteria in Short Text and Long Text fields ("FL" and "Adventure") and pound signs (#) around date criteria in Date/Time fields. The criteria in Number, Currency, and Yes/No fields are not surrounded by any characters. See TABLE B-4 for more information about comparison operators such as > (greater than).
6. **Click the View button**
   The third AND criterion further narrows the number of records selected to four, as shown in FIGURE B-14.
7. **Click the Save button on the Quick Access toolbar, type AdventureFL as the query name, click OK, then close the query**
   The query is saved with the new name, AdventureFL, as a new object in the QuestTravel-B database. Criteria entered in Query Design View are permanently saved with the query (as compared with filters in the previous lesson, which are temporary and not saved with the object).

TROUBLE
If your datasheet doesn't match FIGURE B-14, return to Query Design View and compare your criteria with that of FIGURE B-13.

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FIGURE B-13: Query Design View with AND criteria

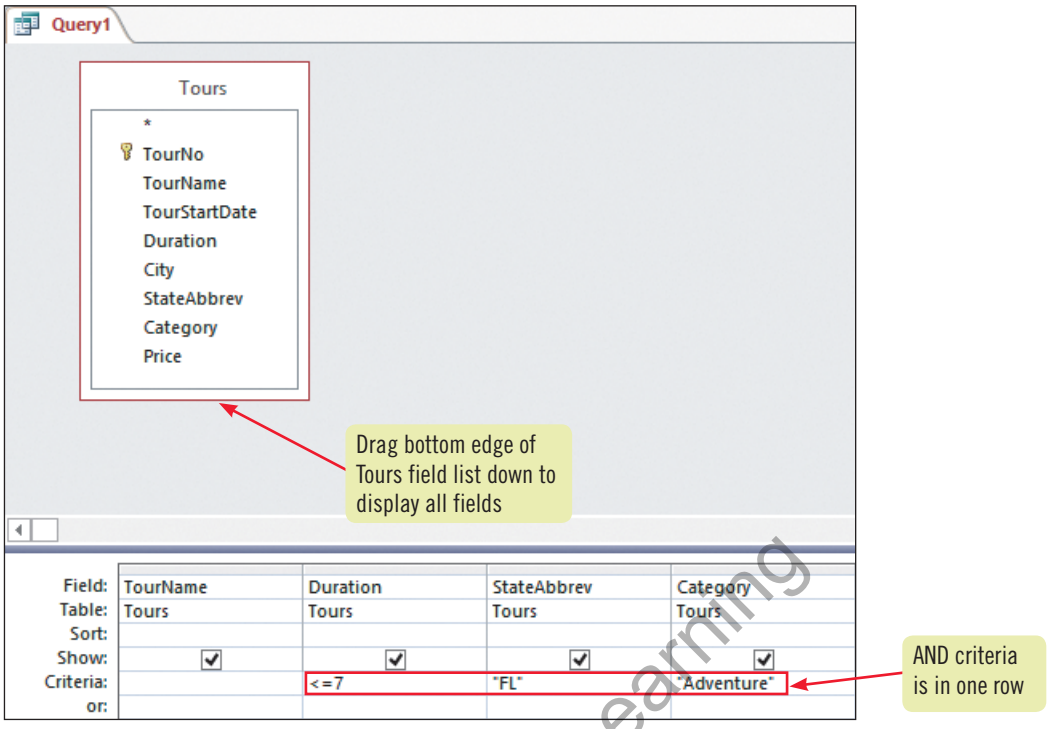

FIGURE B-14: Final datasheet of AdventureFL query

TourName	Duration	State	Category
Breeze Bay Shelling	3	FL	Adventure
Red Reef Scuba	3	FL	Adventure
High Adventurers	7	FL	Adventure
Gulfside Birdwatchers	7	FL	Adventure

Records meet all three criteria:
Duration <=7
State = "FL"
Category = "Adventure"

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TABLE B-4: Comparison operators

operator	description	expression	meaning
>	Greater than	>500	Numbers greater than 500
>=	Greater than or equal to	>=500	Numbers greater than or equal to 500
<	Less than	<"Braveheart"	Names from A to Braveheart, but not Braveheart
<=	Less than or equal to	<="Bridgewater"	Names from A through Bridgewater, inclusive
<>	Not equal to	<>"Fontanelle"	Any name except for Fontanelle

Searching for blank fields

Is Null and Is Not Null are two other types of common criteria. The **Is Null** criterion finds all records where no entry has been made in the field. **Is Not Null** finds all records where there is any entry in the field, even if the entry is 0. Primary key fields cannot have a null entry.

