Coding Challenges - PetPals, The Pet Adoption Platform

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

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: AdoptionEvents
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)

TASKS:

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

Query: //For initialising the database we need to create the database//

Create Database PetPals;

```
mysql> create database PetPals;
Query OK, 1 row affected (0.03 sec)
```

Show databases;

```
mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| carconnect         |
| hexadb             |
| information_schema |
| mysql              |
| performance_schema |
| petpals            |
| practice           |
| sakila             |
| sys                |
| techshop           |
| world              |
+--------------------+
11 rows in set (0.09 sec)
```

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

Query:
//Table for pets//
create table Pets (PetID int primary key,Name varchar(30),Age int,Breed varchar(30),Type varchar(30),AvailableForAdoption bool);

```
mysql> create table Pets (PetID int primary key,Name varchar(30),Age int,Breed varchar(30),Type varchar(30),AvailableFor
Adoption bool);
Query OK, 0 rows affected (0.06 sec)

mysql> desc pets;
+--------------------+-------------+------+-----+---------+-------+
| Field              | Type        | Null | Key | Default | Extra |
+--------------------+-------------+------+-----+---------+-------+
| PetID              | int         | NO   | PRI | NULL    |       |
| Name               | varchar(30) | YES  |     | NULL    |       |
| Age                | int         | YES  |     | NULL    |       |
| Breed              | varchar(30) | YES  |     | NULL    |       |
| Type               | varchar(30) | YES  |     | NULL    |       |
| AvailableForAdoption | tinyint(1) | YES  |     | NULL    |       |
+--------------------+-------------+------+-----+---------+-------+
6 rows in set (0.03 sec)
```

//Table for Shelters//

create table Shelters(shelterID int primary key,Name
varchar(50),Location varchar(50));

```
mysql> create table Shelters(shelterID int primary key,Name varchar(50),Location varchar(50));
Query OK, 0 rows affected (0.04 sec)

mysql> desc shelters;
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| shelterID | int         | NO   | PRI | NULL    |       |
| Name      | varchar(50) | YES  |     | NULL    |       |
| Location  | varchar(50) | YES  |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```

// Table for Donations//
create table Donations(DonationID int primary key, DonorName
varchar(30),DonationType varchar(30),DonationAmount
decimal,DonationItem varchar(30),DonationDate date);

```
mysql> create table Donations(DonationID int primary key, DonorName varchar(30),DonationType varchar(30),DonationAmount
decimal,DonationItem varchar(30),DonationDate date);
Query OK, 0 rows affected (0.03 sec)

mysql> desc Donations;
+----------------+---------------+------+-----+---------+-------+
| Field          | Type          | Null | Key | Default | Extra |
+----------------+---------------+------+-----+---------+-------+
| DonationID     | int           | NO   | PRI | NULL    |       |
| DonorName      | varchar(30)   | YES  |     | NULL    |       |
| DonationType   | varchar(30)   | YES  |     | NULL    |       |
| DonationAmount | decimal(10,0) | YES  |     | NULL    |       |
| DonationItem   | varchar(30)   | YES  |     | NULL    |       |
| DonationDate   | date          | YES  |     | NULL    |       |
+----------------+---------------+------+-----+---------+-------+
6 rows in set (0.00 sec)
```

//Table for AdoptionEvents//

create table AdoptionEvents(EventID int primary key,EventName
varchar(50),EventDate date,Location Varchar(50));

```
mysql> create table AdoptionEvents(EventID int primary key,EventName varchar(50),EventDate date,Location Varchar(50));
Query OK, 0 rows affected (0.03 sec)

mysql> desc AdoptionEvents;
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| EventID   | int         | NO   | PRI | NULL    |       |
| EventName | varchar(50) | YES  |     | NULL    |       |
| EventDate | date        | YES  |     | NULL    |       |
| Location  | varchar(50) | YES  |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

//Table for Participants//

create table participants(ParticipantID int primary key,ParticipantName varchar(50), participantType varchar(50), EventID int);

```
mysql> create table participants(ParticipantID int  primary key,ParticipantName varchar(50), participantType varchar(50)
, EventID int);
Query OK, 0 rows affected (0.03 sec)

mysql> desc participants;
+-----------------+-------------+------+-----+---------+-------+
| 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.

Query:
alter table participants
add foreign key(EventID) references AdoptionEvents(EventId);

```
mysql> alter table  participants
    -> add  foreign key(EventID) references AdoptionEvents(EventId);
Query OK, 0 rows affected (0.11 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

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

Query: create table if not exists participants(ParticipantID int primary key,ParticipantName varchar(50), participantType varchar(50), EventID int);

```
mysql> create table if not exists participants(ParticipantID int  primary key,ParticipantName varchar(50), participantTy
pe varchar(50), EventID int);
Query OK, 0 rows affected, 1 warning (0.01 sec)
```

