MIS Cases: Decision Making With Application Software
Database Tutorial

Timeka's Tanning Salon, Inc.

Tutorial Introduction

Timeka's Tanning Salon, Inc. is a tutorial designed to accompany the second edition of MIS Cases: Decision Making With Application Software, published by Prentice Hall. This tutorial serves as a database development review tool and assumes that you have a basic, fundamental knowledge of databases, database terminology, and Microsoft Access.

This tutorial is divided into two parts. Part I provides the tutorial's background, scenario, storage specifications, input specifications, information specifications, test your design requirements, and deliverables. Part II steps you through the tutorial's preparation. Since Part I introduces the case's main character and sets the stage for the required database design work, you should read Part I before attempting Part II. In Part II, you will design and build a database that satisfies the tutorial's design and information requirements.

Part I: Setting the Scene

Tutorial Background

Timeka Lorenzo owns and operates Timeka's Tanning Salon, which is located in San Francisco, California. The tanning salon has been in operation for several years, and the clientele for the business continues to grow. The tanning salon provides customers with access to the latest tanning beds, tan enhancing products, and a fitness center.

Currently, the salon's customer records are manually kept, and Ms. Lorenzo spends numerous hours each week updating customer records. Ms. Lorenzo realizes the necessity for moving the salon's paper-based records to an electronic format. Ms. Lorenzo hires you to design a database that will track the salon's customers. Initially, the database will track the salon's customers, membership plans, and customer enrollments. Later, the salon's tanning products will be added to the database. To prepare this tutorial, you will design three tables, three forms, three queries, and a report.

Tutorial Scenario

Four years ago, Timeka Lorenzo opened Timeka's Tanning Salon in the San Francisco area. Although the tanning salon is doing well, the salon is experiencing numerous problems. Customer complaints are on the rise, since customer records are often misplaced, lost, or incorrect. Additionally, Ms. Lorenzo has no efficient way of identifying which plans are most attractive to her customers. Ms. Lorenzo has decided it is time to correct the salon's problems, and she turns to you for help.

When a customer enrolls at the salon, a customer enrollment card is completed. The enrollment card contains the customer's name, address, phone number, plan type, enrollment date, and visits. Figure 1 shows the current Customer Enrollment card. When a customer purchases a new session, purchases a special plan, or the card is full, a new card is started and stapled to the front of the old card.

Currently, all past and present customer enrollment cards are kept in plastic tubs beneath the front counter. When a customer visits the salon, her card is pulled from one of the tubs; visit information is recorded on the card, and then the card is filed again in the tub. This manual process often leads to misplaced cards and erroneous information being recorded on the cards.

Figure 1: Current Customer Enrollment Card

Ms. Lorenzo needs a database to track the salon's customers. Specifically, Ms. Lorenzo wants the database to track the salon's customers, items, and enrollments. (This tutorial does not require you to track customer visits.) To build the database according to Ms. Lorenzo's requirements, you will design Customer, Item, and Enrollment tables, design Customer, Item, and Enrollment forms, construct qrySingleSession, qryInactive, and qryNewEnrollment queries, and prepare a Customer List report.

Storage Specifications

After meeting with Ms. Lorenzo on several occasions, you realize that the Salon database requires Customer, Item, and Enrollment tables. The Customer table stores the customer's identification number, last name, first name, phone number, street address, city, state, and zip code. The customer identification number will serve as the primary key. Table 1 shows the Customer table structure.

The Item table stores information about the salon's sessions, specials, and fitness memberships. The Item table stores each item's identification number, description, and price. The item's identification number will serve as the primary key. Table 2 shows the Item table's structure. In Table 2, the name IType is used to designate the item's identification number. Ms. Lorenzo requested that you use the field name IType.

The Enrollment table stores each customer's current enrollment information. For each enrollment, the table stores an enrollment identification number, customer identification number, item identification number, and enrollment date. Although the customer identification number and item identification number could serve as a combination key, you realize there are some instances when this combination would not prove unique, so you decide an enrollment identification number is necessary. The enrollment identification number will serve as the primary key. Since the customer identification number is stored in the Customer table, you will use the Lookup Wizard to create the CID field for the Enrollment table. Likewise, the item identification number is stored in the Item table, so the Lookup Wizard can create the item identification number field in the Enrollment table. Table 3 shows the Enrollment table's structure.

As you study the three table structures, you realize that two relationships are necessary. Relationships between the Customer and Enrollment tables and between the Item and Enrollment tables are necessary. The relationship between the Customer and Enrollment tables should enforce referential integrity, allow cascade updates, and allow cascade deletes. The relationship between the Item and Enrollment tables should enforce referential integrity and allow cascade updates.

Field Name	Data Type	Field Description	Field Size	Comments
CustomerID	AutoNumber	Serves as primary key.	Long Integer	Is required.
LastName	Text		50	
FirstName	Text		25	
PhoneNumber	Text		10	Use an input mask.
SAddress	Text		30	
City	Text		30	Default value is San Francisco.
State	Text		2	Default value is CA.
ZipCode	Text		10	

Table 1: Customer Table Structure

Field Name	Data Type	Field Description	Field Size	Comments
IType	Text	Serves as primary key.	5	Is required.
Description	Text		50	
Price	Currency			

Table 2: Item Table Structure

Field Name	Data Type	Field Description	Field Size	Comments
ENID	AutoNumber	Serves as primary key.	Long Integer	Is required.
CID	Number		Long Integer	Is required. Use the Lookup Wizard.
IType	Text		5	Use the Lookup Wizard.
EDate	Date			Use the short date format.

Table 3: Enrollment Table Structure

Input Specifications

Ms. Lorenzo asks you to create Customer, Item, and Enrollment forms. Ms. Lorenzo will use the Customer form to enroll new customers and maintain existing customer data. As Figure 2 shows, the Customer form allows Ms. Lorenzo to capture the customer's name, address, and phone number. Ms. Lorenzo wants the system to automatically assign the customer an identification number.

Ms. Lorenzo will use the Item form to maintain data about her salon's items. Later, Ms. Lorenzo will add the salon's tanning products to the table. As Figure 3 shows, the Item form captures the item's identification number, description, and price.

When a customer purchases one of the sessions, special, or fitness plans, Ms. Lorenzo will use the Enrollment form to capture the enrollment details. The enrollment details include the enrollment identification number, customer identification number, item identification number, and enrollment date. The enrollment identification number is automatically assigned by the system. Figure 4 provides a sketch of the Enrollment form.

To quickly generate the forms, you decide to use the Form Wizard to generate the initial forms. Then you will modify the forms in Design View. Once Ms. Lorenzo looks at the forms, you will make any requested design changes to the forms.

Timeka's Tanning Salon

Customer Form

Customer Identification Number: Street Address:

Customer Last Name: City:

Customer First Name: State:

Customer Phone:

Figure 2: Customer Form Sketch

Timeka's Tanning Salon

Item Form

Item Identification Number: Item Description: Price:

Figure 3: Salon Item Form Sketch

Timeka's Tanning Salon

Enrollment Form

Enrollment Identification Number: Item Identification Number:

Customer Identification Number: Enrollment Date:

Figure 4: Enrollment Form Sketch

Information Specifications

In an effort to learn more about her customers, Ms. Lorenzo asks you to prepare a Customer List report. The Customer List Report provides Ms. Lorenzo with the customer's last and first name, address, and phone number. Ms. Lorenzo will use this information to call her customers and offer them special discounts for their loyalty to the salon.

In addition to the Customer List report, Ms. Lorenzo wants answers for the following questions. Provide Ms. Lorenzo with the requested information.

1. Which session is the most popular?

2. Which of the salon's customers are not currently enrolled?

3. Which customers enrolled on 1/18/2005? Which items (plans) did the customers purchase?

Test Your Design

After you create the Salon database, you should test your design. Make the following changes to the Salon database.

1. Ms. Lorenzo wants the following fitness plans added to the Item table.

IType	Description	Price
FC001	One-Month Fitness Membership	$35.99
FC002	Three-Month Fitness Membership	$66.99
FC003	Six-Month Fitness Membership	$180.99
FC004	Yearly Fitness Membership	$280.99

2. Enter the following customer enrollments into the Enrollment table.

CID	IType	EDate
10	FC004	2/1/2005
2	FC003	2/1/2005
6	FC001	2/1/2005

Deliverables

In order to satisfactorily complete this tutorial, you should build the Salon database as described in the tutorial and then prepare both written and oral presentations. Unless otherwise specified, submit the following deliverables to your professor. Also, unless otherwise specified, perform these steps after you have tested your design.

1. A written report discussing any assumptions you have made about the tutorial and the key elements of the tutorial. Additionally, what features did you add to make the database more functional? User friendly? (Please note that these assumptions cannot violate any of the requirements specified above and must be approved by your professor.)

2. A printout of each form.

3. A printout of each report.

4. An electronic, working copy of your database that meets the criteria mentioned in the scenario and specifications sections.

5. Results for each query. (A memo to your instructor discussing these results should also be provided.)

6. As mentioned above, you should prepare an oral presentation. (Your instructor will establish the time allocated to your presentation.) You should use a presentation package and discuss the key features of your database. Also, discuss how this database is beneficial for Ms. Lorenzo. What changes to this database would you recommend? What additional data could be stored in the database?

Part II: Workbook Preparation

Storage Preparation

If you have not already done so, please read Part I of this tutorial.

To satisfy Ms. Lorenzo's design specifications, you will develop a database that contains Customer, Item, and Enrollment tables; Customer, Item, and Enrollment forms; Single Session, Inactive, and Enrollment queries, and a Customer List report. Additionally, you must establish relationships between the Customer and Enrollment tables, as well as the Item and Enrollment tables.

The Salon database preparation is separated into four primary activities. These activities involve designing the tables, creating the forms, creating the queries, and creating the report. Each activity is described below.

Activity 1: Database Creation and Table Design

Activity 1 involves five primary tasks. The first task creates the Salon database. The second task designs the Customer table. The third task creates the Item table. The fourth task designs the Enrollment table, and the fifth task creates the necessary relationships. (Please keep in mind that you should periodically save your work!)