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Apply OR Criteria

Learning Outcomes
- Enter OR criteria in a query
- Rename a query

You use **OR criteria** when *any one* criterion must be true in order for the record to be selected. Enter OR criteria on *different* Criteria rows of the query design grid. As you add rows of OR criteria to the query design grid, you *increase* the number of records selected for the resulting datasheet because the record needs to match *only one* of the Criteria rows to be selected for the datasheet. **CASE** *Samantha Hooper asks you to add criteria to the previous query. She wants to include Cultural tours in the state of Florida that are shorter than or equal to 7 days in duration. To do this, you modify a copy of the AdventureFL query to use OR criteria to add the records.*

STEPS

1. **Right-click the AdventureFL query in the Navigation Pane, click Copy, right-click a blank spot in the Navigation Pane, click Paste, type AdventureCulturalFL in the Paste As dialog box, then click OK**

   By copying the AdventureFL query before starting your modifications, you avoid changing the AdventureFL query by mistake.

2. **Right-click the AdventureCulturalFL query in the Navigation Pane, click Design View, click the second Criteria cell in the Category field, type Cultural, then click the View button to display the query datasheet**

   The query selected 11 records including all of the tours with Cultural in the Category field. Note that some of the Duration values are greater than 7 and some of the StateAbbrev values are not FL. Because each row of the query grid is evaluated separately, all Cultural tours are selected regardless of criteria in any other row. In other words, the criteria in one row have no effect on the criteria of other rows. To make sure that the Cultural tours are also in Florida and have a duration of less than or equal to 7 days, you need to modify the second row of the query grid (the "or" row) to specify that criteria.

QUICK TIP
The Datasheet, Design, and other view buttons are also located in the lower-right corner of the Access window.

3. **Click the View button, click the second Criteria cell in the Duration field, type <=7, click the second Criteria cell in the StateAbbrev field, type FL, then click in any other cell of the grid**

   Query Design View should look like **FIGURE B-15**.

4. **Click the View button**

   Six records are selected that meet all three criteria as entered in row one *or* row two of the query grid, as shown in **FIGURE B-16**.

5. **Right-click the AdventureCulturalFL query tab, click Close, then click Yes to save and close the query datasheet**

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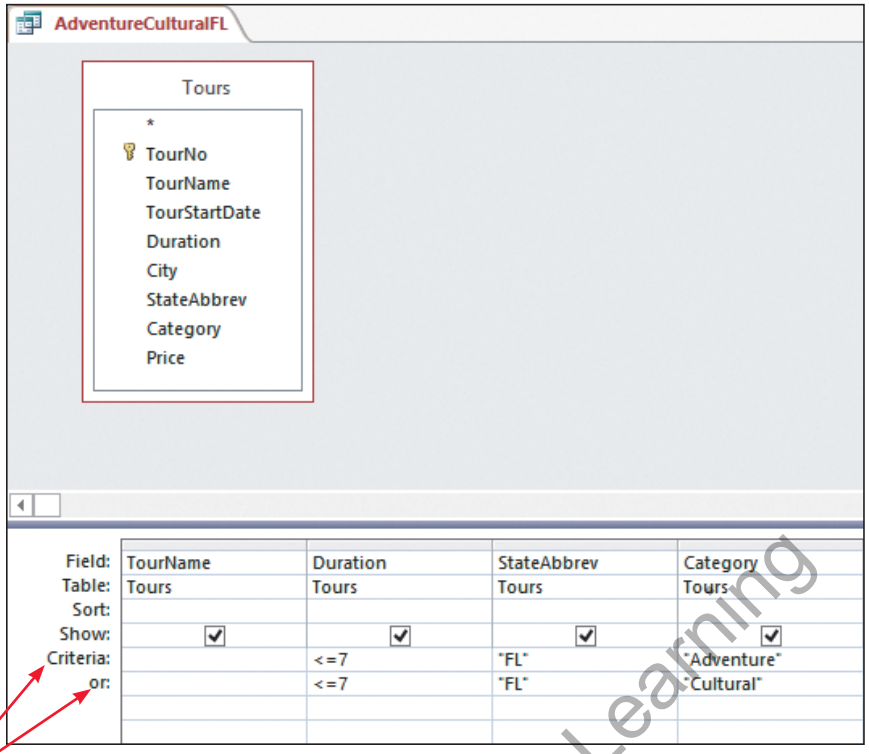
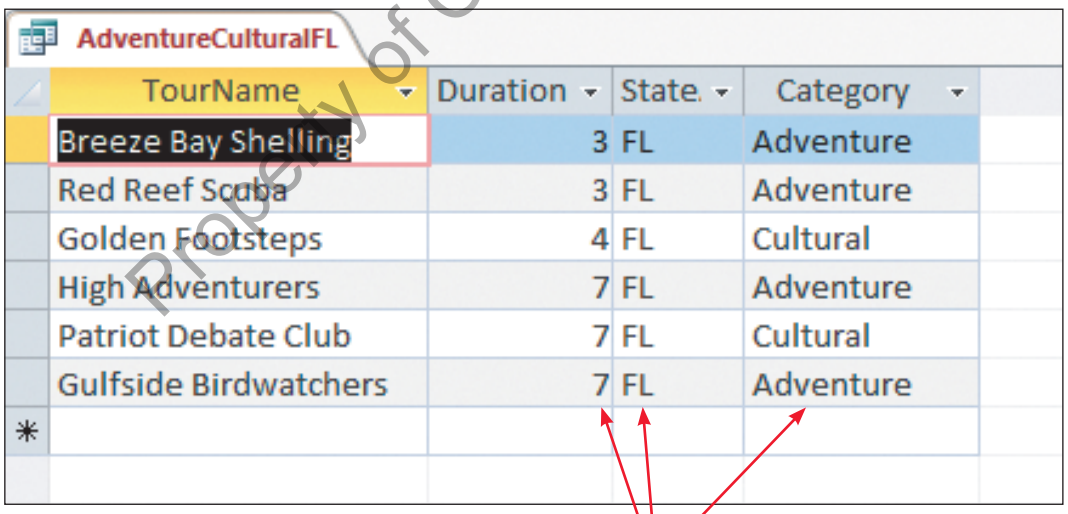
FIGURE B-15: Query Design View with OR criteria



