

Decision Making Using Access

LEARNING OUTCOMES

1. Describe the steps for creating a form using the Form Wizard using Access.
2. Describe the steps for creating and saving AutoForms using Access.
3. Describe the steps to modify the properties of a form using Access.
4. Describe the steps for creating a report using the Report Wizard using Access.
5. Describe the steps to modify the properties of a report using Access.

Introduction

This plug-in focuses on the two functions of decision making using Access: creating forms and creating reports. A *form* is nothing more than a graphical representation of a table. You can add, update, and delete records in your table by using a form. Although a form can be named different from a table, they both still manipulate the same information and the same data. Hence, if you change a record in a form, it will be changed in the table as well.

A form is useful when you have numerous fields in a table. This way you can see all the fields in one screen, whereas if you were in the table view (datasheet) you would have to keep scrolling to get the field you desire.

A *report* is an effective way to present your data in a printed format. Because you have control over the size and appearance of everything on a report, you can display the information the way you want to see it.

Forms

An Access form is a window, similar to a dialog box, that contains a set of controls (such as labels, text boxes, and check boxes) to view, enter, or edit database information, typically one record at a time.

In a form, data are obtained directly from one or more tables or data that have been extracted using a query. Although it is possible to directly enter and edit the information in tables in Datasheet view, a database usually includes a set of forms, which can make entering and editing data considerably easier and can limit the fields that can be viewed or modified.

CREATING A FORM USING THE FORM WIZARD

Forms allow you to enter data one record at a time. Often, it is easier to enter data in a well-designed form rather than in a wide datasheet. You can create a form that has fields from more than one table or query. Like other wizards, the Form Wizard walks you step-by-step through the process of creating a form.

To create a form using the Form Wizard:

1. Open the file **T8_SlopesideBikes_Data.mdb** from the data file that accompanies this text.
2. Double-click **Create form by using wizard**.
3. Click the Tables/Queries drop-down arrow and select **Table: BIKE**.
4. Add all BIKE fields by clicking on the **double right arrow**. Click **Next** to go to the next step.
5. Select the **Columnar** form layout. Click **Next**.
6. Select the **Standard** graphic style. Click **Next**.
7. Type in **BIKE Title** for a form title.
8. Click **Finish** to open the form and begin entering data (see Figure T8.1).

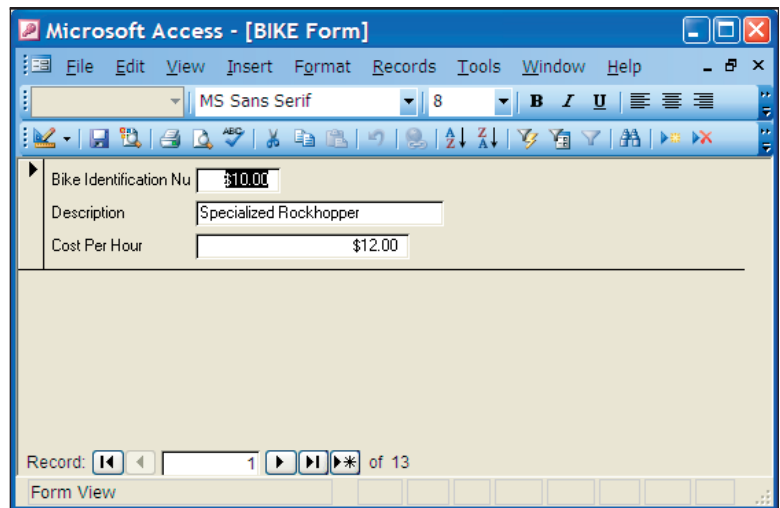


FIGURE T8.1

Create a Form by Using Wizard

Accessing Several Tables or Queries in a Form

When you select the fields for your form in the first Form Wizard dialog box, you can add fields from several tables or queries. To add fields from each table or query, select it in the Tables/Queries drop-down list and then use the buttons to move the fields you want to the Selected Fields list.

If you add fields from several forms or queries, the wizard will display one or two additional dialog boxes that weren't shown in the previous section: one dialog box in which you specify the form or query by which you want to view your data (for example, if you selected fields from the CUSTOMER and the BIKE tables, you would choose to view your data either "by Customer" or "by Bike") and possibly another dialog box in which you select a layout for a subform. The choices you make determine the form's record source.

