PETPALS THE PET ADOPTION PLATFORM

TASKS

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

```
mysql> create database petpals;
Query OK, 1 row affected (0.29 sec)
```

```
+--------------------+
| Database           |
+--------------------+
| abcde              |
| abv                |
| class              |
| information_schema |
| mysql              |
| performance_schema |
| petpals            |
| sakila             |
| student            |
| sys                |
| tcl                |
| ticketbookingsystem |
| world              |
+--------------------+
13 rows in set (0.24 sec)
```

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

```
mysql> CREATE TABLE Pets (
    ->     PetID INT PRIMARY KEY,
    ->     Name NVARCHAR(50),
    ->     Age INT,
    ->     Breed VARCHAR(50),
    ->     Type VARCHAR(50),
    ->     AvailableForAdoption BIT
    -> );
Query OK, 0 rows affected, 1 warning (1.17 sec)
```

```
+----------------------+-------------+------+-----+---------+-------+
| Field                | Type        | Null | Key | Default | Extra |
+----------------------+-------------+------+-----+---------+-------+
| PetID                | int         | NO   | PRI | NULL    |       |
| Name                 | varchar(50) | YES  |     | NULL    |       |
| Age                  | int         | YES  |     | NULL    |       |
| Breed                | varchar(50) | YES  |     | NULL    |       |
| Type                 | varchar(50) | YES  |     | NULL    |       |
| AvailableForAdoption | bit(1)      | YES  |     | NULL    |       |
+----------------------+-------------+------+-----+---------+-------+
```

```
mysql> CREATE TABLE Shelters (
    ->     ShelterID INT PRIMARY KEY,
    ->     Name VARCHAR(50),
    ->     Location VARCHAR(50)
    -> );
Query OK, 0 rows affected (0.32 sec)
```

```
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| ShelterID | int         | NO   | PRI | NULL    |       |
| Name      | varchar(50) | YES  |     | NULL    |       |
| Location  | varchar(50) | YES  |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
```

```
mysql> CREATE TABLE Donations (
    ->     DonationID INT PRIMARY KEY,
    ->     DonorName VARCHAR(50),
    ->     DonationType VARCHAR(50),
    ->     DonationAmount DECIMAL,
    ->     DonationItem VARCHAR(50),
    ->     DonationDate DATETIME
    -> );
Query OK, 0 rows affected (1.02 sec)
```

```
+----------------+---------------+------+-----+---------+-------+
| Field          | Type          | Null | Key | Default | Extra |
+----------------+---------------+------+-----+---------+-------+
| DonationID     | int           | NO   | PRI | NULL    |       |
| DonorName      | varchar(50)   | YES  |     | NULL    |       |
| DonationType   | varchar(50)   | YES  |     | NULL    |       |
| DonationAmount | decimal(10,0) | YES  |     | NULL    |       |
| DonationItem   | varchar(50)   | YES  |     | NULL    |       |
| DonationDate   | datetime      | YES  |     | NULL    |       |
+----------------+---------------+------+-----+---------+-------+
```

```
mysql> CREATE TABLE AdoptionEvents (
    ->     EventID INT PRIMARY KEY,
    ->     EventName VARCHAR(50),
    ->     EventDate DATETIME,
    ->     Location NVARCHAR(50)
    -> );
Query OK, 0 rows affected, 1 warning (2.88 sec)
```

```
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| EventID   | int         | NO   | PRI | NULL    |       |
| EventName | varchar(50) | YES  |     | NULL    |       |
| EventDate | datetime    | YES  |     | NULL    |       |
| Location  | varchar(50) | YES  |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
```

```
mysql> CREATE TABLE Participants (
    ->     ParticipantID INT PRIMARY KEY,
    ->     ParticipantName VARCHAR(50),
    ->     ParticipantType VARCHAR(50),
    ->     EventID INT
    -> );
Query OK, 0 rows affected (0.34 sec)
```

```
+-----------------+-------------+------+-----+---------+-------+
| Field           | Type        | Null | Key | Default | Extra |
+-----------------+-------------+------+-----+---------+-------+
| ParticipantID   | int         | NO   | PRI | NULL    |       |
| ParticipantName | varchar(50) | YES  |     | NULL    |       |
| ParticipantType | varchar(50) | YES  |     | NULL    |       |
| EventID         | int         | YES  |     | NULL    |       |
+-----------------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

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

