Coding Challenges – 1: PetPals, The Pet Adoption Platform

** Madiha Aimon Tappal**

Create SQL Schema from the pet and user class, use the class attributes for table column names.

Table: Pets

Attributes:

- PetID (Primary Key, int): Unique identifier for each pet.
- Name (string): The name of the pet.
- Age (int): The age of the pet.
- Breed (string): The breed of the pet.
- Type (string): Type of pet (e.g., "Dog," "Cat").
- AvailableForAdoption (bit): Indicates whether the pet is available for adoption (0 for not available, 1 for available).
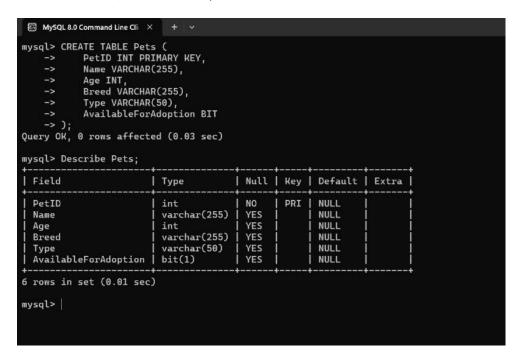
Table: Shelters

Attributes:

- ShelterID (Primary Key, int): Unique identifier for each shelter.
- Name (string): The name of the shelter.
- Location (string): The location or address of the shelter.

Table: Donations
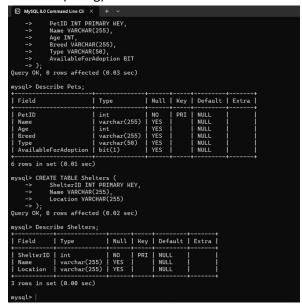
Attributes:

- DonationID (Primary Key, int): Unique identifier for each donation.
- DonorName (string): The name of the donor.
- DonationType (string): Type of donation (e.g., "Cash," "Item").
- DonationAmount (decimal): The amount donated (for cash donations).
- DonationItem (string): The type of item donated (for item donations).
- DonationDate (datetime): Date and time of the donation.

Table: Adoption Events

Attributes:

- EventID (Primary Key, int): Unique identifier for each adoption event.
- EventName (string): The name or title of the event.
- EventDate (datetime): Date and time of the event.
- Location (string): The location or venue of the event.

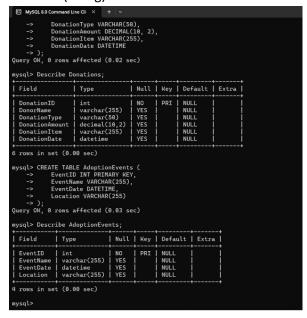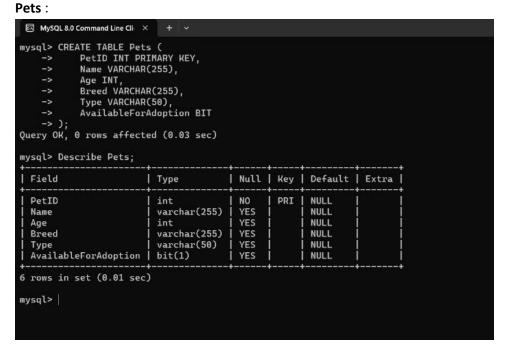**Table: Participants**

Attributes:

- ParticipantID (Primary Key, int): Unique identifier for each participant.
- ParticipantName (string): The name of the participant (shelter or adopter).
- ParticipantType (string): Type of participant (e.g., "Shelter," "Adopter").
- EventID (Foreign Key, int): References the EventID of the associated adoption event (if applicable).

Task – 1 :

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

Pets :

```
MySQL 8.0 Command Line Cli  X    +  v

mysql> CREATE TABLE Pets (
    ->     PetID INT PRIMARY KEY,
    ->     Name VARCHAR(255),
    ->     Age INT,
    ->     Breed VARCHAR(255),
    ->     Type VARCHAR(50),
    ->     AvailableForAdoption BIT
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> Describe Pets;
+----------------------+--------------+------+-----+---------+-------+
| Field                | Type         | Null | Key | Default | Extra |
+----------------------+--------------+------+-----+---------+-------+
| PetID                | int          | NO   | PRI | NULL    |       |
| Name                 | varchar(255) | YES  |     | NULL    |       |
| Age                  | int          | YES  |     | NULL    |       |
| Breed                | varchar(255) | YES  |     | NULL    |       |
| Type                 | varchar(50)  | YES  |     | NULL    |       |
| AvailableForAdoption | bit(1)       | YES  |     | NULL    |       |
+----------------------+--------------+------+-----+---------+-------+
6 rows in set (0.01 sec)

mysql>
```

Shelter:

```
MySQL 8.0 Command Line Cli  X    +  v

    ->     PetID INT PRIMARY KEY,
    ->     Name VARCHAR(255),
    ->     Age INT,
    ->     Breed VARCHAR(255),
    ->     Type VARCHAR(50),
    ->     AvailableForAdoption BIT
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> Describe Pets;
+----------------------+--------------+------+-----+---------+-------+
| Field                | Type         | Null | Key | Default | Extra |
+----------------------+--------------+------+-----+---------+-------+
| PetID                | int          | NO   | PRI | NULL    |       |
| Name                 | varchar(255) | YES  |     | NULL    |       |
| Age                  | int          | YES  |     | NULL    |       |
| Breed                | varchar(255) | YES  |     | NULL    |       |
| Type                 | varchar(50)  | YES  |     | NULL    |       |
| AvailableForAdoption | bit(1)       | YES  |     | NULL    |       |
+----------------------+--------------+------+-----+---------+-------+
6 rows in set (0.01 sec)

mysql> CREATE TABLE Shelters (
    ->     ShelterID INT PRIMARY KEY,
    ->     Name VARCHAR(255),
    ->     Location VARCHAR(255)
    -> );
Query OK, 0 rows affected (0.02 sec)

mysql> Describe Shelters;
+-----------+--------------+------+-----+---------+-------+
| Field     | Type         | Null | Key | Default | Extra |
+-----------+--------------+------+-----+---------+-------+
| ShelterID | int          | NO   | PRI | NULL    |       |
| Name      | varchar(255) | YES  |     | NULL    |       |
| Location  | varchar(255) | YES  |     | NULL    |       |
+-----------+--------------+------+-----+---------+-------+
3 rows in set (0.00 sec)

mysql>
```