INSERT INTO Pets (PetID, Name, Age, Breed, Type, AvailableForAdoption) VALUES
(1, 'Buddy', 3, 'Labrador Retriever', 'Dog', 1),
(2, 'Whiskers', 2, 'Siamese', 'Cat', 1),
(3, 'Simba', 4, 'Persian', 'Cat', 1),
(4, 'Toddy', 2, 'Golden Retriever', 'Dog', 1),
(5, 'Milo', 3, 'Maine Coon', 'Cat', 0),
(6, 'Rocky', 2, 'Bulldog', 'Dog', 1),
(7, 'Oreo', 2, 'Domestic Shorthair', 'Cat', 1),
(8, 'Bella', 1, 'Ragdoll', 'Cat', 1),
(9, 'Molly', 3, 'Siamese Mix', 'Cat', 1),
(10, 'Cooper', 2, 'Chihuahua', 'Dog', 1);

```
mysql> INSERT INTO Pets (PetID, Name, Age, Breed, Type, AvailableForAdoption) VALUES
    -> (1, 'Buddy', 3, 'Labrador Retriever', 'Dog', 1),
    -> (2, 'Whiskers', 2, 'Siamese', 'Cat', 1),
    -> (3, 'Simba', 4, 'Persian', 'Cat', 1),
    -> (4, 'Toddy', 2, 'Golden Retriever', 'Dog', 1),
    -> (5, 'Milo', 3, 'Maine Coon', 'Cat', 0),
    -> (6, 'Rocky', 2, 'Bulldog', 'Dog', 1),
    -> (7, 'Oreo', 2, 'Domestic Shorthair', 'Cat', 1),
    -> (8, 'Bella', 1, 'Ragdoll', 'Cat', 1),
    -> (9, 'Molly', 3, 'Siamese Mix', 'Cat', 1),
    -> (10, 'Cooper', 2, 'Chihuahua', 'Dog', 1);
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

INSERT INTO Shelters (ShelterID, Name, Location) VALUES
(1, 'Happy Tails Animal Shelter', 'Hyderabad, Andhra Pradesh'),
(2, 'Paws and Claws Rescue', 'Vijayawada, Andhra Pradesh'),
(3, 'Furry Friends Adoption Center', 'Visakhapatnam, Andhra Pradesh'),
(4, 'Safe Haven Animal Sanctuary', 'Guntur, Andhra Pradesh'),
(5, 'Rescue Me Animal Shelter', 'Nellore, Andhra Pradesh'),
(6, 'Forever Home Pet Rescue', 'Kurnool, Andhra Pradesh'),
(7, 'Second Chance Animal Shelter', 'Rajahmundry, Andhra Pradesh'),
(8, 'Loving Hearts Animal Rescue', 'Tirupati, Andhra Pradesh'),
(9, 'Compassionate Care Animal Center', 'Tirupati, Andhra Pradesh'),
(10, 'Hopeful Paws Pet Adoption Center', 'Rajhmundry, Andhra Pradesh');

```
mysql> INSERT INTO Shelters (ShelterID, Name, Location) VALUES
    -> (1, 'Happy Tails Animal Shelter', 'Hyderabad, Andhra Pradesh'),
    -> (2, 'Paws and Claws Rescue', 'Vijayawada, Andhra Pradesh'),
    -> (3, 'Furry Friends Adoption Center', 'Visakhapatnam, Andhra Pradesh'),
    -> (4, 'Safe Haven Animal Sanctuary', 'Guntur, Andhra Pradesh'),
    -> (5, 'Rescue Me Animal Shelter', 'Nellore, Andhra Pradesh'),
    -> (6, 'Forever Home Pet Rescue', 'Kurnool, Andhra Pradesh'),
    -> (7, 'Second Chance Animal Shelter', 'Rajahmundry, Andhra Pradesh'),
    -> (8, 'Loving Hearts Animal Rescue', 'Tirupati, Andhra Pradesh'),
    -> (9, 'Compassionate Care Animal Center', 'Tirupati, Andhra Pradesh'),
    -> (10, 'Hopeful Paws Pet Adoption Center', 'Rajhmundry, Andhra Pradesh');
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

INSERT INTO Donations (DonationID, DonorName, DonationType, DonationAmount, DonationItem, DonationDate) VALUES
(1, 'Rahul', 'Cash', 5000.00, NULL, '2024-04-16'),
(2, 'Priya', 'Item', NULL, 'Blankets', '2024-03-13'),
(3, 'Ravi', 'Cash', 2500.00, NULL, '2023-04-17'),
(4, 'Aishwarya', 'Item', NULL, 'Dog Food', '2024-04-17'),
(5, 'Akhila', 'Cash', 1750.50, NULL, '2024-02-16'),
(6, 'Mayuka', 'Cash', 2000.00, NULL, '2024-01-15'),
(7, 'Sneha', 'Item', NULL, 'Toys', '2024-04-15'),
(8, 'Vikram', 'Cash', 3150.00, NULL, '2024-02-14'),
(9, 'Neha', 'Item', NULL, 'Scratching Posts', '2024-04-14'),
(10, 'shivam dube', 'Cash', 7000.00, NULL, '2024-04-13');

```
mysql> INSERT INTO Donations (DonationID, DonorName, DonationType, DonationAmount, DonationItem, DonationDate) VALUES
    -> (1, 'Rahul', 'Cash', 5000.00, NULL, '2024-04-16'),
    -> (2, 'Priya', 'Item', NULL, 'Blankets', '2024-03-13'),
    -> (3, 'Ravi', 'Cash', 2500.00, NULL, '2023-04-17'),
    -> (4, 'Aishwarya', 'Item', NULL, 'Dog Food', '2024-04-17'),
    -> (5, 'Akhila', 'Cash', 1750.50, NULL, '2024-02-16'),
    -> (6, 'Mayuka', 'Cash', 2000.00, NULL, '2024-01-15'),
    -> (7, 'Sneha', 'Item', NULL, 'Toys', '2024-04-15'),
    -> (8, 'Vikram', 'Cash', 3150.00, NULL, '2024-02-14'),
    -> (9, 'Neha', 'Item', NULL, 'Scratching Posts', '2024-04-14'),
    -> (10, 'shivam dube', 'Cash', 7000.00, NULL, '2024-04-13');
Query OK, 10 rows affected, 1 warning (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 1
```

