

# PetPals SQL Script and Answers

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## 1 & 2. Initialize DB and Create Tables

```
-- Create Database
IF NOT EXISTS (SELECT name FROM sys.databases WHERE name = 'PetPals')

BEGIN

    CREATE DATABASE PetPals;

END

GO

USE PetPals;

GO

-- Drop tables if they already exist (in reverse order of dependencies)
DROP TABLE IF EXISTS Participants, AdoptionEvents, Donations, Pets,
Shelters;

-- Table: Shelters

IF NOT EXISTS (SELECT * FROM sys.objects WHERE object_id =
OBJECT_ID(N'[dbo].[Shelters]') AND type in (N'U'))

BEGIN

    CREATE TABLE Shelters (

        ShelterID INT PRIMARY KEY,

        Name NVARCHAR(100),

        Location NVARCHAR(255)

    );

END

GO

INSERT INTO Shelters VALUES
(1, 'Happy Paws', 'Chennai'),
(2, 'Safe Haven', 'Mumbai'),
(3, 'Pet Care', 'Delhi'),
(4, 'Animal Home', 'Bangalore'),
(5, 'Fur Friends', 'Chennai');
```

```

-- Table: Pets
IF NOT EXISTS (SELECT * FROM sys.objects WHERE object_id =
OBJECT_ID(N'[dbo].[Pets]') AND type in (N'U'))

BEGIN

    CREATE TABLE Pets (

        PetID INT PRIMARY KEY,

        Name NVARCHAR(100),

        Age INT,

        Breed NVARCHAR(100),

        Type NVARCHAR(50),

        AvailableForAdoption BIT,

        OwnerID INT NULL

    );

END

GO

```

```

INSERT INTO Pets VALUES
(1, 'Max', 2, 'Labrador', 'Dog', 1, 1, NULL),
(2, 'Milo', 3, 'Beagle', 'Dog', 1, 2, NULL),
(3, 'Lucy', 5, 'Persian', 'Cat', 0, 1, 101),
(4, 'Bella', 1, 'Siamese', 'Cat', 1, 3, NULL),
(5, 'Rocky', 6, 'Bulldog', 'Dog', 0, 4, 102);

```

```

--Donations Table

```

```

IF NOT EXISTS (SELECT * FROM sys.objects WHERE object_id =
OBJECT_ID(N'[dbo].[Donations]') AND type in (N'U'))

BEGIN

```

```

    CREATE TABLE Donations (

        DonationID INT PRIMARY KEY,

        DonorName NVARCHAR(100),

        DonationType NVARCHAR(50),

        DonationAmount DECIMAL(10,2),

```

```

        DonationItem NVARCHAR(100),

        DonationDate DATETIME,

        ShelterID INT FOREIGN KEY REFERENCES Shelters(ShelterID)

    );

END

GO

INSERT INTO Donations (DonationID, DonorName, DonationType,
DonationAmount, DonationItem, DonationDate, ShelterID)

VALUES

(1, 'Amit Shah', 'Cash', 5000.00, NULL, '2024-01-15 10:00:00', 1),

(2, 'Priya Raj', 'Item', NULL, 'Dog Food', '2024-02-10 14:30:00', 2),

(3, 'Rahul Mehta', 'Cash', 3000.00, NULL, '2024-03-20 09:15:00', 1),

(4, 'Sneha Iyer', 'Item', NULL, 'Blankets', '2024-03-25 16:45:00', 3);

--AdoptionEvents Table

IF NOT EXISTS (SELECT * FROM sys.objects WHERE object_id =
OBJECT_ID(N'[dbo].[AdoptionEvents]') AND type in (N'U'))

BEGIN

    CREATE TABLE AdoptionEvents (

        EventID INT PRIMARY KEY,

        EventName NVARCHAR(100),

        EventDate DATETIME,

        Location NVARCHAR(255)

    );

END

GO

--Participants Table

IF NOT EXISTS (SELECT * FROM sys.objects WHERE object_id =
OBJECT_ID(N'[dbo].[Participants]') AND type in (N'U'))

BEGIN

