



DATABASE SYSTEMS MINI PROJECT

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Database Systems

GROUP NO - 14

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1 Part A Relational Database

1.1 Chapter 1 Requirement Analysis

1.1.1 Functional Requirements

During this project it is clearly understand whether the relationship has build up upon the pet adoption centre. Initially concluded that the entities, attributes and the relationships where the database of pet adoption which is deals with the adopters and also the pet availability . here used the conceptual database model while these process it has converted the conceptual representation into the logical structure of database through the normalization process. In these database it was used the MySql to represent the physical structure of the database on Pet_Adoption.

- First identify the user under the categories as adopters, admin, employees as well as the personal details of them.
- As the main relationship is occurred with the users with the pet which are under adopted or they has still live in this centre as well as including with the details of the pets availability.
- Considering pet entity it mainly focused on their health issues from that there has stored data as vet visit details , as well as the medical history of those animals.
- When considering about the pet adoption centre it has direct relationship with the users and transactions whom are adopters, or the donators it will be transacted with. As well as it includes the financial also it provides that it has mainly income of it.
- Considering about the user there is a entity named shelter where it was managed or worked employees in the adoption centres where they has spread over the country.
- It can be a user as an adopter or willing to be an adopter so that there is an opportunity to showcase the abilities of their pets or can watch the abilities of the pets and can be get a dicision of think of the adoption.
- As an adopter there is a main service provide here that is can be get veterinary services under the various vets' supervision.

1.1.2 Data Requirements

Considering about these database it can be identified as basically 8 entities and that was consistence with 2 weak entities also. Others are named as strong entities. All the entities and the attributes of the database is provided below.