Task 1: Create the Database

To create the Salon database, perform the following steps:

1. Start Microsoft Access.

2. Click the Blank Database option in the New File task pane.

3. In the File New Database dialog box, type "Salon", then click the Create button.

Task 2: Create the Customer Table

To create the Customer table, perform the following steps:

1. In the database window, click the Tables button on the Objects bar.

2. Double click the Create table in Design view shortcut. The Design View opens.

3. In the first empty row of the Field Name column, enter "CID" as the new field name. Click the tab key.

4. In the Data Type column, click the drop-down arrow, and then select AutoNumber. See Figure 5.
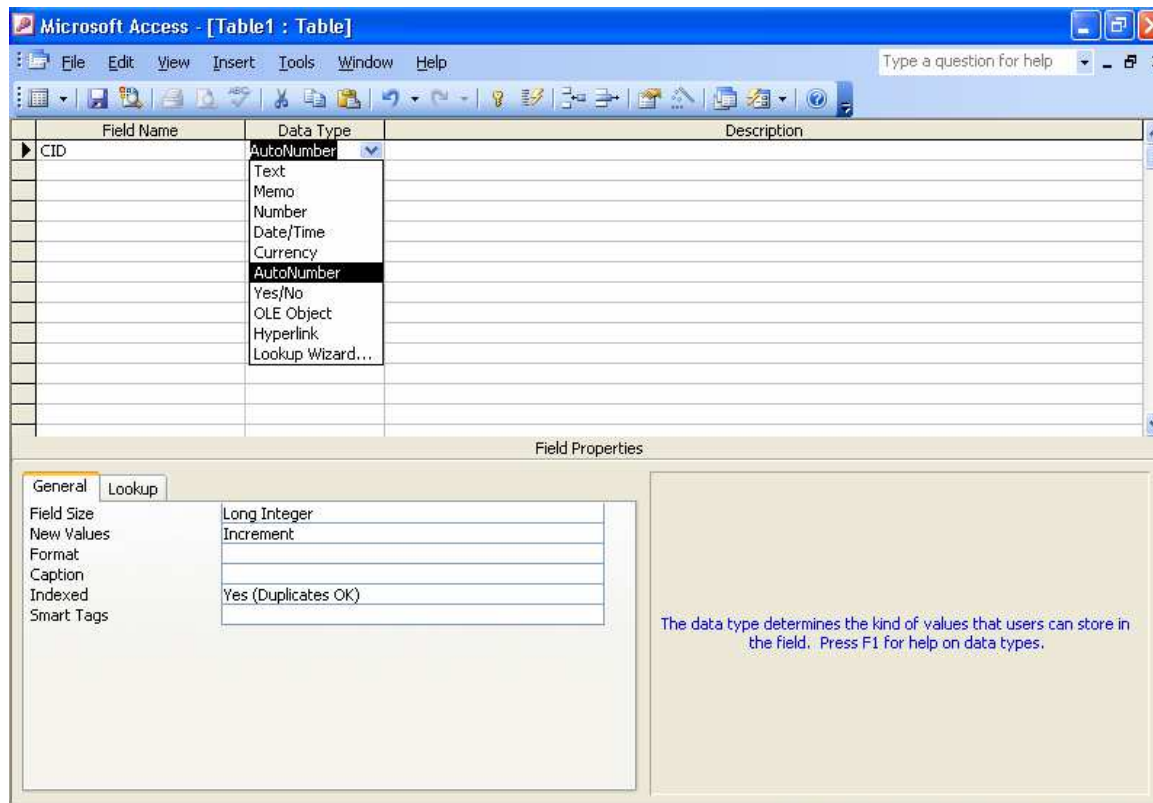
Figure 5: Customer Table Design View

5. For the description, enter "Serves as primary key".

6. Click the Primary Key button 🔑 located on the Table Design toolbar.

7. Click the Save button 💾 on the Table Design toolbar. When prompted, enter "tblCustomer" as the table's name. Click the OK button.

8. In the Field Name column, click in the Field Name box below the CID field. Enter "LastName" as the new field name.

9. In the Field Name column, move to the empty box below the LastName field. Enter "FirstName" as the new field name.

10. Press the F6 key. In the Field Size box, enter "25".

11. Press the F6 key.

12. In the Field Name column, move to the empty box below the FirstName field. Enter PhoneNumber as the new field name. Press F6.

13. In the Field Size box, enter 10.

14. Move to the Input Mask property box, and then type "000\-0000;0;_". (Do not include the quotation marks or period in the mask.)

15. Press the F6 key. Move to the next empty Field Name box. Enter "SAddress" as the new field name. Press F6, and set the field size to 30.

16. Press the F6 key. Move to the next empty Field Name box. Enter "City" as the new field name. Press the F6 key, and set the field size to 30.

17. Move to the Default Value property box, and enter "San Francisco". Press the F6 key.

18. Move to the next empty Field Name box. Enter "State" as the new field name. Press the F6 key, and set the field size to 2.

19. Move to the Default Value property box, and enter "CA". Press the F6 key.

20. Move to the next empty Field Name box. Enter "ZipCode" as the new field name. Press the F6 key, and set the field size to 5.

21. Move to the Input Mask property box. Click the Build Button 🔲 to the right of the Input Mask property box. If prompted to save the table, save the table.

22. The Input Mask Wizard dialog box appears. See Figure 6. Select the Zip Code input mask, and then click the Finish button.

23. Click the Save button on the Table Design toolbar.

24. Close the Design View window. You should now be back at the database window.
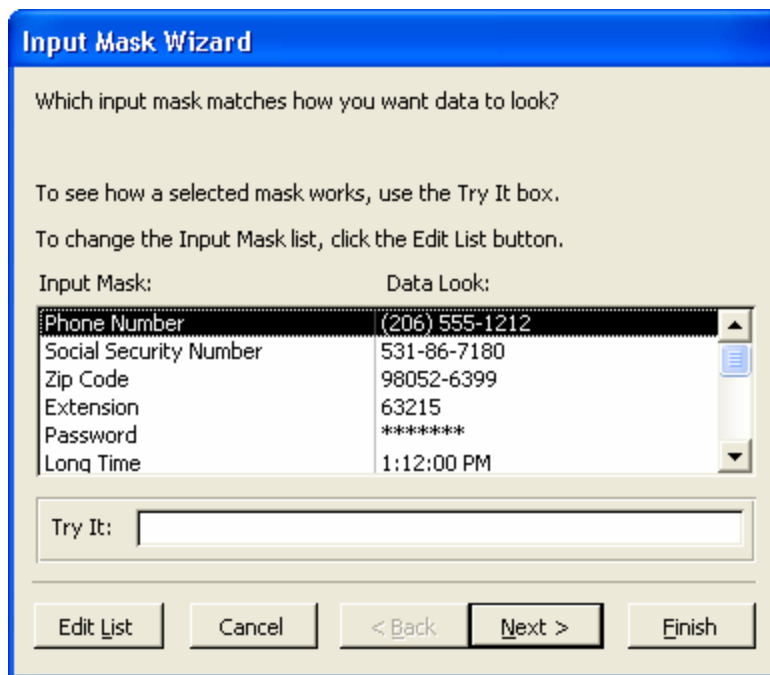
Figure 6: Input Mask Wizard Dialog Box

Task 3: Create the Item Table

1. In the database window, click the Tables button on the Objects bar.

2. Double click the Create table in Design view shortcut. The Design View opens.

3. In the first empty row of the Field Name column, enter "IType".

4. In the Description column, enter Serves as primary key.

5. Press the F6 key. Set the Field size to 5.

6. Press the F6 key, and then click the Primary Key button 🔑 located on the Table Design toolbar.

7. Click the Save button 💾 on the Table Design toolbar. When prompted, enter "tblItem" as the table's name. Click the OK button.

8. In the Field Name column, click in the Field Name box below the Itype field. Enter "Description" as the new field name.

9. In the Field Name column, click the Field Name box below the Description field. Enter "Price" as the field name. In the Data Type box, click the drop-down arrow and then select Currency.

10. Press the F6 key, and then set the Decimal Places property to 2.

11. Click the Save button 💾 located on the Table Design toolbar.

12. Exit to the Database window.

Task 4: Create the Enrollment Table

1. In the database window, click the Tables button on the Objects bar.

2. Double click the Create table in Design View shortcut. The Design View opens.

3. In the first empty row of the Field Name column, enter "ENID". Press the Tab key.

4. In the Data Type box, select AutoNumber. Press the tab key.

5. In the Description box, enter Serves as primary key.

6. Click the Primary Key button 🔑 located on the Table Design toolbar.

7. In the empty Field Name box below the ENID field, enter CID. Press the tab key.

8. In the Data Type column, click the drop-down arrow and select Lookup Wizard. The Lookup Wizard dialog box appears. Make sure the "I want the lookup column to lookup the values in a table or query" option is selected. Click the Next button. See Figure 7.

9. When prompted by the Lookup Wizard, specify tblCustomer as the table that provides the values for your lookup column. Click the Next button. See Figure 8.

10. When prompted by the Lookup Wizard, specify that the CID, LastName, and FirstName fields are the values that you want included in your lookup column. Click the Next Button. Click the Next Button. See Figure 9.

11. When prompted by the Lookup Wizard, deselect the Hide key option, and then click the Next button. See Figure 10.

12. When prompted by the Lookup Wizard, indicate that the CID field contains the value that you want stored in the database. See Figure 11. Click the Next button.

13. When the Lookup Wizard prompts you for a label name, name the field "CID". (CID is the default name displayed in the label name box. If not, then change the name to CID.) Click the Finish button.

14. Save the table as tblEnrollment.

15. In the next empty Field Name box, enter IType. For the data type, select the Lookup Wizard. You will perform the same steps as you did for the CID field.

16. When prompted by the Lookup Wizard, specify that the value should be looked up from a table.

17. When prompted by the Lookup Wizard, specify that the tblItem table provides the values.

18. When prompted by the Lookup Wizard, specify that IType and IDescription contain the values that you want included in your lookup column; do not hide the primary key column.