INSERT INTO AdoptionEvents (EventID, EventName, EventDate, Location) VALUES
(1, 'Pet Adoption Drive', '2024-04-20', 'Hyderabad, Andhra Pradesh'),
(2, 'Furry Friends Adoption Fair', '2024-04-21', 'Vijayawada, Andhra Pradesh'),
(3, 'Happy Tails Adoption Event', '2024-04-22', 'Visakhapatnam, Andhra Pradesh'),
(4, 'Paws and Claws Adoption Day', '2024-04-23', 'Guntur, Andhra Pradesh'),
(5, 'Rescue Me Pet Adoption Event', '2024-04-24', 'Nellore, Andhra Pradesh'),
(6, 'Forever Home Adoption Fair', '2024-04-25', 'Kurnool, Andhra Pradesh'),
(7, 'Second Chance Adoption Drive', '2024-04-26', 'Rajahmundry, Andhra Pradesh'),
(8, 'Loving Hearts Adoption Event', '2024-04-27', 'Tirupati, Andhra Pradesh'),
(9, 'Hopeful Paws Adoption Fair', '2024-04-28', 'Rajhmundry, Andhra Pradesh'),
(10, 'Purrfect Haven Adoption Day', '2024-04-29', 'Tirupati, Andhra Pradesh');

```
mysql> INSERT INTO AdoptionEvents (EventID, EventName, EventDate, Location) VALUES
    -> (1, 'Pet Adoption Drive', '2024-04-20', 'Hyderabad, Andhra Pradesh'),
    -> (2, 'Furry Friends Adoption Fair', '2024-04-21', 'Vijayawada, Andhra Pradesh'),
    -> (3, 'Happy Tails Adoption Event', '2024-04-22', 'Visakhapatnam, Andhra Pradesh'),
    -> (4, 'Paws and Claws Adoption Day', '2024-04-23', 'Guntur, Andhra Pradesh'),
    -> (5, 'Rescue Me Pet Adoption Event', '2024-04-24', 'Nellore, Andhra Pradesh'),
    -> (6, 'Forever Home Adoption Fair', '2024-04-25', 'Kurnool, Andhra Pradesh'),
    -> (7, 'Second Chance Adoption Drive', '2024-04-26', 'Rajahmundry, Andhra Pradesh'),
    -> (8, 'Loving Hearts Adoption Event', '2024-04-27', 'Tirupati, Andhra Pradesh'),
    -> (9, 'Hopeful Paws Adoption Fair', '2024-04-28', 'Rajhmundry, Andhra Pradesh'),
    -> (10, 'Purrfect Haven Adoption Day', '2024-04-29', 'Tirupati, Andhra Pradesh');
Query OK, 10 rows affected (0.02 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

INSERT INTO Participants (ParticipantID, ParticipantName, ParticipantType, EventID)
VALUES
(1, 'Happy Tails Animal Shelter', 'Shelter', 1),
(2, 'Paws and Claws Rescue', 'Shelter', 2),
(3, 'Rahul', 'Adopter', 1),
(4, 'Furry Friends Adoption Center', 'Shelter', 3),
(5, 'Ravi', 'Adopter', 3),
(6, 'Safe Haven Animal Sanctuary', 'Shelter', 4),
(7, 'Aishwarya', 'Adopter', 4),
(8, 'Rescue Me Animal Shelter', 'Shelter', 5),
(9, 'Priya ', 'Adopter', 2),
(10, 'Akhil', 'Adopter', 5);

```
mysql> INSERT INTO Participants (ParticipantID, ParticipantName, ParticipantType, EventID) VALUES
    -> (1, 'Happy Tails Animal Shelter', 'Shelter', 1),
    -> (2, 'Paws and Claws Rescue', 'Shelter', 2),
    -> (3, 'Rahul', 'Adopter', 1),
    -> (4, 'Furry Friends Adoption Center', 'Shelter', 3),
    -> (5, 'Ravi', 'Adopter', 3),
    -> (6, 'Safe Haven Animal Sanctuary', 'Shelter', 4),
    -> (7, 'Aishwarya', 'Adopter', 4),
    -> (8, 'Rescue Me Animal Shelter', 'Shelter', 5),
    -> (9, 'Priya ', 'Adopter', 2),
    -> (10, 'Akhil', 'Adopter', 5);
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

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.