OR criteria is on multiple rows

FIGURE B-16: Final datasheet of AdventureCulturalFL query



AdventureCulturalFL

TourName	Duration	State	Category
Breeze Bay Shelling	3	FL	Adventure
Red Reef Scuba	3	FL	Adventure
Golden Footsteps	4	FL	Cultural
High Adventurers	7	FL	Adventure
Patriot Debate Club	7	FL	Cultural
Gulfside Birdwatchers	7	FL	Adventure

Records meet all three criteria:
Duration <=7
State = "FL"
Category = "Adventure"
OR
Duration <=7
State = "FL"
Category = "Cultural"

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Format a Datasheet

Learning Outcomes
- Zoom in print preview
- Format a datasheet
- Change page orientation

A report is the primary Access tool to create a professional printout, but you can print a datasheet as well. A datasheet allows you to apply some basic formatting modifications such as changing the font size, font face, colors, and gridlines. **CASE** *Samantha Hooper asks you to print a list of customers. You decide to format the Customers table datasheet before printing it for her.*

STEPS

1. **In the Navigation Pane, double-click the Customers table to open it in Datasheet View**
   Before applying new formatting enhancements, you preview the default printout.
2. **Click the FILE tab, click Print, click Print Preview, then click the header of the printout to zoom in**
   The preview window displays the layout of the printout, as shown in FIGURE B-17. By default, the printout of a datasheet contains the object name and current date in the header. The page number is in the footer.
3. **Click the Next Page button in the navigation bar to move to the next page of the printout**
   The last two fields print on the second page because the first is not wide enough to accommodate them. You decide to switch the report to landscape orientation so that all of the fields print on one page, and then increase the size of the font before printing to make the text easier to read.
4. **Click the Landscape button on the PRINT PREVIEW tab to switch the report to landscape orientation, then click the Close Print Preview button**
   You return to Datasheet View where you can make font face, font size, font color, gridline color, and background color choices.
5. **Click the Font list arrow Calibri (Body) in the Text Formatting group, click Times New Roman, click the Font Size list arrow 11, then click 12**
   With the larger font size applied, you need to resize some columns to accommodate the widest entries.
6. **Use the ↔ pointer to double-click the field separator between the Street and City field names, then double-click the field separator between the Phone and FirstContact field names**
   Double-clicking the field separators widens the columns as needed to display every entry in those fields, as shown in FIGURE B-18.
7. **Click the FILE tab, click Print, click Print Preview, then click the preview to zoom in and out to review the information**
   All of the fields now fit across a page in landscape orientation. The preview of the printout is still two pages, but with the larger font size, it is easier to read.
8. **Right-click the Customers table tab, click Close, click Yes when prompted to save changes, then click the Close button on the title bar to close the QuestTravel-B.accdb database and Access 2013**

QUICK TIP
If you need a printout of this datasheet, click the Print button on the PRINT PREVIEW tab, then click OK.

