Database Tutorial

Timeka's Tanning Salon, Inc.

Tutorial Introduction

Timeka's Tanning Salon, Inc., is a tutorial designed to accompany MIS Cases: Decision Making with Application Software, Fourth Edition, published by Pearson Prentice Hall. This tutorial serves as a database development review tool and assumes you have a basic, fundamental knowledge of databases, database terminology, and Microsoft Access 2007.

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. As 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, items for sale (such as 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, as 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: Customer Enrollment Card

Timeka's Tanning Salon Customer Enrollment			
Customer Name:			
Customer Address:			
Phone Number:			
Plan Type:			
Enrollment Date:			
Visits			

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. As 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.

Table 1: Customer Table Structure

Field Name	Data Type	Field Description	Field Size	Comments
CID	AutoNumber	Serves as primary key.	Long Integer	Is required.
LastName	Text		50	
FirstName	Text		25	
PhoneNumber	Text		15	Use an input mask.
SAddress	Text		30	
City	Text		30	Default value is San Francisco.
State	Text		2	Default value is CA.
ZipCode	Text		5	

Table 2: Item 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			Set decimal places to 2.

Table 3: Enrollment 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/Time			Use the short date format.

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, specials, 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.

Figure 2: Customer Form Sketch

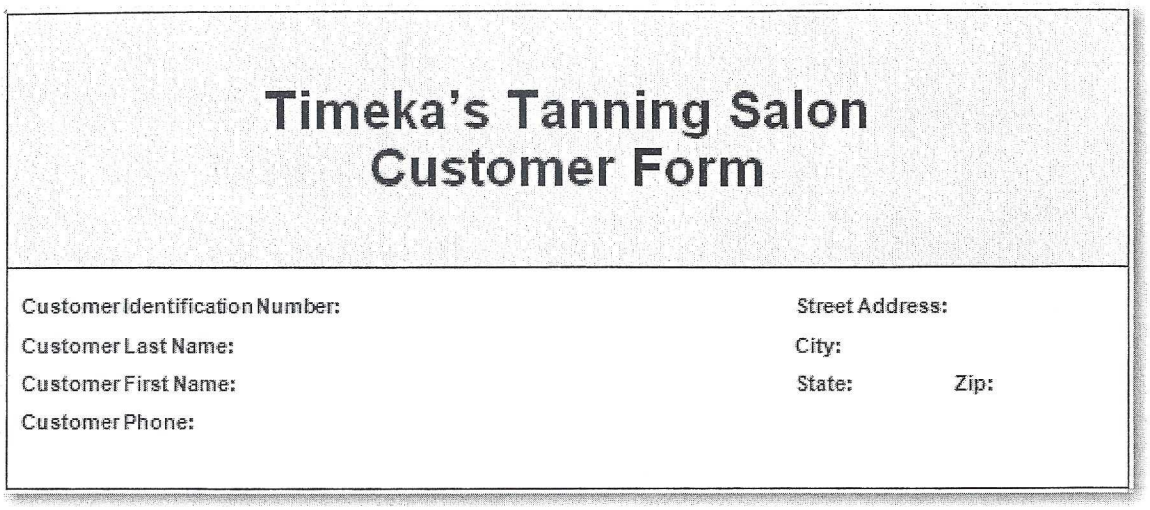


Figure 3: Item Form Sketch

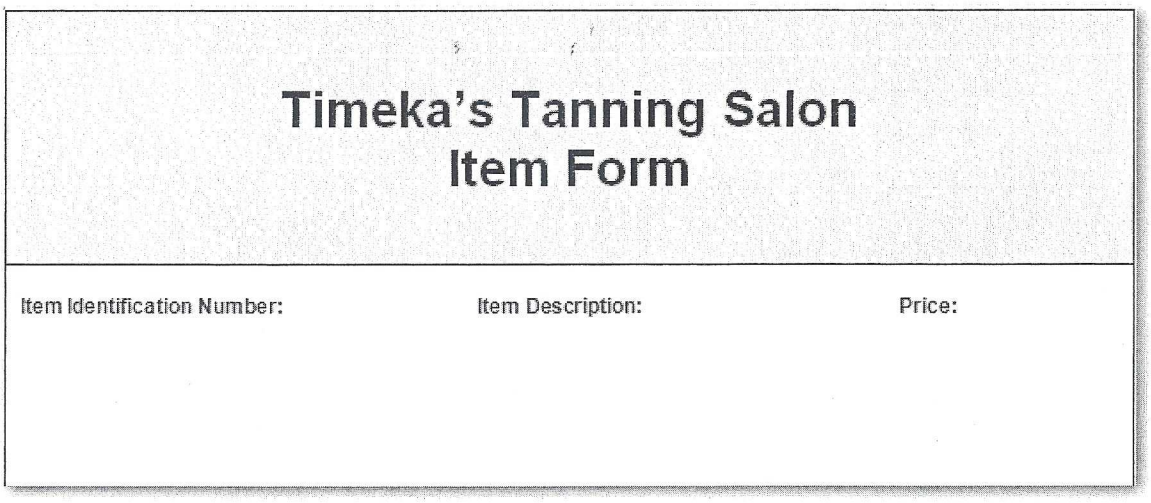
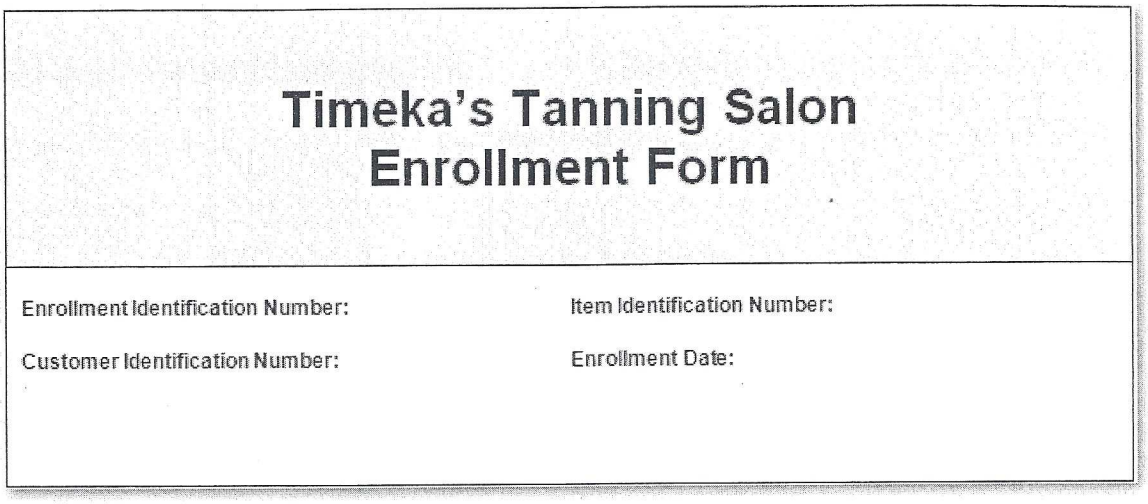


Figure 4: Enrollment Form Sketch



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. How many customers have purchased a single tanning session?
2. Which of the salon's customers are not currently enrolled?
3. Which customers enrolled after August 1, 2007?

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

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

2. Enter data for you and two of your friends into the Customer table. Also, enter the following enrollment data for you and your friends.

CID	IType	EDate
Your CID.	FC004	8/1/2007
First Friend's CID.	FC003	8/1/2007
Second Friend's CID.	FC001	8/1/2007

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.

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?