Donanation:

```
MySQL 8.0 Command Line Cli

mysql> CREATE DATABASE PetPals;USE PetPals;
ERROR 1007 (HY000): Can't create database 'petpals'; database exists
Database changed
mysql>
mysql> CREATE TABLE Donations (
    ->      DonationID INT PRIMARY KEY,
    ->      DonorName VARCHAR(255),
    ->      DonationType VARCHAR(50),
    ->      DonationAmount DECIMAL(10, 2),
    ->      DonationItem VARCHAR(255),
    ->      DonationDate DATETIME
    -> );
Query OK, 0 rows affected (0.02 sec)

mysql> Describe Donations;
+----------------+---------------+------+-----+---------+-------+
| Field          | Type          | Null | Key | Default | Extra |
+----------------+---------------+------+-----+---------+-------+
| DonationID     | int           | NO   | PRI | NULL    |       |
| DonorName      | varchar(255)  | YES  |     | NULL    |       |
| DonationType   | varchar(50)   | YES  |     | NULL    |       |
| DonationAmount | decimal(10,2) | YES  |     | NULL    |       |
| DonationItem   | varchar(255)  | YES  |     | NULL    |       |
| DonationDate   | datetime      | YES  |     | NULL    |       |
+----------------+---------------+------+-----+---------+-------+
6 rows in set (0.00 sec)

mysql>
```

Adoption:

```
MySQL 8.0 Command Line Cli

    ->      DonationType VARCHAR(50),
    ->      DonationAmount DECIMAL(10, 2),
    ->      DonationItem VARCHAR(255),
    ->      DonationDate DATETIME
    -> );
Query OK, 0 rows affected (0.02 sec)

mysql> Describe Donations;
+----------------+---------------+------+-----+---------+-------+
| Field          | Type          | Null | Key | Default | Extra |
+----------------+---------------+------+-----+---------+-------+
| DonationID     | int           | NO   | PRI | NULL    |       |
| DonorName      | varchar(255)  | YES  |     | NULL    |       |
| DonationType   | varchar(50)   | YES  |     | NULL    |       |
| DonationAmount | decimal(10,2) | YES  |     | NULL    |       |
| DonationItem   | varchar(255)  | YES  |     | NULL    |       |
| DonationDate   | datetime      | YES  |     | NULL    |       |
+----------------+---------------+------+-----+---------+-------+
6 rows in set (0.00 sec)

mysql> CREATE TABLE AdoptionEvents (
    ->      EventID INT PRIMARY KEY,
    ->      EventName VARCHAR(255),
    ->      EventDate DATETIME,
    ->      Location VARCHAR(255)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> Describe AdoptionEvents;
+-----------+--------------+------+-----+---------+-------+
| Field     | Type         | Null | Key | Default | Extra |
+-----------+--------------+------+-----+---------+-------+
| EventID   | int          | NO   | PRI | NULL    |       |
| EventName | varchar(255) | YES  |     | NULL    |       |
| EventDate | datetime     | YES  |     | NULL    |       |
| Location  | varchar(255) | YES  |     | NULL    |       |
+-----------+--------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql>
```

Participants:

```
mysql> CREATE TABLE AdoptionEvents (
    ->     EventID INT PRIMARY KEY,
    ->     EventName VARCHAR(255),
    ->     EventDate DATETIME,
    ->     Location VARCHAR(255)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> Describe AdoptionEvents;
+-----------+--------------+------+-----+---------+-------+
| Field     | Type         | Null | Key | Default | Extra |
+-----------+--------------+------+-----+---------+-------+
| EventID   | int          | NO   | PRI | NULL    |       |
| EventName | varchar(255) | YES  |     | NULL    |       |
| EventDate | datetime     | YES  |     | NULL    |       |
| Location  | varchar(255) | YES  |     | NULL    |       |
+-----------+--------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql> CREATE TABLE Participants (
    ->     ParticipantID INT PRIMARY KEY,
    ->     ParticipantName VARCHAR(255),
    ->     ParticipantType VARCHAR(50),
    ->     EventID INT,
    ->     FOREIGN KEY (EventID) REFERENCES AdoptionEvents(EventID)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> Describe Participants;
+-----------------+--------------+------+-----+---------+-------+
| Field           | Type         | Null | Key | Default | Extra |
+-----------------+--------------+------+-----+---------+-------+
| ParticipantID   | int          | NO   | PRI | NULL    |       |
| ParticipantName | varchar(255) | YES  |     | NULL    |       |
| ParticipantType | varchar(50)  | YES  |     | NULL    |       |
| EventID         | int          | YES  | MUL | NULL    |       |
+-----------------+--------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql>
```

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

Pets:

```
mysql> CREATE TABLE Pets (
    ->     PetID INT PRIMARY KEY,
    ->     Name VARCHAR(255),
    ->     Age INT,
    ->     Breed VARCHAR(255),
    ->     Type VARCHAR(50),
    ->     AvailableForAdoption BIT
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> Describe Pets;
+----------------------+--------------+------+-----+---------+-------+
| Field                | Type         | Null | Key | Default | Extra |
+----------------------+--------------+------+-----+---------+-------+
| PetID                | int          | NO   | PRI | NULL    |       |
| Name                 | varchar(255) | YES  |     | NULL    |       |
| Age                  | int          | YES  |     | NULL    |       |
| Breed                | varchar(255) | YES  |     | NULL    |       |
| Type                 | varchar(50)  | YES  |     | NULL    |       |
| AvailableForAdoption | bit(1)       | YES  |     | NULL    |       |
+----------------------+--------------+------+-----+---------+-------+
6 rows in set (0.01 sec)

mysql>
```

Shelter :

```
MySQL 8.0 Command Line Cli  ×    +  ∨

    ->      PetID INT PRIMARY KEY,
    ->      Name VARCHAR(255),
    ->      Age INT,
    ->      Breed VARCHAR(255),
    ->      Type VARCHAR(50),
    ->      AvailableForAdoption BIT
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> Describe Pets;
+----------------------+--------------+------+-----+---------+-------+
| Field                | Type         | Null | Key | Default | Extra |
+----------------------+--------------+------+-----+---------+-------+
| PetID                | int          | NO   | PRI | NULL    |       |
| Name                 | varchar(255) | YES  |     | NULL    |       |
| Age                  | int          | YES  |     | NULL    |       |
| Breed                | varchar(255) | YES  |     | NULL    |       |
| Type                 | varchar(50)  | YES  |     | NULL    |       |
| AvailableForAdoption | bit(1)       | YES  |     | NULL    |       |
+----------------------+--------------+------+-----+---------+-------+
6 rows in set (0.01 sec)

mysql> CREATE TABLE Shelters (
    ->      ShelterID INT PRIMARY KEY,
    ->      Name VARCHAR(255),
    ->      Location VARCHAR(255)
    -> );
Query OK, 0 rows affected (0.02 sec)

mysql> Describe Shelters;
+-----------+--------------+------+-----+---------+-------+
| Field     | Type         | Null | Key | Default | Extra |
+-----------+--------------+------+-----+---------+-------+
| ShelterID | int          | NO   | PRI | NULL    |       |
| Name      | varchar(255) | YES  |     | NULL    |       |
| Location  | varchar(255) | YES  |     | NULL    |       |
+-----------+--------------+------+-----+---------+-------+
3 rows in set (0.00 sec)

mysql>
```