Query: select * from pets where AvailabileForAdoption = 1;

```
mysql> select * from pets where AvailableForAdoption=1;
+-------+----------+------+---------------------+------+---------------------+
| PetID | Name     | Age  | Breed               | Type | AvailableForAdoption |
+-------+----------+------+---------------------+------+---------------------+
|     1 | Buddy    |    3 | Labrador Retriever  | Dog  |                   1 |
|     2 | Whiskers |    2 | Siamese             | Cat  |                   1 |
|     3 | Simba    |    4 | Persian             | Cat  |                   1 |
|     4 | Toddy    |    2 | Golden Retriever    | Dog  |                   1 |
|     6 | Rocky    |    2 | Bulldog             | Dog  |                   1 |
|     7 | Oreo     |    2 | Domestic Shorthair  | Cat  |                   1 |
|     8 | Bella    |    1 | Ragdoll             | Cat  |                   1 |
|     9 | Molly    |    3 | Siamese Mix         | Cat  |                   1 |
|    10 | Cooper   |    2 | Chihuahua           | Dog  |                   1 |
+-------+----------+------+---------------------+------+---------------------+
9 rows in set (0.00 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.

Query:
select P.participantName, p.ParticipantType from participants as p Inner join AdoptionEvents as A on P.EventID=A.EventId where A.EventID = 4;

```
mysql> select P.participantName, p.ParticipantType from participants as p Inner join AdoptionEvents as A on P.EventID=A.
EventId  where A.EventID = 4;
+-------------------------+-----------------+
| participantName         | ParticipantType |
+-------------------------+-----------------+
| Safe Haven Animal Sanctuary | Shelter     |
| Aishwarya               | Adopter         |
+-------------------------+-----------------+
2 rows in set (0.01 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.

Query:update shelters
set name='puurfect Haeven', Loaction='Hyderabad, Andhra Pradesh'
where shelterID=5;

```
mysql> update shelters
    -> set name='puurfect Haeven', Location='Hyderabad, Andhra Pradesh'
    -> where shelterID=5;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select *from shelters
    -> where shelterID=5;
+-----------+-----------------+----------------------------+
| shelterID | Name            | Location                   |
+-----------+-----------------+----------------------------+
|         5 | puurfect Haeven | Hyderabad, Andhra Pradesh  |
+-----------+-----------------+----------------------------+
1 row in set (0.00 sec)
```

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.

Query:

Select s.name , sum(d.donationAmount) as Totaldonation from shelters s Inner join
Donations d on s.ShelterID=d.donatedto group by s.name;

```
mysql> Select  s.name , sum(d.donationAmount) as Totaldonation  from shelters s Inner join Donations d on s.ShelterID=d.
donatedto group by s.name;
+-------------------------------+---------------+
| name                          | Totaldonation |
+-------------------------------+---------------+
| Happy Tails Animal Shelter    |          2500 |
| Paws and Claws Rescue         |          5000 |
| Furry Friends Adoption Center |          1751 |
| Safe Haven Animal Sanctuary   |          NULL |
| puurfect Haeven               |          2000 |
| Second Chance Animal Shelter  |          3150 |
| Compassionate Care Animal Center |       7000 |
+-------------------------------+---------------+
7 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.

Query:

 Select * from pets where AvailbleForAdoption =1;

```
mysql> select  * from pets where   AvailableForAdoption = 1;
+-------+----------+------+---------------------+------+----------------------+
| PetID | Name     | Age  | Breed               | Type | AvailableForAdoption |
+-------+----------+------+---------------------+------+----------------------+
|     1 | Buddy    |    3 | Labrador Retriever  | Dog  |                    1 |
|     2 | Whiskers |    2 | Siamese             | Cat  |                    1 |
|     3 | Simba    |    4 | Persian             | Cat  |                    1 |
|     4 | Toddy    |    2 | Golden Retriever    | Dog  |                    1 |
|     6 | Rocky    |    2 | Bulldog             | Dog  |                    1 |
|     7 | Oreo     |    2 | Domestic Shorthair  | Cat  |                    1 |
|     8 | Bella    |    1 | Ragdoll             | Cat  |                    1 |
|     9 | Molly    |    3 | Siamese Mix         | Cat  |                    1 |
|    10 | Cooper   |    2 | Chihuahua           | Dog  |                    1 |
+-------+----------+------+---------------------+------+----------------------+
9 rows in set (0.01 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

Query:

Select YEAR(DonationDate) AS DonationYear,MONTH(DonationDate) AS
DonationMonth,SUM(DonationAmount) as TotalDonation FROM Donations
GROUP BY YEAR(DonationDate),MONTH(DonationDate)
ORDER BY YEAR(DonationDate),MONTH(DonationDate);

```
mysql> Select YEAR(DonationDate) AS DonationYear,MONTH(DonationDate) AS DonationMonth,SUM(DonationAmount) as TotalDonati
on FROM Donations GROUP BY YEAR(DonationDate),MONTH(DonationDate)
    -> ORDER BY YEAR(DonationDate),MONTH(DonationDate);
+--------------+---------------+---------------+
| DonationYear | DonationMonth | TotalDonation |
+--------------+---------------+---------------+
|         2023 |             4 |          2500 |
|         2024 |             1 |          2000 |
|         2024 |             2 |          4901 |
|         2024 |             3 |          NULL |
|         2024 |             4 |         12000 |
+--------------+---------------+---------------+
5 rows in set (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.

Query:
 select distinct breed from pets where (age between 1 and 3) or(age >5);