19. When prompted by the Lookup Wizard, specify that the IType column contains the value that you want to store in your database, and name the column IType.

20. When prompted, save the table.

21. In the next empty Field Name box, enter EDate as the new field name. Set the data type to Date/Time.

22. Press the F6 key, and specify the Short Date format.

23. Click the Save button [icon] located on the Table Design toolbar.
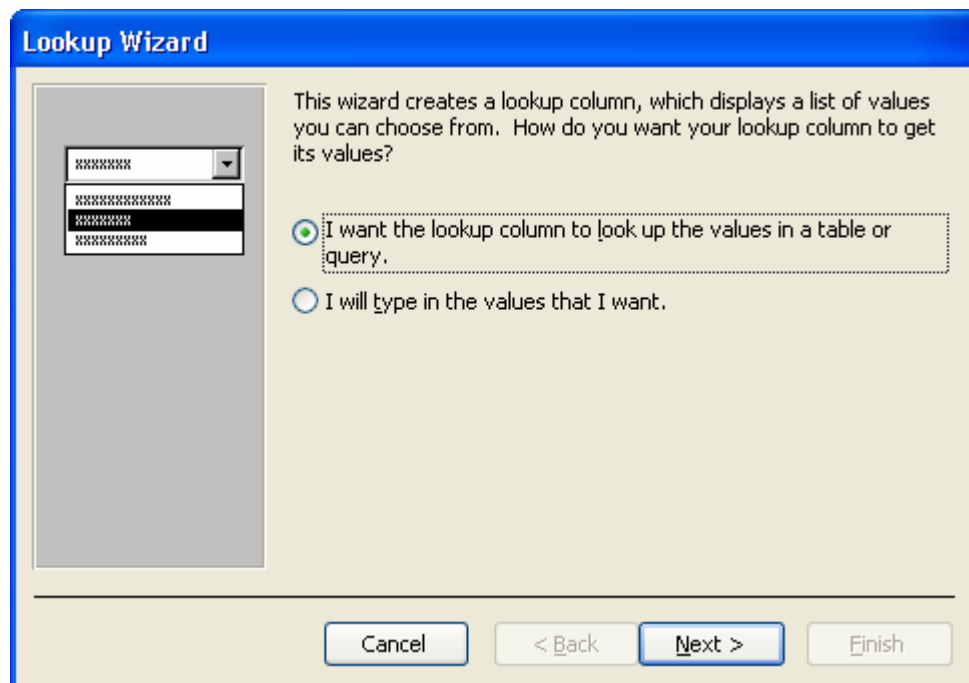
Figure 7: Lookup Wizard Dialog Box 1
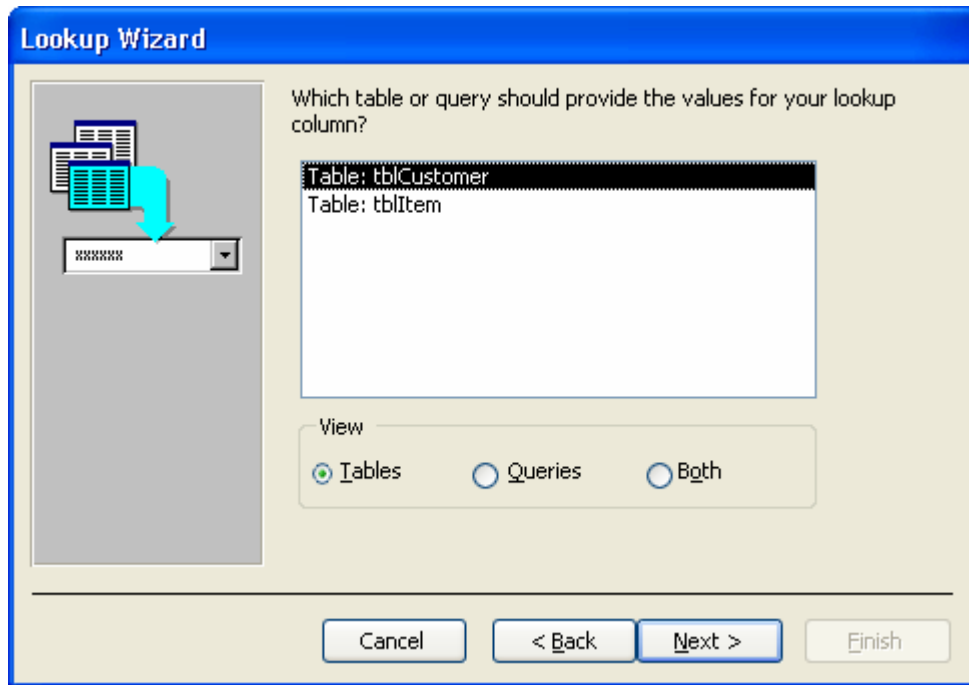
Figure 8: Lookup Wizard Dialog Box 2
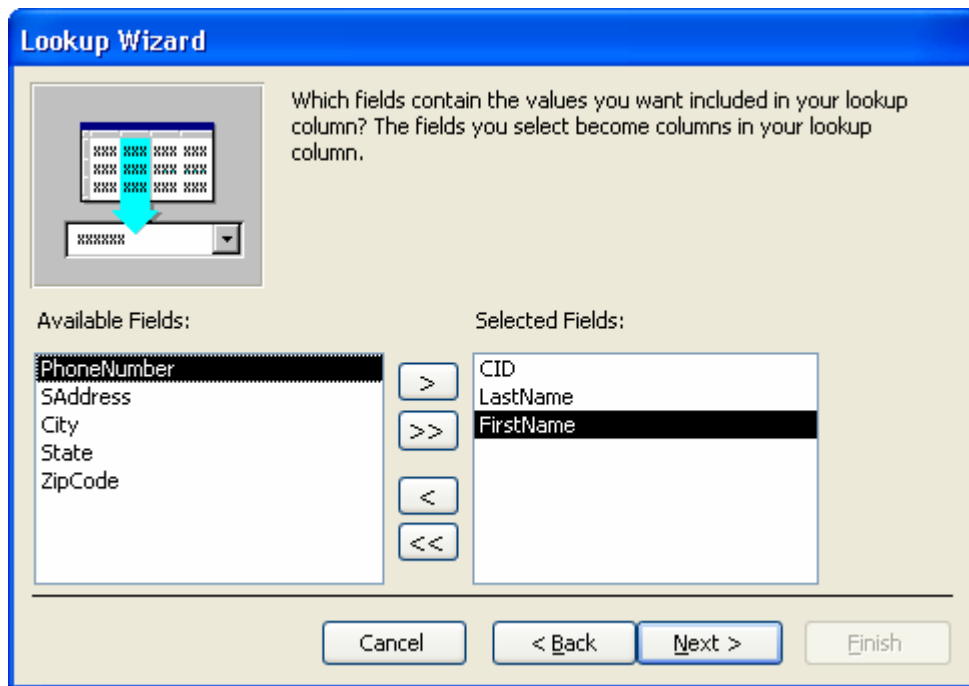
Figure 9: Lookup Wizard Dialog Box 3
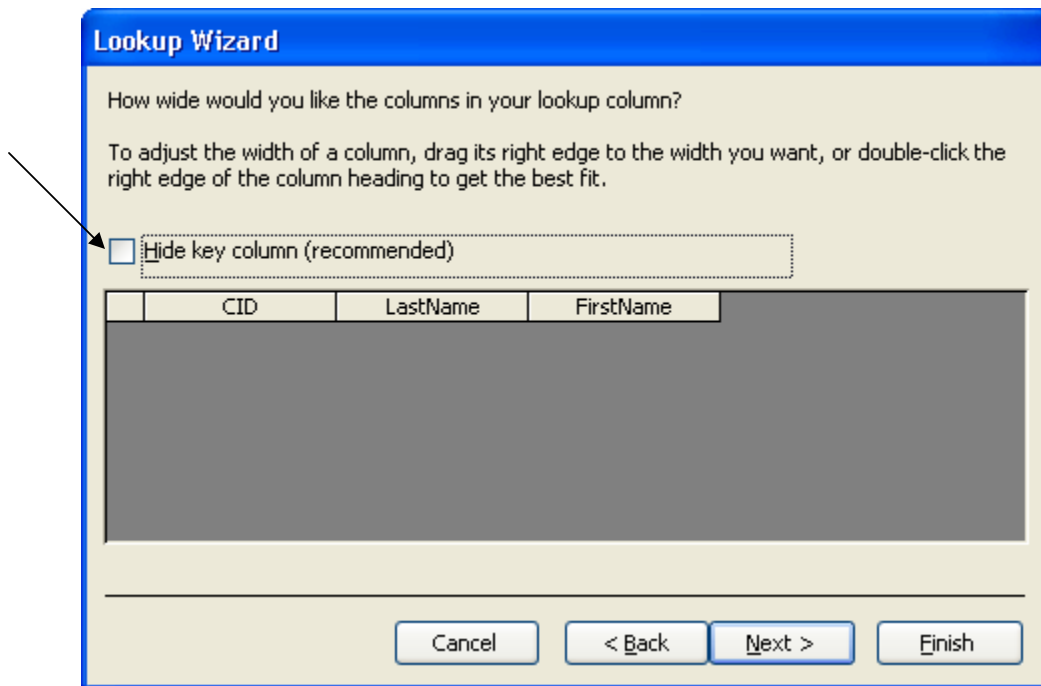
Figure 10: Lookup Wizard Dialog Box 4
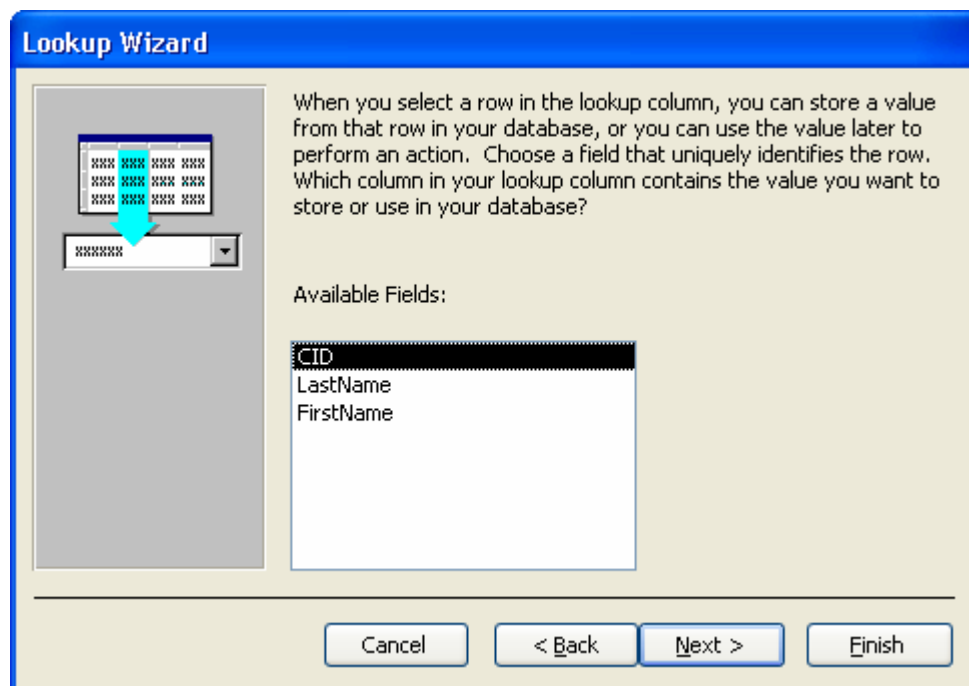
Figure 11: Lookup Wizard Dialog Box 5