➤ Strong entities and attributes

1. User

User_ID
Name
Contact_No
Email
Adress
Reg_Date

2. PET

Pet_ID
User_ID

Pet_Name
Pet_Type
Age
Date of birth
Breed
Availability

3. Transaction

Trans_ID
User_ID
Vet_ID
Trans_Date
Amount
Trans_Type

4. Financial

Amount
Trans_ID
User_ID

5. Event

Event_ID
Event_Name
Event_Date
User_ID
Event_Location

6. Vetanary

Vet_ID
Vet_Name
User_ID
V_Date
Pet_ID
Medicine

7. Vet_Visit

Vetvisit_ID
Vet_ID
Visit_Date
Reason
Vet_Name
Pet_ID

➤ Weak entites and attributes

1. Medical_History
History_ID

Pet_ID
Pre_Date
Details

2. Comments

2 Chapter 2 Conceptual Design

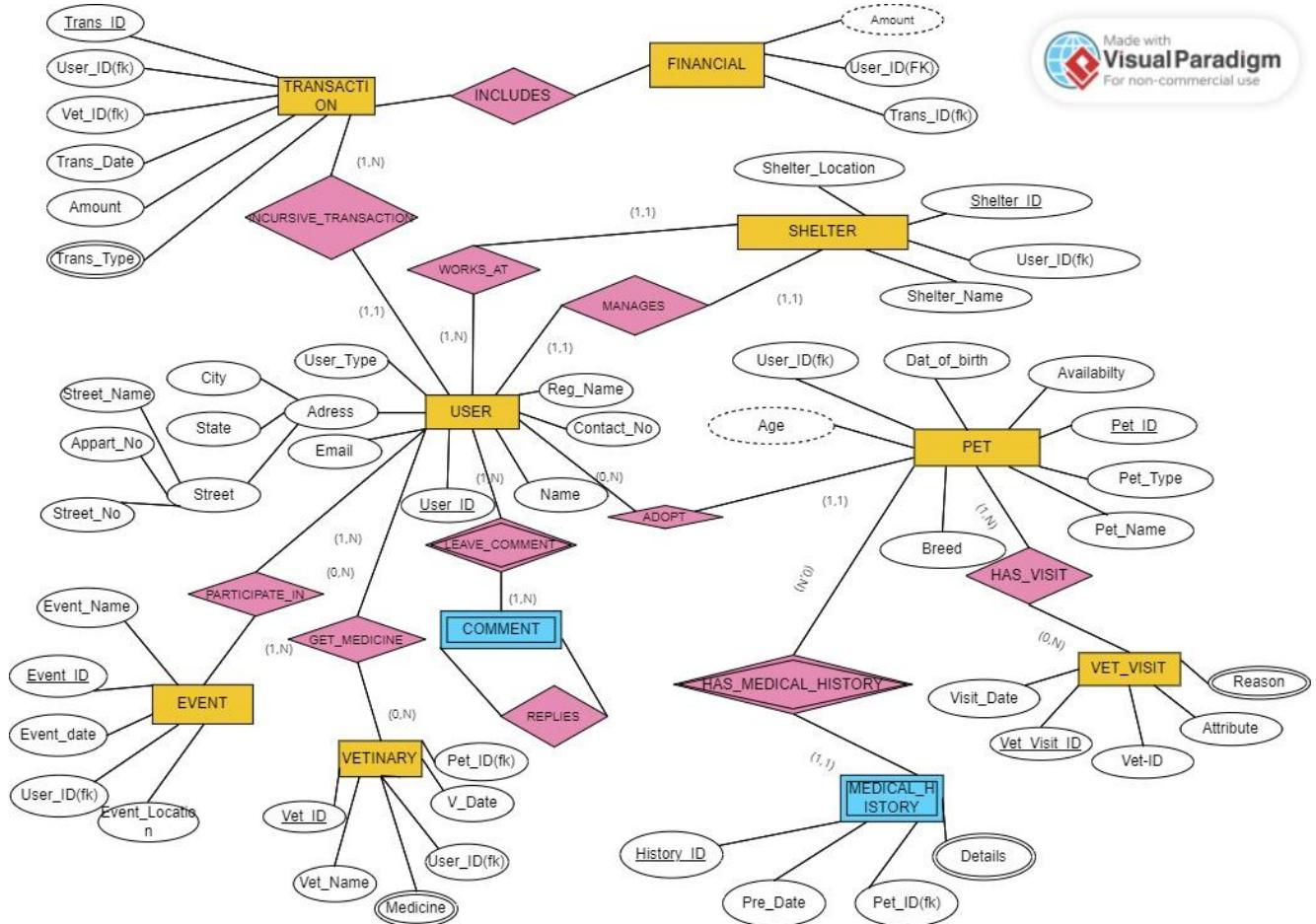


Figure 1: Entity Relationship Diagram of the Pet Adoption Database

Logical Design

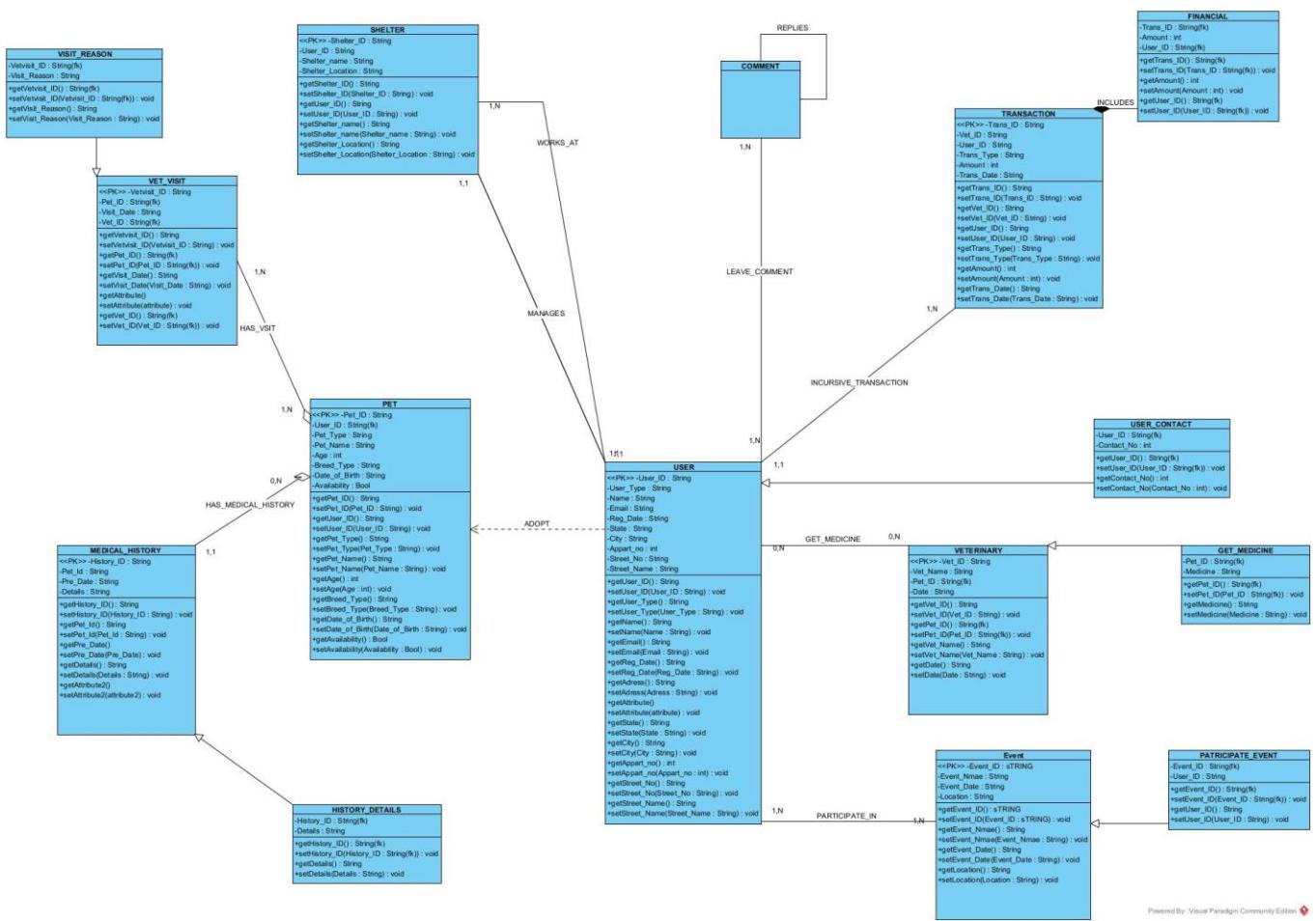
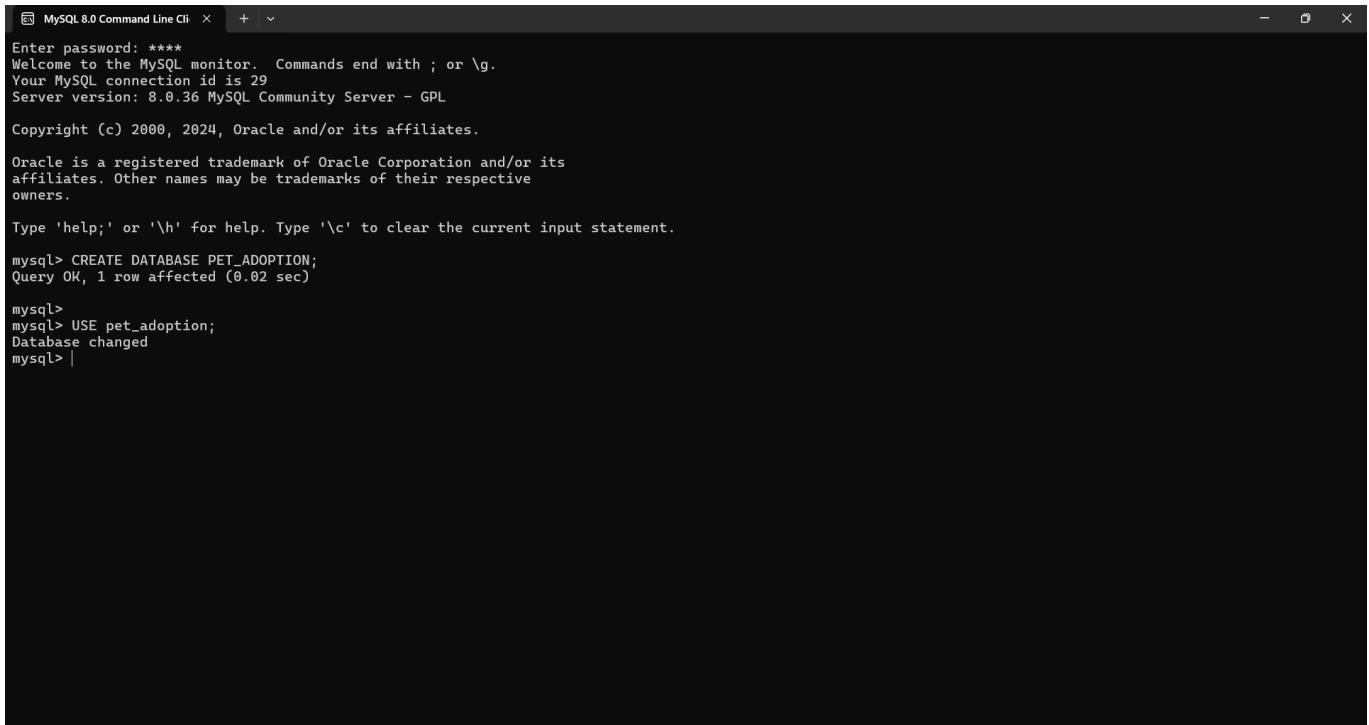


Figure 2: Logical Database Design

3 Chapter 4 – Implementation

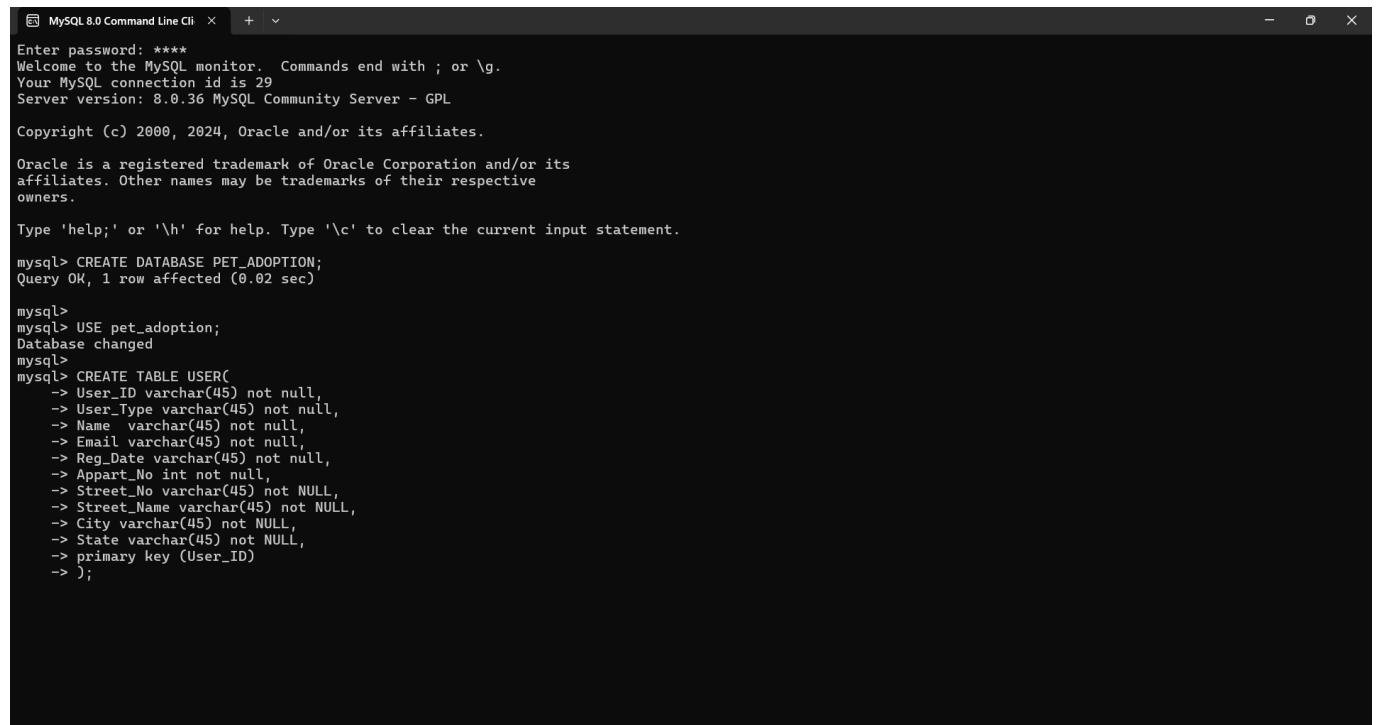
3.1 Create the Data base



```
MySQL 8.0 Command Line Cli  X + ^ Enter password: **** Welcome to the MySQL monitor. Commands end with ; or \g. Your MySQL connection id is 29 Server version: 8.0.36 MySQL Community Server - GPL Copyright (c) 2000, 2024, Oracle and/or its affiliates. Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners. Type 'help;' or '\h' for help. Type '\c' to clear the current input statement. mysql> CREATE DATABASE PET_ADOPTION; Query OK, 1 row affected (0.02 sec) mysql> USE pet_adoption; Database changed mysql> |
```