```
mysql>  select distinct breed from pets where (age between 1 and 3) or(age >5);
+--------------------+
| breed              |
+--------------------+
| Labrador Retriever |
| Siamese            |
| Golden Retriever   |
| Maine Coon         |
| Bulldog            |
| Domestic Shorthair |
| Ragdoll            |
| Siamese Mix        |
| Chihuahua          |
+--------------------+
9 rows in set (0.01 sec)
```

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

Query:

 Select p.Name,p.age,p.breed, p.type,s.Name from pets p Inner join shelters s on
p.shelterID= s.ShelterID where Availableforadoption =1;

```
mysql>  Select p.Name,p.age,p.breed, p.type,s.Name from pets p Inner join shelters s on p.sID= s.ShelterID  where Availa
bleforadoption =1;
+----------+------+--------------------+------+--------------------------------+
| Name     | age  | breed              | type | Name                           |
+----------+------+--------------------+------+--------------------------------+
| Buddy    |    3 | Labrador Retriever | Dog  | Happy Tails Animal Shelter     |
| Whiskers |    2 | Siamese            | Cat  | Hopeful Paws Pet Adoption Center |
| Simba    |    4 | Persian            | Cat  | Forever Home Pet Rescue        |
| Toddy    |    2 | Golden Retriever   | Dog  | Second Chance Animal Shelter   |
| Rocky    |    2 | Bulldog            | Dog  | puurfect Haeven                |
| Oreo     |    2 | Domestic Shorthair | Cat  | Safe Haven Animal Sanctuary    |
| Bella    |    1 | Ragdoll            | Cat  | Compassionate Care Animal Center |
| Molly    |    3 | Siamese Mix        | Cat  | Safe Haven Animal Sanctuary    |
| Cooper   |    2 | Chihuahua          | Dog  | Paws and Claws Rescue          |
+----------+------+--------------------+------+--------------------------------+
9 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

Query:
 select count(*) from participants pt
  join adoptionevents a on pt.eventId=a.eventId
  join shelters s on a.shelter_id=s.shelterId

where s.location='Hyderabad,Andhrapradesh';

```
mysql>  select count(*) from participants pt
    ->    join adoptionevents a on pt.eventId=a.eventId
    ->    join shelters  s on a.shelter_id=s.shelterId
    -> where s.location=' Hyderabad, Andhra Pradesh';
+----------+
| count(*) |
+----------+
|        0 |
+----------+
1 row in set (0.00 sec)
```

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

Query:

select distinct breed from pets where age between 1 and 5;

```
mysql> select distinct breed
    -> from pets
    -> where age between 1 and 5;
+--------------------+
| breed              |
+--------------------+
| Labrador Retriever |
| Siamese            |
| Persian            |
| Golden Retriever   |
| Maine Coon         |
| Bulldog            |
| Domestic Shorthair |
| Ragdoll            |
| Siamese Mix        |
| Chihuahua          |
+--------------------+
10 rows in set (0.00 sec)
```

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

Query: select * from pets
whereAvailableforAdoption=1;

```
mysql> select * from pets where AvailableforAdoption=1;
+-------+----------+------+-------------------+------+---------------------+
| PetID | Name     | Age  | Breed             | Type | AvailableForAdoption |
+-------+----------+------+-------------------+------+---------------------+
|     1 | Buddy    |    3 | Labrador Retriever | Dog  |                   1 |
|     2 | Whiskers |    2 | Siamese           | Cat  |                   1 |
|     3 | Simba    |    4 | Persian           | Cat  |                   1 |
|     4 | Toddy    |    2 | Golden Retriever  | Dog  |                   1 |
|     6 | Rocky    |    2 | Bulldog           | Dog  |                   1 |
|     7 | Oreo     |    2 | Domestic Shorthair | Cat  |                   1 |
|     8 | Bella    |    1 | Ragdoll           | Cat  |                   1 |
|     9 | Molly    |    3 | Siamese Mix       | Cat  |                   1 |
|    10 | Cooper   |    2 | Chihuahua         | Dog  |                   1 |
+-------+----------+------+-------------------+------+---------------------+
9 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.

Query:

Select p.Name,pt.ParticipantName from Pets p JOIN Participants pt ON p.PetID=pet_id where p.AvailableForAdoption=0;

```
mysql> Select p.Name,pt.ParticipantName from Pets p JOIN Participants pt ON p.PetID=pet_id where p.AvailableForAdoption=0;
+------+-----------------+
| Name | ParticipantName |
+------+-----------------+
| Milo | Ravi            |
+------+-----------------+
1 row 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.

