**Ch1-Prac-ModProb**

**In-Class:** Chapter 1 Practice with Modification Problems - In-Class \_\_\_ \_\_ \_\_\_

* Type your answers in Word or WordPad while we are discussing them in class.
* Submit your Word or WordPad file on Blackboard when we finish this during class.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **PetName** | **PetType** | **PetBreed** | **PetDOB** | **Owner**  **Last**  **Name** | **Owner**  **First**  **Name** | **OwnerPhone** | **OwnerEmail** |
| King | Dog | Std. Poodle | 27-Feb-11 | Downs | Marsha | 201-823-5467 | marsha@sw.com |
| Teddy | Cat | Cashmier | 01-Feb-12 | James | Richard | 201-735-9812 | richard@sw.com |
| Fido | Dog | Std. Poodle | 17-Jul-10 | Downs | Marsha | 201-823-5467 | marsha@sw.com |
| AJ | Dog | Collie Mix | 05-May-11 | Frier | Liz | 201-823-6578 | liz@sw.com |
| Cedro | Cat | Unknown | 06-Jun-09 | James | Richard | 201-735-9812 | richard@sw.com |
| Woolley | Cat | Unknown | ??? | James | Richard | 201-735-9812 | richard@sw.com |
| Buster | Dog | Border Collie | 11-Dec-08 | Trent | Miles |  | miles@sw.com |

Question 1: This list is used by a veterinary office. Describe three modification problems that are likely to occur when using this list. Use specific data to describe each problem.

Insert problem: Add a stray pet, but all the owner information is null.

Update problem: Update Richard’s email, but you only do it in one row. So it’s inconsistent with his other rows.

Deletion problem: AJ passes away and Liz also gets deleted when row is removed.

Question 2: Name the two themes in the list.

PET and OWNER.

Question 3: What is an ID column?

You can identify the rest of the data in the row from the ID column.

Question 4: Break the list into two tables each with data for a single theme. Assume that owners have a unique phone number but that pets have no unique column. Create an ID column for pets like the one created for customers and courses for the Art Course database tables in Figure 1-10. Use the table representation shown in the Study Guide and in class (not in textbook), like this:

STUDENT (StudentLastName, StudentFirstName, StudentEmail, Phone, Residence, *AdviserLastName*)  
ADVISER (AdviserLastName, AdviserFirstName, AdviserEmail)

PET (PetType, PetName, PetBreed, PetDOB, *OwnerFirstName*)

OWNER (OwnerPhone, OwnerEmail, OwnerFirstName, OwnerLastName)

Question 5: Show how the tables you created solve the problems you described.

Insert problem: Add a stray pet, only in the PET table, so no null owner data.

Update problem: Update Richard’s email in only one row in OWNER table only, so no inconsistent data.

Deletion problem: AJ passes away and gets deleted from the PET table, but Liz remains in the OWNER table.