Gin Sang

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Term Project: Phase III

Pet Adoption Agency

Brief Description: I am choosing to do a PET ADOPTION AGENCY database for my miniworld. In this database, we will be managing pets, owners, breeds, adoptions, locations, and veterinarians as entity types and their relationships. Each PET has a unique identifier. Each PET is stationed at one LOCATION. Each PET belongs to one OWNER. Each PET is treated by one VETERINARIAN. Each VETERINARIAN can treat multiple PETS. Each PET is a member of one or more BREED. Each PET has ADOPTION information. Each VETERINARIAN is stationed at one LOCATION. The only new two entities added in order to meet at least one generalization/specialization requirement are Cat and Dog. More details about those two entities will be decided in the future. Cats and Dogs are part of PET.

Queries (Also in code .sql format in another file):

```sql
-- Q1: Retrieve names, ages, breeds, and locations of all available pets
-- Entities involved: PET, BREED, LOCATION
SELECT p.Pet_Name, p.Age, b.Breed_Name, l.City, l.State, l.Country
FROM PET p
JOIN BREED b ON p.Breed_ID = b.Breed_ID
JOIN LOCATION l ON p.Location_ID = l.Location_ID
WHERE p.Availability_Status = TRUE;


-- Q2: Retrieve names, countries of origins, breeds, and adoption fees of available
pets
-- Entities involved: PET, BREED, ADOPTION
SELECT p.Pet_Name, b.Country_of_Origin, b.Breed_Name, a.Adoption_Fee
FROM PET p
JOIN BREED b ON p.Breed_ID = b.Breed_ID
JOIN ADOPTION a ON p.Pet_ID = a.fk_Pet_ID
WHERE p.Availability_Status = TRUE;


-- Q3: Retrieve owner's name, contact information, adoption date, and adoption
location for a specific pet
-- Entities involved: PET, OWNER, LOCATION, ADOPTION
SELECT CONCAT(o.First_Name, ' ', o.Last_Name) AS Owner_Name,
```

```
        o.Contact_Information,
        a.Adoption_Date,
        l.City,
        l.State,
        l.Country
FROM PET p
JOIN ADOPTION a ON p.Pet_ID = a.fk_Pet_ID
JOIN OWNER o ON a.fk_Owner_ID = o.Owner_ID
JOIN LOCATION l ON a.fk_Location_ID = l.Location_ID
WHERE p.Pet_Name = 'Daisy';


-- Q4: Find the average age of pets, grouped by breed, filtering out breeds with an
average age less than or equal to 2, ordered by the average age in descending order
-- Entities involved: PET, BREED

SELECT b.Breed_Name, AVG(p.Age) AS Average_Age
FROM PET p
JOIN BREED b ON p.Breed_ID = b.Breed_ID
GROUP BY b.Breed_Name
HAVING AVG(p.Age) > 2
ORDER BY Average_Age DESC;




-- Q5:Find an available pet that is 2 years of age, that is a labrador retriever, with
an adoption fee that is less
-- than 200 dollars
-- Entities involved: PET, ADOPTION
SELECT p.Pet_Name, p.Age, b.Breed_Name, l.City, l.State, l.Country
FROM PET p
JOIN BREED b ON p.Breed_ID = b.Breed_ID
JOIN ADOPTION a ON p.Pet_ID = a.fk_Pet_ID
JOIN LOCATION l ON a.fk_Location_ID = l.Location_ID
WHERE p.Age = 2 AND b.Breed_Name = 'Labrador Retriever' AND a.Adoption_Fee < 200;


-- Q6: Find the average age of pets, grouped by breed, only considering breeds with an
average lifespan greater than 10 years, ordered by the average age in descending order
-- Entities involved: PET, BREED
SELECT b.Breed_Name, AVG(p.Age) AS Average_Age
FROM PET p
JOIN BREED b ON p.Breed_ID = b.Breed_ID
WHERE b.Average_Lifespan > 10
GROUP BY b.Breed_Name
```