Figure 3: create database

3.1.1 Create Tables



```
MySQL 8.0 Command Line Cli  X + ^ Enter password: **** Welcome to the MySQL monitor. Commands end with ; or \g. Your MySQL connection id is 29 Server version: 8.0.36 MySQL Community Server - GPL Copyright (c) 2000, 2024, Oracle and/or its affiliates. Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners. Type 'help;' or '\h' for help. Type '\c' to clear the current input statement. mysql> CREATE DATABASE PET_ADOPTION; Query OK, 1 row affected (0.02 sec) mysql> USE pet_adoption; Database changed mysql> mysql> CREATE TABLE USER(    > User_ID varchar(45) not null,    > User_Type varchar(45) not null,    > Name varchar(45) not null,    > Email varchar(45) not null,    > Reg_Date varchar(45) not null,    > Appart_No int not null,    > Street_No varchar(45) not NULL,    > Street_Name varchar(45) not NULL,    > City varchar(45) not NULL,    > State varchar(45) not NULL,    > primary key (User_ID)    > );
```

Figure 4: create USER table

```
MySQL 8.0 Command Line Cli  +  X

Enter password: ****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 36
Server version: 8.0.36 MySQL Community Server - GPL

Copyright (c) 2000, 2024, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> CREATE DATABASE PET_ADOPTION;
Query OK, 1 row affected (0.01 sec)

mysql>
mysql> USE pet_adoption;
Database changed
mysql>
mysql> CREATE TABLE USER(
    --> User_ID varchar(45) not null,
    --> User_Type varchar(45) not null,
    --> Name varchar(45) not null,
    --> Email varchar(45) not null,
    --> Reg_Date varchar(45) not null,
    --> Appart_No int not null,
    --> Street_No varchar(45) not NULL,
    --> Street_Name varchar(45) not NULL,
    --> City varchar(45) not NULL,
    --> State varchar(45) not NULL,
    --> primary key (User_ID)
    --> );
Query OK, 0 rows affected (0.05 sec)

mysql> CREATE TABLE USER_CONTACT(
    --> User_ID varchar(45),
    --> User_Contact_No varchar(45),
    --> primary key(User_ID,User_Contact_No)
    --> );
Query OK, 0 rows affected (0.04 sec)

mysql> ALTER TABLE USER_CONTACT
    --> ADD CONSTRAINT FOREIGN KEY (User_ID) REFERENCES USER(User_ID);
Query OK, 0 rows affected (0.10 sec)
```

Figure 5:Create User_Contact Table

```
MySQL 8.0 Command Line Cli  +  X

mysql> USE pet_adoption;
Database changed
mysql>
mysql> CREATE TABLE USER(
    --> User_ID varchar(45) not null,
    --> User_Type varchar(45) not null,
    --> Name varchar(45) not null,
    --> Email varchar(45) not null,
    --> Reg_Date varchar(45) not null,
    --> Appart_No int not null,
    --> Street_No varchar(45) not NULL,
    --> Street_Name varchar(45) not NULL,
    --> City varchar(45) not NULL,
    --> State varchar(45) not NULL,
    --> primary key (User_ID)
    --> );
Query OK, 0 rows affected (0.05 sec)

mysql> CREATE TABLE USER_CONTACT(
    --> User_ID varchar(45),
    --> User_Contact_No varchar(45),
    --> primary key(User_ID,User_Contact_No)
    --> );
Query OK, 0 rows affected (0.04 sec)

mysql> ALTER TABLE USER_CONTACT
    --> ADD CONSTRAINT FOREIGN KEY (User_ID) REFERENCES USER(User_ID);
Query OK, 0 rows affected (0.10 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql>
mysql> CREATE TABLE PET (
    --> Pet_ID varchar(45) NOT NULL,
    --> User_ID varchar(45),
    --> Pet_Type varchar(10) NOT NULL,
    --> Pet_Name varchar(10) NOT NULL,
    --> Age varchar(10) NOT NULL,
    --> Breed Varchar(50) NOT NULL,
    --> DateOfBirth varchar(10) NOT NULL,
    --> Availability varchar(10) NOT NULL,
    --> PRIMARY KEY (Pet_ID),
    --> FOREIGN KEY (User_ID) REFERENCES USER(User_ID)
    --> );
Query OK, 0 rows affected (0.15 sec)
```

Figure 6:Create PET Table

```
MySQL 8.0 Command Line Cli  +  ~
--> Appart_No int not null,
--> Street_No varchar(45) not NULL,
--> Street_Name varchar(45) not NULL,
--> City varchar(45) not NULL,
--> State varchar(45) not NULL,
--> primary key (User_ID)
--> );
Query OK, 0 rows affected (0.05 sec)

mysql> CREATE TABLE USER_CONTACT(
--> User_ID varchar(45),
--> User_Contact_No varchar(45),
--> primary key(User_ID,User_Contact_No)
--> );
Query OK, 0 rows affected (0.04 sec)

mysql> ALTER TABLE USER_CONTACT
--> ADD CONSTRAINT FOREIGN KEY (User_ID) REFERENCES USER(User_ID);
Query OK, 0 rows affected (0.10 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> CREATE TABLE PET (
--> Pet_ID varchar(45) NOT NULL,
--> User_ID varchar(45),
--> Pet_Type varchar(10) NOT NULL,
--> Pet_Name varchar(10) NOT NULL,
--> Age varchar(10) NOT NULL,
--> Breed varchar(50) NOT NULL,
--> DateOfBirth varchar(10) NOT NULL,
--> Availability varchar(10) NOT NULL,
--> PRIMARY KEY (Pet_ID),
--> FOREIGN KEY (User_ID) REFERENCES USER(User_ID)
--> );
Query OK, 0 rows affected (0.15 sec)

mysql> create table EVENT(
--> Event_ID varchar(100) not NULL,
--> Event_Name varchar(100) not NULL,
--> Event_Date varchar(100) not NULL,
--> Location varchar(100),
--> primary key(EVENT_ID)
--> );
Query OK, 0 rows affected (0.06 sec)
```

