CASE 15   KoKo's Canine Pet Club

Database Case   **Difficulty Rating:** ★

CASE BACKGROUND

Six months ago, Caedee Hannah found herself facing a dilemma. As a result of a chronic illness, KoKo, her beloved schnauzer, required medication, a special diet, and daily exercise. While the medication and special diet were easy to accommodate into a busy life style, ensuring that KoKo received daily exercise was another matter. Although KoKo's daily exercise usually took the form of a walk around the neighborhood, Ms. Hannah, as a busy executive, had trouble scheduling KoKo's daily walks. Ms. Hannah's friend, Ian, would walk KoKo on the days when Ms. Hannah was extremely busy. Ms. Hannah's friends and neighbors liked the pet walking idea so much that they approached Ms. Hannah and Ian about walking their dogs as well. What began as a neighborhood walking service has now become a fledgling, yet growing, metropolitan area business. Ms. Hannah has hired you to build a simple, yet effective, database for her business. She needs you to build Client and Pet forms, Client and Pet tables, Walker Schedule and Client List reports, and several queries.

CASE SCENARIO

KoKo's Canine Pet Club is a dog-walking service, catering to caring, yet busy, pet owners. The service proves very popular with pet lovers who recognize the value of providing their

pets with daily exercise. Although the service was only started six months ago, it currently provides pet walking services for 50 pets and is registering, on average, 5 pets per week. Paperwork is increasing, and Caedee Hannah, the service's owner, needs a better record-keeping system.

During a meeting with Ms. Hannah, she explains to you that a new client must register with the service. During the registration process, the new client provides basic information about his pet(s), chooses a preferred walk time for his pet(s) and specifies a walker preference. During this time, a dog-walking fee is determined and recorded on the pet registration form. The dog-walking fee varies by pet and is based on the pet's size, temperament, and the number of pets the owner has. The pet owner can request that his pet be walked in the early morning, late morning, early afternoon, late afternoon, or early evening hours. Available walk times are currently kept on a clipboard by the phone. However, Ms. Hannah wants the available walk times, as well as walker, client, and pet information, kept in the database that you are building.

Ms. Hannah's record-keeping needs are simple. She requires a database that tracks her clients, their pets, available walk times, and the pet walkers. Ms. Hannah gives you a partially completed database and requests that you build and populate Client and Pet tables, create several relationships, design Client and Pet forms, design Walker Schedule and Client List reports, and construct several queries.

Storage Specifications

After reviewing the partially completed KoKo's Canine Pet Club database, you notice that the database currently contains Walker and Walk tables. The Walker table stores basic information about each walker and the WalkerNo field serves as the table's primary key. The Walk table stores a set of walk time codes. When a client registers a pet, a walk time code is assigned to each pet. This walk time code indicates the pet owner's preference for the time of day when the pet should be walked.

KoKo's Canine Pet Club database requires both Client and Pet tables. You decide the Client table should store contact information for each client and that the client identification number should serve as the primary key. Table 1 shows the structure for the Client table. (Your instructor will provide you with the data to populate the Client table.)

The Pet table stores information about each pet, including the pet number, pet name, client identification number, walker identification number, quoted price, preferred walk time, enrollment date, and any relevant comments. Table 2 shows the structure for the Pet table. (Your instructor will provide you with the data to populate the Pet table.) As you study this structure, you notice that the WalkerNo and WalkTimeCode fields are part of the Pet table structure. As the WalkerNo and WalkTimeCode fields already exist in other tables, you use the Lookup Wizard to create these fields in the Pet table. By using the Lookup Wizard, you can facilitate data entry and ensure accuracy for both fields. (The Lookup Wizard is invoked when you select the Lookup Wizard as the data type for the field.)