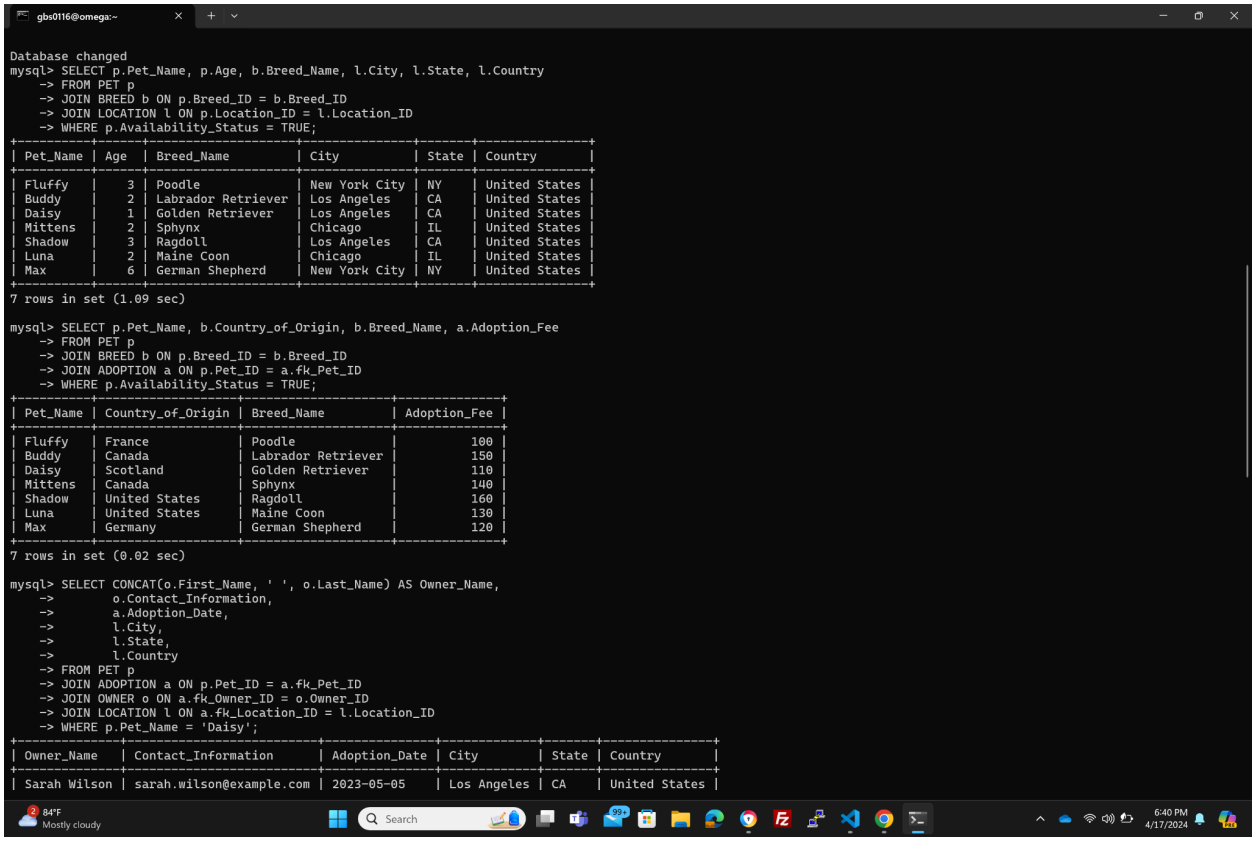
```
ORDER BY Average_Age DESC;
```

Screenshots:

Query # 1 & 2

Q1: Retrieve names, ages, breeds, and locations of all available pets.

Q2: Retrieve names, countries of origins, breeds, and adoption fees of available pets.