If your form includes fields from two tables that are related in a one-to-many relationship and if you selected to view your data by the primary table, the wizard will let you display the records from the related table in a subform contained within the form. As an alternative, the wizard will let you set up a linked form, which is a separate form that displays the related data and which you open by clicking a button on the main form.

On the other hand, if you chose to view your data by the related table in the one-to-many relationship, when the form displays a record in the related table, it will simply display the unique matching fields from the primary table along with the fields from the current record in the related table.

A form that accesses data from several tables or queries can be complex to design from scratch or to modify. However, if you create the form using the Form Wizard, almost everything is set up for you.

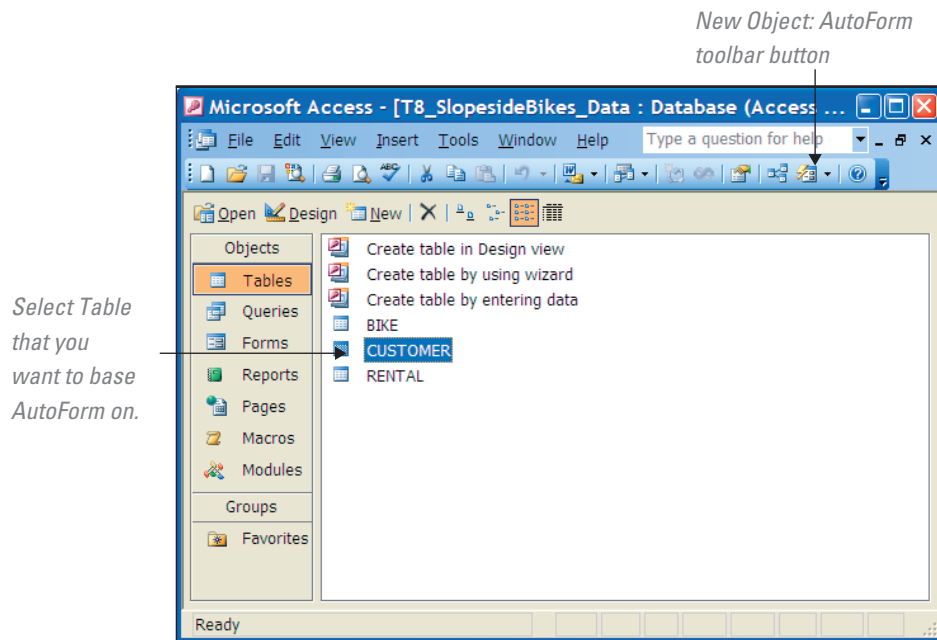
CREATING AND SAVING AUTOFORMS

The AutoForm Wizard is the quickest and easiest way to create a form. There are five types of AutoForms: (1) Columnar, (2) Tabular, (3) Datasheet, (4) PivotTable, and (5) PivotChart. The Columnar Form is the default format.



FIGURE T8.2

Create a Form by Using AutoForm



To use the AutoForm Wizard to create a Columnar Form:

1. Display the Tables window.
2. Select the **CUSTOMER** table.
3. Click the **New Object:AutoForm** toolbar button (refer to Figure T8.2). (If the New Object toolbar button is not in the AutoForm state, click the New Object arrow and select AutoForm.)
4. Access automatically creates a Columnar Form based on the CUSTOMER table you selected.
5. **Close** the form by clicking the Close box in the upper-right corner.
6. Access will automatically prompt you to save the form. Save the form as **Cus-tomer**.

Note: Notice that the *New Object* toolbar button changes. The button will change to reflect the most recent object type.

MODIFYING THE PROPERTIES OF A FORM

Once you have created a form using one of the wizards, you can still change the way the form looks and functions. The AutoFormat button allows you to change the form's graphic style. Opening the Properties dialog allows you to change other form properties.