Query:
select s.shelterID,s.name,count(p.petId)from shelters s inner join pets p on s.shelterId= p.SID and AvailableforAdoption=1
group by s.shelterID,s.name;

```
mysql> select s.shelterID,s.name,count(p.petId)from shelters s inner join pets p on s.shelterId= p.SID and  AvailableforAdoption=1
    -> group by s.shelterID,s.name;
+----------+-------------------------------+----------------+
| shelterID | name                         | count(p.petId) |
+----------+-------------------------------+----------------+
|        1 | Happy Tails Animal Shelter    |              1 |
|       10 | Hopeful Paws Pet Adoption Center |            1 |
|        6 | Forever Home Pet Rescue       |              1 |
|        7 | Second Chance Animal Shelter  |              1 |
|        5 | puurfect Haeven               |              1 |
|        4 | Safe Haven Animal Sanctuary   |              2 |
|        9 | Compassionate Care Animal Center |            1 |
|        2 | Paws and Claws Rescue         |              1 |
+----------+-------------------------------+----------------+
8 rows in set (0.00 sec)
```

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

Query:

Select p1.name, p2.name,p1.breed from pets p1 inner join petsp2 on p1.petID=petID and p1.breed=p2.breed;

```
mysql> Select p1.name, p2.name,p1.breed from pets p1 inner join pets p2 on p1.petID=p2.petID and p1.breed=p2.breed;
+----------+----------+---------------------+
| name     | name     | breed               |
+----------+----------+---------------------+
| Buddy    | Buddy    | Labrador Retriever  |
| Whiskers | Whiskers | Siamese             |
| Simba    | Simba    | Persian             |
| Toddy    | Toddy    | Golden Retriever    |
| Milo     | Milo     | Maine Coon          |
| Rocky    | Rocky    | Bulldog             |
| Oreo     | Oreo     | Domestic Shorthair  |
| Bella    | Bella    | Ragdoll             |
| Molly    | Molly    | Siamese Mix         |
| Cooper   | Cooper   | Chihuahua           |
+----------+----------+---------------------+
10 rows in set (0.00 sec)
```