Figure 7: Create EVENT Table

```
MySQL 8.0 Command Line Cli  +  ~
--> User_ID varchar(45),
--> User_Contact_No varchar(45),
--> primary key(User_ID,User_Contact_No)
--> );
Query OK, 0 rows affected (0.04 sec)

mysql> ALTER TABLE USER_CONTACT
--> ADD CONSTRAINT FOREIGN KEY (User_ID) REFERENCES USER(User_ID);
Query OK, 0 rows affected (0.10 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> CREATE TABLE PET (
--> Pet_ID varchar(45) NOT NULL,
--> User_ID varchar(45),
--> Pet_Type varchar(10) NOT NULL,
--> Pet_Name varchar(10) NOT NULL,
--> Age varchar(10) NOT NULL,
--> Breed varchar(50) NOT NULL,
--> DateOfBirth varchar(10) NOT NULL,
--> Availability varchar(10) NOT NULL,
--> PRIMARY KEY (Pet_ID),
--> FOREIGN KEY (User_ID) REFERENCES USER(User_ID)
--> );
Query OK, 0 rows affected (0.15 sec)

mysql> create table EVENT(
--> Event_ID varchar(100) not NULL,
--> Event_Name varchar(100) not NULL,
--> Event_Date varchar(100) not NULL,
--> Location varchar(100),
--> primary key(EVENT_ID)
--> );
Query OK, 0 rows affected (0.06 sec)

mysql> create table PARTICIPATE_EVENT(
--> Event_ID varchar(100) not NULL,
--> User_ID varchar(45) not NULL,
--> primary key(EVENT_ID,USER_ID),
--> FOREIGN KEY (User_ID) REFERENCES USER(User_ID),
--> FOREIGN KEY (Event_ID) REFERENCES EVENT(Event_ID)
--> );
Query OK, 0 rows affected (0.19 sec)
```

Figure 8: Create Participate_Event Table

```
MySQL 8.0 Command Line Cli  +  ▾
--> User_ID varchar(45),
--> Pet_Type varchar(10) NOT NULL,
--> Pet_Name varchar(10) NOT NULL,
--> Age varchar(10) NOT NULL,
--> Breed varchar(50) NOT NULL,
--> DateOfBirth varchar(10) NOT NULL,
--> Availability varchar(10) NOT NULL,
--> PRIMARY KEY (Pet_ID),
--> FOREIGN KEY (User_ID) REFERENCES USER(User_ID)
--> );
Query OK, 0 rows affected (0.15 sec)

mysql> create table EVENT(
--> Event_ID varchar(100) not NULL,
--> Event_Name varchar(100) not NULL,
--> Event_Date varchar(100) not NULL,
--> Location varchar(100),
--> primary key(EVENT_ID)
--> );
Query OK, 0 rows affected (0.06 sec)

mysql> create table PARTICIPATE_EVENT(
--> Event_ID varchar(100) not NULL,
--> User_ID varchar(45) not NULL,
--> Event_Date varchar(100) not NULL,
--> primary key(EVENT_ID,USER_ID),
--> FOREIGN KEY (User_ID) REFERENCES USER(User_ID),
--> FOREIGN KEY (Event_ID) REFERENCES EVENT(Event_ID)
--> );
Query OK, 0 rows affected (0.19 sec)

mysql>
mysql> create table VETANARY(
--> VETANARY_ID varchar(45) not NULL,
--> PET_ID varchar(45) not NULL,
--> VET_NAME varchar(100) not NULL,
--> DATE varchar(100) not NULL,
--> primary key(VETANARY_ID),
--> FOREIGN KEY (PET_ID) REFERENCES PET(PET_ID)
--> );
Query OK, 0 rows affected (0.15 sec)

mysql> create table GET_MEDICINE(

```

Figure 9: Create VETANARY Table

```
MySQL 8.0 Command Line Cli  +  ▾
Query OK, 0 rows affected (0.15 sec)

mysql> create table EVENT(
--> Event_ID varchar(100) not NULL,
--> Event_Name varchar(100) not NULL,
--> Event_Date varchar(100) not NULL,
--> Location varchar(100),
--> primary key(EVENT_ID)
--> );
Query OK, 0 rows affected (0.06 sec)

mysql>
mysql> create table PARTICIPATE_EVENT(
--> Event_ID varchar(100) not NULL,
--> User_ID varchar(45) not NULL,
--> Event_Date varchar(100) not NULL,
--> primary key(EVENT_ID,USER_ID),
--> FOREIGN KEY (User_ID) REFERENCES USER(User_ID),
--> FOREIGN KEY (Event_ID) REFERENCES EVENT(Event_ID)
--> );
Query OK, 0 rows affected (0.19 sec)

mysql>
mysql> create table VETANARY(
--> VETANARY_ID varchar(45) not NULL,
--> PET_ID varchar(45) not NULL,
--> VET_NAME varchar(100) not NULL,
--> DATE varchar(100) not NULL,
--> primary key(VETANARY_ID),
--> FOREIGN KEY (PET_ID) REFERENCES PET(PET_ID)
--> );
Query OK, 0 rows affected (0.15 sec)

mysql> create table GET_MEDICINE(
--> PET_ID varchar(45) not NULL,
--> Medicine varchar(100) not NULL,
--> DATE varchar(100) not NULL,
--> primary key(PET_ID,Medicine),
--> FOREIGN KEY (PET_ID) REFERENCES PET(PET_ID)
--> );
Query OK, 0 rows affected (0.04 sec)

mysql>
```

Figure 10: Create Get_Medicine Table

```
MySQL 8.0 Command Line Cli - + v
mysql> create table PARTICIPATE_EVENT(
    --> Event_ID varchar(100) not NULL,
    --> User_ID varchar(45) not NULL,
    --> Event_Date varchar(100) not NULL,
    --> primary key(Event_ID,User_ID),
    --> FOREIGN KEY (User_ID) REFERENCES USER(User_ID),
    --> FOREIGN KEY (Event_ID) REFERENCES EVENT(Event_ID)
    --> );
Query OK, 0 rows affected (0.19 sec)

mysql> create table VETANARY(
    --> VETANARY_ID varchar(45) not NULL,
    --> PET_ID varchar(45) not NULL,
    --> VET_NAME varchar(100) not NULL,
    --> DATE varchar(100) not NULL,
    --> primary key(VETANARY_ID),
    --> FOREIGN KEY (PET_ID) REFERENCES PET(PET_ID)
    --> );
Query OK, 0 rows affected (0.15 sec)

mysql> create table GET_MEDICINE(
    -->
    --> PET_ID varchar(45) not NULL,
    --> Medicine varchar(100) not NULL,
    --> DATE varchar(100) not NULL,
    --> primary key(PET_ID,Medicine),
    --> FOREIGN KEY (PET_ID) REFERENCES PET(PET_ID)
    --> );
Query OK, 0 rows affected (0.04 sec)

mysql> create table TRANSACTION(
    --> User_ID varchar(45) not NULL,
    --> Vetary_ID varchar(45) not NULL,
    --> Trans_ID varchar(45) not NULL,
    --> Amount varchar(100),
    --> Trans_Type varchar(100),
    --> Trans_Date varchar(100),
    --> primary key(Trans_ID),
    --> FOREIGN KEY (User_ID) REFERENCES USER(User_ID),
    --> FOREIGN KEY (Vetary_ID) REFERENCES VETANARY(VETANARY_ID)
    --> );
Query OK, 0 rows affected (0.08 sec)
```