Task 5: Create Relationships

1. In the database window, click the Relationships button [icon] located on the Database toolbar. The Relationships window will open. See Figure 12.
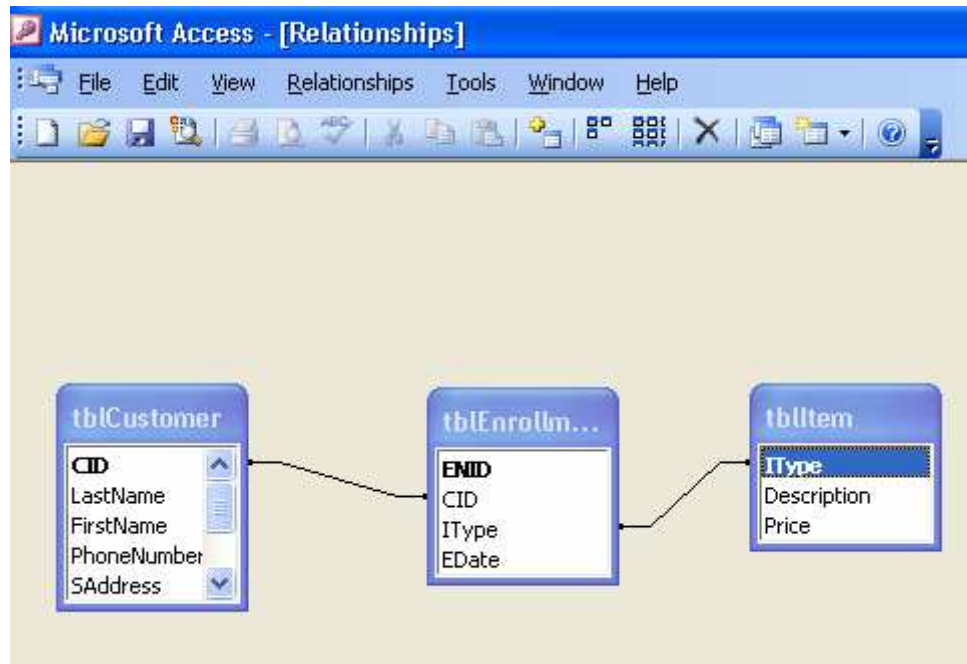
Figure 12: Relationship Window for Salon Database

2. Double click the line that connects the tblCustomer and tblEnrollment tables. The Edit Relationships dialog box opens.

3. Select the enforce referential integrity, cascade update related fields, and cascade delete related records options. Click the OK button. See Figure 13.

4. Double click the line that connects the tblEnrollment and tblItem tables. The Edit Relationships dialog box opens.

5. Select the enforce referential integrity and cascade update related fields options. Click the OK button.
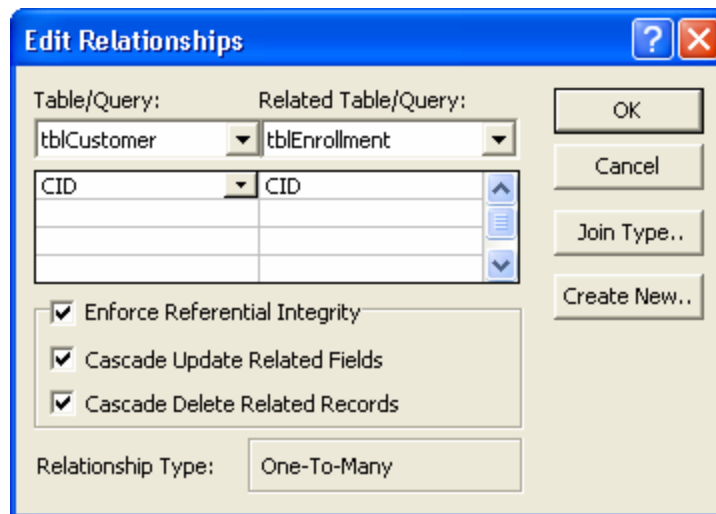
Figure 13: Edit Relationships Dialog Box

6. Click the Save button 📁 located on the Relationship toolbar, and then close the Relationships window.

Activity 2: Form Creation and Test Data Entry

Activity 2 requires you to design Customer, Item, and Enrollment forms, as well as use the forms to enter test data. When designing these forms, you can use Figures 2 – 4 and Figures 20 – 25 as references. Once the forms are created, you can use the forms to enter the data shown in Figures 26 – 28.

Task 1: Create the Customer Form

   To create the Customer form, you can:

1. Click the Forms button 📧 Forms located on the Objects bar.

2. Click the New button 📧 New located on the Database Window toolbar. The New Form dialog box appears.

3. Select the Form Wizard option.

4. Click the drop-down arrow, and select tblCustomer. See Figure 14. Click the OK button.
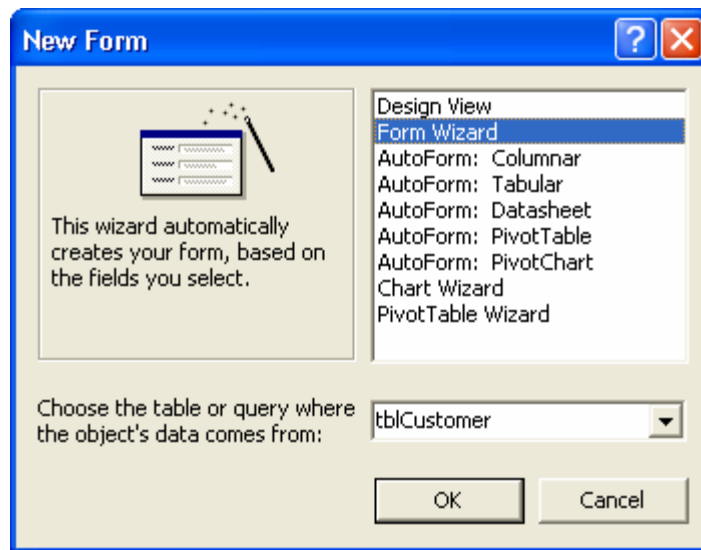
Figure 14: New Form Dialog Box