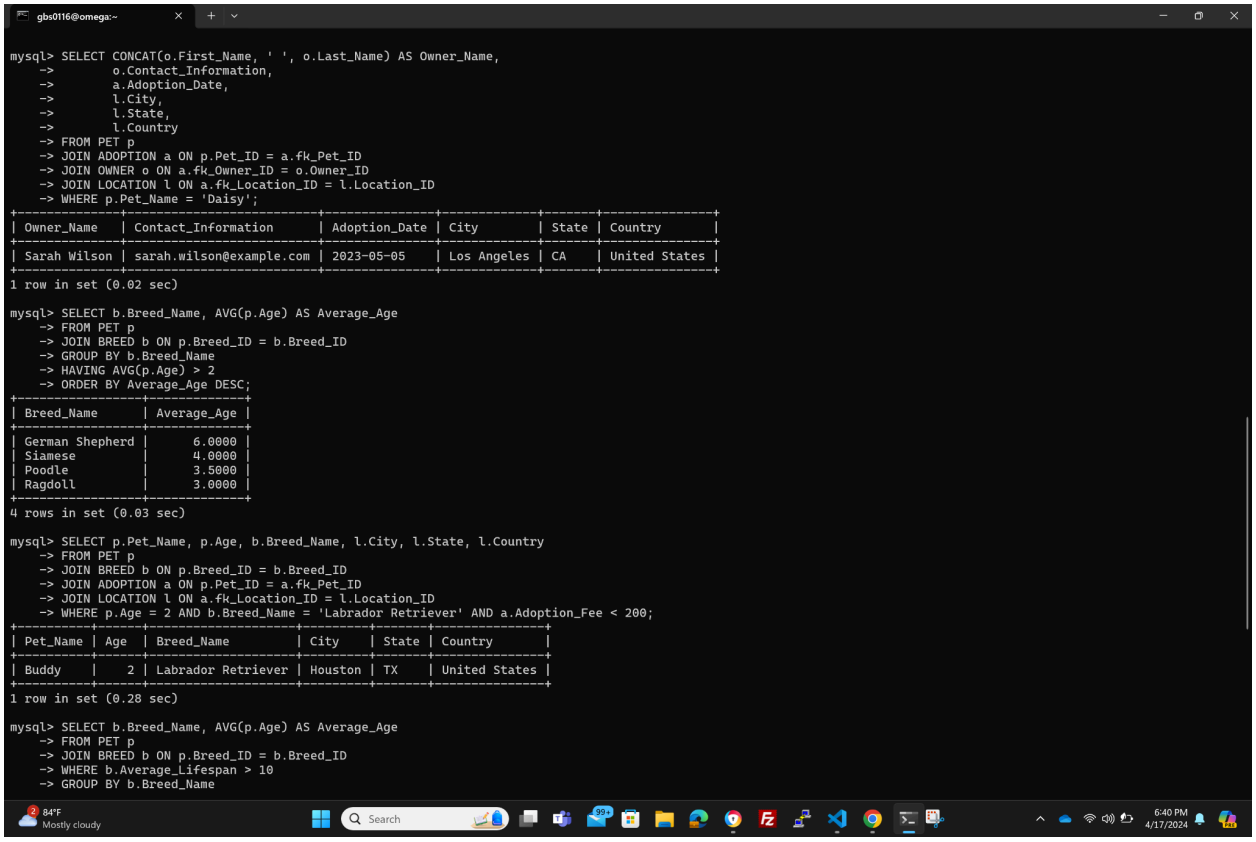
```
gbs0116@omega:~

Database changed
mysql> SELECT p.Pet_Name, p.Age, b.Breed_Name, l.City, l.State, l.Country
    -> FROM PET p
    -> JOIN BREED b ON p.Breed_ID = b.Breed_ID
    -> JOIN LOCATION l ON p.Location_ID = l.Location_ID
    -> WHERE p.Availability_Status = TRUE;
+----------+------+--------------------+---------------+-------+---------------+
| Pet_Name | Age  | Breed_Name         | City          | State | Country       |
+----------+------+--------------------+---------------+-------+---------------+
| Fluffy   |    3 | Poodle             | New York City | NY    | United States |
| Buddy    |    2 | Labrador Retriever | Los Angeles   | CA    | United States |
| Daisy    |    1 | Golden Retriever   | Los Angeles   | CA    | United States |
| Mittens  |    2 | Sphynx             | Chicago       | IL    | United States |
| Shadow   |    3 | Ragdoll            | Los Angeles   | CA    | United States |
| Luna     |    2 | Maine Coon         | Chicago       | IL    | United States |
| Max      |    6 | German Shepherd    | New York City | NY    | United States |
+----------+------+--------------------+---------------+-------+---------------+
7 rows in set (1.09 sec)

mysql> SELECT p.Pet_Name, b.Country_of_Origin, b.Breed_Name, a.Adoption_Fee
    -> FROM PET p
    -> JOIN BREED b ON p.Breed_ID = b.Breed_ID
    -> JOIN ADOPTION a ON p.Pet_ID = a.fk_Pet_ID
    -> WHERE p.Availability_Status = TRUE;
+----------+-------------------+--------------------+--------------+
| Pet_Name | Country_of_Origin | Breed_Name         | Adoption_Fee |
+----------+-------------------+--------------------+--------------+
| Fluffy   | France            | Poodle             |          100 |
| Buddy    | Canada            | Labrador Retriever |          150 |
| Daisy    | Scotland          | Golden Retriever   |          110 |
| Mittens  | Canada            | Sphynx             |          140 |
| Shadow   | United States     | Ragdoll            |          160 |
| Luna     | United States     | Maine Coon         |          130 |
| Max      | Germany           | German Shepherd    |          120 |
+----------+-------------------+--------------------+--------------+
7 rows in set (0.02 sec)

mysql> SELECT CONCAT(o.First_Name, ' ', o.Last_Name) AS Owner_Name,
    ->        o.Contact_Information,
    ->        a.Adoption_Date,
    ->        l.City,
    ->        l.State,
    ->        l.Country
    -> FROM PET p
    -> JOIN ADOPTION a ON p.Pet_ID = a.fk_Pet_ID
    -> JOIN OWNER o ON a.fk_Owner_ID = o.Owner_ID
    -> JOIN LOCATION l ON a.fk_Location_ID = l.Location_ID
    -> WHERE p.Pet_Name = 'Daisy';
+--------------+---------------------------+---------------+--------------+-------+---------------+
| Owner_Name   | Contact_Information       | Adoption_Date | City         | State | Country       |
+--------------+---------------------------+---------------+--------------+-------+---------------+
| Sarah Wilson | sarah.wilson@example.com | 2023-05-05    | Los Angeles | CA    | United States |
+--------------+---------------------------+---------------+--------------+-------+---------------+
```

Query # 3, 4, & 5

Q3: Retrieve owner's name, contact information, adoption date, and adoption location for a specific pet.

Q4: Find the average age of pets, grouped by breed, filtering out breeds with an average age less than or equal to 2, ordered by the average age in descending order.

Q5:Find an available pet that is 2 years of age, that is a labrador retriever, with an adoption fee that is less than 200 dollars.



Query # 6

Q6: Find the average age of pets, grouped by breed, only considering breeds with an average lifespan greater than 10 years, ordered by the average age in descending order