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Table 1: Client Table Structure

Field Name	Data Type	Field Description	Field Size	Comments
ClientNo	AutoNumber	Is a unique, identifying number assigned to each client. Serves as primary key.	Long Integer	Is required.
CLastName	Text	Is the customer's last name.	50	Is required.
CFirstName	Text	Is the customer's first name.	25	Is required.
CAddress	Text	Is the customer's street address.	25	Is required.
CCity	Text	Is the customer's city.	25	Is required.
CState	Text	Is the customer's state abbreviation. The default is OK.	2	Is required.
CZip	Text	Is the customer's zip code. Use an input mask.	10	Is required.
CPhone	Text	Is the customer's home phone number. Use for non-emergency contact. Use an input mask.	8	Is required.
EPhone	Text	Is the customer's emergency phone number. Use for emergency contact. Use an input mask.	8	Is required.

Table 2: Pet Table Structure

Field Name	Data Type	Field Description	Field Size	Comments
PetNo	Text	Is a unique identification number assigned to each pet. Serves as primary key.	10	Is required.
PetName	Text	Stores the pet's name.	25	Is required.
ClientNo	Number	Is the client identification number. Must match a client number from the Client table. Use the Lookup Wizard.	Long Integer	Is required.
WalkerNo	Text	Is the walker identification number. Must match a walker identification number from the Walker table. Use the Lookup Wizard.	4	Is required.
QuotedPrice	Currency	Stores the daily walk fee. Ms. Hannah determines the actual price per pet.		Is required.
WalkTimeCode	Text	Is the code designating the preferred time for walking the pet. Use the Lookup Wizard.	2	Is required.
EnrollmentDate	Date/Time	Indicates when the client enrolled the pet. Use the short date format.		Is required.
Comments	Memo	Contains any additional information that is necessary.		

After studying your notes, you decide three relationships are necessary. First, a relationship between the Pet and Client tables is needed. Since each table contains a ClientNo field, you use the ClientNo field to create the relationship. Second, a relationship between the Walker and Pet tables is necessary. The Walker and Pet tables have a WalkerNo field, and you use this field to create a relationship between the Walker and Pet tables. Third, both the Walk and Pet tables have a WalkTimeCode field. You use the WalkTimeCode field to create the relationship between the Walk and Pet tables. You decide each relationship should enforce referential integrity. (Note: The Lookup Wizard will create relationships for you. However, you need to edit these relationships to enforce referential integrity.)

Input Specifications

Figure 1 provides a tentative sketch for the Client form that Ms. Hannah wants to use. When a new client enrolls his pet with the walking service, Ms. Hannah uses this form to capture contact information about the client, such as his name, address, and phone number. As the tentative sketch shows, the form header includes the service's name and the form's name. After studying the tentative sketch, you use the Form Wizard to build an initial Client form. Once the form is built, you edit the form in Design view.

Figure 1: Client Form

KoKo's Canine Pet Club

Client

Client No:

Client Last Name:

Client First Name:

Street Address:

City:

State: Zip:

Client Phone:

Emergency Phone:

After a client registers, Ms. Hannah enrolls his pet(s). The pet enrollment process is simple and captures basic information about the pet, such as the pet's name, walk time, and walker preference. You use the Form Wizard to build the initial Pet form. Once the initial form is built, you edit the form in Design View. Figure 2 shows the initial Pet form sketch.

Figure 2: Pet Form

KoKo's Canine Pet Club

Pet

Client No:

Pet No:

Pet Name:

Enrollment Date:

Walker No:

Walk Time Code:

Quoted Price:

Comments:

Information Specifications

Ms. Hannah requests Walker Schedule and Client List reports. The Walker Schedule report is generated on a weekly basis and tells Ms. Hannah when her walkers are scheduled to walk the pets. As the Walker Schedule report uses data from four tables, you build a select query, and then base the report on the select query. As the tentative sketch in Figure 3 shows, the Walker Schedule report header contains the service's name, a report title, and the current date. The information in the report body lists the walkers in ascending order based on the walker's last name. A secondary sort is performed on the walk time code, and within the walk time code category, the information is sorted based on the client's last name. Ms. Hannah also mentions that she wants the Walker Schedule report to utilize a landscape orientation.

Figure 4 shows a tentative sketch for the Client List report. The Client List report provides a listing of the service's current clients. You use the Report Wizard to speed initial report development, and then edit this report in Design view. The Client List report's header contains the service's name, report name, and current date. To maintain a consistent appearance with the Walker Schedule report, you use a report style similar to the Walker Schedule report.