```
mysql> ALTER TABLE participants ADD FOREIGN KEY(EventId)
    -> REFERENCES AdoptionEvents(EventID);
Query OK, 0 rows affected (2.89 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

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

```
mysql> CREATE database if not exists petspal;
Query OK, 1 row affected (0.09 sec)
```

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.

```
mysql> SELECT Name, Age, Breed, Type
    -> FROM Pets
    -> WHERE AvailableForAdoption = 1;
+----------+------+--------------------+------+
| Name     | Age  | Breed              | Type |
+----------+------+--------------------+------+
| Buddy    |    3 | Labrador Retriever | Dog  |
| Whiskers |    2 | Siamese            | Cat  |
| Fluffy   |    1 | Persian            | Cat  |
| Rocky    |    4 | German Shepherd    | Dog  |
| Mittens  |    3 | Maine Coon         | Cat  |
| Luna     |    1 | Ragdoll            | Cat  |
| Daisy    |    6 | Poodle             | Dog  |
| Simba    |    4 | Bengal             | Cat  |
+----------+------+--------------------+------+
8 rows in set (0.02 sec)
```

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.

```
mysql>  SELECT p.ParticipantName, p.ParticipantType
    ->      FROM Participants p
    ->      INNER JOIN AdoptionEvents ae ON p.EventID = ae.EventID
    ->      WHERE ae.EventID = 2;
+-----------------+-----------------+
| ParticipantName | ParticipantType |
+-----------------+-----------------+
| Phjggh          | Shelter         |
| ykgu            | Shelter         |
| John            | Adopter         |
+-----------------+-----------------+
3 rows in set (0.00 sec)
```

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.

```
mysql> UPDATE Shelters SET Name ='house',
    ->  Location ='france'
    ->  WHERE ShelterID =2;
Query OK, 1 row affected (0.19 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

ShelterID	Name	Location
1	Happy Paws Shelter	123 Main Street
2	house	france
3	Purrfect Haven	789 Oak Lane
4	Woofs and Whiskers	321 Pine Road
5	Pawsitive Solutions	654 Cedar Court
6	Rescue Me Shelter	987 Birch Drive
7	Heavenly Tails	741 Maple Street
8	Whisker Way	852 Walnut Boulevard
9	Bark Avenue	369 Cherry Lane
10	Meow Manor	159 Spruce Lane

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.

```
mysql> SELECT s.Name,SUM(d.DonationAmount) AS TotalDonation
    -> FROM Shelters s
    -> INNER JOIN Donations d ON s.ShelterID = d.donationID
    -> GROUP BY s.Name;
+---------------------+---------------+
| Name                | TotalDonation |
+---------------------+---------------+
| Happy Paws Shelter  |           100 |
| house               |            50 |
| Purrfect Haven      |          NULL |
| Woofs and Whiskers  |            75 |
| Pawsitive Solutions |           200 |
| Rescue Me Shelter   |          NULL |
| Heavenly Tails      |           150 |
| Whisker Way         |          NULL |
| Bark Avenue         |            80 |
| Meow Manor          |           120 |
+---------------------+---------------+
10 rows in set (0.00 sec)
```

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.

```
mysql> SELECT Name, Age, Breed, Type
    -> FROM Pets
    -> WHERE OwnerID IS NULL;
+---------+------+-----------------+------+
| Name    | Age  | Breed           | Type |
+---------+------+-----------------+------+
| Rocky   |    4 | German Shepherd | Dog  |
| Mittens |    3 | Maine Coon      | Cat  |
| Charlie |    2 | Beagle          | Dog  |
| Luna    |    1 | Ragdoll         | Cat  |
| Daisy   |    6 | Poodle          | Dog  |
| Simba   |    4 | Bengal          | Cat  |
+---------+------+-----------------+------+
6 rows in set (0.00 sec)
```

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.