Figure 11: Create Transaction Table

```
MySQL 8.0 Command Line Cli - + v
--> FOREIGN KEY (PET_ID) REFERENCES PET(PET_ID)
--> );
Query OK, 0 rows affected (0.04 sec)

mysql> create table TRANSACTION(
    --> User_ID varchar(45) not NULL,
    --> Vetary_ID varchar(45) not NULL,
    --> Trans_ID varchar(45) not NULL,
    --> Amount varchar(100),
    --> Trans_Type varchar(100),
    --> Trans_Date varchar(100),
    --> primary key(Trans_ID),
    --> FOREIGN KEY (User_ID) REFERENCES USER(User_ID),
    --> FOREIGN KEY (Vetary_ID) REFERENCES VETANARY(VETANARY_ID)
    --> );
Query OK, 0 rows affected (0.08 sec)

mysql> ALTER TABLE TRANSACTION
    --> MODIFY COLUMN Vetary_ID varchar(45) DEFAULT NULL;
Query OK, 0 rows affected (0.09 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> create table MEDICAL_HISTORY(
    --> History_ID varchar(45) not NULL,
    --> Pet_ID varchar(45) not NULL,
    --> Pre_Date varchar(100) not NULL,
    --> primary key(History_ID),
    --> FOREIGN KEY (PET_ID) REFERENCES PET(PET_ID)
    --> );
Query OK, 0 rows affected (0.06 sec)

mysql> create table HISTORY_DETAIL(
    --> History_ID varchar(45) not NULL,
    --> DETAIL varchar(100) not NULL,
    --> primary key(History_ID,DETAIL),
    --> FOREIGN KEY (HISTORY_ID) REFERENCES MEDICAL_HISTORY(HISTORY_ID)
    --> );
Query OK, 0 rows affected (0.03 sec)

mysql> ^C
mysql>
```

Figure 12: Create Medical _History Table

```
MySQL> 
-->      FOREIGN KEY (PET_ID) REFERENCES PET(PET_ID)
--> );
Query OK, 0 rows affected (0.04 sec)

mysql> create table TRANSACTION(
-->     User_ID varchar(45) not NULL,
-->     Veterany_ID varchar(45) not NULL,
-->     Trans_ID varchar(45) not NULL,
-->     Amount varchar(100),
-->     Trans_Type varchar(100),
-->     Trans_Date varchar(100),
-->     primary key(Trans_ID),
-->     FOREIGN KEY (User_ID) REFERENCES USER(User_ID),
-->     FOREIGN KEY (Veterany_ID) REFERENCES VETANARY(VETANARY_ID)
--> );
Query OK, 0 rows affected (0.08 sec)

mysql> ALTER TABLE TRANSACTION
-->     MODIFY COLUMN Veterany_ID varchar(45) DEFAULT NULL;
Query OK, 0 rows affected (0.09 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> create table MEDICAL_HISTORY(
-->     History_ID varchar(45) not NULL,
-->     Pet_ID varchar(45) not NULL,
-->     Pre_Date varchar(100) not NULL,
-->     primary key(History_ID),
-->     FOREIGN KEY (PET_ID) REFERENCES PET(PET_ID)
--> );
Query OK, 0 rows affected (0.06 sec)

mysql> create table HISTORY_DETAIL(
-->     History_ID varchar(45) not NULL,
-->     DETAIL varchar(100) not NULL,
-->     primary key(History_ID,DETAIL),
-->     FOREIGN KEY (HISTORY_ID) REFERENCES MEDICAL_HISTORY(HISTORY_ID)
--> );
Query OK, 0 rows affected (0.03 sec)

mysql> ^C
mysql>
```

Figure 13: Create History_Detail Table

```
MySQL> 
-->     Trans_Type varchar(100),
-->     Trans_Date varchar(100),
-->     primary key(Trans_ID),
-->     FOREIGN KEY (User_ID) REFERENCES USER(User_ID),
-->     FOREIGN KEY (Veterany_ID) REFERENCES VETANARY(VETANARY_ID)
--> );
Query OK, 0 rows affected (0.08 sec)

mysql> ALTER TABLE TRANSACTION
-->     MODIFY COLUMN Veterany_ID varchar(45) DEFAULT NULL;
Query OK, 0 rows affected (0.09 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> create table MEDICAL_HISTORY(
-->     History_ID varchar(45) not NULL,
-->     Pet_ID varchar(45) not NULL,
-->     Pre_Date varchar(100) not NULL,
-->     primary key(History_ID),
-->     FOREIGN KEY (PET_ID) REFERENCES PET(PET_ID)
--> );
Query OK, 0 rows affected (0.06 sec)

mysql> create table HISTORY_DETAIL(
-->     History_ID varchar(45) not NULL,
-->     DETAIL varchar(100) not NULL,
-->     primary key(History_ID,DETAIL),
-->     FOREIGN KEY (HISTORY_ID) REFERENCES MEDICAL_HISTORY(HISTORY_ID)
--> );
Query OK, 0 rows affected (0.03 sec)

mysql> ^C
mysql> create table SHELTER(
-->     SHELTER_ID varchar(100) not NULL,
-->     USER_ID varchar(45) not NULL,
-->     SHELTER_NAME varchar(100) not NULL,
-->     SHEELTER_LOCATION varchar(100) not NULL,
-->     primary key(SHELTER_ID,USER_ID),
-->     FOREIGN KEY (USER_ID) REFERENCES USER(USER_ID)
--> );
Query OK, 0 rows affected (0.10 sec)
```

Figure 14: Create Shelter table

```
MySQL 8.0 Command Line Cli x + v
Records: 0 Duplicates: 0 Warnings: 0

mysql> create table MEDICAL_HISTORY(
    -> History_ID varchar(45) not NULL,
    -> Pet_ID varchar(45) not NULL,
    -> Pre_Date varchar(100) not NULL,
    -> primary key(History_ID),
    -> FOREIGN KEY (Pet_ID) REFERENCES PET(PET_ID)
    -> );
Query OK, 0 rows affected (0.06 sec)

mysql> create table HISTORY_DETAIL(
    -> History_ID varchar(45) not NULL,
    -> DETAIL varchar(100) not NULL,
    -> primary key(History_ID,DETAIL),
    -> FOREIGN KEY (History_ID) REFERENCES MEDICAL_HISTORY(HISTORY_ID)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> ^C
mysql>
mysql> create table SHELTER(
    -> SHELTER_ID varchar(100) not NULL,
    -> USER_ID varchar(45) not NULL,
    -> SHELTER_NAME varchar(100) not NULL,
    -> SHEELTER_LOCATION varchar(100) not NULL,
    -> primary key(SHELTER_ID,USER_ID),
    -> FOREIGN KEY (USER_ID) REFERENCES USER(USER_ID)
    -> );
Query OK, 0 rows affected (0.10 sec)

mysql>
mysql> create table FINANCIAL(
    -> TRANS_ID varchar(45) not NULL,
    -> User_ID varchar(45) not NULL,
    -> AMOUNT varchar(100) not NULL,
    -> primary key(TRANS_ID,User_ID),
    -> FOREIGN KEY (User_ID) REFERENCES USER(USER_ID),
    -> FOREIGN KEY (TRANS_ID) REFERENCES TRANSACTION(TRANS_ID)
    -> );
Query OK, 0 rows affected (0.07 sec)
```

Figure 15: Create financial table

```
MySQL 8.0 Command Line Cli x + v
mysql> create table HISTORY_DETAIL(
    -> History_ID varchar(45) not NULL,
    -> DETAIL varchar(100) not NULL,
    -> primary key(History_ID,DETAIL),
    -> FOREIGN KEY (History_ID) REFERENCES MEDICAL_HISTORY(HISTORY_ID)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> ^C
mysql>
mysql> create table SHELTER(
    -> SHELTER_ID varchar(100) not NULL,
    -> USER_ID varchar(45) not NULL,
    -> SHELTER_NAME varchar(100) not NULL,
    -> SHEELTER_LOCATION varchar(100) not NULL,
    -> primary key(SHELTER_ID,USER_ID),
    -> FOREIGN KEY (USER_ID) REFERENCES USER(USER_ID)
    -> );
Query OK, 0 rows affected (0.10 sec)

mysql>
mysql> create table FINANCIAL(
    -> TRANS_ID varchar(45) not NULL,
    -> User_ID varchar(45) not NULL,
    -> AMOUNT varchar(100) not NULL,
    -> primary key(TRANS_ID,User_ID),
    -> FOREIGN KEY (User_ID) REFERENCES USER(USER_ID),
    -> FOREIGN KEY (TRANS_ID) REFERENCES TRANSACTION(TRANS_ID)
    -> );
Query OK, 0 rows affected (0.07 sec)

mysql>
mysql> create table VET_VISIT(
    -> VETVISIT_ID varchar(45) not NULL,
    -> DATE varchar(100) not NULL,
    -> VET_NAME varchar(100) not NULL,
    -> VETANARY_ID varchar(45) not NULL,
    -> PET_ID varchar(45) not NULL,
    -> primary key(VETVISIT_ID),
    -> FOREIGN KEY (PET_ID) REFERENCES PET(PET_ID),
    -> FOREIGN KEY (VETANARY_ID) REFERENCES VETANARY(VETANARY_ID)
    -> );
Query OK, 0 rows affected (0.07 sec)

mysql> ALTER TABLE VET_VISIT
```