Donations:

```
MySQL 8.0 Command Line Cli  ×    +  ∨

mysql> CREATE DATABASE PetPals;USE PetPals;
ERROR 1007 (HY000): Can't create database 'petpals'; database exists
Database changed
mysql>
mysql> CREATE TABLE Donations (
    ->      DonationID INT PRIMARY KEY,
    ->      DonorName VARCHAR(255),
    ->      DonationType VARCHAR(50),
    ->      DonationAmount DECIMAL(10, 2),
    ->      DonationItem VARCHAR(255),
    ->      DonationDate DATETIME
    -> );
Query OK, 0 rows affected (0.02 sec)

mysql> Describe Donations;
+----------------+---------------+------+-----+---------+-------+
| Field          | Type          | Null | Key | Default | Extra |
+----------------+---------------+------+-----+---------+-------+
| DonationID     | int           | NO   | PRI | NULL    |       |
| DonorName      | varchar(255)  | YES  |     | NULL    |       |
| DonationType   | varchar(50)   | YES  |     | NULL    |       |
| DonationAmount | decimal(10,2) | YES  |     | NULL    |       |
| DonationItem   | varchar(255)  | YES  |     | NULL    |       |
| DonationDate   | datetime      | YES  |     | NULL    |       |
+----------------+---------------+------+-----+---------+-------+
6 rows in set (0.00 sec)

mysql>
```

adoption events:

```
MySQL 8.0 Command Line Cli   ×   +   ∨

    ->      DonationType VARCHAR(50),
    ->      DonationAmount DECIMAL(10, 2),
    ->      DonationItem VARCHAR(255),
    ->      DonationDate DATETIME
    -> );
Query OK, 0 rows affected (0.02 sec)

mysql> Describe Donations;
+----------------+---------------+------+-----+---------+-------+
| Field          | Type          | Null | Key | Default | Extra |
+----------------+---------------+------+-----+---------+-------+
| DonationID     | int           | NO   | PRI | NULL    |       |
| DonorName      | varchar(255)  | YES  |     | NULL    |       |
| DonationType   | varchar(50)   | YES  |     | NULL    |       |
| DonationAmount | decimal(10,2) | YES  |     | NULL    |       |
| DonationItem   | varchar(255)  | YES  |     | NULL    |       |
| DonationDate   | datetime      | YES  |     | NULL    |       |
+----------------+---------------+------+-----+---------+-------+
6 rows in set (0.00 sec)

mysql> CREATE TABLE AdoptionEvents (
    ->      EventID INT PRIMARY KEY,
    ->      EventName VARCHAR(255),
    ->      EventDate DATETIME,
    ->      Location VARCHAR(255)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> Describe AdoptionEvents;
+-----------+--------------+------+-----+---------+-------+
| Field     | Type         | Null | Key | Default | Extra |
+-----------+--------------+------+-----+---------+-------+
| EventID   | int          | NO   | PRI | NULL    |       |
| EventName | varchar(255) | YES  |     | NULL    |       |
| EventDate | datetime     | YES  |     | NULL    |       |
| Location  | varchar(255) | YES  |     | NULL    |       |
+-----------+--------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql>
```

Participants:

```
MySQL 8.0 Command Line Cli   ×   +   ∨

mysql> CREATE TABLE AdoptionEvents (
    ->      EventID INT PRIMARY KEY,
    ->      EventName VARCHAR(255),
    ->      EventDate DATETIME,
    ->      Location VARCHAR(255)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> Describe AdoptionEvents;
+-----------+--------------+------+-----+---------+-------+
| Field     | Type         | Null | Key | Default | Extra |
+-----------+--------------+------+-----+---------+-------+
| EventID   | int          | NO   | PRI | NULL    |       |
| EventName | varchar(255) | YES  |     | NULL    |       |
| EventDate | datetime     | YES  |     | NULL    |       |
| Location  | varchar(255) | YES  |     | NULL    |       |
+-----------+--------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql> CREATE TABLE Participants (
    ->      ParticipantID INT PRIMARY KEY,
    ->      ParticipantName VARCHAR(255),
    ->      ParticipantType VARCHAR(50),
    ->      EventID INT,
    ->      FOREIGN KEY (EventID) REFERENCES AdoptionEvents(EventID)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> Describe Participants;
+-----------------+--------------+------+-----+---------+-------+
| Field           | Type         | Null | Key | Default | Extra |
+-----------------+--------------+------+-----+---------+-------+
| ParticipantID   | int          | NO   | PRI | NULL    |       |
| ParticipantName | varchar(255) | YES  |     | NULL    |       |
| ParticipantType | varchar(50)  | YES  |     | NULL    |       |
| EventID         | int          | YES  | MUL | NULL    |       |
+-----------------+--------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql>
```

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

```
mysql> CREATE TABLE Pets (
    ->     PetID INT PRIMARY KEY,
    ->     Name VARCHAR(255),
    ->     Age INT,
    ->     Breed VARCHAR(255),
    ->     Type VARCHAR(50),
    ->     AvailableForAdoption BIT
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> Describe Pets;
+----------------------+--------------+------+-----+---------+-------+
| Field                | Type         | Null | Key | Default | Extra |
+----------------------+--------------+------+-----+---------+-------+
| PetID                | int          | NO   | PRI | NULL    |       |
| Name                 | varchar(255) | YES  |     | NULL    |       |
| Age                  | int          | YES  |     | NULL    |       |
| Breed                | varchar(255) | YES  |     | NULL    |       |
| Type                 | varchar(50)  | YES  |     | NULL    |       |
| AvailableForAdoption | bit(1)       | YES  |     | NULL    |       |
+----------------------+--------------+------+-----+---------+-------+
6 rows in set (0.01 sec)

mysql>
```

Shelter:

```
    ->     PetID INT PRIMARY KEY,
    ->     Name VARCHAR(255),
    ->     Age INT,
    ->     Breed VARCHAR(255),
    ->     Type VARCHAR(50),
    ->     AvailableForAdoption BIT
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> Describe Pets;
+----------------------+--------------+------+-----+---------+-------+
| Field                | Type         | Null | Key | Default | Extra |
+----------------------+--------------+------+-----+---------+-------+
| PetID                | int          | NO   | PRI | NULL    |       |
| Name                 | varchar(255) | YES  |     | NULL    |       |
| Age                  | int          | YES  |     | NULL    |       |
| Breed                | varchar(255) | YES  |     | NULL    |       |
| Type                 | varchar(50)  | YES  |     | NULL    |       |
| AvailableForAdoption | bit(1)       | YES  |     | NULL    |       |
+----------------------+--------------+------+-----+---------+-------+
6 rows in set (0.01 sec)

mysql> CREATE TABLE Shelters (
    ->     ShelterID INT PRIMARY KEY,
    ->     Name VARCHAR(255),
    ->     Location VARCHAR(255)
    -> );
Query OK, 0 rows affected (0.02 sec)

mysql> Describe Shelters;
+-----------+--------------+------+-----+---------+-------+
| Field     | Type         | Null | Key | Default | Extra |
+-----------+--------------+------+-----+---------+-------+
| ShelterID | int          | NO   | PRI | NULL    |       |
| Name      | varchar(255) | YES  |     | NULL    |       |
| Location  | varchar(255) | YES  |     | NULL    |       |
+-----------+--------------+------+-----+---------+-------+
3 rows in set (0.00 sec)

mysql>
```

