

# Databases Project Part 3

- Nicey and Sal

## 3. Translate the logical data model for the DBMS.

a. Develop SQL code to create the entire database schema, reflecting the constraints identified in previous steps.

```
### PAWSOME PETS DATABASE

Table: Owner
Empty DataFrame
Columns: [ownerNo, ownerName, ownerAddress, ownerTeleNo]
Index: []

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Table: Clinic
Empty DataFrame
Columns: [clinicNo, clinicName, clinicAddress, clinicTeleNo, managerStaffNo]
Index: []

-----

Table: Pet
Empty DataFrame
Columns: [petNo, petName, petDOB, petBreed, petColor, ownerNo, clinicNo]
Index: []

-----

Table: Staff
Empty DataFrame
Columns: [staffNo, staffName, staffAddress, staffTeleNo, staffDOB, position, salary, clinicNo]
Index: []

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Table: Examination
Empty DataFrame
Columns: [examNo, chiefComplaint, description, dateSeen, actionsTaken, petNo, staffNo]
Index: []

-----

Table: Breed
Empty DataFrame
Columns: [petBreed, petSpecies]
Index: []

-----
```

b. Create at least 5 tuples for each relation in your database.

### PAWSOME PETS DATABASE

Table: Owner

ownerNo	ownerName	ownerAddress	ownerTeleNo
0	1	John Doe 123 Elm St, Miami, FL	3051234567
1	2	Jane Smith 456 Oak St, Miami, FL	3059876543
2	3	Mike Johnson 789 Pine St, Miami, FL	3054567890
3	4	Emily Davis 101 Maple St, Miami, FL	3056781234
4	5	Anna Brown 202 Birch St, Miami, FL	3055436789

Table: Clinic

clinicNo	clinicName	clinicAddress	clinicTeleNo	managerStaffNo
0	1	Pet Care Center 500 Main St, Miami, FL	3051234560	1
1	2	Animal Health Clinic 600 Main St, Miami, FL	3059876540	2
2	3	Happy Tails Clinic 700 Main St, Miami, FL	3054567899	3
3	4	Best Friend Vet 800 Main St, Miami, FL	3056781239	4
4	5	Pawfect Care 900 Main St, Miami, FL	3055436780	5

Table: Pet

petNo	petName	petDOB	petBreed	petColor	ownerNo	clinicNo
0	1	Buddy 2021-01-15	Golden Retriever	Golden	1	1
1	2	Mittens 2020-05-20	Siamese Cat	White	2	2
2	3	Max 2019-07-10	Bulldog	Brown	3	3
3	4	Bella 2022-03-25	Persian Cat	Gray	4	4
4	5	Charlie 2021-09-05	Beagle	Tri-color	5	5

Table: Staff

staffNo	staffName	staffAddress	staffTeleNo	staffDOB	position	salary	clinicNo
0	1	Alice Alon 120 Elm St, Miami, FL	3051112222	1980-04-15	Manager	120000	1
1	2	Bob Brown 130 Oak St, Miami, FL	3052223333	1985-08-10	Manager	115000	2
2	3	Carol Corne 140 Pine St, Miami, FL	3053334444	1975-12-20	Manager	130000	3
3	4	David Doogle 150 Maple St, Miami, FL	3054445555	1990-06-25	Manager	110000	4
4	5	Eve Evette 160 Birch St, Miami, FL	3055556666	1982-11-30	Manager	125000	5
5	6	Faruq Fonty 170 Red Rd, Miami, FL	3051113333	2002-17-08	Examiner	6000	6

Table: Examination

examNo	chiefComplaint	description	dateSeen	actionsTaken	petNo	staffNo	
0	1	Coughing	Persistent cough and lethargy	2024-01-15	Prescribed medication	1	1
1	2	Limping	Injury to front left leg	2024-02-10	Applied bandage	2	2
2	3	Vomiting	Repeated vomiting and loss of appetite	2024-03-05	Administered IV fluids	3	3
3	4	Skin Rash	Redness and irritation on skin	2024-04-20	Prescribed ointment	4	4
4	5	Ear Infection	Discharge and odor from ears	2024-05-12	Cleaned ears and prescribed drops	5	5

Table: Breed

	petBreed	petSpecies
0	Golden Retriever	Dog
1	Siamese Cat	Cat
2	Bulldog	Dog
3	Persian Cat	Cat
4	Beagle	Dog