```

```

CREATE TABLE Participants (
    ParticipantID INT PRIMARY KEY,
    ParticipantName NVARCHAR(100),
    ParticipantType NVARCHAR(50),
    EventID INT FOREIGN KEY REFERENCES AdoptionEvents(EventID)
);

END

GO

--AdoptionEvents

INSERT INTO AdoptionEvents (EventID, EventName, EventDate, Location)
VALUES

(1, 'Adoptathon 2024', '2024-04-10 11:00:00', 'Chennai'),
(2, 'Pet Meet & Greet', '2024-05-05 10:00:00', 'Mumbai');

-- Participants

I
(4, 'Anjali Menon', 'Adopter', 2);NSERT INTO Participants (ParticipantID,
ParticipantName, ParticipantType, EventID)
VALUES

(1, 'Happy Paws Shelter', 'Shelter', 1),
(2, 'Safe Haven Rescue', 'Shelter', 2),
(3, 'Ravi Kumar', 'Adopter', 1),

```

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

-- Already handled in table creation scripts above using PRIMARY KEY and FOREIGN KEY clauses

### 4. Handle potential errors (e.g., existing tables)

-- Already done using 'DROP TABLE IF EXISTS' and 'CREATE DATABASE IF NOT EXISTS'

### 5. List of available pets

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

### 6. Participants in a specific event

```
SELECT ParticipantName, ParticipantType
FROM Participants
WHERE EventID =2;
```

### 7. Stored procedure to update shelter info

Skipped this Question (Related To Procedure)

### 8. Total donation amount by shelter

```
SELECT ShelterID, SUM(DonationAmount) AS TotalDonation
FROM Donations
GROUP BY ShelterID;
```

### 9. Pets with no owner

```
SELECT Name, Age, Breed, Type
FROM Pets
WHERE OwnerID IS NULL;
```

### 10. Total donation per month and year

```
SELECT
    FORMAT(DonationDate, 'MMMM yyyy') AS MonthYear,
    SUM(DonationAmount) AS TotalDonation
FROM
    Donations
GROUP BY
    FORMAT(DonationDate, 'MMMM yyyy')
ORDER BY
    MIN(DonationDate);
```

### 11. Breeds for pets aged 1-3 or >5 years

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

### 12. Available pets with their shelters

```
SELECT P.Name, P.Breed, S.Name AS ShelterName
FROM Pets P
JOIN Shelters S ON P.ShelterID = S.ShelterID
WHERE P.AvailableForAdoption = 1;
```

### 13. Total participants in events by city (e.g., Chennai)

```
SELECT COUNT(*) AS TotalParticipants
FROM Participants PR
JOIN AdoptionEvents AE ON PR.EventID = AE.EventID
WHERE AE.Location = 'Chennai';
```

### 14. Unique breeds of pets aged 1-5 years

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

### 15. Pets not adopted

```
SELECT *
FROM Pets
WHERE OwnerID IS NULL;
```

### 16. Adopted pets and adopter names (requires Adoption, User tables)

```
SELECT
    P.Name AS PetName,
    PR.ParticipantName AS AdopterName
FROM
    Pets P
JOIN
    Participants PR ON P.OwnerID = PR.ParticipantID
WHERE
    PR.ParticipantType = 'Adopter' AND
    P.OwnerID IS NOT NULL;
```

### 17. Shelter and count of available pets

```
SELECT S.Name AS ShelterName, COUNT(P.PetID) AS AvailablePets
FROM Shelters S
LEFT JOIN Pets P ON S.ShelterID = P.ShelterID AND P.AvailableForAdoption
= 1
GROUP BY S.Name;
```

### 18. Pairs of pets with same breed in same shelter

```
SELECT A.Name AS Pet1, B.Name AS Pet2, A.Breed, A.ShelterID
FROM Pets A, Pets B
WHERE A.ShelterID = B.ShelterID AND A.Breed = B.Breed AND A.PetID <
B.PetID;
```

### 19. All combinations of shelters and adoption events

```
SELECT S.Name AS Shelter, E.EventName
FROM Shelters S
CROSS JOIN AdoptionEvents E;
```

### 20. Shelter with highest adopted pets (requires Adoption table)

```
SELECT TOP 1
```

```
        S.Name AS ShelterName,  
        COUNT(P.PetID) AS AdoptedPetCount  
FROM  
    Shelters S  
JOIN  
    Pets P ON S.ShelterID = P.ShelterID  
WHERE  
    P.OwnerID IS NOT NULL  
GROUP BY  
    S.Name  
ORDER BY  
    AdoptedPetCount DESC;
```