Donations:

```
MySQL 8.0 Command Line Cli   ×   +   ∨

mysql> CREATE DATABASE PetPals;USE PetPals;
ERROR 1007 (HY000): Can't create database 'petpals'; database exists
Database changed
mysql>
mysql> CREATE TABLE Donations (
    ->     DonationID INT PRIMARY KEY,
    ->     DonorName VARCHAR(255),
    ->     DonationType VARCHAR(50),
    ->     DonationAmount DECIMAL(10, 2),
    ->     DonationItem VARCHAR(255),
    ->     DonationDate DATETIME
    -> );
Query OK, 0 rows affected (0.02 sec)

mysql> Describe Donations;
+----------------+---------------+------+-----+---------+-------+
| Field          | Type          | Null | Key | Default | Extra |
+----------------+---------------+------+-----+---------+-------+
| DonationID     | int           | NO   | PRI | NULL    |       |
| DonorName      | varchar(255)  | YES  |     | NULL    |       |
| DonationType   | varchar(50)   | YES  |     | NULL    |       |
| DonationAmount | decimal(10,2) | YES  |     | NULL    |       |
| DonationItem   | varchar(255)  | YES  |     | NULL    |       |
| DonationDate   | datetime      | YES  |     | NULL    |       |
+----------------+---------------+------+-----+---------+-------+
6 rows in set (0.00 sec)

mysql>
```

Adoptions event:

```
MySQL 8.0 Command Line Cli   ×   +   ∨

    ->     DonationType VARCHAR(50),
    ->     DonationAmount DECIMAL(10, 2),
    ->     DonationItem VARCHAR(255),
    ->     DonationDate DATETIME
    -> );
Query OK, 0 rows affected (0.02 sec)

mysql> Describe Donations;
+----------------+---------------+------+-----+---------+-------+
| Field          | Type          | Null | Key | Default | Extra |
+----------------+---------------+------+-----+---------+-------+
| DonationID     | int           | NO   | PRI | NULL    |       |
| DonorName      | varchar(255)  | YES  |     | NULL    |       |
| DonationType   | varchar(50)   | YES  |     | NULL    |       |
| DonationAmount | decimal(10,2) | YES  |     | NULL    |       |
| DonationItem   | varchar(255)  | YES  |     | NULL    |       |
| DonationDate   | datetime      | YES  |     | NULL    |       |
+----------------+---------------+------+-----+---------+-------+
6 rows in set (0.00 sec)

mysql> CREATE TABLE AdoptionEvents (
    ->     EventID INT PRIMARY KEY,
    ->     EventName VARCHAR(255),
    ->     EventDate DATETIME,
    ->     Location VARCHAR(255)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> Describe AdoptionEvents;
+-----------+--------------+------+-----+---------+-------+
| Field     | Type         | Null | Key | Default | Extra |
+-----------+--------------+------+-----+---------+-------+
| EventID   | int          | NO   | PRI | NULL    |       |
| EventName | varchar(255) | YES  |     | NULL    |       |
| EventDate | datetime     | YES  |     | NULL    |       |
| Location  | varchar(255) | YES  |     | NULL    |       |
+-----------+--------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql>
```
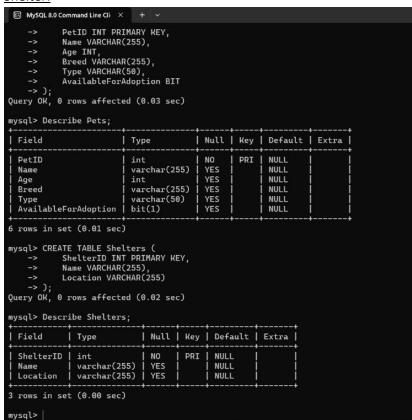
Participants:

```
mysql> CREATE TABLE AdoptionEvents (
    ->     EventID INT PRIMARY KEY,
    ->     EventName VARCHAR(255),
    ->     EventDate DATETIME,
    ->     Location VARCHAR(255)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> Describe AdoptionEvents;
+-----------+--------------+------+-----+---------+-------+
| Field     | Type         | Null | Key | Default | Extra |
+-----------+--------------+------+-----+---------+-------+
| EventID   | int          | NO   | PRI | NULL    |       |
| EventName | varchar(255) | YES  |     | NULL    |       |
| EventDate | datetime     | YES  |     | NULL    |       |
| Location  | varchar(255) | YES  |     | NULL    |       |
+-----------+--------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql> CREATE TABLE Participants (
    ->     ParticipantID INT PRIMARY KEY,
    ->     ParticipantName VARCHAR(255),
    ->     ParticipantType VARCHAR(50),
    ->     EventID INT,
    ->     FOREIGN KEY (EventID) REFERENCES AdoptionEvents(EventID)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> Describe Participants;
+-----------------+--------------+------+-----+---------+-------+
| Field           | Type         | Null | Key | Default | Extra |
+-----------------+--------------+------+-----+---------+-------+
| ParticipantID   | int          | NO   | PRI | NULL    |       |
| ParticipantName | varchar(255) | YES  |     | NULL    |       |
| ParticipantType | varchar(50)  | YES  |     | NULL    |       |
| EventID         | int          | YES  | MUL | NULL    |       |
+-----------------+--------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql>
```

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

Pets:

```
mysql> CREATE TABLE Pets (
    ->     PetID INT PRIMARY KEY,
    ->     Name VARCHAR(255),
    ->     Age INT,
    ->     Breed VARCHAR(255),
    ->     Type VARCHAR(50),
    ->     AvailableForAdoption BIT
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> Describe Pets;
+----------------------+--------------+------+-----+---------+-------+
| Field                | Type         | Null | Key | Default | Extra |
+----------------------+--------------+------+-----+---------+-------+
| PetID                | int          | NO   | PRI | NULL    |       |
| Name                 | varchar(255) | YES  |     | NULL    |       |
| Age                  | int          | YES  |     | NULL    |       |
| Breed                | varchar(255) | YES  |     | NULL    |       |
| Type                 | varchar(50)  | YES  |     | NULL    |       |
| AvailableForAdoption | bit(1)       | YES  |     | NULL    |       |
+----------------------+--------------+------+-----+---------+-------+
6 rows in set (0.01 sec)

mysql>
```