Here is a description on how to modify the properties of a form:

1. With the form open in Design view, use the **AutoFormat** toolbar button to change the graphic style of the form (refer to Figure T8.3).
2. To change other form properties, open the Properties dialog box by clicking the **Properties** toolbar button (refer to Figure T8.3).
3. Make sure that you are viewing the properties for the form by looking at the box at the top of the dialog.
4. Scroll through the list of properties.
5. Click the **box** next to the property that you want to change. Some properties have a drop-down list with specific choices. For other properties, you enter a specific value.

- When you have made the changes you want, **close** the Properties dialog box by clicking the Close box in the upper-right corner.
- Click on the **View** button to switch to **Form View** to see the changes you have made (refer to Figure T8.3).

MODIFYING SPECIFIC CONTROLS ON A FORM

Not all controls on your form may be of equal importance. You may want to modify the look of a specific control to make it stand out, or you may want to modify the control behavior. When designing forms, be careful not to over-design. Too many different colors, styles, or behaviors can distract from accurate data entry.

To modify the properties of a specific control (refer to Figure T8.3):

- Open **BIKE form** in Design view.
- Since the BIKE form you created using the wizard did not include a title for the form, you should create one.
- Select all the objects on the form by pressing **CTRL + A**. Use your **down arrow** key to move the selected objects down enough for you to enter a form title label.
- Using the **Toolbar options**, select the **Label** tool. Notice that the pointer changes to a plus (+) sign.
- Click and drag a rectangular box at the top of the form. Type **SLOPESIDE BIKE FORM** inside the label box.
- Select **Properties** from the shortcut menu.
- Click the **Format** tab if necessary.
- Click the **Font Weight** property, and select **Bold** in the drop-down list.
- Click the **Text Align** property, and select **Center** in the drop-down list. **Note:** Some properties have a drop-down list with specific choices. For other properties, you enter a specific value.
- Close** the Properties dialog box by clicking the Close box in the upper-right corner.

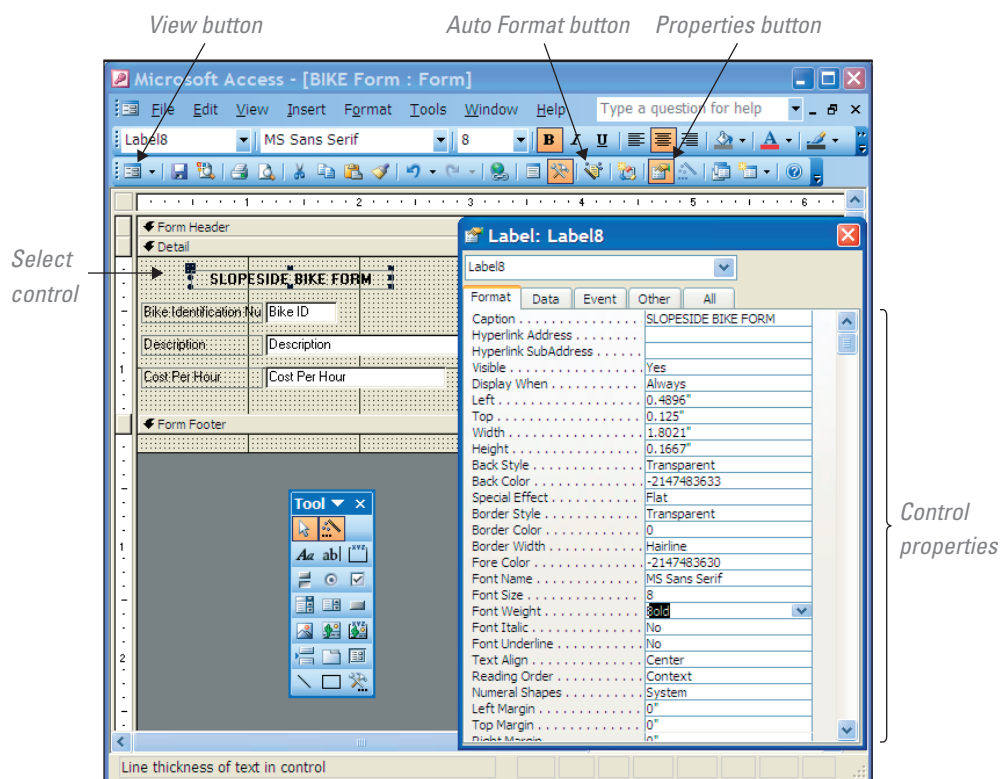


FIGURE T8.3

Modify Form Properties and Controls

11. Switch to **Form View** to see the changes you have made.

12. **Close** and **Save** the form.

