

SQL CODING CHALLENGE-AKSHAYA.S

1. Provide a SQL script that initializes the database for the Pet Adoption Platform "PetPals"

```
CREATE DATABASE IF NOT EXISTS PetPals;  
USE PetPals;
```

2. Create tables for pets, shelters, donations, adoption events, and participants.

3. Define appropriate primary keys, foreign keys, and constraints

4. Ensure the script handles potential errors, such as if the database or tables already exist.

```
CREATE TABLE IF NOT EXISTS Pets (  
    PetID INT PRIMARY KEY AUTO_INCREMENT,  
    Name VARCHAR(100),  
    Age INT,  
    Breed VARCHAR(100),  
    Type VARCHAR(50),  
    AvailableForAdoption BIT  
);
```

```
CREATE TABLE IF NOT EXISTS Shelters (  
    ShelterID INT PRIMARY KEY AUTO_INCREMENT,  
    Name VARCHAR(100),  
    Location VARCHAR(255)  
);
```

```
CREATE TABLE IF NOT EXISTS Donations (  
    DonationID INT PRIMARY KEY AUTO_INCREMENT,  
    DonorName VARCHAR(100),  
    DonationType VARCHAR(50),  
    DonationAmount DECIMAL(10,2),  
    DonationItem VARCHAR(100),  
    DonationDate DATETIME  
);
```

```
CREATE TABLE IF NOT EXISTS AdoptionEvents (  
    EventID INT PRIMARY KEY AUTO_INCREMENT,  
    EventName VARCHAR(100),  
    EventDate DATETIME,  
    Location VARCHAR(255)  
);
```

```
CREATE TABLE IF NOT EXISTS Participants (  
    ParticipantID INT PRIMARY KEY AUTO_INCREMENT,  
    ParticipantName VARCHAR(100),
```

```
ParticipantType VARCHAR(50),
EventID INT,
FOREIGN KEY (EventID) REFERENCES AdoptionEvents(EventID)
);
```

```
INSERT INTO Pets (Name, Age, Breed, Type, AvailableForAdoption) VALUES
('Buddy', 2, 'Labrador', 'Dog', 1),
('Milo', 3, 'Beagle', 'Dog', 1),
('Simba', 1, 'Persian', 'Cat', 1),
('Lucy', 4, 'Golden Retriever', 'Dog', 0),
('Daisy', 5, 'Poodle', 'Dog', 1);
```

```
INSERT INTO Shelters (Name, Location) VALUES
('Happy Paws', 'New York'),
('Furry Friends', 'Los Angeles'),
('Safe Haven', 'Chicago'),
('Paw Palace', 'Houston'),
('Rescue Shelter', 'Miami');
```

```
INSERT INTO Donations (DonorName, DonationType, DonationAmount, DonationItem,
DonationDate) VALUES
('Alice', 'Cash', 100.00, NULL, '2024-03-01 10:00:00'),
('Bob', 'Item', NULL, 'Dog Food', '2024-03-05 12:30:00'),
('Charlie', 'Cash', 50.00, NULL, '2024-03-10 14:00:00'),
('David', 'Item', NULL, 'Cat Litter', '2024-03-15 09:15:00'),
('Emma', 'Cash', 75.00, NULL, '2024-03-20 11:45:00');
```

```
INSERT INTO AdoptionEvents (EventName, EventDate, Location) VALUES
('Spring Adoption Fair', '2024-04-10 11:00:00', 'Central Park'),
('Summer Pet Parade', '2024-06-15 09:30:00', 'Downtown Plaza'),
('Rescue Rally', '2024-08-20 13:00:00', 'Community Hall'),
('Holiday Pet Fest', '2024-12-05 10:00:00', 'Mall Square'),
('Animal Lovers Meet', '2024-10-08 15:00:00', 'City Grounds');
```

```
INSERT INTO Participants (ParticipantName, ParticipantType, EventID) VALUES
('Happy Paws', 'Shelter', 1),
('Furry Friends', 'Shelter', 2),
('John Doe', 'Adopter', 3),
('Jane Smith', 'Adopter', 4),
('Safe Haven', 'Shelter', 5);
```

5. Write an SQL query that retrieves a list of available pets (those marked as available for adoption) from the "Pets" table. Include the pet's name, age, breed, and type in the result set. Ensure that the query filters out pets that are not available for adoption.