```
mysql> SELECT FORMAT(DonationDate, 'mmm yyy') AS MonthYear,
    -> SUM(DonationAmount) AS TotalDonation
    -> FROM Donations
    -> GROUP BY monthyear;
+--------------------+---------------+
| MonthYear          | TotalDonation |
+--------------------+---------------+
| 20,240,418,000,000 |           100 |
| 20,240,417,000,000 |            50 |
| 20,240,416,000,000 |          NULL |
| 20,240,415,000,000 |            75 |
| 20,240,414,000,000 |           200 |
| 20,240,413,000,000 |          NULL |
| 20,240,412,000,000 |           150 |
| 20,240,411,000,000 |          NULL |
| 20,240,410,000,000 |            80 |
| 20,240,409,000,000 |           120 |
+--------------------+---------------+
10 rows in set, 20 warnings (0.00 sec)
```

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

```
mysql>
mysql> SELECT DISTINCT Breed
    -> FROM Pets
    -> WHERE (Age BETWEEN 1 AND 3) OR (Age > 5);
+--------------------+
| Breed              |
+--------------------+
| Labrador Retriever |
| Siamese            |
| Persian            |
| Maine Coon         |
| Beagle             |
| Ragdoll            |
| Poodle             |
+--------------------+
7 rows in set (0.06 sec)
```

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

```
mysql> SELECT p.Name AS PetName, p.Age, p.Breed, p.Type, s.Name AS ShelterName
    -> FROM Pets p
    -> INNER JOIN Shelters s ON p.petId = s.ShelterID
    -> WHERE p.AvailableForAdoption = 1;
+----------+------+--------------------+------+---------------------+
| PetName  | Age  | Breed              | Type | ShelterName         |
+----------+------+--------------------+------+---------------------+
| Buddy    |    3 | Labrador Retriever | Dog  | Happy Paws Shelter  |
| Whiskers |    2 | Siamese            | Cat  | house               |
| Fluffy   |    1 | Persian            | Cat  | Woofs and Whiskers  |
| Rocky    |    4 | German Shepherd    | Dog  | Pawsitive Solutions |
| Mittens  |    3 | Maine Coon         | Cat  | Rescue Me Shelter   |
| Luna     |    1 | Ragdoll            | Cat  | Whisker Way         |
| Daisy    |    6 | Poodle             | Dog  | Bark Avenue         |
| Simba    |    4 | Bengal             | Cat  | Meow Manor          |
+----------+------+--------------------+------+---------------------+
8 rows in set (0.00 sec)
```

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

```
mysql> SELECT COUNT(DISTINCT pt.ParticipantID) AS TotalParticipants
    -> FROM Participants pt
    -> INNER JOIN AdoptionEvents ae ON pt.EventID = ae.EventID
    -> INNER JOIN Shelters s ON pt.ParticipantID = s.ShelterID
    -> WHERE s.Location = 'uk';
+-------------------+
| TotalParticipants |
+-------------------+
|                 0 |
+-------------------+
1 row in set (0.04 sec)
```

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

```
mysql> SELECT DISTINCT Breed
    -> FROM Pets
    -> WHERE Age BETWEEN 1 AND 5;
+--------------------+
| Breed              |
+--------------------+
| Labrador Retriever |
| Siamese            |
| Golden Retriever   |
| Persian            |
| German Shepherd    |
| Maine Coon         |
| Beagle             |
| Ragdoll            |
| Bengal             |
+--------------------+
9 rows in set (0.00 sec)
```

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

```
mysql> SELECT * FROM pets
    -> Where Availableforadoption=0;
+-------+---------+------+------------------+------+-----------------------------------------+---------+
| PetID | Name    | Age  | Breed            | Type | AvailableForAdoption                    | ownerid |
+-------+---------+------+------------------+------+-----------------------------------------+---------+
|     3 | Max     |    5 | Golden Retriever | Dog  | 0x00                                    |       1 |
|     7 | Charlie |    2 | Beagle           | Dog  | 0x00                                    |    NULL |
+-------+---------+------+------------------+------+-----------------------------------------+---------+
2 rows in set (0.00 sec)
```

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