Figure 3: Walker Schedule

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Walker Schedule

(Current Date)

Last Name	Code	Client	Pet Name	Address	City	Phone	E-Phone
Jordan	3	Monac	Bear	303 Northridge	Edmond	899-2395	909-8679
	3	Stone	Bruno	1408 Peter Pan Drive	Yukon	899-8182	606-3402
				.			
				.			
				.			
Morgan	1	Ruaz	Molly	1701 Memorial Road	Oklahoma City	905-8440	606-4102
				.			
				.			
				.			

Figure 4: Client List Report

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Client List

(Current Date)

Client Name	Address	City	Phone
Blake, Barney	101 Sunnyville Lane	Edmond	606-8975
		.	
		.	
		.	
Stone, David	1408 Peter Pan Drive	Yukon	899-8182
		.	
		.	
		.	

Ms. Hannah needs answers to the following questions. Build queries to help Ms. Hannah answer these questions. If you choose, you may generate reports based on these queries.

1. How many pets does each pet walker currently walk? Show the walker's first and last name and the pet count for each pet walker. Sort the information in ascending order based on the pet walker's last name.

2. Which clients are located in Edmond? Provide their last and first names.

3. Which clients have three or more pets? Show each client's first and last name and the number of pets he currently has.

4. What are the total pet walking fees charged to each client? Show the client's first and last name and the total fees charged to him.

5. Which pets does Bob walk in the early morning? For each pet, show the pet's name, his owner's last name, and his owner's phone number.

Implementation Concerns

Although you are free to work with the design of the forms and reports, each form and report should have a consistent, professional appearance. Consider using the wizards to prepare the initial forms and reports. Once you have prepared the initial forms and reports, you can edit them in Design view.

A lookup field enables the end user to select a value from a list, thus facilitating data entry and promoting data accuracy. You should define the ClientNo, WalkerNo, and WalkTimeCode fields in the Pet table as lookup fields. When defining the data type for each field, select the Lookup Wizard in the Data Type column and follow the directions in the Lookup Wizard dialogue boxes.

Test Your Design

After creating the forms, tables, relationships, queries, and reports, you should test your database design. Perform the following steps.

1. In addition to the pet walker's base pay, Ms. Hannah wants to give each pet walker a 10 percent commission for each pet that he walks. The commission is based on the fee charged to walk the pet. What is the total commission for each pet walker? Provide the walker's first and last name and his total commission.

2. Ms. Hannah wants to know the number of clients she has in each town. Provide the name of the town and the number of clients for each town.

3. Ms. Hannah is considering raising her fees. She would like to raise the fee for the most popular time. Which walk time is most popular? Provide the walk time description and a count of the number of pets walked at that time.

4. On average, how much does Ms. Hannah charge her clients for walking their pets? Show only the average.

5. Two new clients have enrolled with the pet walking service. Enter their information, along with the information about their pets, into the database. For each client, assign the next available client identification number. For each pet, assign the next available pet identification number and add any comments that you feel are necessary.

   Fancy Tibbs lives at 48473 Roosevelt Drive in Luther, Oklahoma. The zip code is 73002; her phone number is 943-8789, and her emergency number is 910-5746. Mickey, Precious, Prancer, and Spot are her four pets. Mickey is a Yorkshire terrier, Precious is a poodle, Prancer is a Daschund, and Spot is a Dalmatian. The three small dogs cost $6.50 to walk, and the larger dog costs $8.50 to walk. Ms. Tibbs wants Bob Legier to walk each dog in the early morning. Use today's date as the enrollment date.

   Thunder Dumont lives at 84739 Park Lane in Guthrie, OK. The zip code is 73250; his phone number is 748-0098, and his emergency number is 748-9876. Mr. Dumont has two pets. Lightning is a poodle and costs $6.50 to walk. Sunshine is a Great Dane and costs $10.50 to walk. Mr. Dumont requests that Kelly Lamont walk his dogs in the late afternoon. Use today's date as the enrollment date.