**c. Develop the 5 SQL queries that correspond to 2c using embedded SQL.**

```
# Transaction 1: Register a New Pet Owner and their Pet(s) at a clinic
Inserted new owner:
[(6, 'Sarah Connor', '12 Skynet St, Miami, FL', '3055551234')]
Constraint check 1: Clinic exists: (1, 'Pet Care Center', '500 Main St, Miami, FL', '3051234560', 1)
Constraint check 2: Owner 6 exists
Inserted new pets:
[(6, 'Rex', '2022-05-01', 'Golden Retriever', 'Brown', 6, 1), (7, 'Daisy', '2023-01-15', 'Persian Cat', 'Black', 6, 1)]

# Transaction 2: Schedule an Examination for a Pet
Constraint Check 1: Staff 1 exists
Constraint Check 2: Pet 6 exists
[(6, 'Limping', 'Injury to front paw', '2024-12-05', 'Prescribed anti-biotics', 6, 1)]

# Transaction 3: Update a Pet's medical records after an examination
Constraint Check 1: Exam 2 exists
[(2, 'Limping', 'Injury to front left leg, mild swelling', '2024-02-10', 'Applied 2 bandages', 2, 2)]

# Transaction 4: Retrieve a list of all Pets owned by a specific owner
Constraint check 1: Owner 6 exists
[('Rex', '2022-05-01', 'Golden Retriever', 'Brown', 1), ('Daisy', '2023-01-15', 'Persian Cat', 'Black', 1)]

# Transaction 5: Assign a Manager to the Clinic
Constraint check 1: Staff member 6 is not managing another clinic
Constraint check 2: Staff member 6 exists in the Staff table
Updated Clinic Details: (2, 'Animal Health Clinic', '600 Main St, Miami, FL', '3059876540', 6)
### All SQL Queries done
```

The updated database after the queries are complete:

```
### PAWSOME PETS DATABASE
```

ownerNo	ownerName	ownerAddress	ownerTeleNo
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1	2 Jane Smith	456 Oak St, Miami, FL	3059876543
2	3 Mike Johnson	789 Pine St, Miami, FL	3054567890
3	4 Emily Davis	101 Maple St, Miami, FL	3056781234
4	5 Anna Brown	202 Birch St, Miami, FL	3055436789
5	6 Sarah Connor	12 Skynet St, Miami, FL	3055551234

---

clinicNo	clinicName	clinicAddress	clinicTeleNo	managerStaffNo
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1	2 Animal Health Clinic	600 Main St, Miami, FL	3059876540	6
2	3 Happy Tails Clinic	700 Main St, Miami, FL	3054567899	3
3	4 Best Friend Vet	800 Main St, Miami, FL	3056781239	4
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---

petNo	petName	petDOB	petBreed	petColor	ownerNo	clinicNo
0	1 Buddy	2021-01-15	Golden Retriever	Golden	1	1
1	2 Mittens	2020-05-20	Siamese Cat	White	2	2
2	3 Max	2019-07-10	Bulldog	Brown	3	3
3	4 Bella	2022-03-25	Persian Cat	Gray	4	4
4	5 Charlie	2021-09-05	Beagle	Tri-color	5	5
5	6 Rex	2022-05-01	Golden Retriever	Brown	6	1
6	7 Daisy	2023-01-15	Persian Cat	Black	6	1

---

staffNo	staffName	staffAddress	staffTeleNo	staffDOB	position	salary	clinicNo
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---

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3	4 Skin Rash	Redness and irritation on skin	2024-04-20	Prescribed ointment	4	4
4	5 Ear Infection	Discharge and odor from ears	2024-05-12	Cleaned ears and prescribed drops	5	5
5	6 Limping	Injury to front paw	2024-12-05	Prescribed anti-biotics	6	1

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petBreed	petSpecies
0 Golden Retriever	Dog
1 Siamese Cat	Cat
2 Bulldog	Dog
3 Persian Cat	Cat
4 Beagle	Dog

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d. Upload all the code and documentation to GitHub.

Github link: [https://github.com/niceyraiayani/CSC423-Database\\_Systems-PawsomePets](https://github.com/niceyraiayani/CSC423-Database_Systems-PawsomePets)