Note: Common properties to modify are the use of scroll bars and growing or shrinking the size of the control based on data the user enters. If you turn off scroll bars, users can only see the data that fits within the specific control dimensions. If you turn on *Can Grow* or *Can Shrink*, the control area will grow and/or shrink to fit the data.

Many formatting options are available from the shortcut menu (selecting a control, then right mouse click). You can change the background color, font color, and which special effect is applied to the control.

ALIGNING CONTROLS IN A FORM

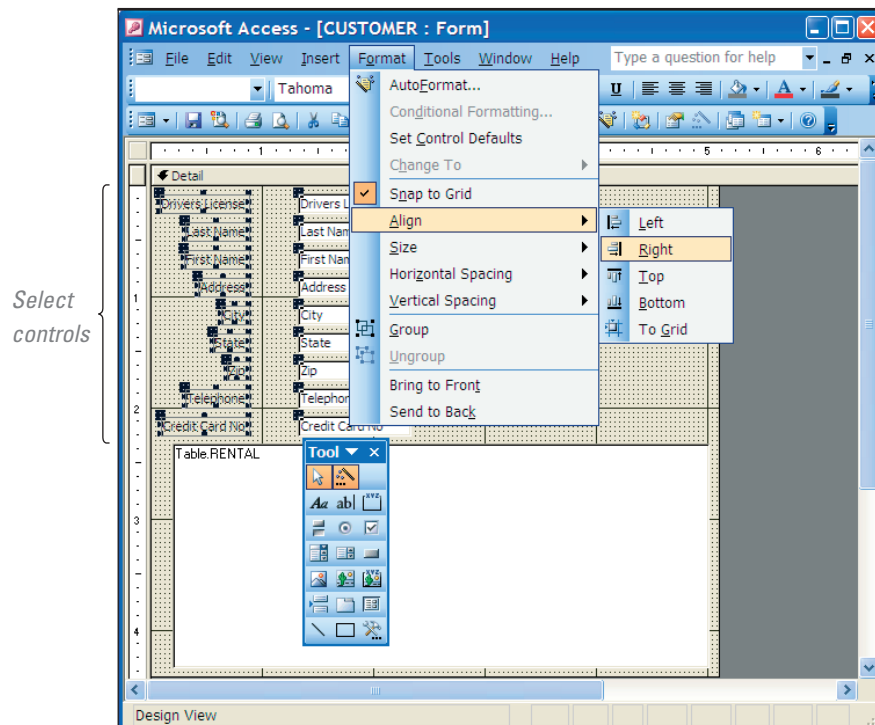
To give your form a professional look, make sure that controls are aligned evenly. You can use the form rulers or display the form grid to give you visual guidelines. Rather than trying to manually align controls, use the Access alignment tools. You can select multiple controls and then align them by the left side, right side, top, or bottom.

To align controls in a form:

1. Open the **CUSTOMER** form.
2. Show the form grid by selecting **Grid** from the **View** menu.
3. Show the rules by selecting **Ruler** from the **View** menu.
4. Select all the **label controls** to the left of the text boxes.
5. Select **Align** from the **Format** menu. Select the **Right** alignment (refer to Figure T8.4).
6. Switch to **Form View** to see the changes you have made.
7. **Close** and **Save** the form.

Note: Use left or right alignment for controls that are in the same column. Use top or bottom alignment for controls that are in the same row.

FIGURE T8.4
Modify Form Properties



If you specify an alignment that would cause controls to overlap, Access will place the edges of the controls right next to each other, but will not overlap them.

Reports

Reports are used primarily for printing selected database information. A report labels, groups, sorts, and summarizes the data it presents. Like a form, a report can display data directly from one or more tables or it can display the results of a query.

USING THE REPORT WIZARD

Like other wizards, the Report Wizard walks you step-by-step through the process of creating a report. Unlike forms, which are designed for on-screen data entry, reports are designed for print.