5. When prompted, add all the tblCustomer fields to the form. See Figure 15. Click the Next Button.

6. When prompted, select the columnar layout. Click the Next button.

7. When prompted, select the standard style for the form's appearance. Click the Next button.

8. When prompted, name the form "frmCustomer". Click the Finish button. The initial Customer form is displayed. See Figure 16.
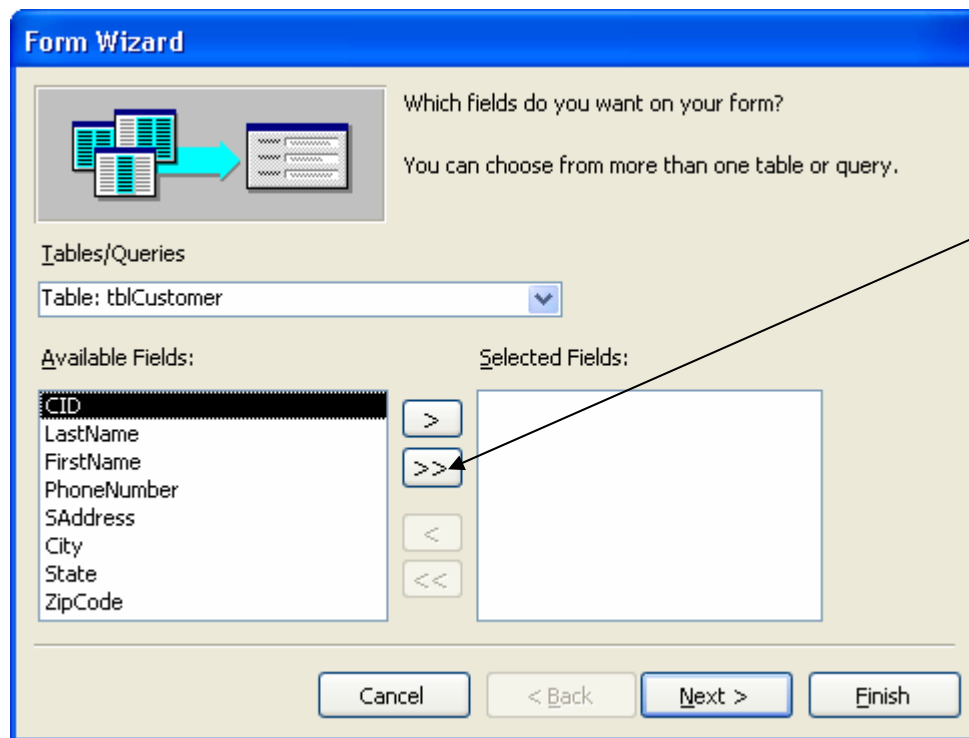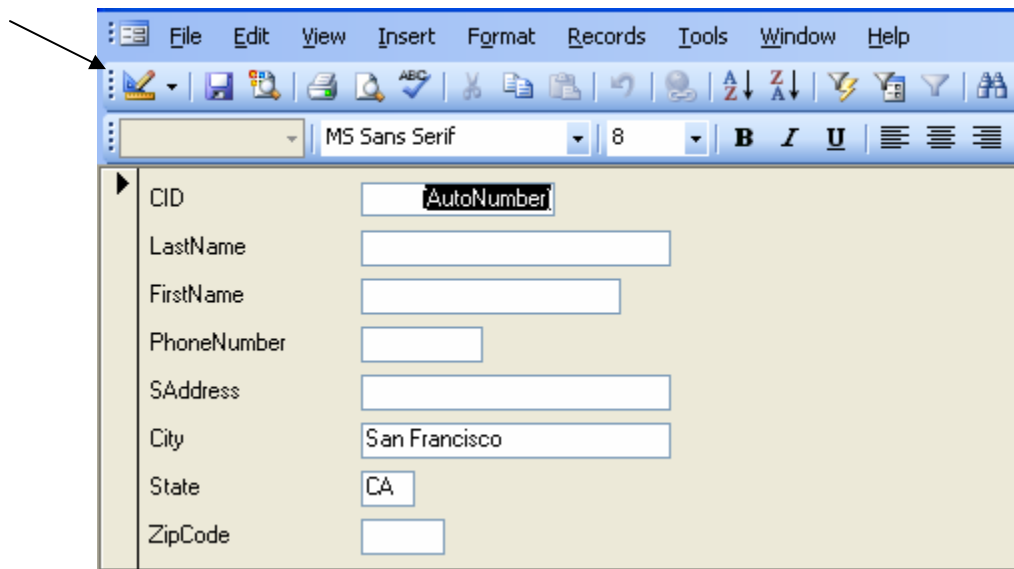

Figure 15: Form Wizard Field Selection

Figure 16: Initial Customer Form

9. Click the View button located on the Form View toolbar to switch to the Design View. See Figure 16.

10. Place the mouse pointer on the line between the Form Header bar and the Detail Section Bar. See Figure 17. When the mouse pointer changes to a double-headed arrow ✛ with a thick line between the arrow heads, drag downward until the header section is approximately one inch. (This opens up the Header section.) See Figure 18.

11. Resize the form's border width to approximately seven inches. See Figure 18.

12. Click the label button ⓐ located on the Toolbox toolbar; place your mouse pointer in the Form Header section; then drag to size the control. (If your Toolbox toolbar is not showing, do the following. From the Form Design toolbar, click the Toolbox button 🛠.)

13. Type the words "Timeka's Tanning Salon" inside the control. Set the font size to 18; bold and center the text inside the control. Position the control so that its contents will appear centered on the form. Also, move the label to the top of the Form Header section. When positioning the control, use Figure 19 as a guide.

14. Click the label button ⓐ located on the Toolbox toolbar; place your mouse pointer in the header section; then drag to size the control. Place the control beneath the Timeka's Tanning Salon control that you just created.

15. Type the words "Customer Form" inside the unbound control. Set the font size to 14; bold and center the text inside the unbound control. See Figure 19.

16. Open Microsoft Clip Organizer, and select a suitable graphic. Copy the graphic; switch back to your Customer form's design view, and then paste the graphic in the upper left hand corner of the header section. Move over to the right hand corner of the header section and paste the graphic again. Use Figure 19 as a guide for the graphic placements. (The image that you choose does not have to be the one shown in the tutorial's figures. If Microsoft Clip Organizer is not available, ask your instructor for instructions on how to include a suitable graphic on your form.)

17. Use the sizing handles on each graphic to resize the graphic. If necessary, reposition the Detail Section Bar to the one-inch mark.

18. Select both pictures. Right click. From the shortcut menu, select the properties option. Set the size mode property to Stretch.

19. Move to the Detail Section. Using Figure 19 as a guide, reposition the field controls and their labels.

20. Double click the CID label. The Properties window should appear. Click the Format tab. In the Caption box, type "Customer Identification Number:". Close the Properties window.

21. Bold and right justify the CID label.

22. Double click the LastName label. The Properties window should appear. Click the Format tab. In the Caption box, type "Last Name:". Close the Properties window.

23. Bold and right justify the LastName label.

24. Double click the FirstName label. The Properties window should appear. Click the Format tab. In the Caption box, type "First Name:". Close the Properties window.

25. Bold and right justify the FirstName label.

26. Double click the PhoneNumber label. The Properties window should appear. Click the Format tab. In the Caption box, type "Phone Number:". Close the Properties window.

27. Bold and right justify the PhoneNumber label.

28. Double click the SAddress label. The Properties window should appear. Click the Format tab. In the Caption box, type "Street Address:". Close the Properties window.

29. Bold and right justify the SAddress label.

30. Double click the City label. The Properties window should appear. Click the Format tab. In the Caption box, insert a colon after "City". Close the Properties window.

31. Bold and right justify the City label.

32. Double click the State label. The Properties window should appear. Click the Format tab. In the Caption box, insert a colon after "State". Close the Properties window.

33. Bold and right justify the State label.

34. Double click the ZipCode label. The Properties window should appear. Click the Format tab. In the Caption box, type "Zip Code:". Close the Properties window.

35. Bold and right justify the ZipCode label.

36. Make any other adjustments that you feel are necessary to improve the Customer form's appearance. See Figure 20.

37. Save the form.

Figure 17: Initial Customer Form in Design View

Figure 18: Form Header Section and Increased Border Width

Figure 19: Customer Form in Design View

Figure 20: Customer Form in Form View

Task 2: Create the Item Form

To create the Item form, you can:

1. Click the Forms button ▦ Forms located on the Objects bar.

2. Click the New button ▣ New located on the Database Window toolbar. The New Form dialog box appears. Refer to Figure 14 as a guide.

3. Select the Form Wizard option.

4. Click the drop-down arrow, and select tblItem. Click the OK button.

5. When prompted, add all the tblItem fields to the form. Click the Next button. You can use Figure 15 as a guide.

6. When prompted, select the columnar layout. Click the Next button.

7. When prompted, select the standard style for the form's appearance. Click the Next button.

8. When prompted, name the form "frmItem". Click the Finish button. The initial Item form is displayed. See Figure 21.

9. Click the View button located on the Form View toolbar to switch to Design View.

10. Place the mouse pointer on the line between the Form Header bar and the Detail Section Bar. When the mouse pointer changes to a double-headed arrow ‡ with a thick line between the arrow heads, drag downward until the header section is approximately one inch. (This opens up the Header section.)

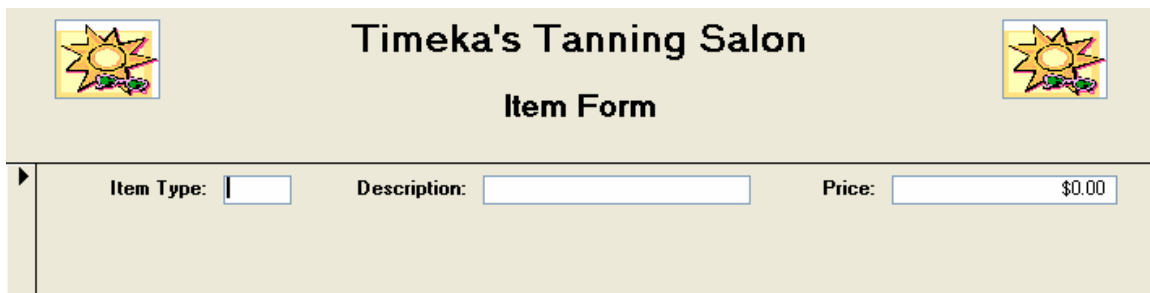11. Resize the form's border width to approximately seven inches.

12. Click the label button ![Aa] located on the Toolbox toolbar; place your mouse pointer in the header section and drag to size the control. (If the Toolbox toolbar is not displayed, click the Toolbox button ![tool] on the Form Design toolbar.)

13. Type the words "Timeka's Tanning Salon" inside the control. Set the font size to 18; bold and center the text inside the control. Move the label to the top of the form header section. Position the control so that its contents will appear centered on the form. When positioning the control, use Figure 22 as a guide.

14. Click the label button ![Aa] located on the Toolbox toolbar; place your mouse pointer in the header section and drag to size the control. Place the control beneath the Timeka's Tanning Salon control that you just created.

15. Type the words "Item Form" inside the unbound control. Set the font size to 14; bold and center the text inside the unbound control. See Figure 22.

16. Open Microsoft Clip Organizer, and select a suitable graphic. Copy the graphic; switch back to your Item Form's design view, and then paste the graphic in the upper left hand corner of the header section. Move over to the right hand corner of the header section and paste the graphic again. Use Figure 22 as a guide for the graphic placements. (The image that you choose does not have to be the one shown in the tutorial's figures. If Microsoft Clip Organizer is not available, ask your instructor for instructions on how to include a suitable graphic on your form.)

17. Use the sizing handles on each graphic to resize the graphic. If necessary, reposition the Detail Section Bar to the one-inch mark.

18. Select both pictures. Right click. From the shortcut menu, select the properties option. Set the size mode property to Stretch.

19. Move to the Detail Section. Using Figure 22 as a guide, reposition the field controls and their labels.

20. Double click the IType label. The Properties window should appear. Click the Format tab. In the Caption box, type "Item Type:". Close the Properties window.