```
mysql> SELECT p.Name AS PetName, d.donorname AS AdopterName
    -> FROM donations d
    -> INNER JOIN Pets p ON p.PetID = d.donationID
    -> where petid=donationid;
+-----------+-------------------+
| PetName   | AdopterName       |
+-----------+-------------------+
| Buddy     | John Doe          |
| Whiskers  | Jane Smith        |
| Max       | Alice Johnson     |
| Fluffy    | Bob Brown         |
| Rocky     | Emily Wilson      |
| Mittens   | David Lee         |
| Charlie   | Sarah Clark       |
| Luna      | Michael Garcia    |
| Daisy     | Karen Martinez    |
| Simba     | Steven Rodriguez  |
+-----------+-------------------+
10 rows in set (0.00 sec)
```

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

```
mysql> SELECT s.ShelterID, s.Name AS ShelterName, COUNT(p.PetID) AS AvailablePetsCount
    -> FROM Shelters s
    -> INNER JOIN Pets p ON s.ShelterID = p.PETID AND p.AvailableForAdoption = 1
    -> GROUP BY s.ShelterID, s.Name;
+-----------+--------------------+--------------------+
| ShelterID | ShelterName        | AvailablePetsCount |
+-----------+--------------------+--------------------+
|         1 | Happy Paws Shelter |                  1 |
|         2 | house              |                  1 |
|         4 | Woofs and Whiskers |                  1 |
|         5 | Pawsitive Solutions|                  1 |
|         6 | Rescue Me Shelter  |                  1 |
|         8 | Whisker Way        |                  1 |
|         9 | Bark Avenue        |                  1 |
|        10 | Meow Manor         |                  1 |
+-----------+--------------------+--------------------+
8 rows in set (0.00 sec)
```

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

```
mysql> SELECT p1.Name AS Pet1, p2.Name AS Pet2, p1.Breed
    -> FROM Pets p1
    -> INNER JOIN Pets p2 ON p1.petID = p2.petID AND p1.Breed = p2.Breed;
+----------+----------+--------------------+
| Pet1     | Pet2     | Breed              |
+----------+----------+--------------------+
| Buddy    | Buddy    | Labrador Retriever |
| Whiskers | Whiskers | Siamese            |
| Max      | Max      | Golden Retriever   |
| Fluffy   | Fluffy   | Persian            |
| Rocky    | Rocky    | German Shepherd    |
| Mittens  | Mittens  | Maine Coon         |
| Charlie  | Charlie  | Beagle             |
| Luna     | Luna     | Ragdoll            |
| Daisy    | Daisy    | Poodle             |
| Simba    | Simba    | Bengal             |
+----------+----------+--------------------+
10 rows in set (0.00 sec)
```

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