To create a report using the Report Wizard:

1. In the Reports window, double-click **Create report by using wizard**.
2. Click the Tables/Queries drop-down arrow. Select the **CUSTOMER** table and select all the fields except the *Drivers License*, *Telephone*, and *Credit Card No.* Then select the **RENTAL** table and select the **Date** field. Lastly, select the **BIKE** table and select the **Description** field.
3. Click **Next** to go to the next step. **Note:** If you selected fields from more than one table or query in the previous step, the second Report Wizard dialog box asks you to choose one table or query that will be used for grouping the information in the report, if possible.
4. The next wizard asks how you want to view the report. Double-click **BIKE**. Click **Next**.
5. Make **Date** the Grouping. (**Note:** Use a grouping level to organize the data into subgroups by the value of a specific field.) Click **Next**.
6. Next, specify **State** as the data sort. Click **Next**.
7. Select the **Stepped** report layout and **Landscape** orientation. Click **Next**.
8. Select the **Bold** graphic style for the report. Click **Next**.
9. Type in **Customer Rental by State Report** for the title and select **View the report**.
10. Click **Finish**. Figure T8.5 displays the results.

MODIFYING THE REPORT DESIGN

Once you create a report, you can modify the report's design to make it more visually attractive. As with forms, be careful not to overdesign your report. A poorly designed report can distract from the information being presented. To modify the design, you must have the report open in Design view.

To modify the report design:

1. Preview the report first. Double-click the **Customer Rental by State Report**. Notice that the Description name is truncated and the State column needs to be moved to the right.
2. Switch to **Design view** by clicking the **View** button.
3. Click the **Description** control under the Bike_Id header section, and then **drag** the sizing **right handle** to increase the width of the control box (this will allow more characters to be visible in the report). You can also select **Size** from the **Format** menu. Select **To Fit** to automatically resize the label or control to fit your data.

FIGURE T8.5

View Report

Description	Date by Month	State	Last Name	Date	First Name	Address	City	Zip
Specialized Rockhopp	May 2006							
		PA	Smith	5/30/2006	Sue	214 Oak Avenue	Philadelphia	19019
	June 2006							
Specialized Rockhopp	June 2006	PA	Smith	6/2/2006	Sue	214 Oak Avenue	Philadelphia	19019
	July 2006							
	July 2006	NY	Dunn	7/5/2006	David	3 Ivy Lane	New York	10151
Trek Fuel 70	June 2006							
		MN	Myers	5/29/2006	Mike	567 5th Street	Minneapolis	55401
		MN	Myers	5/30/2006	Mike	567 5th Street	Minneapolis	55401
Trek Fuel 80	July 2006							
		NJ	Elliott	7/5/2006	Raymond	7890 Fishpike Lane	Newark	07101
		NJ	Elliott	7/7/2006	Raymond	7890 Fishpike Lane	Newark	07101
Trek Fuel 80	July 2006							
		LA	Lapierre	7/11/2006	Lynne	819 River Road	New Orleans	70117
		LA	Lapierre	7/12/2006	Lynne	819 River Road	New Orleans	70117

- 4. Select the **State** column heading and the **State** control (to select both, hold down the Shift key when selecting) and move to the **right** a few spaces using the **right arrow** key. Do not worry if some of the controls overlap.
- 5. Switch back to **Preview** mode to see the effects of your changes. Figure T8.6 displays the modified report.

FIGURE T8.6

Modified Report Properties

Description	Date by Month	State	Last Name	Date	First Name	Address	City	Zip
Specialized Rockhopper	May 2006							
		PA	Smith	5/30/2006	Sue	214 Oak Avenue	Philadelphia	19019
	June 2006							
Specialized Rockhopper	June 2006	PA	Smith	6/2/2006	Sue	214 Oak Avenue	Philadelphia	19019
	July 2006							
	July 2006	NY	Dunn	7/5/2006	David	3 Ivy Lane	New York	10151
Trek Fuel 70	June 2006							
		MN	Myers	5/29/2006	Mike	567 5th Street	Minneapolis	55401
		MN	Myers	5/30/2006	Mike	567 5th Street	Minneapolis	55401
Trek Fuel 80	July 2006							
		NJ	Elliott	7/5/2006	Raymond	7890 Fishpike Lane	Newark	07101
		NJ	Elliott	7/7/2006	Raymond	7890 Fishpike Lane	Newark	07101
Trek Fuel 80	July 2006							
		LA	Lapierre	7/11/2006	Lynne	819 River Road	New Orleans	70117
		LA	Lapierre	7/12/2006	Lynne	819 River Road	New Orleans	70117

Note: Change the graphic style of the report by clicking the AutoFormat toolbar button. The AutoFormat style list is the same list of styles that you choose from when creating a report using the Report Wizard.