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

Query:
Select * from shelters cross join adaoptionEvents;

```
   4 | Safe Haven Animal Sanctuary     | Guntur, Andhra Pradesh         |  4 | Paws and Claws Adoption Day  | 2024-04-23 | Guntur, Andhra Pradesh
   3 | Furry Friends Adoption Center   | Visakhapatnam, Andhra Pradesh  |  4 | Paws and Claws Adoption Day  | 2024-04-23 | Guntur, Andhra Pradesh
   2 | Paws and Claws Rescue           | Vijayawada, Andhra Pradesh     |  4 | Paws and Claws Adoption Day  | 2024-04-23 | Guntur, Andhra Pradesh
   1 | Happy Tails Animal Shelter      | Hyderabad, Andhra Pradesh      |  4 | Paws and Claws Adoption Day  | 2024-04-23 | Guntur, Andhra Pradesh
  10 | Hopeful Paws Pet Adoption Center| Rajhmundry, Andhra Pradesh     |  5 | Rescue Me Pet Adoption Event | 2024-04-24 | Nellore, Andhra Pradesh
   9 | Compassionate Care Animal Center| Tirupati, Andhra Pradesh       |  5 | Rescue Me Pet Adoption Event | 2024-04-24 | Nellore, Andhra Pradesh
   8 | Loving Hearts Animal Rescue     | Tirupati, Andhra Pradesh       |  5 | Rescue Me Pet Adoption Event | 2024-04-24 | Nellore, Andhra Pradesh
   7 | Second Chance Animal Shelter    | Rajahmundry, Andhra Pradesh    |  5 | Rescue Me Pet Adoption Event | 2024-04-24 | Nellore, Andhra Pradesh
   6 | Forever Home Pet Rescue         | Kurnool, Andhra Pradesh        |  5 | Rescue Me Pet Adoption Event | 2024-04-24 | Nellore, Andhra Pradesh
   5 | puurfect Haeven                 | Hyderabad, Andhra Pradesh      |  5 | Rescue Me Pet Adoption Event | 2024-04-24 | Nellore, Andhra Pradesh
   4 | Safe Haven Animal Sanctuary     | Guntur, Andhra Pradesh         |  5 | Rescue Me Pet Adoption Event | 2024-04-24 | Nellore, Andhra Pradesh
   3 | Furry Friends Adoption Center   | Visakhapatnam, Andhra Pradesh  |  5 | Rescue Me Pet Adoption Event | 2024-04-24 | Nellore, Andhra Pradesh
   2 | Paws and Claws Rescue           | Vijayawada, Andhra Pradesh     |  5 | Rescue Me Pet Adoption Event | 2024-04-24 | Nellore, Andhra Pradesh
   1 | Happy Tails Animal Shelter      | Hyderabad, Andhra Pradesh      |  5 | Rescue Me Pet Adoption Event | 2024-04-24 | Nellore, Andhra Pradesh
  10 | Hopeful Paws Pet Adoption Center| Rajhmundry, Andhra Pradesh     |  6 | Forever Home Adoption Fair   | 2024-04-25 | Kurnool, Andhra Pradesh
   9 | Compassionate Care Animal Center| Tirupati, Andhra Pradesh       |  6 | Forever Home Adoption Fair   | 2024-04-25 | Kurnool, Andhra Pradesh
   8 | Loving Hearts Animal Rescue     | Tirupati, Andhra Pradesh       |  6 | Forever Home Adoption Fair   | 2024-04-25 | Kurnool, Andhra Pradesh
   7 | Second Chance Animal Shelter    | Rajahmundry, Andhra Pradesh    |  6 | Forever Home Adoption Fair   | 2024-04-25 | Kurnool, Andhra Pradesh
   6 | Forever Home Pet Rescue         | Kurnool, Andhra Pradesh        |  6 | Forever Home Adoption Fair   | 2024-04-25 | Kurnool, Andhra Pradesh
   5 | puurfect Haeven                 | Hyderabad, Andhra Pradesh      |  6 | Forever Home Adoption Fair   | 2024-04-25 | Kurnool, Andhra Pradesh
   4 | Safe Haven Animal Sanctuary     | Guntur, Andhra Pradesh         |  6 | Forever Home Adoption Fair   | 2024-04-25 | Kurnool, Andhra Pradesh
   3 | Furry Friends Adoption Center   | Visakhapatnam, Andhra Pradesh  |  6 | Forever Home Adoption Fair   | 2024-04-25 | Kurnool, Andhra Pradesh
   2 | Paws and Claws Rescue           | Vijayawada, Andhra Pradesh     |  6 | Forever Home Adoption Fair   | 2024-04-25 | Kurnool, Andhra Pradesh
   1 | Happy Tails Animal Shelter      | Hyderabad, Andhra Pradesh      |  6 | Forever Home Adoption Fair   | 2024-04-25 | Kurnool, Andhra Pradesh
  10 | Hopeful Paws Pet Adoption Center| Rajhmundry, Andhra Pradesh     |  7 | Second Chance Adoption Drive | 2024-04-26 | Rajahmundry, Andhra Pradesh
   9 | Compassionate Care Animal Center| Tirupati, Andhra Pradesh       |  7 | Second Chance Adoption Drive | 2024-04-26 | Rajahmundry, Andhra Pradesh
   8 | Loving Hearts Animal Rescue     | Tirupati, Andhra Pradesh       |  7 | Second Chance Adoption Drive | 2024-04-26 | Rajahmundry, Andhra Pradesh
   7 | Second Chance Animal Shelter    | Rajahmundry, Andhra Pradesh    |  7 | Second Chance Adoption Drive | 2024-04-26 | Rajahmundry, Andhra Pradesh
   6 | Forever Home Pet Rescue         | Kurnool, Andhra Pradesh        |  7 | Second Chance Adoption Drive | 2024-04-26 | Rajahmundry, Andhra Pradesh
   5 | puurfect Haeven                 | Hyderabad, Andhra Pradesh      |  7 | Second Chance Adoption Drive | 2024-04-26 | Rajahmundry, Andhra Pradesh
   4 | Safe Haven Animal Sanctuary     | Guntur, Andhra Pradesh         |  7 | Second Chance Adoption Drive | 2024-04-26 | Rajahmundry, Andhra Pradesh
   3 | Furry Friends Adoption Center   | Visakhapatnam, Andhra Pradesh  |  7 | Second Chance Adoption Drive | 2024-04-26 | Rajahmundry, Andhra Pradesh
   2 | Paws and Claws Rescue           | Vijayawada, Andhra Pradesh     |  7 | Second Chance Adoption Drive | 2024-04-26 | Rajahmundry, Andhra Pradesh
   1 | Happy Tails Animal Shelter      | Hyderabad, Andhra Pradesh      |  7 | Second Chance Adoption Drive | 2024-04-26 | Rajahmundry, Andhra Pradesh
  10 | Hopeful Paws Pet Adoption Center| Rajhmundry, Andhra Pradesh     |  8 | Loving Hearts Adoption Event | 2024-04-27 | Tirupati, Andhra Pradesh
