**Ch1-Prac-Themes**

**In-Class:** Chapter 1 Practice with Themes - 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.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Pet**  **Name** | **Pet**  **Type** | **PetBreed** | **PetDOB** | **Owner**  **Last**  **Name** | **Owner**  **First**  **Name** | **Owner**  **Phone** | **Owner**  **Email** | **Service** | **Date** | **Charge** |
| King | Dog | Std. Poodle | 27-Feb-11 | Downs | Marsha | 201-  823-5467 | marsha  @sw.com | Ear Infection | 17-Aug-12 | $65.00 |
| Teddy | Cat | Cashmier | 01-Feb-12 | James | Richard | 201-  735-9812 | richard  @sw.com | Nail Clip | 5-Sep-12 | $27.50 |
| 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 | One year shots | 5-May-12 | $42.50 |
| Cedro | Cat | Unknown | 6-Jun-09 | James | Richard | 201-  735-9812 | richard  @sw.com | Nail Clip | 5-Sep-12 | $27.50 |
| Woolley | Cat | Unknown | ??? | James | Richard | 201-  735-9812 | richard  @sw.com | Skin Infection | 3-Oct-12 | $35.00 |
| Buster | Dog | Border Collie | 11-Dec-08 | Trent | Miles | 201-  634-2345 | miles  @sw.com | Laceration Repair | 5-Oct-12 | $127.00 |

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

OWNER ( OwnerLastName, OwnerFirstName, OwnerPhone, OwnerEmail )

SERVICE ( ServiceType, ServiceDate, ServiceCharge, *PetName* )

Assumption: Pet names are unique.

Assumption: No more than one service per day per pet.

VET\_2 (PetName, PetType, PetBreed, PetDOB, OwnerLastName, OwnerFirstName, OwnerPhone, OwnerEmail, Service, Date, Charge)

**Question 1: Another version of the list used by the veterinary office is shown above. How many themes does this list have? What are they?** There are three themes: PET, OWNER, SERVICE

**Question 2: Break this list into tables, each with a single theme. Create ID columns as you think necessary. 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)**

**Question 3: Show how the tables you created solve the three problems of lists identified in this chapter.**

Update problem: No duplicate emails, because each owner is listed only once in the OWNER table.

Insertion problem: Add pet with no owner. No null data, because pet is in its own table.

Deletion problem: Deleting a pet will not delete the owner, because they are in their own table.

**Question 4: Describe in your own words and illustrate with tables how relationships are represented in a relational database. Refer to the tables you created above.**

Tables are related through foreign and primary keys.