```
mysql> SELECT s.Name AS ShelterName, ae.EventName
    -> FROM Shelters s
    -> CROSS JOIN AdoptionEvents ae;
+----------------------+-----------------+
| ShelterName          | EventName       |
+----------------------+-----------------+
| Meow Manor           | Spring          |
| Bark Avenue          | Spring          |
| Whisker Way          | Spring          |
| Heavenly Tails       | Spring          |
| Rescue Me Shelter    | Spring          |
| Pawsitive Solutions  | Spring          |
| Woofs and Whiskers   | Spring          |
| Purrfect Haven       | Spring          |
| house                | Spring          |
| Happy Paws Shelter   | Spring          |
| Meow Manor           | Summer          |
| Bark Avenue          | Summer          |
| Whisker Way          | Summer          |
| Heavenly Tails       | Summer          |
| Rescue Me Shelter    | Summer          |
| Pawsitive Solutions  | Summer          |
| Woofs and Whiskers   | Summer          |
| Purrfect Haven       | Summer          |
| house                | Summer          |
| Happy Paws Shelter   | Summer          |
| Meow Manor           | Fall            |
| Bark Avenue          | Fall            |
| Whisker Way          | Fall            |
| Heavenly Tails       | Fall            |
| Rescue Me Shelter    | Fall            |
| Pawsitive Solutions  | Fall            |
| Woofs and Whiskers   | Fall            |
| Purrfect Haven       | Fall            |
| house                | Fall            |
| Happy Paws Shelter   | Fall            |
| Meow Manor           | Holiday         |
| Bark Avenue          | Holiday         |
```

Meow Manor	Holiday
Bark Avenue	Holiday
Whisker Way	Holiday
Heavenly Tails	Holiday
Rescue Me Shelter	Holiday
Pawsitive Solutions	Holiday
Woofs and Whiskers	Holiday
Purrfect Haven	Holiday
house	Holiday
Happy Paws Shelter	Holiday
Meow Manor	Wintert
Bark Avenue	Wintert
Whisker Way	Wintert
Heavenly Tails	Wintert
Rescue Me Shelter	Wintert
Pawsitive Solutions	Wintert
Woofs and Whiskers	Wintert
Purrfect Haven	Wintert
house	Wintert
Happy Paws Shelter	Wintert
Meow Manor	Valentine
Bark Avenue	Valentine
Whisker Way	Valentine
Heavenly Tails	Valentine
Rescue Me Shelter	Valentine
Pawsitive Solutions	Valentine
Woofs and Whiskers	Valentine
Purrfect Haven	Valentine
house	Valentine
Happy Paws Shelter	Valentine
Meow Manor	Easter
Bark Avenue	Easter
Whisker Way	Easter
Heavenly Tails	Easter
Rescue Me Shelter	Easter
Pawsitive Solutions	Easter
Woofs and Whiskers	Easter
Purrfect Haven	Easter
house	Easter
Happy Paws Shelter	Easter
Meow Manor	Summer
Bark Avenue	Summer
Whisker Way	Summer

```
| Meow Manor           | Summer           |
| Bark Avenue          | Summer           |
| Whisker Way          | Summer           |
| Heavenly Tails       | Summer           |
| Rescue Me Shelter    | Summer           |
| Pawsitive Solutions  | Summer           |
| Woofs and Whiskers   | Summer           |
| Purrfect Haven       | Summer           |
| house                | Summer           |
| Happy Paws Shelter   | Summer           |
| Meow Manor           | Back-to-School   |
| Bark Avenue          | Back-to-School   |
| Whisker Way          | Back-to-School   |
| Heavenly Tails       | Back-to-School   |
| Rescue Me Shelter    | Back-to-School   |
| Pawsitive Solutions  | Back-to-School   |
| Woofs and Whiskers   | Back-to-School   |
| Purrfect Haven       | Back-to-School   |
| house                | Back-to-School   |
| Happy Paws Shelter   | Back-to-School   |
| Meow Manor           | LaborDay         |
| Bark Avenue          | LaborDay         |
| Whisker Way          | LaborDay         |
| Heavenly Tails       | LaborDay         |
| Rescue Me Shelter    | LaborDay         |
| Pawsitive Solutions  | LaborDay         |
| Woofs and Whiskers   | LaborDay         |
| Purrfect Haven       | LaborDay         |
| house                | LaborDay         |
| Happy Paws Shelter   | LaborDay         |
+----------------------+------------------+
100 rows in set (0.00 sec)
```

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

```
mysql> SELECT s.Name AS ShelterName, COUNT(p.PetID) AS AdoptedPetsCount
    -> FROM Shelters s
    -> INNER JOIN Pets p ON s.ShelterID = p.petID
    -> INNER JOIN AdoptionEvents a ON p.PetID = a.eventID
    -> GROUP BY s.Name
    -> ORDER BY AdoptedPetsCount DESC LIMIT 1;
+--------------------+-------------------+
| ShelterName        | AdoptedPetsCount |
+--------------------+-------------------+
| Happy Paws Shelter |                 1 |
+--------------------+-------------------+
1 row in set (0.00 sec)
```