Shelter:

```
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    ->    PetID INT PRIMARY KEY,
    ->    Name VARCHAR(255),
    ->    Age INT,
    ->    Breed VARCHAR(255),
    ->    Type VARCHAR(50),
    ->    AvailableForAdoption BIT
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> Describe Pets;
+----------------------+--------------+------+-----+---------+-------+
| Field                | Type         | Null | Key | Default | Extra |
+----------------------+--------------+------+-----+---------+-------+
| PetID                | int          | NO   | PRI | NULL    |       |
| Name                 | varchar(255) | YES  |     | NULL    |       |
| Age                  | int          | YES  |     | NULL    |       |
| Breed                | varchar(255) | YES  |     | NULL    |       |
| Type                 | varchar(50)  | YES  |     | NULL    |       |
| AvailableForAdoption | bit(1)       | YES  |     | NULL    |       |
+----------------------+--------------+------+-----+---------+-------+
6 rows in set (0.01 sec)

mysql> CREATE TABLE Shelters (
    ->    ShelterID INT PRIMARY KEY,
    ->    Name VARCHAR(255),
    ->    Location VARCHAR(255)
    -> );
Query OK, 0 rows affected (0.02 sec)

mysql> Describe Shelters;
+-----------+--------------+------+-----+---------+-------+
| Field     | Type         | Null | Key | Default | Extra |
+-----------+--------------+------+-----+---------+-------+
| ShelterID | int          | NO   | PRI | NULL    |       |
| Name      | varchar(255) | YES  |     | NULL    |       |
| Location  | varchar(255) | YES  |     | NULL    |       |
+-----------+--------------+------+-----+---------+-------+
3 rows in set (0.00 sec)

mysql>
```

Donation:

```
MySQL 8.0 Command Line Cli  ×    +   ∨

mysql> CREATE DATABASE PetPals;USE PetPals;
ERROR 1007 (HY000): Can't create database 'petpals'; database exists
Database changed
mysql>
mysql> CREATE TABLE Donations (
    ->    DonationID INT PRIMARY KEY,
    ->    DonorName VARCHAR(255),
    ->    DonationType VARCHAR(50),
    ->    DonationAmount DECIMAL(10, 2),
    ->    DonationItem VARCHAR(255),
    ->    DonationDate DATETIME
    -> );
Query OK, 0 rows affected (0.02 sec)

mysql> Describe Donations;
+----------------+---------------+------+-----+---------+-------+
| Field          | Type          | Null | Key | Default | Extra |
+----------------+---------------+------+-----+---------+-------+
| DonationID     | int           | NO   | PRI | NULL    |       |
| DonorName      | varchar(255)  | YES  |     | NULL    |       |
| DonationType   | varchar(50)   | YES  |     | NULL    |       |
| DonationAmount | decimal(10,2) | YES  |     | NULL    |       |
| DonationItem   | varchar(255)  | YES  |     | NULL    |       |
| DonationDate   | datetime      | YES  |     | NULL    |       |
+----------------+---------------+------+-----+---------+-------+
6 rows in set (0.00 sec)

mysql>
```

Adoption event:

```
MySQL 8.0 Command Line Cli    ×    +    ∨

    ->       DonationType VARCHAR(50),
    ->       DonationAmount DECIMAL(10, 2),
    ->       DonationItem VARCHAR(255),
    ->       DonationDate DATETIME
    -> );
Query OK, 0 rows affected (0.02 sec)

mysql> Describe Donations;
+----------------+---------------+------+-----+---------+-------+
| Field          | Type          | Null | Key | Default | Extra |
+----------------+---------------+------+-----+---------+-------+
| DonationID     | int           | NO   | PRI | NULL    |       |
| DonorName      | varchar(255)  | YES  |     | NULL    |       |
| DonationType   | varchar(50)   | YES  |     | NULL    |       |
| DonationAmount | decimal(10,2) | YES  |     | NULL    |       |
| DonationItem   | varchar(255)  | YES  |     | NULL    |       |
| DonationDate   | datetime      | YES  |     | NULL    |       |
+----------------+---------------+------+-----+---------+-------+
6 rows in set (0.00 sec)

mysql> CREATE TABLE AdoptionEvents (
    ->       EventID INT PRIMARY KEY,
    ->       EventName VARCHAR(255),
    ->       EventDate DATETIME,
    ->       Location VARCHAR(255)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> Describe AdoptionEvents;
+-----------+--------------+------+-----+---------+-------+
| Field     | Type         | Null | Key | Default | Extra |
+-----------+--------------+------+-----+---------+-------+
| EventID   | int          | NO   | PRI | NULL    |       |
| EventName | varchar(255) | YES  |     | NULL    |       |
| EventDate | datetime     | YES  |     | NULL    |       |
| Location  | varchar(255) | YES  |     | NULL    |       |
+-----------+--------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql>
```

Participants:

```
MySQL 8.0 Command Line Cli    ×    +    ∨

mysql> CREATE TABLE AdoptionEvents (
    ->       EventID INT PRIMARY KEY,
    ->       EventName VARCHAR(255),
    ->       EventDate DATETIME,
    ->       Location VARCHAR(255)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> Describe AdoptionEvents;
+-----------+--------------+------+-----+---------+-------+
| Field     | Type         | Null | Key | Default | Extra |
+-----------+--------------+------+-----+---------+-------+
| EventID   | int          | NO   | PRI | NULL    |       |
| EventName | varchar(255) | YES  |     | NULL    |       |
| EventDate | datetime     | YES  |     | NULL    |       |
| Location  | varchar(255) | YES  |     | NULL    |       |
+-----------+--------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql> CREATE TABLE Participants (
    ->       ParticipantID INT PRIMARY KEY,
    ->       ParticipantName VARCHAR(255),
    ->       ParticipantType VARCHAR(50),
    ->       EventID INT,
    ->       FOREIGN KEY (EventID) REFERENCES AdoptionEvents(EventID)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> Describe Participants;
+-----------------+--------------+------+-----+---------+-------+
| Field           | Type         | Null | Key | Default | Extra |
+-----------------+--------------+------+-----+---------+-------+
| ParticipantID   | int          | NO   | PRI | NULL    |       |
| ParticipantName | varchar(255) | YES  |     | NULL    |       |
| ParticipantType | varchar(50)  | YES  |     | NULL    |       |
| EventID         | int          | YES  | MUL | NULL    |       |
+-----------------+--------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql>
```

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 | Golden Retriever | Dog  |
| Max     |    1 | Beagle           | Dog  |
| Fluffy  |    4 | Persian          | Cat  |
| Mittens |    3 | Maine Coon       | Cat  |
+---------+------+------------------+------+
4 rows in set (0.00 sec)

mysql>
```

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 Participants.ParticipantName, Participants.ParticipantType
    -> FROM Participants
    -> INNER JOIN AdoptionEvents ON Participants.EventID = AdoptionEvents.EventID
    -> WHERE AdoptionEvents.EventID = 1;
+-----------------+-----------------+
| ParticipantName | ParticipantType |
+-----------------+-----------------+
| Aarav Kumar     | Shelter         |
| Ananya Sharma   | Adopter         |
+-----------------+-----------------+
2 rows in set (0.00 sec)

mysql>
```