   9 | Compassionate Care Animal Center| Tirupati, Andhra Pradesh       |  8 | Loving Hearts Adoption Event | 2024-04-27 | Tirupati, Andhra Pradesh
   8 | Loving Hearts Animal Rescue     | Tirupati, Andhra Pradesh       |  8 | Loving Hearts Adoption Event | 2024-04-27 | Tirupati, Andhra Pradesh
   7 | Second Chance Animal Shelter    | Rajahmundry, Andhra Pradesh    |  8 | Loving Hearts Adoption Event | 2024-04-27 | Tirupati, Andhra Pradesh
   6 | Forever Home Pet Rescue         | Kurnool, Andhra Pradesh        |  8 | Loving Hearts Adoption Event | 2024-04-27 | Tirupati, Andhra Pradesh
   5 | puurfect Haeven                 | Hyderabad, Andhra Pradesh      |  8 | Loving Hearts Adoption Event | 2024-04-27 | Tirupati, Andhra Pradesh
   4 | Safe Haven Animal Sanctuary     | Guntur, Andhra Pradesh         |  8 | Loving Hearts Adoption Event | 2024-04-27 | Tirupati, Andhra Pradesh
   3 | Furry Friends Adoption Center   | Visakhapatnam, Andhra Pradesh  |  8 | Loving Hearts Adoption Event | 2024-04-27 | Tirupati, Andhra Pradesh
   2 | Paws and Claws Rescue           | Vijayawada, Andhra Pradesh     |  8 | Loving Hearts Adoption Event | 2024-04-27 | Tirupati, Andhra Pradesh
   1 | Happy Tails Animal Shelter      | Hyderabad, Andhra Pradesh      |  8 | Loving Hearts Adoption Event | 2024-04-27 | Tirupati, Andhra Pradesh
  10 | Hopeful Paws Pet Adoption Center| Rajhmundry, Andhra Pradesh     |  9 | Hopeful Paws Adoption Fair   | 2024-04-28 | Rajhmundry, Andhra Pradesh
   9 | Compassionate Care Animal Center| Tirupati, Andhra Pradesh       |  9 | Hopeful Paws Adoption Fair   | 2024-04-28 | Rajhmundry, Andhra Pradesh
   8 | Loving Hearts Animal Rescue     | Tirupati, Andhra Pradesh       |  9 | Hopeful Paws Adoption Fair   | 2024-04-28 | Rajhmundry, Andhra Pradesh
   7 | Second Chance Animal Shelter    | Rajahmundry, Andhra Pradesh    |  9 | Hopeful Paws Adoption Fair   | 2024-04-28 | Rajhmundry, Andhra Pradesh
   6 | Forever Home Pet Rescue         | Kurnool, Andhra Pradesh        |  9 | Hopeful Paws Adoption Fair   | 2024-04-28 | Rajhmundry, Andhra Pradesh
   5 | puurfect Haeven                 | Hyderabad, Andhra Pradesh      |  9 | Hopeful Paws Adoption Fair   | 2024-04-28 | Rajhmundry, Andhra Pradesh
   4 | Safe Haven Animal Sanctuary     | Guntur, Andhra Pradesh         |  9 | Hopeful Paws Adoption Fair   | 2024-04-28 | Rajhmundry, Andhra Pradesh
   3 | Furry Friends Adoption Center   | Visakhapatnam, Andhra Pradesh  |  9 | Hopeful Paws Adoption Fair   | 2024-04-28 | Rajhmundry, Andhra Pradesh
   2 | Paws and Claws Rescue           | Vijayawada, Andhra Pradesh     |  9 | Hopeful Paws Adoption Fair   | 2024-04-28 | Rajhmundry, Andhra Pradesh
   1 | Happy Tails Animal Shelter      | Hyderabad, Andhra Pradesh      |  9 | Hopeful Paws Adoption Fair   | 2024-04-28 | Rajhmundry, Andhra Pradesh
  10 | Hopeful Paws Pet Adoption Center| Rajhmundry, Andhra Pradesh     | 10 | Purrfect Haven Adoption Day  | 2024-04-29 | Tirupati, Andhra Pradesh
   9 | Compassionate Care Animal Center| Tirupati, Andhra Pradesh       | 10 | Purrfect Haven Adoption Day  | 2024-04-29 | Tirupati, Andhra Pradesh
   8 | Loving Hearts Animal Rescue     | Tirupati, Andhra Pradesh       | 10 | Purrfect Haven Adoption Day  | 2024-04-29 | Tirupati, Andhra Pradesh
   7 | Second Chance Animal Shelter    | Rajahmundry, Andhra Pradesh    | 10 | Purrfect Haven Adoption Day  | 2024-04-29 | Tirupati, Andhra Pradesh
   6 | Forever Home Pet Rescue         | Kurnool, Andhra Pradesh        | 10 | Purrfect Haven Adoption Day  | 2024-04-29 | Tirupati, Andhra Pradesh
   5 | puurfect Haeven                 | Hyderabad, Andhra Pradesh      | 10 | Purrfect Haven Adoption Day  | 2024-04-29 | Tirupati, Andhra Pradesh
   4 | Safe Haven Animal Sanctuary     | Guntur, Andhra Pradesh         | 10 | Purrfect Haven Adoption Day  | 2024-04-29 | Tirupati, Andhra Pradesh
   3 | Furry Friends Adoption Center   | Visakhapatnam, Andhra Pradesh  | 10 | Purrfect Haven Adoption Day  | 2024-04-29 | Tirupati, Andhra Pradesh
   2 | Paws and Claws Rescue           | Vijayawada, Andhra Pradesh     | 10 | Purrfect Haven Adoption Day  | 2024-04-29 | Tirupati, Andhra Pradesh
   1 | Happy Tails Animal Shelter      | Hyderabad, Andhra Pradesh      | 10 | Purrfect Haven Adoption Day  | 2024-04-29 | Tirupati, Andhra Pradesh
+-----+---------------------------------+--------------------------------+----+------------------------------+------------+-----------------------------+
100 rows in set (0.00 sec)
```

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

 Query:
Select s.name, count(p.petID) from shelters s
inner join pets p on s.shelterID=p.SID
Where availableforadoption=0
Group by s.name
Order by count(p.petID)
Desc limit 1;

```
mysql> Select s.name, count(p.petID) from shelters s
    -> inner join pets p on s.shelterID=p.SID
    -> Where availableforadoption=0
    -> Group by s.name
    -> Order by count(p.petID)
    -> Desc limit 1;
+----------------------------------+----------------+
| name                             | count(p.petID) |
+----------------------------------+----------------+
| Hopeful Paws Pet Adoption Center |              1 |
+----------------------------------+----------------+
1 row in set (0.00 sec)
```