CIS 5355 - DATABASE MANAGEMENT SYSTEMS

ASSIGNMENT - 9

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a. **Verified Relational Model After going through Normalization and Business Rules:**

VISIT (Visit_ID, *Emp_ID,Pet_ID,*Visit_Date, Visit_StartTime, Visit_EndTime)

EMPLOYEE(Emp_ID, *Specialty_ID* Emp_Firstname, Emp_Lastname, Emp_Address, Emp_City, Emp_State, Emp_Zip_Code, Emp_Area_Code, Emp_Phone_Number, Emp_Hire_Date)

SPECIALITY (Speciality_ID, Specialization)

OWNER(Owner_ID, Owner_FirstName, Owner_LastName, Owner_Address, Owner_City, Owner_State, Owner_Zip_Code, Owner_Area_Code, Owner_Phone_Number)
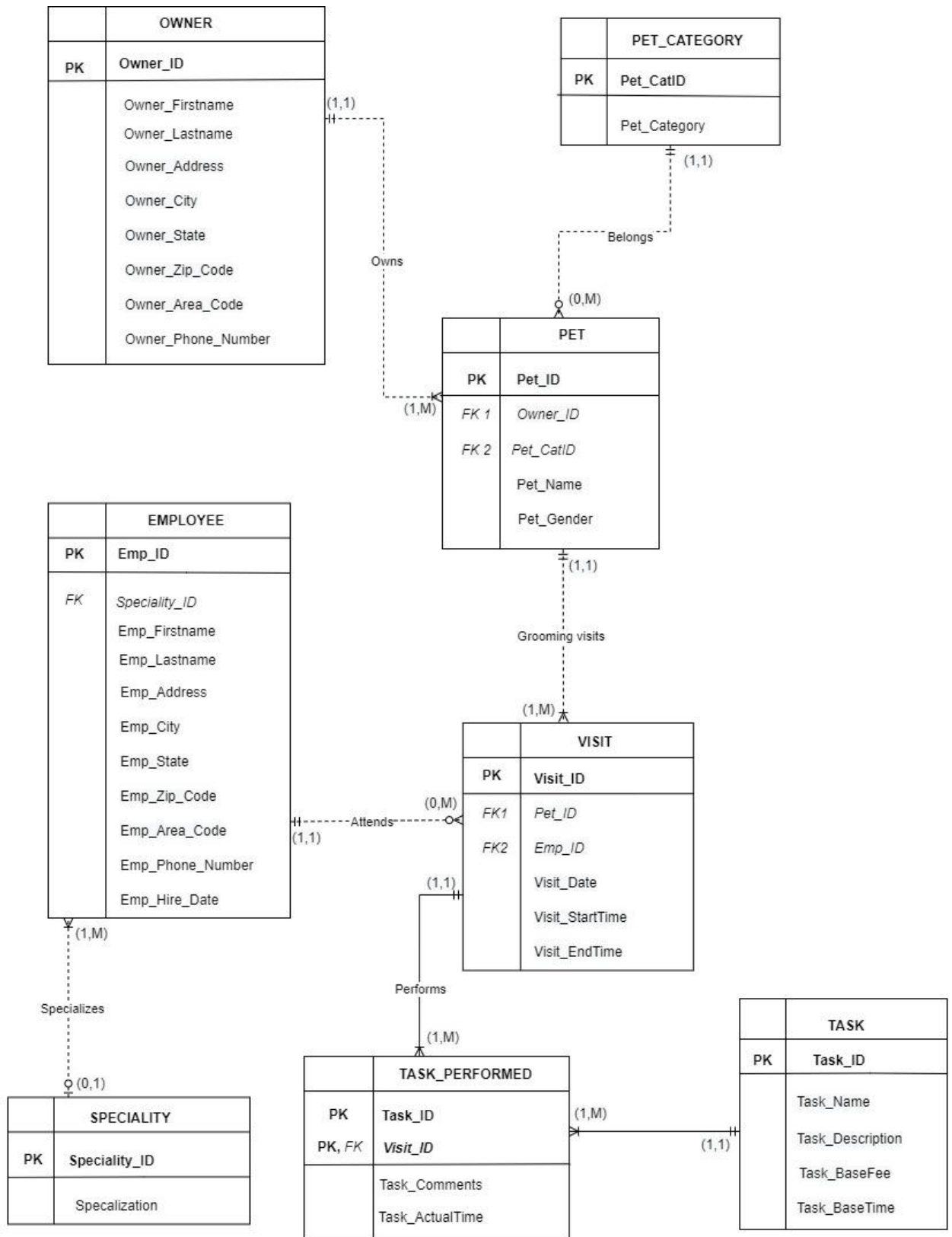
PET(Pet_ID,*Pet_CatID*,*Owner_ID,* Pet_Name,Pet_Gender)