21. Bold and right justify the IType label.

22. Double click the Description label. The Properties window should appear. Click the Format tab. In the Caption box, type a colon after Description. Close the Properties window.

23. Bold and right justify the Description label.

24. Double click the Price label. The Properties window should appear. Click the Format tab. In the Caption box, type a colon after Price. Close the Properties window.

25. Bold and right justify the Price label.

26. Make any other adjustments that you feel are necessary to improve the Customer form's appearance.

27. Save the form.

Figure 21: Initial Item Form

Figure 22: Item Form in Form View

Task 3: Create the Enrollment Form

To create the Enrollment form, you can:

1. Click the Forms button [Forms] located on the Objects bar.

2. Click the New button [New] located on the Database Window toolbar. The New Form dialog box appears. (Use Figure 14 as a guide.)

3. Select the Form Wizard option.

4. Click the drop-down arrow, and select tblEnrollment. Click the OK button.

5. When prompted, add all the tblEnrollment fields to the form. Click the Next Button.

6. When prompted, select the columnar layout. Click the Next button.

7. When prompted, select the standard style for the form's appearance. Click the Next button.

8. When prompted, name the form "frmEnrollment". Click the Finish button. The initial frmEnrollment form is displayed. See Figure 23.

9. Click the View button located on the Form View toolbar to switch to Design View.

10. Place the mouse pointer on the line between the Form Header bar and the Detail Section Bar. When the mouse pointer changes to a double-headed arrow ⊥ with a thick line between the arrow heads, drag downward until the header section is approximately one inch. (This opens up the Header section.)

11. Resize the form's border width to approximately seven inches.

12. Click the label button **Aa** located on the Toolbox toolbar; place your mouse pointer in the header section and drag to size the control. (If your Toolbox toolbar is not showing, do the following. From the Form Design toolbar, click the Toolbox button .)

13. Type the words "Timeka's Tanning Salon" inside the control. Set the font size to 18; bold and center the text inside the control. Move the label to the top of the Form Header section. Position the control so that its contents will appear centered on the form. When positioning the control, use Figure 24 as a guide.

14. Click the label button **Aa** located on the Toolbox toolbar; place your mouse pointer in the header section and drag to size the control. Place the control beneath the Timeka's Tanning Salon control that you just created.

15. Type the words "Enrollment Form" inside the unbound control. Set the font size to 14; bold and center the text inside the unbound control. See Figure 24.

16. Open Microsoft Clip Organizer, and select a suitable graphic. Copy the graphic; switch back to your Enrollment Form's design view, and then paste the graphic in the upper left hand corner of the header section. Move over to the right hand corner of the header section and paste the graphic again. Use Figure 24 as a guide for the graphic placements.   (The image that you choose does not have to be the one shown in the tutorial's figures. If Microsoft Clip Organizer is not available, ask your instructor for instructions on how to include a suitable graphic on your form.)

17. Use the sizing handles on each graphic to resize the graphic.

18. Select both pictures. Right click. From the shortcut menu, select the properties option. Set the size mode property to Stretch.

19. Move to the Detail Section. Using Figure 24 as a guide, reposition the field controls and their labels.

20. Double click the ENID label. The Properties window should appear. Click the Format tab. In the Caption box, type "Enrollment Identification Number:". Close the Properties window.

21. Bold and right justify the ENID label.

22. Double click the CID label. The Properties window should appear. Click the Format tab. In the Caption box, type "Customer Identification Number:". Close the Properties window.

23. Bold and right justify the CID label.

24. Double click the IType label. The Properties window should appear. Click the Format tab. In the Caption box, type "Item Type:". Close the Properties window.

25. Bold and right justify the IType label.

26. Double click the EDate label. The Properties window should appear. Click the Format tab. In the Caption box, type "Enrollment Date:". Close the Properties window.

27. Bold and right justify the EDate label.

28. Make any other adjustments that you feel are necessary to improve the Enrollment form's appearance.

29. Save the form.

Figure 23: Initial Enrollment Form in Form View

Figure 24: Enrollment Form in Design View

Figure 25: Enrollment Form in Form View

Task 4: Enter the Customer, Item, and Enrollment Data

1. Use your newly created Customer form to enter the customer data shown in Figure 26.

2. Use your newly created Item form to enter the item data shown in Figure 27.

3. Use your newly created Enrollment form to enter the enrollment data shown in Figure 28.

CID	LastName	FirstName	Phone Number	SAddress	City	State	ZipCode
1	Grant	Mitchell	555-1255	1010 Boulevard Rd.	San Francisco	CA	94111
2	Sasser	Lexina	555-6456	210 Rushing Meadows	San Francisco	CA	94112
3	Rother	Elwood	555-6577	3001 Ripple Creek	San Francisco	CA	94113
4	Chen	Shibo	555-4789	15712 Tanglewood Road	San Francisco	CA	94113
5	Elotmani	Damir	555-3812	2121 Hyde Parke	San Francisco	CA	94115
6	Schoenhals	Eliah	555-6058	1920 Pine Drive	San Francisco	CA	94111
7	Erbst	Troy	555-1300	1780 Glacier Drive	San Francisco	CA	94112
8	Ottinger	Clarissa	555-9351	11908 Coltrane	San Francisco	CA	94112
9	Blochowiak	Edith	555-0202	1223 Ridgewood	San Francisco	CA	94115
10	Harley	Sasha	555-5931	10625 Brighton	San Francisco	CA	94115

Figure 26: Customer Data

SType	SDescription	SPrice
SE001	One Session	$5.00
SE002	5 Sessions	$25.00
SE003	10 Sessions	$50.00
SE004	15 Sessions	$75.00
SE005	20 Sessions	$100.00
SP001	One Month Unlimited	$35.00
SP002	Monthly Special	$30.00
SP003	Loyal Customer	$29.99
SP004	Referral	$29.99
SP005	Yearly Enrollment	$350.00

Figure 27: Item Data

CID	SType	EDate
2	SE002	1/15/2005
3	SP001	1/13/2005
4	SE003	1/18/2005
5	SE001	1/13/2005
6	SP003	1/16/2005
7	SE004	1/17/2005
8	SP001	1/18/2005
9	SE003	1/18/2005
10	SE002	1/16/2005

Figure 28: Enrollment Data

Activity 3: Query Creation

Activity 3 creates three queries. The first query, qrySingleSession, identifies how many customers have purchased a single tanning session. The second query, qryInactive, identifies the salon's customers who are not currently enrolled. The third query, qryNewEnrollment, identifies the customers that enrolled on 1/18/2005.

Task 1: Create the qrySingleSession Query

1. In the database window, click the Queries button on the Objects bar.

2. Click the New button ![New] on the Database Windows toolbar.

3. In the New Query Dialog box, select Design View. Click the OK button. The Query Design View opens. The Show Table dialog box should also be open. (If the Show Table dialog box is not open, click the Show Table button ![icon] on the Query Design toolbar.)

4. In the Show Table dialog box, double click tblEnrollment and tblItem. The field lists for both tables should now be added to the top pane of the Query Design window. Click the Close Button.

5. Add the Description field from the tblItem table and the Itype field from the tblEnrollment table to the query design grid. (You can add the field by double clicking its name.)

6. Click the Totals button ![Σ] located on the Query Design toolbar.

7. In the Total row for the IType field, click the drop-down arrow and select Count from the drop-down list. (If the drop down arrow is not showing, just click by the word "By".   The drop down arrow should now appear.)

8. In the Sort row for the Description field, click the drop-down arrow and select Ascending from the drop-down list.

9. In the Criteria row for the Description field, enter "One Session".

10. Click the Save button ![Save] located on the Query Design toolbar. When prompted, name the query "qrySingleSession".

11. Click the Run button ![Run] located on the Query Design toolbar. Figure 29 shows the query in Design View, and Figure 30 shows the query results.
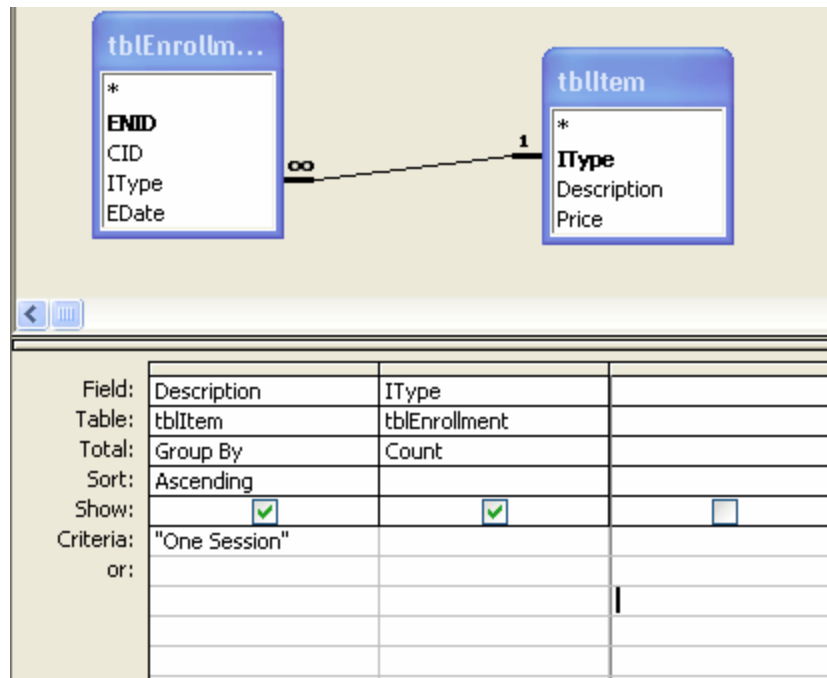
Figure 29: qrySingleSession Query in Design View

Figure 30: qrySingleSession Query Results

Task 2: Create the qryInactiveCustomers Query

1. In the database window, click the Queries button on the Objects bar.

2. Click the New button ⊞ New on the Database Windows toolbar.

3. In the New Query dialog box, select the Find Unmatched Query Wizard. Click the OK button. See Figure 31.

4. In the Find Unmatched Query Wizard dialog box, specify tblCustomer as the table that contains the records that you want in the query results. Click the Next button. See Figure 32.