Figure 16: Create vet_visit table

```

MySQL 8.0 Command Line Cli  +  X
Query OK, 0 rows affected (0.10 sec)

mysql> create table FINANCIAL(
    -> TRANS_ID varchar(45) not NULL,
    ->     User_ID varchar(45) not NULL,
    ->     AMOUNT varchar(100) not NULL,
    -> primary key(TRANS_ID,USER_ID),
    -> FOREIGN KEY (USER_ID) REFERENCES USER(USER_ID),
    -> FOREIGN KEY (TRANS_ID) REFERENCES TRANSACTION(TRANS_ID)
    -> );
Query OK, 0 rows affected (0.07 sec)

mysql> create table VET_VISIT(
    -> VETVISIT_ID varchar(45) not NULL,
    -> DATE varchar(100) not NULL,
    -> VET_NAME varchar(100) not NULL,
    -> VETANARY_ID varchar(45) not NULL,
    -> PET_ID varchar(45) not NULL,
    -> primary key(VETVISIT_ID),
    -> FOREIGN KEY (PET_ID) REFERENCES PET(PET_ID),
    -> FOREIGN KEY (VETANARY_ID) REFERENCES VETANARY(VETANARY_ID)
    -> );
Query OK, 0 rows affected (0.07 sec)

mysql> ALTER TABLE VET_VISIT
    -> MODIFY COLUMN Vetary_ID varchar(45) DEFAULT NULL;
Query OK, 0 rows affected (0.11 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql>
mysql>
mysql> create table VISIT_REASON(
    ->
    -> VETVISIT_ID varchar(45) not NULL,
    -> Visit_reason varchar(100) not NULL,
    -> DATE varchar(100) not NULL,
    ->
    -> primary key(VETVISIT_ID,Visit_reason),
    -> FOREIGN KEY (VETVISIT_ID) REFERENCES VET_VISIT(VETVISIT_ID)
    ->
    -> );
Query OK, 0 rows affected (0.03 sec)

```

Figure 17: Create visit_reason table

```

MySQL 8.0 Command Line Cli  +  X
mysql>
mysql> UPDATE VISIT_REASON
    -> SET DATE = '26/03/2018'
    -> WHERE VETVISIT_ID ='VSI004' AND Visit_reason='TO WATCH';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT* FROM VISIT_REASON;
+-----+-----+-----+
| VETVISIT_ID | Visit_reason | DATE      |
+-----+-----+-----+
| VSI001      | MEDICINE    | 21/02/2023 |
| VSI002      | ADOPT       | 22/4/2020   |
| VSI003      | MEDICINE    | 14/5/2014   |
| VSI004      | MEDICINE    | 26/3/2018   |
| VSI004      | TO WATCH    | 26/03/2018  |
| VSI005      | TO WATCH    | 14/5/2022   |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> SHOW TABLES;
+-----+
| Tables_in_pet_adoption |
+-----+
| event
| financial
| get_medicine
| medical_history
| participate_event
| pet
| shelter
| transaction
| user
| user_contact
| vet_visit
| vetanary
| visit_reason
+-----+
13 rows in set (0.01 sec)

mysql>

```

Figure 18: Show all the created tables

3.1.2 Inserting Values

Insert values to user

```

MySQL> INSERT INTO USER VALUES ('U001', 'ADMIN', 'Namal Rajapaksha', 'namalrah456@gmail.com', '30/2/2023', '19', 'thissapura', 'chadayanthalawa', 'ampara', 'Srilanka');
Query OK, 1 row affected (0.01 sec)

MySQL> INSERT INTO USER VALUES ('U002', 'ADMIN', 'Kumara welgama ', 'kumar4322@gmail.com', '15/5/2020', '2', 'bogoda', 'marisiwella', 'Welimada', 'Srilanka');
Query OK, 1 row affected (0.00 sec)

MySQL> INSERT INTO USER VALUES ('U003', 'ADOPTER', 'Niranji', 'niranji5664@gmail.com', '24/12/2021', '45', 'weeragoda', 'bogala', 'badulla', 'Srilanka');
Query OK, 1 row affected (0.00 sec)

MySQL> INSERT INTO USER VALUES ('U004', 'NULL', 'Tharindu', 'tharindu5664@gmail.com', '22/1/2022', '23', 'kithulpe', 'haguranketha', 'Rikillagaskada', 'Srilanka');
Query OK, 1 row affected (0.00 sec)

MySQL> INSERT INTO USER VALUES ('U005', 'EMPLOYEE', 'Anura', 'anura5664@gmempil.com', '15/2/2024', '1', 'kandakadu', 'kampane', 'badulla', 'Srilanka');
Query OK, 1 row affected (0.00 sec)

MySQL> INSERT INTO USER VALUES ('U006', 'EMPLOYEE', 'Gihan', 'gihan5664@gmempil.com', '23/3/2022', '35', 'rajagahawewa', 'howewa', 'putththalama', 'Srilanka');
Query OK, 1 row affected (0.00 sec)

MySQL> INSERT INTO USER VALUES ('U007', 'ADOPTER', 'Malinda', 'malinda675@gmail.com', '24/2/2024', '356', 'marathmuni', 'maliyadda', 'mirissa', 'Srilanka');
Query OK, 1 row affected (0.00 sec)

MySQL> INSERT INTO USER VALUES ('U008', 'ADOPTER', 'Kapila', 'kapila4563@gmail.com', '13/2/2021', '108', 'beressa', 'kithulgala', 'hambanthota', 'Srilanka');
Query OK, 1 row affected (0.00 sec)

MySQL> INSERT INTO USER VALUES ('U009', 'ADOPTER', 'Kalpana', 'kalpana4563@gmail.com', '13/2/2024', '10', 'Gayagama', 'katukithula', 'hambegamuwa', 'Srilanka');
Query OK, 1 row affected (0.00 sec)

MySQL> INSERT INTO USER VALUES ('U010', 'ADOPTER', 'Nadun', 'Nadun5663@gmail.com', '13/12/2024', '53', 'Ethakandawake', 'Lunuwatte', 'Uva-paranagama', 'Srilanka');
Query OK, 1 row affected (0.00 sec)

MySQL> INSERT INTO USER VALUES ('U011', 'EMPLOYEE', 'Gihara', 'gihara664@gmempil.com', '28/8/2024', '56', 'Katumatiya', 'Hokandara', 'Kaduwela', 'Srilanka');
Query OK, 1 row affected (0.00 sec)

MySQL> INSERT INTO USER VALUES ('U012', 'EMPLOYEE', 'Kamasan', 'kamesan664@gmempil.com', '14/6/2021', '9', 'Ethiliwewa', 'Pigurana', 'Wellawaya', 'Srilanka');
Query OK, 1 row affected (0.00 sec)

MySQL> INSERT INTO USER VALUES ('U013', 'ADOPTER', 'Nirmal', 'Nirmal5663@gmail.com', '03/10/2021', '43', 'Kirawanagaam', 'Lunuwatte', 'Uva-paranagama', 'Srilanka');
Query OK, 1 row affected (0.00 sec)

MySQL> INSERT INTO USER VALUES ('U014', 'EMPLOYEE', 'NirmalI', 'NirmalI5663@gmail.com', '30/10/2021', '3', 'Kirawanagama', 'Lunuwatte', 'Uva-paranagama', 'Srilanka');
Query OK, 1 row affected (0.00 sec)

MySQL> select* from USER;