SELECT Name, Age, Breed, Type FROM Pets WHERE AvailableForAdoption = 1;

Result Grid				
Filter Rows:				
	Name	Age	Breed	Type
▶	Buddy	2	Labrador	Dog
	Milo	3	Beagle	Dog
	Simba	1	Persian	Cat
	Daisy	5	Poodle	Dog

6. Write an SQL query that retrieves the names of participants (shelters and adopters) registered for a specific adoption event. Use a parameter to specify the event ID. Ensure that the query joins the necessary tables to retrieve the participant names and types

SELECT ParticipantName, ParticipantType FROM Participants WHERE EventID = 1;

Result Grid		
Filter Rows:		
	ParticipantName	ParticipantType
▶	Happy Paws	Shelter

7. Create a stored procedure in SQL that allows a shelter to update its information (name and location) in the "Shelters" table. Use parameters to pass the shelter ID and the new information. Ensure that the procedure performs the update and handles potential errors, such as an invalid shelter ID.

DELIMITER //

CREATE PROCEDURE UpdateShelter(IN shelterID INT, IN newName VARCHAR(100), IN newLocation VARCHAR(255))

BEGIN

UPDATE Shelters SET Name = newName, Location = newLocation WHERE ShelterID = shelterID;

END //

DELIMITER ;

8. Write an SQL query that calculates and retrieves the total donation amount for each shelter (by shelter name) from the "Donations" table. The result should include the shelter name and the total donation amount. Ensure that the query handles cases where a shelter has received no donations.

SELECT Shelters.Name, COALESCE(SUM(Donations.DonationAmount), 0) AS TotalDonation FROM Shelters

LEFT JOIN Donations ON Shelters.ShelterID = Donations.DonationID

GROUP BY Shelters.Name;

Result Grid			Filter Rows:
	Name	TotalDonation	
▶	Happy Paws	100.00	
	Furry Friends	0.00	
	Safe Haven	50.00	
	Paw Palace	0.00	
	Rescue Shelter	75.00	

9. Write an SQL query that retrieves the names of pets from the "Pets" table that do not have an owner (i.e., where "OwnerID" is null). Include the pet's name, age, breed, and type in the result set.

```
SELECT Name, Age, Breed, Type FROM Pets WHERE PetID NOT IN (SELECT PetID
FROM AdoptionEvents);
```

Result Grid					Filter Rows:
	Name	Age	Breed	Type	

10. Write an SQL query that retrieves the total donation amount for each month and year (e.g., January 2023) from the "Donations" table. The result should include the month-year and the corresponding total donation amount. Ensure that the query handles cases where no donations were made in a specific month-year

```
SELECT DATE_FORMAT(DonationDate, '%Y-%M') AS MonthYear, SUM(DonationAmount)
AS TotalDonations
FROM Donations GROUP BY MonthYear;
```

Result Grid			Filter Rows:
	MonthYear	TotalDonations	
▶	2024-March	225.00	

11. Retrieve a list of distinct breeds for all pets that are either aged between 1 and 3 years or older than 5 years

```
SELECT DISTINCT Breed FROM Pets WHERE (Age BETWEEN 1 AND 3) OR Age > 5;
```

Result Grid		Filter Rows:
	Breed	
▶	Labrador	
	Beagle	
	Persian	

12. Retrieve a list of pets and their respective shelters where the pets are currently available for adoption

```
SELECT Pets.Name, Shelters.Name FROM Pets JOIN Shelters ON  
Pets.AvailableForAdoption = 1;
```

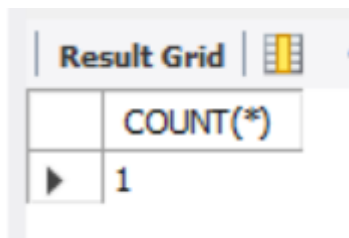


The screenshot shows a SQL query result grid with two columns: 'Name' and 'Name'. The grid contains 20 rows of data, listing pets and their respective shelters. The pets are Milo, Buddy, Daisy, and Simba, and the shelters are Happy Paws, Furry Friends, Safe Haven, Paw Palace, and Rescue Shelter. The results are as follows:

Name	Name
Milo	Happy Paws
Buddy	Happy Paws
Daisy	Furry Friends
Simba	Furry Friends
Milo	Furry Friends
Buddy	Furry Friends
Daisy	Safe Haven
Simba	Safe Haven
Milo	Safe Haven
Buddy	Safe Haven
Daisy	Paw Palace
Simba	Paw Palace
Milo	Paw Palace
Buddy	Paw Palace
Daisy	Rescue Shelter
Simba	Rescue Shelter
Milo	Rescue Shelter
Buddy	Rescue Shelter

13. Find the total number of participants in events organized by shelters located in specific city. Example: City=Chennai

```
SELECT COUNT(*) FROM Participants WHERE EventID IN (SELECT EventID FROM  
AdoptionEvents WHERE Location = 'Central Park');
```




The screenshot shows a SQL query result grid with one column: 'COUNT(*)'. The grid contains one row of data, showing the total number of participants in events organized by shelters located in a specific city. The result is 1.

COUNT(*)
1

14. Retrieve a list of unique breeds for pets with ages between 1 and 5 years

```
SELECT DISTINCT Breed FROM Pets WHERE Age BETWEEN 1 AND 5;
```



The screenshot shows a SQL query result grid with one column: 'Breed'. The grid contains six rows of data, listing the unique breeds for pets with ages between 1 and 5 years. The breeds are Labrador, Beagle, Persian, Golden Retriever, and Poodle.

Breed
Labrador
Beagle
Persian
Golden Retriever
Poodle

15. Find the pets that have not been adopted by selecting their information from the 'Pet' table

SELECT * FROM Pets WHERE PetID NOT IN (SELECT PetID FROM AdoptionEvents);

Result Grid		Filter Rows:		Edit:		
	PetID	Name	Age	Breed	Type	AvailableForAdoption
*	NULL	NULL	NULL	NULL	NULL	NULL

16. Retrieve the names of all adopted pets along with the adopter's name from the 'Adoption' and 'User' tables.

SELECT Pets.Name, Participants.ParticipantName FROM Pets JOIN Participants ON Pets.PetID = Participants.ParticipantID;

Result Grid		Filter Rows:	
	Name	ParticipantName	
▶	Buddy	Happy Paws	
	Milo	Furry Friends	
	Simba	John Doe	
	Lucy	Jane Smith	
	Daisy	Safe Haven	

17. Retrieve a list of all shelters along with the count of pets currently available for adoption in each shelter

SELECT Shelters.Name, COUNT(Pets.PetID) FROM Shelters JOIN Pets ON Pets.AvailableForAdoption = 1 GROUP BY Shelters.Name;

Result Grid		Filter Rows:	
	Name	COUNT(Pets.PetID)	
▶	Happy Paws	4	
	Furry Friends	4	
	Safe Haven	4	
	Paw Palace	4	
	Rescue Shelter	4	

18. Find pairs of pets from the same shelter that have the same breed.

SELECT P1.Name, P2.Name FROM Pets P1 JOIN Pets P2 ON P1.Breed = P2.Breed;

Result Grid		
	Name	Name
▶	Buddy	Buddy
	Milo	Milo
	Simba	Simba
	Lucy	Lucy
	Daisy	Daisy

19. List all possible combinations of shelters and adoption events.

SELECT Shelters.Name, AdoptionEvents.EventName FROM Shelters CROSS JOIN AdoptionEvents;

Result Grid		
	Name	EventName
	Safe Haven	Spring Adoption Fair
	Furry Friends	Spring Adoption Fair
	Happy Paws	Spring Adoption Fair
	Rescue Shelter	Summer Pet Parade
	Paw Palace	Summer Pet Parade
	Safe Haven	Summer Pet Parade
	Furry Friends	Summer Pet Parade
	Happy Paws	Summer Pet Parade
	Rescue Shelter	Rescue Rally
	Paw Palace	Rescue Rally
	Safe Haven	Rescue Rally
	Furry Friends	Rescue Rally
	Happy Paws	Rescue Rally
	Rescue Shelter	Holiday Pet Fest
	Paw Palace	Holiday Pet Fest
	Safe Haven	Holiday Pet Fest
	Furry Friends	Holiday Pet Fest
	Happy Paws	Holiday Pet Fest

20. Determine the shelter that has the highest number of adopted pets.

SELECT Shelters.Name FROM Shelters JOIN Participants ON Shelters.ShelterID = Participants.ParticipantID
GROUP BY Shelters.Name ORDER BY COUNT(*) DESC LIMIT 1;

Result Grid	
	Name
▶	Happy Paws