5. When prompted by the Find Unmatched Query Wizard, specify tblEnrollment as the table that contains the related records. Click the Next button. See Figure 33.

6. When prompted by the Find Unmatched Query Wizard, specify the CID field as the matching field. Click the Next button. See Figure 34.

7. When prompted by the Find Unmatched Query Wizard, display all fields in the results. Click the Next button. See Figure 35.

8. When prompted, name the query qryInactive. Click the Finish button. Figure 36 shows that Mitchell Grant is an inactive customer.
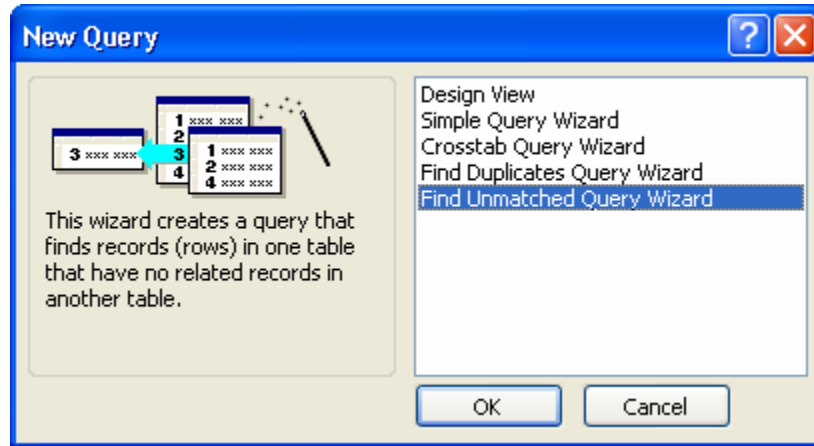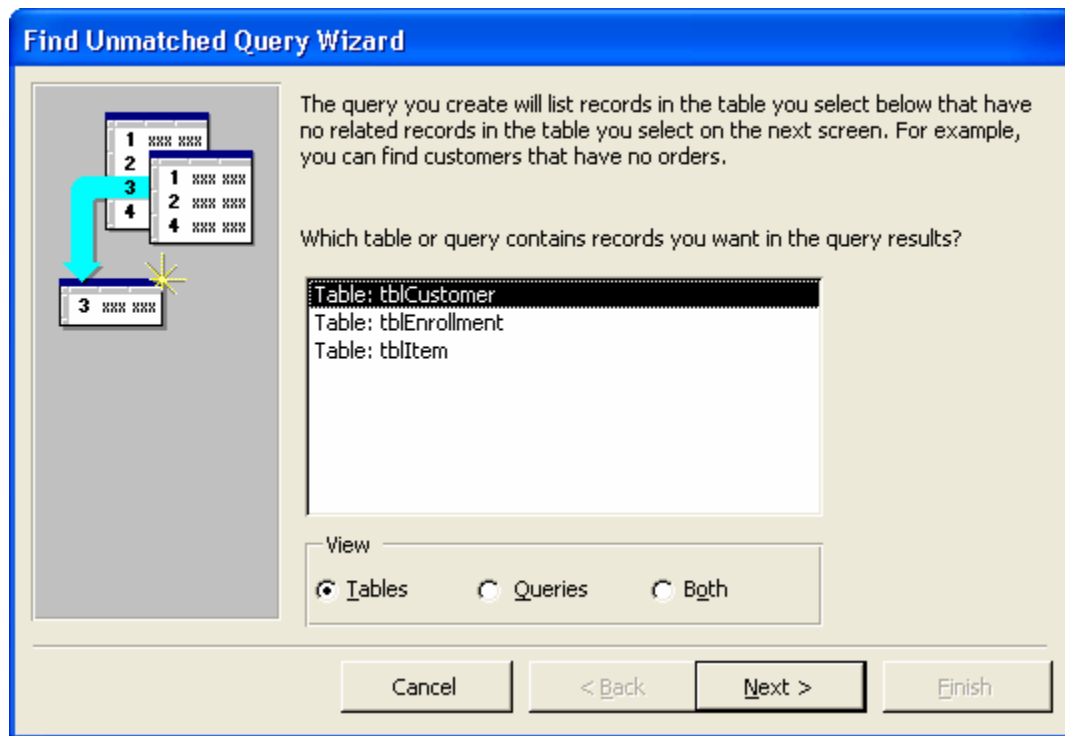

Figure 31: New Query Dialog Box

Figure 32: Find Unmatched Query Wizard Dialog Box 1
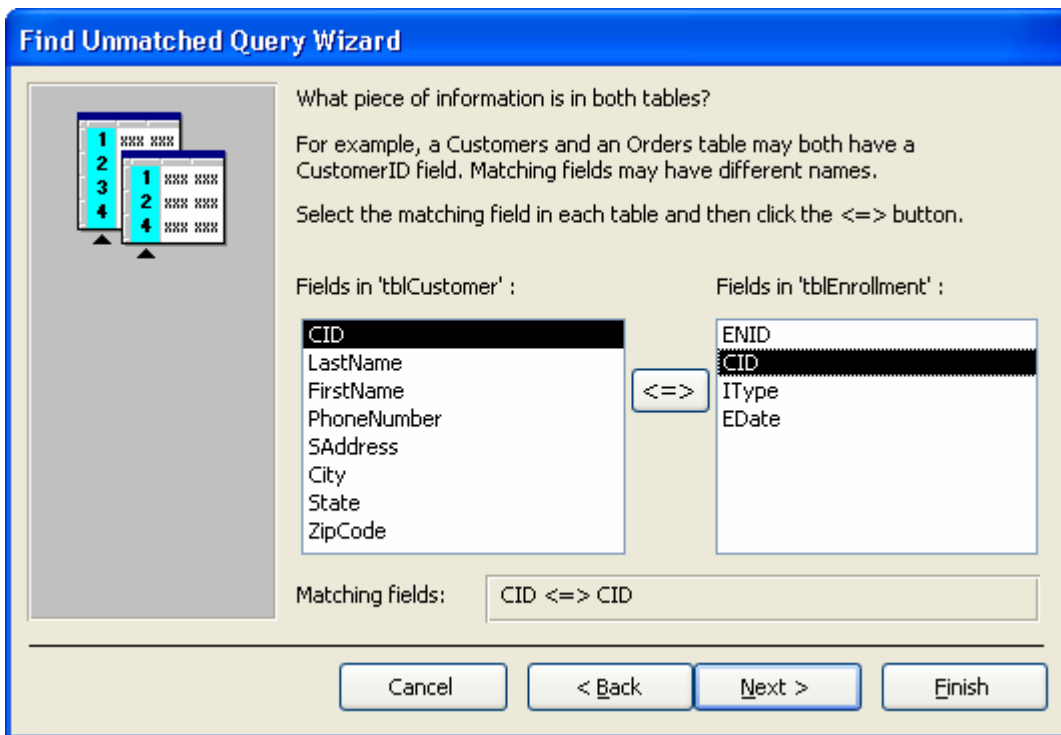
Figure 33: Find Unmatched Query Wizard Dialog Box 2
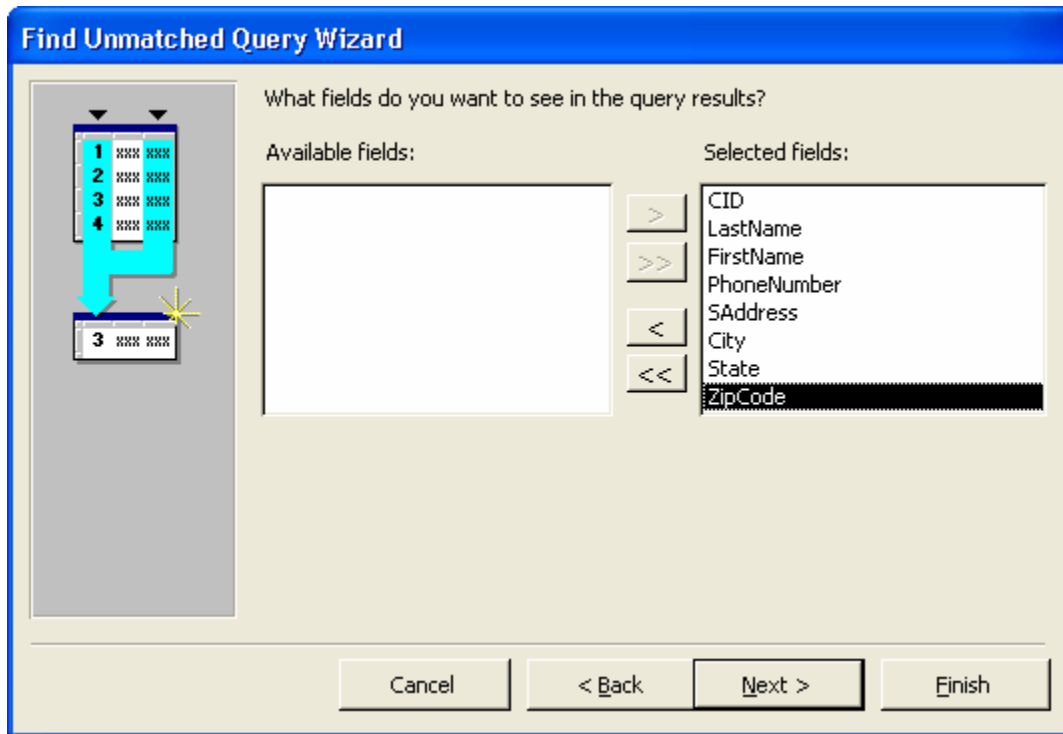

Figure 34: Find Unmatched Query Wizard Dialog Box 3

Figure 35: Find Unmatched Query Wizard Dialog Box 4

Figure 36: Inactive Query Results

Task 3: Create the qryNewEnrollment Query

1. In the database window, click the Queries button on the Objects bar.

2. Click the New button [New] on the Database Windows toolbar.

3. In the New Query Dialog box, select Design View. Click the OK button. The Query Design View opens. The Show Table dialog box should also be open. (If the Show Table dialog box is not open, click the Show Table button [icon] on the Query Design toolbar.)