```

Figure 19: Insert values to the USER Table (1)

```

MySQL> INSERT INTO USER VALUES ('U0011', 'EMPLOYEE', 'Gihara', 'gihara664@gmempil.com', '28/8/2024', '56', 'Katumatiya', 'Hokandara', 'Kaduwela', 'Srilanka ');
Query OK, 1 row affected (0.01 sec)

MySQL> INSERT INTO USER VALUES ('U0012', 'EMPLOYEE', 'Kamasan', 'kamesan664@gmempil.com', '14/6/2021', '9', 'Ethiliwewa', 'Pigurana', 'Wellawaya', 'Srilanka ');
Query OK, 1 row affected (0.01 sec)

MySQL> INSERT INTO USER VALUES ('U0013', 'ADOPTER', 'Nirmal', 'Nirmal5663@gmail.com', '03/10/2021', '43', 'Kirawanagaam', 'Lunuwatte', 'Uva-paranagama', 'Sri Lanka');
Query OK, 1 row affected (0.01 sec)

MySQL> INSERT INTO USER VALUES ('U0014', 'EMPLOYEE', 'NirmalI', 'NirmalI5663@gmail.com', '30/10/2021', '3', 'Kirawanagama', 'Lunuwatte', 'Uva-paranagama', 'Srilanka');
Query OK, 1 row affected (0.01 sec)

MySQL> show USER table;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'U SER table' at line 1
mysql> select* from USER;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| User_ID | User_Type | Name | Email | Reg_Date | Appart_No | Street_No | Street_Name | City | State |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| U001 | ADMIN | Namal Rajapaksha | namalrah456@gmail.com | 30/2/2023 | 19 | thissapura | chadayanthalawa | ampara | Srilanka |
| U0011 | EMPLOYEE | Gihara | gihara664@gmempil.com | 28/8/2024 | 56 | Katumatiya | Hokandara | Kaduwela | Srilanka |
| U002 | ADMIN | Kumara welgama | kumar4322@gmail.com | 15/5/2020 | 2 | bogoda | marisiwella | Welimada | Srilanka |
| U003 | ADOPTER | Niranji | niranji5664@gmail.com | 24/12/2021 | 45 | weeragoda | bogala | badulla | Srilanka |
| U004 | NULL | Tharindu | tharindu5664@gmail.com | 22/1/2022 | 23 | Kithulpe | haguranketha | Rikillagaskada | Srilanka |
| U005 | EMPLOYEE | Anura | anura5664@gmempil.com | 15/2/2024 | 1 | kandakadu | kampane | badulla | Srilanka |
| U006 | EMPLOYEE | Gihan | gihan5664@gmempil.com | 23/3/2022 | 35 | rajagahawewa | howewa | putththalama | Srilanka |
| U007 | ADOPTER | Malinda | malinda675@gmail.com | 24/2/2024 | 356 | marathmuni | maliyadda | mirissa | Srilanka |
| U008 | ADOPTER | Kapila | kapila4563@gmail.com | 13/2/2021 | 108 | beressa | kithulgala | hambanthota | Srilanka |
| U010 | ADOPTER | Kalpana | kalpana4563@gmail.com | 13/2/2024 | 10 | Gayagama | katukithula | hambegamuwa | Srilanka |
| U012 | EMPLOYEE | Kamasan | kamesan664@gmempil.com | 14/6/2021 | 9 | Ethiliwewa | Pigurana | Wellawaya | Srilanka |
| U013 | ADOPTER | Nirmal | Nirmal5663@gmail.com | 03/10/2021 | 43 | Kirawanagaam | Lunuwatte | Uva-paranagama | Srilanka |
| U014 | EMPLOYEE | NirmalI | NirmalI5663@gmail.com | 30/10/2021 | 3 | Kirawanagama | Lunuwatte | Uva-paranagama | Srilanka |
| U015 | ADOPTER | Nadun | Nadun5663@gmail.com | 13/12/2024 | 53 | Ethakandawake | Lunuwatte | Uva-paranagama | Srilanka |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
14 rows in set (0.00 sec)

mysql> |

```

Figure 20: Show all the data of USER Table

```

MySQL 8.0 Command Line Cli  +  X

+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| U004 | NULL  | Tharindu   | tharindu5664@gmail.com | 22/1/2022  |    23 | kithulpe   | haguranketha | Rikillagaskada | Srilanka |
| U005 | EMPLOYEE | Anura     | anura5664@gmempil.com | 15/3/2024  |     1 | kandakadu  | kampane     | badulla      | Srilanka |
| U006 | EMPLOYEE | Gihan     | gihan5664@gmempil.com | 23/3/2022  |    35 | rajaghawewa | howewa      | putththalama | Srilanka |
| U007 | ADOPTER   | Malinda   | malinda075@gmail.com  | 24/2/2024  |   356 | marathmuni  | maliyadda   |               |
|       | mirissa   |           |                         |            |      |             |             |               |               |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
U008 | ADOPTER   | Kapila    | kapila4563@gmail.com | 13/2/2021  |   108 | beressa    | kithulgala  | hambanthota | Srilanka |
U010 | ADOPTER   | Kalpana   | kalpana4563@gmail.com | 13/2/2024  |    10 | Gayagama   | katukithula | hambegamuwa | Srilanka |
U012 | EMPLOYEE  | Kamasan   | kamesan664@gmempil.com | 14/6/2021  |     9 | Ethiliwewa | Pigurana    | Wellawaya   | Srilanka |
U013 | ADOPTER   | Nirmal    | Nirmal5663@gmail.com  | 03/10/2021 |    43 | Kirawanagaam | Lunuwatte   | Uva-paranagama | Srilanka |
U014 | EMPLOYEE  | NirmalI   | NirmalI5663@gmail.com | 30/10/2021 |     3 | Kirawanagama | Lunuwatte   | Uva-paranagama | Srilanka |
U015 | ADOPTER   | Nadun    | Nadun5663@gmail.com  | 13/12/2024  |    53 | Ethakandawake | Lunuwatte   | Uva-paranagama | Srilanka |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
14 rows in set (0.00 sec)

mysql> INSERT INTO USER_CONTACT VALUES ('U001', '774506161');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO USER_CONTACT VALUES ('U001', '572246145');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO USER_CONTACT VALUES ('U002', '722116995');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO USER_CONTACT VALUES ('U003', '728724600');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO USER_CONTACT VALUES ('U007', '71216785');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO USER_CONTACT VALUES ('U008', '522256780');
Query OK, 1 row affected (0.00 sec)

mysql> SELECT* FROM USER_CONTACT;
+-----+-----+
| User_ID | User_Contact_No |
+-----+-----+
| U001    | 572246145        |
| U001    | 774506161        |
| U002    | 722116995        |
| U003    | 728724600        |
| U007    | 71216785         |
| U008    | 522256780        |
+-----+-----+