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..

```
    -> LEFT JOIN
    ->     Donations D ON S.ShelterID = D.ShelterID
    -> GROUP BY
    ->     S.Name;
ERROR 1054 (42S22): Unknown column 'D.ShelterID' in 'on clause'
mysql>  SELECT * FROM Donations;
+------------+--------------+--------------+----------------+--------------+---------------------+
| DonationID | DonorName    | DonationType | DonationAmount | DonationItem | DonationDate        |
+------------+--------------+--------------+----------------+--------------+---------------------+
|          1 | Aarav Sharma | Cash         |         500.00 | NULL         | 2023-03-15 10:30:00 |
|          2 | Diya Patel   | Item         |           NULL | Pet Toys     | 2023-03-16 14:45:00 |
|          3 | Arjun Gupta  | Cash         |         250.00 | NULL         | 2023-03-17 11:20:00 |
|          4 | Ananya Reddy | Cash         |         100.00 | NULL         | 2023-03-18 09:10:00 |
|          5 | Ishaan Kapoor| Item         |           NULL | Pet Bed      | 2023-03-19 13:00:00 |
|          6 | Kavya Singh  | Cash         |         150.00 | NULL         | 2023-03-20 15:30:00 |
+------------+--------------+--------------+----------------+--------------+---------------------+
6 rows in set (0.00 sec)

mysql> SELECT
    ->     S.Name AS ShelterName,
    ->     COALESCE(SUM(D.DonationAmount), 0) AS TotalDonationAmount
    -> FROM
    ->     Shelters S
    -> LEFT JOIN
    ->     Donations D ON S.Name = D.DonorName
    -> GROUP BY
    ->     S.Name;
+------------------------------+---------------------+
| ShelterName                  | TotalDonationAmount |
+------------------------------+---------------------+
| Happy Paws Shelter           |                0.00 |
| Safe Haven Animal Rescue     |                0.00 |
| Purrfect Homes Cat Shelter   |                0.00 |
| Rescue Me Dog Haven          |                0.00 |
| Feathered Friends Aviary     |                0.00 |
| Critter Care Wildlife Center |                0.00 |
+------------------------------+---------------------+
6 rows in set (0.00 sec)

mysql>
```

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 * from pets;
+-------+----------+-----+-----------------+------+---------------------+
| PetID | Name     | Age | Breed           | Type | AvailableForAdoption |
+-------+----------+-----+-----------------+------+---------------------+
|     1 | Buddy    |   3 | Golden Retriever| Dog  | 0x01                |
|     2 | Whiskers |   2 | Siamese         | Cat  | 0x00                |
|     3 | Max      |   1 | Beagle          | Dog  | 0x01                |
|     4 | Fluffy   |   4 | Persian         | Cat  | 0x01                |
|     5 | Rocky    |   2 | Labrador        | Dog  | 0x00                |
|     6 | Mittens  |   3 | Maine Coon      | Cat  | 0x01                |
+-------+----------+-----+-----------------+------+---------------------+
6 rows in set (0.00 sec)

mysql> SELECT
    ->     Name,
    ->     Age,
    ->     Breed,
    ->     Type
    -> FROM
    ->     Pets
    -> WHERE AvailableForAdoption = 0;
+----------+-----+----------+------+
| Name     | Age | Breed    | Type |
+----------+-----+----------+------+
| Whiskers |   2 | Siamese  | Cat  |
| Rocky    |   2 | Labrador | Dog  |
+----------+-----+----------+------+
2 rows in set (0.00 sec)

mysql>
```

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.

```
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| Name      | Age | Breed    | Type |
+-----------+-----+----------+------+
| Whiskers  |   2 | Siamese  | Cat  |
| Rocky     |   2 | Labrador | Dog  |
+-----------+-----+----------+------+
2 rows in set (0.00 sec)

mysql> select *  from Donations;
+------------+---------------+--------------+----------------+-------------+---------------------+
| DonationID | DonorName     | DonationType | DonationAmount | DonationItem | DonationDate        |
+------------+---------------+--------------+----------------+-------------+---------------------+
|          1 | Aarav Sharma  | Cash         |         500.00 | NULL        | 2023-03-15 10:30:00 |
|          2 | Diya Patel    | Item         |           NULL | Pet Toys    | 2023-03-16 14:45:00 |
|          3 | Arjun Gupta   | Cash         |         250.00 | NULL        | 2023-03-17 11:20:00 |
|          4 | Ananya Reddy  | Cash         |         100.00 | NULL        | 2023-03-18 09:10:00 |
|          5 | Ishaan Kapoor | Item         |           NULL | Pet Bed     | 2023-03-19 13:00:00 |
|          6 | Kavya Singh   | Cash         |         150.00 | NULL        | 2023-03-20 15:30:00 |
+------------+---------------+--------------+----------------+-------------+---------------------+
6 rows in set (0.00 sec)

mysql> SELECT
    ->      FORMAT(DonationDate, '2023-03') AS MonthYear,
    ->      SUM(DonationAmount) AS TotalDonationAmount
    -> FROM
    ->      Donations
    -> GROUP BY
    ->      FORMAT(DonationDate, '2023-03');
+------------------------------------------------------------+---------------------+
| MonthYear                                                  | TotalDonationAmount |
+------------------------------------------------------------+---------------------+
| 20,230,315,103,000.0000000000000000000000000000000         |              500.00 |
| 20,230,316,144,500.0000000000000000000000000000000         |                NULL |
| 20,230,317,112,000.0000000000000000000000000000000         |              250.00 |
| 20,230,318,091,000.0000000000000000000000000000000         |              100.00 |
| 20,230,319,130,000.0000000000000000000000000000000         |                NULL |
| 20,230,320,153,000.0000000000000000000000000000000         |              150.00 |
+------------------------------------------------------------+---------------------+
6 rows in set, 12 warnings (0.01 sec)

mysql>
```

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 8.0 Command Line Cli    ×    +    ∨

mysql> select *  from pets;
+-------+----------+-----+-----------------+------+--------------------+
| PetID | Name     | Age | Breed           | Type | AvailableForAdoption |
+-------+----------+-----+-----------------+------+--------------------+
|     1 | Buddy    |   3 | Golden Retriever | Dog  | 0x01               |
|     2 | Whiskers |   2 | Siamese         | Cat  | 0x00               |
|     3 | Max      |   1 | Beagle          | Dog  | 0x01               |
|     4 | Fluffy   |   4 | Persian         | Cat  | 0x01               |
|     5 | Rocky    |   2 | Labrador        | Dog  | 0x00               |
|     6 | Mittens  |   3 | Maine Coon      | Cat  | 0x01               |
+-------+----------+-----+-----------------+------+--------------------+
6 rows in set (0.00 sec)

mysql> SELECT DISTINCT Breed
    -> FROM Pets
    -> WHERE (Age BETWEEN 1 AND 3) OR (Age > 5);
+------------------+
| Breed            |
+------------------+
| Golden Retriever |
| Siamese          |
| Beagle           |
| Labrador         |
| Maine Coon       |
+------------------+
5 rows in set (0.00 sec)

mysql>
```