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FIGURE B-17: Preview of Customers datasheet

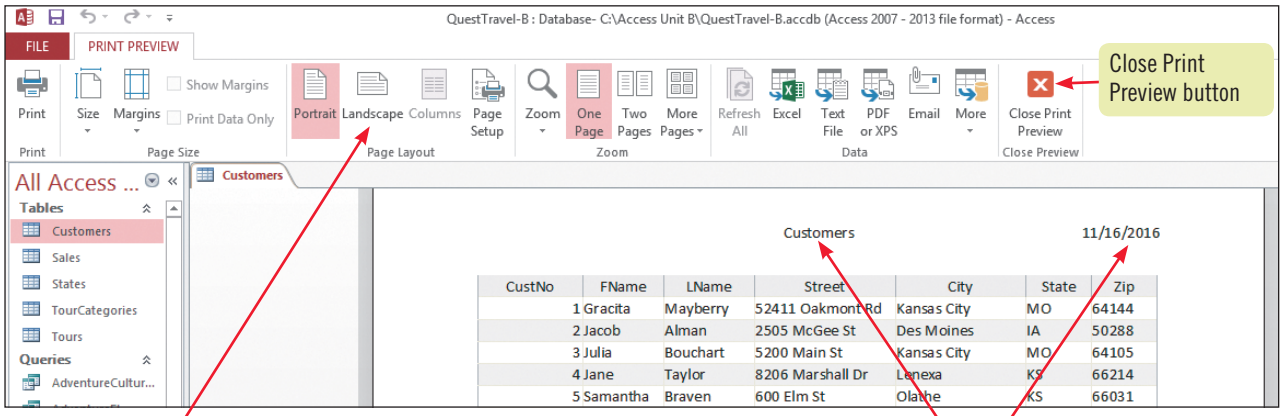
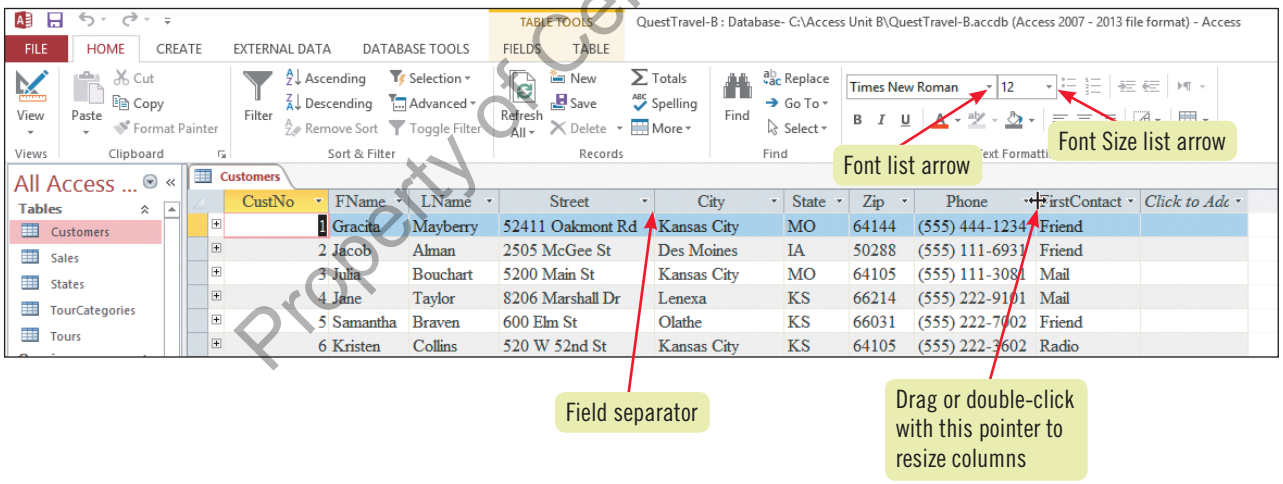


FIGURE B-18: Formatting the Customers datasheet



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