PET_CATEGORY(Pet_CatID, Pet_Category)

TASK_PERFORMED(Task_ID, *Visit_ID*, Task_ActualTime, Task_Comment)

TASK(Task_ID, Task_Name, Task_Description, Task_BaseFee, Task_BaseTime)

b. <u>Full ERD Diagram:</u>

OWNER

PK	Owner_ID
	Owner_Firstname
	Owner_Lastname
	Owner_Address
	Owner_City
	Owner_State
	Owner_Zip_Code
	Owner_Area_Code
	Owner_Phone_Number

PET_CATEGORY

PK	Pet_CatID
	Pet_Category

PET

PK	Pet_ID
FK 1	Owner_ID
FK 2	Pet_CatID
	Pet_Name
	Pet_Gender

EMPLOYEE

PK	Emp_ID
FK	Speciality_ID
	Emp_Firstname
	Emp_Lastname
	Emp_Address
	Emp_City
	Emp_State
	Emp_Zip_Code
	Emp_Area_Code
	Emp_Phone_Number
	Emp_Hire_Date

VISIT

PK	Visit_ID
FK1	Pet_ID
FK2	Emp_ID
	Visit_Date
	Visit_StartTime
	Visit_EndTime

SPECIALITY

PK	Speciality_ID
	Specalization

TASK_PERFORMED

PK	Task_ID
PK, FK	Visit_ID
	Task_Comments
	Task_ActualTime

TASK

PK	Task_ID
	Task_Name
	Task_Description
	Task_BaseFee
	Task_BaseTime

Relationships:
- Owns (1,1) — (1,M)
- Belongs (1,1) — (0,M)
- Grooming visits (1,1) — (1,M)
- Attends (1,1) — (0,M)
- Specializes (1,M) — (0,1)
- Performs (1,1) — (1,M)
- (1,M) — (1,1) TASK

c. __The Implementation Model:__

CREATE DATABASE nkrpssuPetShop

GO

CREATE TABLE OWNER
(
```
      Owner_ID                SMALLINT          NOT NULL,
      Owner_Firstname         VARCHAR(25)       NOT NULL,
      Owner_Lastname          VARCHAR(25)       NOT NULL,
      Owner_Address           VARCHAR(25)       NOT NULL,
      Owner_City              VARCHAR(25)       NOT NULL,
      Owner_State             CHAR(2)           NOT NULL,
      Owner_Zip_Code          CHAR(5)           NOT NULL,
      Owner_Area_Code         CHAR(3)           NOT NULL,
      Owner_Phone_Number      CHAR(7)           NOT NULL,
      CONSTRAINT              pk_Owner_ID       PRIMARY KEY (Owner_ID)
```
)

CREATE TABLE PET_CATEGORY
(
```
      Pet_CatID        SMALLINT        NOT NULL,
      Pet_Category     VARCHAR(25)     NOT NULL,
      CONSTRAINT       pk_Pet_CatID    PRIMARY KEY (Pet_CatID)
```
)