CHANGING MARGINS AND PAGE ORIENTATION FOR REPORTS

The default page orientation for a report is portrait. This means the height of the page is greater than the width. You may want to change this orientation to accommodate multiple columns of data so they fit on one page. Margins are the blank spaces at the top, bottom, left, and right of a report. By adjusting the page margins, you can control the number of records printed on each page. Use the dialog box to adjust margins and page orientation for your reports.

Here is a description on how to change the margins for a report:

1. Double-click the **report name** in the Reports window.
2. Click the **Setup** toolbar button.
3. The **Page Setup** dialog box opens with the Margins tab on top.
4. Change the values for the top, bottom, left, or right margin.
5. Click **OK**.

To change the page orientation for a report:

1. Double-click the **report name** in the Reports window.
2. In the Page Setup dialog box, click the **Page** tab.
3. Click the radio button for Portrait or Landscape orientation.
4. Click **OK**.

Note: When you print a report, Access prints the data along with all graphic elements associated with the report's AutoFormat. To print only the data and not the graphic elements of a report, select the Print Data Only check box on the Margins tab of the Page Setup dialog box.



PLUG-IN SUMMARY

To have Microsoft Access create the form for you according to your specifications, select the Form Wizard option. The Form Wizard lets you choose the specific fields to include, which can belong to one or more tables or queries. To have Access quickly create a form that has a particular configuration (Columnar, Tabular, Datasheet, PivotTable, or PivotChart), based on the record source table or query you select in the drop-down list, select one of the five AutoForm options. Access will immediately create the form, including all fields from the record source and using default options without asking for your specifications.

To have Microsoft Access help you design a report, select the Report Wizard option. To use default settings to quickly create a report based on a single table or query, with a columnar or tabular layout, select the AutoReport: Columnar or the AutoReport: Tabular option. Either report will include all the fields belonging to the record source table or query that you select in the drop-down list at the bottom of the New Report dialog box.



MAKING BUSINESS DECISIONS

1. WasteNot Recycling

WasteNot Recycling, introduced in Plug-In T6 and reintroduced in T7, picks up recyclables from homeowners in Boulder, Colorado. The owners of WasteNot Recycling have asked you to assist with creating a form and several reports. They have provided you with an updated database file, **T8_WasteNotRecycling_Data.mdb**. Specifically they want you to do the following:

1. Create a form that will allow the owners to enter data into the CUSTOMER and the CUSTOMER RECORD tables. They have left the design (i.e., aesthetics) up to you. However, they have asked that you locate an appropriate graphic to include on the form. You will want to use the Internet to find such a graphic. Make sure you align all the controls and adjust the size of all the controls to fit the data. Save the form as **Customers**.
2. Create a report that groups the records by customer. The report should include data on the customer first and last name, service date of pickup, weight of paper, and weight of other. The report should be sorted by customer last name. You will need to create a subtotal for the weights for each customer. Create a report title called **Customer Weights**.

2. It's A Grind Coffee Shop

It's A Grind Coffee Shop, introduced in Plug-In T6, is an Oakland, California, neighborhood coffee shop. Kate Fitzgerald, the proprietor, has decided that she needs a form and a few reports created to help her purchase new books for her coffee shop.