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

```
      ->      END;
Query OK, 6 rows affected (0.01 sec)
Rows matched: 6  Changed: 6  Warnings: 0

mysql> SELECT * FROM Pets;
+-------+----------+------+-----------------+------+--------------------+-----------+
| PetID | Name     | Age  | Breed           | Type | AvailableForAdoption | ShelterID |
+-------+----------+------+-----------------+------+--------------------+-----------+
|     1 | Buddy    |    3 | Golden Retriever | Dog  | 0x01               |         1 |
|     2 | Whiskers |    2 | Siamese         | Cat  | 0x00               |         2 |
|     3 | Max      |    1 | Beagle          | Dog  | 0x01               |         3 |
|     4 | Fluffy   |    4 | Persian         | Cat  | 0x01               |         1 |
|     5 | Rocky    |    2 | Labrador        | Dog  | 0x00               |         2 |
|     6 | Mittens  |    3 | Maine Coon      | Cat  | 0x01               |         3 |
+-------+----------+------+-----------------+------+--------------------+-----------+
6 rows in set (0.00 sec)

mysql> SELECT
    ->      P.Name AS PetName,
    ->      P.Age,
    ->      P.Breed,
    ->      P.Type AS PetType,
    ->      S.Name AS ShelterName
    -> FROM
    ->      Pets P
    -> JOIN
    ->      Shelters S ON P.ShelterID = S.ShelterID
    -> WHERE
    ->      P.AvailableForAdoption = 1;
+---------+------+-----------------+---------+---------------------------+
| PetName | Age  | Breed           | PetType | ShelterName               |
+---------+------+-----------------+---------+---------------------------+
| Buddy   |    3 | Golden Retriever | Dog     | Happy Paws Shelter        |
| Max     |    1 | Beagle          | Dog     | Purrfect Homes Cat Shelter |
| Fluffy  |    4 | Persian         | Cat     | Happy Paws Shelter        |
| Mittens |    3 | Maine Coon      | Cat     | Purrfect Homes Cat Shelter |
+---------+------+-----------------+---------+---------------------------+
4 rows in set (0.00 sec)

mysql>
```

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           |
+-----------------+
| Golden Retriever |
| Siamese         |
| Beagle          |
| Persian         |
| Labrador        |
| Maine Coon      |
+-----------------+
6 rows in set (0.00 sec)

mysql>
```

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

```
MySQL 8.0 Command Line Cli  ×    +   ∨
| Persian          |
| Labrador         |
| Maine Coon       |
+------------------+
6 rows in set (0.00 sec)

mysql> SELECT * FROM Pets;
+-------+----------+------+-----------------+------+------------------------------------+-----------+
| PetID | Name     | Age  | Breed           | Type | AvailableForAdoption               | ShelterID |
+-------+----------+------+-----------------+------+------------------------------------+-----------+
|     1 | Buddy    |    3 | Golden Retriever| Dog  | 0x01                               |         1 |
|     2 | Whiskers |    2 | Siamese         | Cat  | 0x00                               |         2 |
|     3 | Max      |    1 | Beagle          | Dog  | 0x01                               |         3 |
|     4 | Fluffy   |    4 | Persian         | Cat  | 0x01                               |         1 |
|     5 | Rocky    |    2 | Labrador        | Dog  | 0x00                               |         2 |
|     6 | Mittens  |    3 | Maine Coon      | Cat  | 0x01                               |         3 |
+-------+----------+------+-----------------+------+------------------------------------+-----------+
6 rows in set (0.00 sec)

mysql> SELECT
    ->      PetID,
    ->      Name,
    ->      Age,
    ->      Breed,
    ->      Type
    -> FROM
    ->      Pets
    -> WHERE
    ->      AvailableForAdoption = 1;
+-------+----------+------+-----------------+------+
| PetID | Name     | Age  | Breed           | Type |
+-------+----------+------+-----------------+------+
|     1 | Buddy    |    3 | Golden Retriever| Dog  |
|     3 | Max      |    1 | Beagle          | Dog  |
|     4 | Fluffy   |    4 | Persian         | Cat  |
|     6 | Mittens  |    3 | Maine Coon      | Cat  |
+-------+----------+------+-----------------+------+
4 rows in set (0.00 sec)

mysql>
```

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

```
MySQL 8.0 Command Line Cli  ×    +   ∨
    ->      Breed,
    ->      Type
    -> FROM
    ->      Pets
    -> WHERE
    ->      AvailableForAdoption = 1;
+-------+----------+------+-----------------+------+
| PetID | Name     | Age  | Breed           | Type |
+-------+----------+------+-----------------+------+
|     1 | Buddy    |    3 | Golden Retriever| Dog  |
|     3 | Max      |    1 | Beagle          | Dog  |
|     4 | Fluffy   |    4 | Persian         | Cat  |
|     6 | Mittens  |    3 | Maine Coon      | Cat  |
+-------+----------+------+-----------------+------+
4 rows in set (0.00 sec)

mysql> SELECT
    ->      S.ShelterID,
    ->      S.Name AS ShelterName,
    ->      COUNT(P.PetID) AS PetsAvailableForAdoption
    -> FROM
    ->      Shelters S
    -> LEFT JOIN
    ->      Pets P ON S.ShelterID = P.ShelterID
    -> WHERE
    ->      P.AvailableForAdoption = 1 OR P.AvailableForAdoption IS NULL
    -> GROUP BY
    ->      S.ShelterID, S.Name;
+-----------+-----------------------------+--------------------------+
| ShelterID | ShelterName                 | PetsAvailableForAdoption |
+-----------+-----------------------------+--------------------------+
|         1 | Happy Paws Shelter          |                        2 |
|         3 | Purrfect Homes Cat Shelter  |                        2 |
|         4 | Rescue Me Dog Haven         |                        0 |
|         5 | Feathered Friends Aviary    |                        0 |
|         6 | Critter Care Wildlife Center|                        0 |
+-----------+-----------------------------+--------------------------+
5 rows in set (0.00 sec)

mysql>
```

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

```
mysql> SELECT
    ->      P1.PetID AS Pet1ID,
    ->      P1.Name AS Pet1Name,
    ->      P1.Breed AS Pet1Breed,
    ->      P2.PetID AS Pet2ID,
    ->      P2.Name AS Pet2Name,
    ->      P2.Breed AS Pet2Breed,
    ->      S.ShelterID,
    ->      S.Name AS ShelterName
    -> FROM
    ->      Pets P1
    -> JOIN
    ->      Pets P2 ON P1.ShelterID = P2.ShelterID
    ->              AND P1.Breed = P2.Breed
    ->              AND P1.PetID < P2.PetID
    -> JOIN
    ->      Shelters S ON P1.ShelterID = S.ShelterID;
Empty set (0.00 sec)