CREATE TABLE SPECIALITY
(
```
      Speciality_ID      SMALLINT        NOT NULL,
      Specialization     VARCHAR(25)     NOT NULL,
      CONSTRAINT         pk_Speciality   PRIMARY KEY (Speciality_ID)
```
)

```sql
CREATE TABLE TASK
(
        Task_ID         SMALLINT        NOT NULL,
        Task_Name       VARCHAR(25)     NOT NULL,
        Task_Description VARCHAR(25)    NOT NULL,
        Task_BaseFee    NUMERIC(6,2)    NOT NULL,
        Task_BaseTime   DATE            NOT NULL        DEFAULT(GETDATE()),
        CONSTRAINT      pk_Task         PRIMARY KEY (Task_ID)
)

CREATE TABLE PET
(
        Pet_ID          SMALLINT        NOT NULL,
        Owner_ID        SMALLINT        NOT NULL,
        Pet_CatID       SMALLINT        NOT NULL,
        Pet_Name        VARCHAR(25)     NOT NULL,
        Pet_Gender      VARCHAR(25)     NOT NULL,
        CONSTRAINT      pk_Pet_ID       PRIMARY KEY (Pet_ID),
        CONSTRAINT      fk_Owner_ID     FOREIGN KEY(Owner_ID)       REFERENCES
                                OWNER(Owner_ID),
        CONSTRAINT      fk_Pet_CatID    FOREIGN KEY(Pet_CatID)      REFERENCES
                                PET_CATEGORY(Pet_CatID)
)

CREATE TABLE EMPLOYEE
(
        Emp_ID          SMALLINT        NOT NULL,
        Specialty_ID    SMALLINT        NOT NULL,
        Emp_Firstname   VARCHAR(25)     NOT NULL,
        Emp_Lastname    VARCHAR(25)     NOT NULL,
        Emp_Address     VARCHAR(25)     NOT NULL,
        Emp_City        VARCHAR(25)     NOT NULL,
        Emp_State       CHAR(2)         NOT NULL,
        Emp_Zip_Code    CHAR(5)         NOT NULL,
        Emp_Area_Code   CHAR(3)         NOT NULL,
        Emp_Phone_Number CHAR(7)        NOT NULL,
        Emp_Hire_Date   DATE    NOT NULL   DEFAULT(GETDATE()),
        CONSTRAINT      pk_Emp_ID       PRIMARY KEY (Emp_ID),
        CONSTRAINT      fk_Specialty_ID FOREIGN KEY (Specialty_ID)
                        REFERENCES  SPECIALITY(Specialty_ID)
```

```
        )


CREATE TABLE VISIT
(
        Visit_ID          SMALLINT          NOT NULL,
        Pet_ID            SMALLINT          NOT NULL,
        Emp_ID            SMALLINT          NOT NULL,
        Visit_Date        DATE              NOT NULL          DEFAULT(GETDATE()),
        Visit_StartTime   DATE              NOT NULL          DEFAULT(GETDATE()),
        Visit_EndTime     DATE              NOT NULL          DEFAULT(GETDATE()),
        CONSTRAINT        pk_Visit_ID       PRIMARY KEY (Visit_ID),
        CONSTRAINT        fk_Pet_ID         FOREIGN KEY(Pet_ID)             REFERENCES
                                                                            PET(Pet_ID),
        CONSTRAINT        fk_Emp_ID         FOREIGN KEY(Emp_ID)             REFERENCES
                                                                            EMPLOYEE(Emp_ID)
)


CREATE TABLE TASK_PERFORMED
(
        Task_ID           SMALLINT          NOT NULL,
        Visit_ID          SMALLINT          NOT NULL,
        Task_ActualTime   DATE              NOT NULL          DEFAULT(GETDATE()),
        Task_Comment      VARCHAR(25)       NOT NULL,
        CONSTRAINT        pk_Task_ID        PRIMARY KEY (Task_ID),
        CONSTRAINT        pk_Visit_ID       PRIMARY KEY (Visit_ID),
        CONSTRAINT        fk_Visit_ID    FOREIGN KEY (Visit_ID) REFERENCES  VISIT(Visit_ID)
)
```