Kate has provided you with an updated database file, **T8_ItsAGrindCoffee_Data.mdb**. Specifically, Kate wants you to:

1. Create a form that will allow Kate to add new books to the BOOK table. Kate has asked you to use a Columnar layout and the Sumi Painting style. Kate has given you her logo to add to the form, **ItsAGrindImage.jpg**. Position the logo in the top-left corner. Save the form as **Books**.
2. Create a report that groups the records by author. Include only the author from the AUTHOR table and book title, year, and condition from the BOOK table. Sort the report by book title. Create a title labeled Current Authors; center the title on the report. Set the label properties to 12 point, bold, italic. Save the report as **Books By Author**.
3. Create a report using the publisher name, book title, year, and author name. Group the report on publisher and sort on the year the book was published. Create a report title

to say **Books By Publisher**. Align the columns evenly and use a professional looking font style and layout. Save the report as **Publishers**.

3. TechIT Seminars

TechIT Seminars is an organization of independent seminar facilitators who provide onsite technical training to large businesses around the world. The facilitators build curriculum that is marketed by TechIT. TechIT books the seminars, arranges facilities, enrolls participants, and collects the money. While the facilitators are not employees of TechIT, they provide the service that is marketed, and their skills and schedules need to be available to all TechIT offices. Deborah Wallbridge has been charged with tracking facilitators and their classification. She has asked you to help develop a form and a few reports to assist in scheduling seminars.

1. Use the **T8_TechITSeminars_Data.mdb** file.
2. Create a data entry form for the FACILITATOR table. Set the form background color to a blue color (hue). Organize and align all controls for effective use and full data display. For the phone data, use the Phone input mask. Save the form as **Facilitators Form**.
3. Use the ENROLLMENT table to create a report listing the students currently enrolled in each seminar. The report field order is Seminar ID, Last Name, First Name, Phone Number, and Student Number. Adjust all controls to display all of their contents. Adjust the color and content of the column headings as shown in Figure T8.7. Align all controls. Add a gray line above and below the column headings. Use Sorting and Grouping to sort by Seminar ID, Last Name, and First Name. Place the report date, time, and Page XX of XX in the Page Footer. Format the date and time to long format. Save the report as **Students By Seminar Report**.

4. Scale Classic Cars

Johnny Krol, introduced in Plug-In T7, runs a body shop that specializes in restoring classic cars. Johnny owns three classics and began collecting scale models when his wife put her foot down and said no to building more garage space for his cars. Johnny has decided that he needs a form and a few reports created to help in identifying the buying habits of his customers. Johnny has provided you with an updated database file, **T8_ClassicCars_Data.mdb**.

Specifically, Johnny wants you to:

1. Create a form that will allow Johnny to enter new classic cars and update existing records. The form should use a Columnar format and the Sandstone style. Save the form as **Catalog**.
2. Create a report listing classic cars grouped by their make. The report should display all fields from the CATALOG table, sort by model name, and calculate the average price for each make. Use the Formal style. Save the report as **Cars By Model**.

Seminar ID	Last Name	First Name	Student Phone	Student Number
TL003	Elynuik	Kerry	539-566-3223	115
	Ray	Maria	217-226-4415	135
	Ross	Wilbert	395-444-2247	244
	Timmerman	Henry	123-225-8543	229
	Tsuhara	Gordon	7-1-655-4487	124
	Weinstein	Albert	120-22-547-6684	108
TL010	Malone	Sean	894-544-6637	311
	Norgaard	Max	315-554-7787	331
	Rodrigues	Marc	938-224-1135	249
	Tarchuk	Sapphire	217-544-2014	131
	Van Zandt	Willem	439-455-3112	177
TR101	Dhalwal	Frank	452-332-4125	250
	Habib	Akram	315-335-4414	186
	Harrison	Tina	748-441-3352	109
	Kowalski	Byron	976-255-3177	291
	Mahal	Balinder	543-337-8541	308
	McMahon	Lavon	315-225-6634	330
	Nadeau	Pierre	675-441-5511	325
	Oakes	Judy	603-221-4473	255
	Pittman	Dale	43-848-332-6674	455
	Pryor	Deanna	46-438-378-6767	166
TR105	Quinn	Dwayne	315-224-3581	283
	Reyes	Herbert	72-334-6142	208
	Weymouth	Corey	303-335-4712	181
	Bartok	Nick	539-557-3306	277
	Caulfield	Holden	307-445-2257	134
	Chartrand	Beryl	738-382-6644	225

FIGURE T8.7
Students by Seminar Report