4. In the Show Table dialog box, double click tblEnrollment and tblCustomer. The field lists for both tables should now be added to the top pane of the Query Design window. Close the Show Table dialog box.

5. Add the LastName and FirstName fields from tblCustomer and the EDate field from tblEnrollment to the query design grid. (You can add a field by double clicking its name.)

6. In the Sort row for the LastName field, click the drop-down arrow and select Ascending from the drop-down list.

7. In the Criteria row for the EDate field, enter 1/18/2005.

8. Click the Save button 🖫 located on the Query Design toolbar. When prompted, name the query qryNewEnrollment.

9. Click the Run button ❗ located on the Query Design toolbar. Figure 37 shows the query in Design View, and Figure 38 shows the query results.
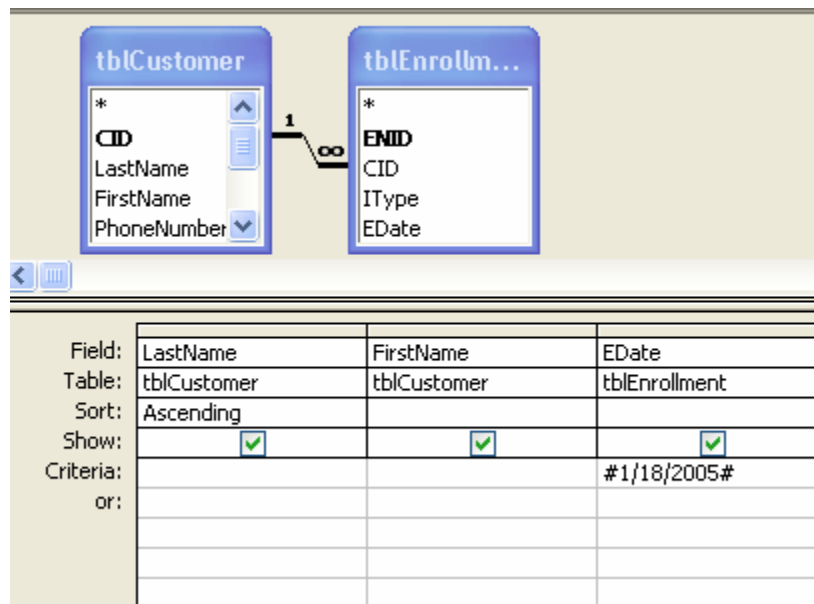

**Figure 37: qryNewEnrollment Query in Design View**

LastName	FirstName	EDate
Blochowiak	Edith	1/18/2005
Chen	Shibo	1/18/2005
Ottinger	Clarissa	1/18/2005

Figure 38: qryNewEnrollment Query Results

Activity 4: Prepare the Customer Report

Activity 4 prepares the Customer List report according to Timeka's specifications. This activity is easy to perform, since the Report Wizard can be used.

Task 1: Create the Customer List Report

1. In the database window, click the Reports button on the Objects Bar.

2. Click the New Report button ![New] on the Database Window toolbar.

3. In the New Report dialog box, select Report Wizard, then select tblCustomer as the data source. Click the OK button. See Figure 39.

4. When prompted by the Report Wizard, add all the fields from tblCustomer except the CID field. Click the Next button. See Figure 40.

5. Do not add a grouping level to the report; click the Next button.

6. When prompted by the Report Wizard, specify an ascending sort order on the LastName field. Click the Next button.

7. When prompted by the Report Wizard, specify a tabular layout for the report. Click the Next button.

8. When prompted by the Report Wizard, specify a formal style for the report. Click the Next button.

9. When prompted by the Report Wizard, specify rptCustomer as the report's name. Click the Finish button.

10. Click the View button located on the Print Preview toolbar to switch to Design View.

11. Double click the rptCustomer label. The property window should now open.

12. Click the Format tab and change the Caption to read "Customer List". Close the Property window.

13. Bold and center the Customer label over the report's contents.

14. In the Page Header section, modify the labels so that they appear similar to the labels shown in Figure 41.

15. In the Detail section, reposition the controls so that they appear similar to Figure 41.

16. Save the report.

17. Notice that the page footer is not shown in Figure 41. Your Customer List report will have a footer containing the date and page number.
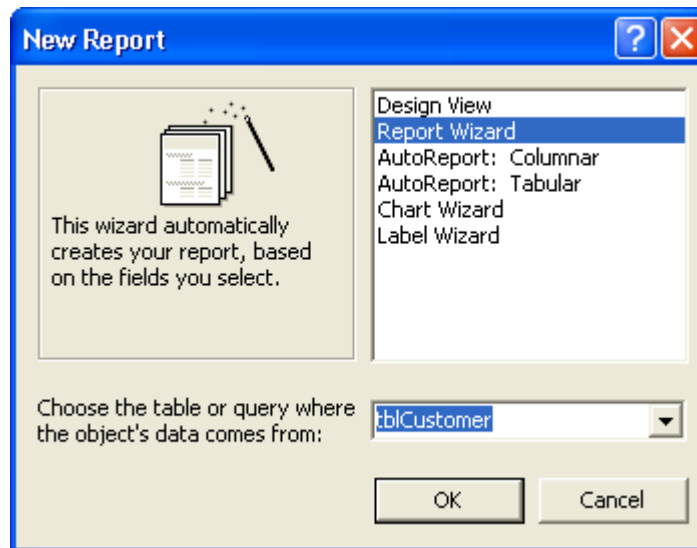

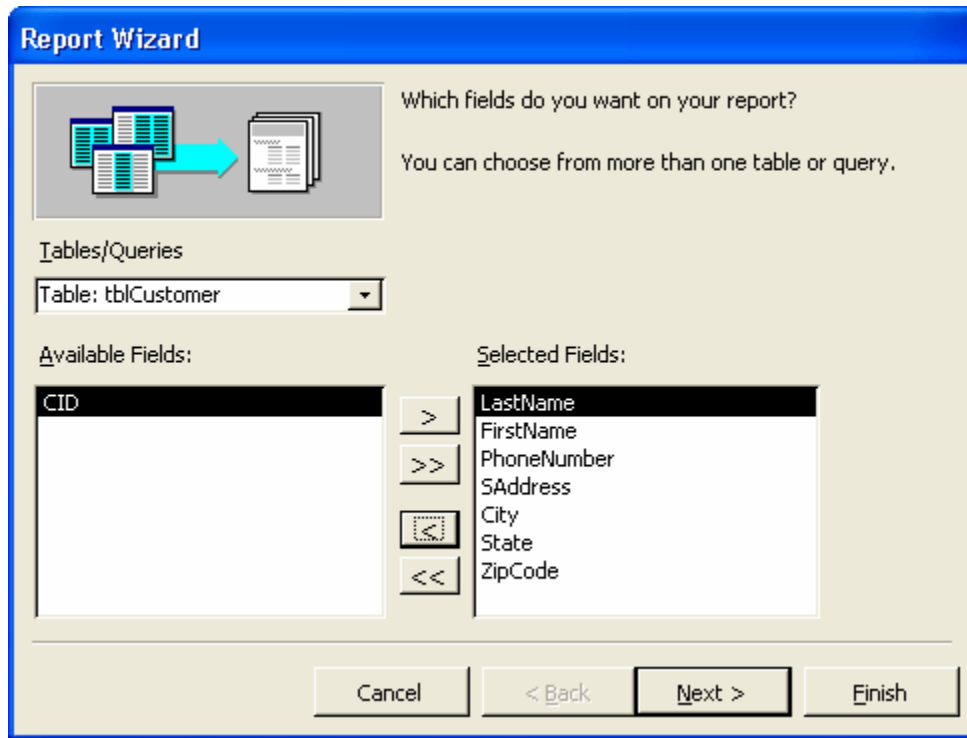**Figure 39: New Report Dialog Box**

Figure 40: Field Selection for the Customer Report

Customer List

Last Name	First Name	Phone Number	Address	City	State	Zip Code
Blochowiak	Edith	555-0202	1223 Ridgewood	San Francisco	CA	94115
Chen	Shibo	555-4789	15712 Tanglewood Ro	San Francisco	CA	94113
Elotmani	Damir	555-3812	2121 Hyde Parke	San Francisco	CA	94115
Erbst	Troy	555-1300	1780 Glacier Drive	San Francisco	CA	94112
Grant	Mitchell	555-1255	1010 Boulevard Rd.	San Francisco	CA	94111
Harley	Sasha	555-5931	10625 Brighton	San Francisco	CA	94115
Ottinger	Clarissa	555-9351	11908 Coltrane	San Francisco	CA	94112
Rother	Elwood	555-6577	3001 Ripple Creek	San Francisco	CA	94113
Sasser	Lexina	555-6456	210 Rushing Meadows	San Francisco	CA	94112
Schoenhals	Eliah	555-6058	1920 Pine Drive	San Francisco	CA	94111

Figure 41: Customer List Report

Test Your Design Preparation

Each MIS Cases: Decision Making With Application Software case requires you to modify your database. After you have modified the database, you are asked to provide the case's main character with additional information about his business.

As the tutorial mentions, Ms. Lorenzo needs you to enter the fitness membership plans into the database, as well as add several new customer enrollments. As the tutorial's Test Your Design Section only involves adding new data to the tables, a step-by-step guide is not provided.

Case Deliverables Preparation

For each MIS Cases: Decision Making with Application Software case, you will prepare several deliverables. Your instructor will specify which deliverables you are to prepare.

The Test Your Design section often specifies that the database is to be modified and that new data are to be added. This request encourages you to prepare a flexible database that is adaptable to changing business needs. Since the Test Your Design section often alters the data in your newly created database, you should confirm with your instructor whether or not he wants the deliverables printed for the Information Specifications section *before* you complete the Test Your Design section or *after* the Test Your Design section is completed.