mysql>
```

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

```
+-----------+------------------------------+----------+------------------------------+
|         6 | Critter Care Wildlife Center |        1 | Spring Pet Adoption Fair     |
|         5 | Feathered Friends Aviary     |        1 | Spring Pet Adoption Fair     |
|         4 | Rescue Me Dog Haven          |        1 | Spring Pet Adoption Fair     |
|         3 | Purrfect Homes Cat Shelter   |        1 | Spring Pet Adoption Fair     |
|         2 | Safe Haven Animal Rescue     |        1 | Spring Pet Adoption Fair     |
|         1 | Happy Paws Shelter           |        1 | Spring Pet Adoption Fair     |
|         6 | Critter Care Wildlife Center |        2 | Summer Pet Expo              |
|         5 | Feathered Friends Aviary     |        2 | Summer Pet Expo              |
|         4 | Rescue Me Dog Haven          |        2 | Summer Pet Expo              |
|         3 | Purrfect Homes Cat Shelter   |        2 | Summer Pet Expo              |
|         2 | Safe Haven Animal Rescue     |        2 | Summer Pet Expo              |
|         1 | Happy Paws Shelter           |        2 | Summer Pet Expo              |
|         6 | Critter Care Wildlife Center |        3 | Fall Furry Friends Festival  |
|         5 | Feathered Friends Aviary     |        3 | Fall Furry Friends Festival  |
|         4 | Rescue Me Dog Haven          |        3 | Fall Furry Friends Festival  |
|         3 | Purrfect Homes Cat Shelter   |        3 | Fall Furry Friends Festival  |
|         2 | Safe Haven Animal Rescue     |        3 | Fall Furry Friends Festival  |
|         1 | Happy Paws Shelter           |        3 | Fall Furry Friends Festival  |
|         6 | Critter Care Wildlife Center |        4 | Winter Wonderland Pet Adoption |
|         5 | Feathered Friends Aviary     |        4 | Winter Wonderland Pet Adoption |
|         4 | Rescue Me Dog Haven          |        4 | Winter Wonderland Pet Adoption |
|         3 | Purrfect Homes Cat Shelter   |        4 | Winter Wonderland Pet Adoption |
|         2 | Safe Haven Animal Rescue     |        4 | Winter Wonderland Pet Adoption |
|         1 | Happy Paws Shelter           |        4 | Winter Wonderland Pet Adoption |
|         6 | Critter Care Wildlife Center |        5 | Holiday Homecoming for Pets  |
|         5 | Feathered Friends Aviary     |        5 | Holiday Homecoming for Pets  |
|         4 | Rescue Me Dog Haven          |        5 | Holiday Homecoming for Pets  |
|         3 | Purrfect Homes Cat Shelter   |        5 | Holiday Homecoming for Pets  |
|         2 | Safe Haven Animal Rescue     |        5 | Holiday Homecoming for Pets  |
|         1 | Happy Paws Shelter           |        5 | Holiday Homecoming for Pets  |
|         6 | Critter Care Wildlife Center |        6 | New Year, New Furry Friends  |
|         5 | Feathered Friends Aviary     |        6 | New Year, New Furry Friends  |
|         4 | Rescue Me Dog Haven          |        6 | New Year, New Furry Friends  |
|         3 | Purrfect Homes Cat Shelter   |        6 | New Year, New Furry Friends  |
|         2 | Safe Haven Animal Rescue     |        6 | New Year, New Furry Friends  |
|         1 | Happy Paws Shelter           |        6 | New Year, New Furry Friends  |
+-----------+------------------------------+----------+------------------------------+
36 rows in set (0.00 sec)
```

```
mysql> SELECT
    ->     S.ShelterID AS ShelterID,
    ->     S.Name AS ShelterName,
    ->     AE.EventID AS EventID,
    ->     AE.EventName AS EventName
    -> FROM
    ->     Shelters S
    -> CROSS JOIN
    ->     AdoptionEvents AE;
+-----------+------------------------------+----------+------------------------------+
| ShelterID | ShelterName                  | EventID  | EventName                    |
+-----------+------------------------------+----------+------------------------------+
|         6 | Critter Care Wildlife Center |        1 | Spring Pet Adoption Fair     |
|         5 | Feathered Friends Aviary     |        1 | Spring Pet Adoption Fair     |
|         4 | Rescue Me Dog Haven          |        1 | Spring Pet Adoption Fair     |
|         3 | Purrfect Homes Cat Shelter   |        1 | Spring Pet Adoption Fair     |
|         2 | Safe Haven Animal Rescue     |        1 | Spring Pet Adoption Fair     |
|         1 | Happy Paws Shelter           |        1 | Spring Pet Adoption Fair     |
|         6 | Critter Care Wildlife Center |        2 | Summer Pet Expo              |
|         5 | Feathered Friends Aviary     |        2 | Summer Pet Expo              |
|         4 | Rescue Me Dog Haven          |        2 | Summer Pet Expo              |
|         3 | Purrfect Homes Cat Shelter   |        2 | Summer Pet Expo              |
|         2 | Safe Haven Animal Rescue     |        2 | Summer Pet Expo              |
|         1 | Happy Paws Shelter           |        2 | Summer Pet Expo              |
|         6 | Critter Care Wildlife Center |        3 | Fall Furry Friends Festival  |
|         5 | Feathered Friends Aviary     |        3 | Fall Furry Friends Festival  |
|         4 | Rescue Me Dog Haven          |        3 | Fall Furry Friends Festival  |
|         3 | Purrfect Homes Cat Shelter   |        3 | Fall Furry Friends Festival  |
|         2 | Safe Haven Animal Rescue     |        3 | Fall Furry Friends Festival  |
|         1 | Happy Paws Shelter           |        3 | Fall Furry Friends Festival  |
|         6 | Critter Care Wildlife Center |        4 | Winter Wonderland Pet Adoption |
|         5 | Feathered Friends Aviary     |        4 | Winter Wonderland Pet Adoption |
|         4 | Rescue Me Dog Haven          |        4 | Winter Wonderland Pet Adoption |
|         3 | Purrfect Homes Cat Shelter   |        4 | Winter Wonderland Pet Adoption |
|         2 | Safe Haven Animal Rescue     |        4 | Winter Wonderland Pet Adoption |
|         1 | Happy Paws Shelter           |        4 | Winter Wonderland Pet Adoption |
|         6 | Critter Care Wildlife Center |        5 | Holiday Homecoming for Pets  |
|         5 | Feathered Friends Aviary     |        5 | Holiday Homecoming for Pets  |
|         4 | Rescue Me Dog Haven          |        5 | Holiday Homecoming for Pets  |
```

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

```
mysql> SELECT
    -> S.ShelterID,
    ->     S.Name AS ShelterName,
    ->     COUNT(P.PetID) AS AvailableForAdoptionCount
    -> FROM
    ->     Shelters S
    -> JOIN
    ->     Pets P ON S.ShelterID = P.ShelterID
    -> WHERE
    ->     P.AvailableForAdoption = 1
    -> GROUP BY
    ->     S.ShelterID, S.Name
    -> ORDER BY
    ->     AvailableForAdoptionCount DESC;
+----------+---------------------------+---------------------------+
| ShelterID | ShelterName               | AvailableForAdoptionCount |
+----------+---------------------------+---------------------------+
|        1 | Happy Paws Shelter        |                         2 |
|        3 | Purrfect Homes Cat Shelter |                         2 |
+----------+---------------------------+---------------------------+
2 rows in set (0.00 sec)

mysql>
```