```

Figure 21: Inserted values to User_Contact table

```

MySQL 8.0 Command Line Cli  +  X

mysql> INSERT INTO PET VALUES ('P001', NULL, 'Cat', 'Sam', '4', 'Abyssinian', '17/03/2020', 'Yes');
Query OK, 1 row affected (0.03 sec)

mysql> INSERT INTO PET VALUES ('P002', NULL, 'Dog', 'Jimmy', '3', 'Bulldog', '17/03/2021', 'Yes');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO PET VALUES ('P003', 'U003', 'Dog', 'Humpy', '4', 'Rottvialet', '17/03/2020', 'No');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO PET VALUES ('P004', 'U004', 'Cat', 'Larse', '6', 'Balinese', '17/03/2018', 'No');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO PET VALUES ('P005', 'U007', 'Parrot', 'Kiw', '1', 'Budgerigar', '17/03/2023', 'No');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO PET VALUES ('P006', 'U008', 'Parrot', 'Prut', '2', 'Cockatiel', '17/03/2022', 'No');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO PET VALUES ('P007', 'U010', 'Dog', 'Roxy', '5', 'Germen_Shepard', '17/03/2019', 'Yes');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO PET VALUES ('P008', NULL, 'Cat', 'Morse', '4', 'Persian', '17/03/2020', 'Yes');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO PET VALUES ('P009', 'U013', 'Dog', 'Jann', '6', 'Germen_Shepard', '3/10/2021', 'Yes');
Query OK, 1 row affected (0.00 sec)

mysql> SELECT*FROM PET;
+-----+-----+-----+-----+-----+-----+-----+-----+
| Pet_ID | User_ID | Pet_Type | Pet_Name | Age | Breed      | DateOfBirth | Availability |
+-----+-----+-----+-----+-----+-----+-----+-----+
| P001   | NULL    | Cat      | Sam      | 4   | Abyssinian | 17/03/2020  | Yes          |
| P0010  | NULL    | Dog      | KAL      | 6   | Germen_Shepard | 6/10/2021  | Yes          |
| P002   | NULL    | Dog      | Jimmy    | 3   | Bulldog    | 17/03/2021  | Yes          |
| P003   | U003    | Dog      | Humpy    | 4   | Rottvialet | 17/03/2020  | No           |
| P004   | U004    | Cat      | Larse    | 6   | Balinese   | 17/03/2018  | No           |
| P005   | U007    | Parrot   | Kiw      | 1   | Budgerigar | 17/03/2023  | No           |
| P006   | U008    | Parrot   | Prut    | 2   | Cockatiel  | 17/03/2022  | No           |
| P007   | U010    | Dog      | Roxy    | 5   | Germen_Shepard | 17/03/2019 | Yes          |
| P008   | NULL    | Cat      | Morse   | 4   | Persian    | 17/03/2020  | Yes          |
| P009   | U013    | Dog      | Jann    | 6   | Germen_Shepard | 3/10/2021  | Yes          |
+-----+-----+-----+-----+-----+-----+-----+-----+

```

Figure 22: Insert data to PET Table

```

MySQL> +-----+-----+-----+-----+
| P004 | U004 | Cat   | Larse | 6    | Balinese | 17/03/2018 | No
| P005 | U007 | Parrot | Kiw   | 1    | Budgerigar | 17/03/2023 | No
| P006 | U008 | Parrot | Prut  | 2    | Cockatiel | 17/03/2022 | No
| P007 | U010 | Dog   | Roxy  | 5    | Germen_Shepard | 17/03/2019 | Yes
| P008 | NULL  | Cat   | Morse | 4    | Persian  | 17/03/2020 | Yes
| P009 | U013 | Dog   | Jann  | 6    | Germen_Shepard | 3/10/2021 | Yes
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> INSERT INTO EVENT VALUES ('E001', 'Pet_Training_Mania', '14/5/2021', 'Ampara');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO EVENT VALUES ('E002', 'Pet_Palooza', '13/2/2025', 'Badulla');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO EVENT VALUES ('E003', 'Felina_Funday', '23/8/2024', 'NuwaraEliya');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO EVENT VALUES ('E004', 'Wagfest', '22/9/2024', 'NuwaraEliya');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO EVENT VALUES ('E005', 'Whisker_Wonderland', '25/12/2023', 'NuwaraEliya');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO EVENT VALUES ('E006', 'Wonder_Pets', '24/11/2026', 'Badulla');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO EVENT VALUES ('E007', 'Wonder_Pets with happy', '25/12/2026', 'Welimada');
Query OK, 1 row affected (0.00 sec)

mysql> SELECT* FROM EVENT;
+-----+-----+-----+-----+
| Event_ID | Event_Name      | Event_Date | Location |
+-----+-----+-----+-----+
| E001    | Pet_Training_Mania | 14/5/2021 | Ampara
| E002    | Pet_Palooza       | 13/2/2025 | Badulla
| E003    | Felina_Funday     | 23/8/2024 | NuwaraEliya
| E004    | Wagfest           | 22/9/2024 | NuwaraEliya
| E005    | Whisker_Wonderland | 25/12/2023 | NuwaraEliya
| E006    | Wonder_Pets        | 24/11/2026 | Badulla
| E007    | Wonder_Pets with happy | 25/12/2026 | Welimada
+-----+-----+-----+-----+
7 rows in set (0.00 sec)

```

Figure 23: Insert values of EVENT Table

```

MySQL> +-----+-----+-----+
| E002 | Pet_Palooza | 13/2/2025 | Badulla
| E003 | Felina_Funday | 23/8/2024 | NuwaraEliya
| E004 | Wagfest | 22/9/2024 | NuwaraEliya
| E005 | Whisker_Wonderland | 25/12/2023 | NuwaraEliya
| E006 | Wonder_Pets | 24/11/2026 | Badulla
| E007 | Wonder_Pets with happy | 25/12/2026 | Welimada
+-----+-----+-----+
7 rows in set (0.00 sec)

mysql> INSERT INTO PARTICIPATE_EVENT VALUES ('E001', 'U001','14/5/2021');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO PARTICIPATE_EVENT VALUES ('E001', 'U002','14/5/2021');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO PARTICIPATE_EVENT VALUES ('E002', 'U004','13/2/2025');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO PARTICIPATE_EVENT VALUES ('E002', 'U005','13/2/2025');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO PARTICIPATE_EVENT VALUES ('E003', 'U008','23/8/2024');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO PARTICIPATE_EVENT VALUES ('E005', 'U005', '25/12/2023');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO PARTICIPATE_EVENT VALUES ('E006', 'U003', '24/11/2026');
Query OK, 1 row affected (0.00 sec)

mysql> SELECT* FROM PARTICIPATE_EVENT;
+-----+-----+-----+
| Event_ID | User_ID | Event_Date |
+-----+-----+-----+
| E001 | U001 | 14/5/2021 |
| E001 | U002 | 14/5/2021 |
| E002 | U004 | 13/2/2025 |
| E002 | U005 | 13/2/2025 |
| E003 | U008 | 23/8/2024 |
| E005 | U005 | 25/12/2023 |
| E006 | U003 | 24/11/2026 |
+-----+-----+-----+
7 rows in set (0.00 sec)

```

Figure 24: Insert values to Participate_Event Table

```

MySQL 8.0 Command Line Cli  +  -
+-----+
| E001 | U002 | 14/5/2021 |
| E002 | U004 | 13/2/2025 |
| E002 | U005 | 13/2/2025 |
| E003 | U008 | 23/8/2024 |
| E005 | U005 | 25/12/2023 |
| E006 | U003 | 24/11/2026 |
+-----+
7 rows in set (0.00 sec)

mysql> INSERT INTO VETANARY VALUES ('VET001', 'P001', 'SAMSON', '23/4/2012');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO VETANARY VALUES ('VET002', 'P005', 'SHEENA', '22/3/2013');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO VETANARY VALUES ('VET003', 'P007', 'SAMSON', '14/5/2014');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO VETANARY VALUES ('VET004', 'P001', 'SHEENA', '16/7/2022');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO VETANARY VALUES ('VET005', 'P002', 'JONNY' , '15/3/2024');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO VETANARY VALUES ('VET006', 'P009', 'JONNY' , '10/3/2021');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO VETANARY VALUES ('VET007', 'P005', 'JONNY' , '11/3/2021');
Query OK, 1 row affected (0.00 sec)

mysql> SELECT* FROM VETANARY;
+-----+
| VETANARY_ID | PET_ID | VET_NAME | DATE      |
+-----+
| VET001     | P001   | SAMSON   | 23/4/2012 |
| VET002     | P005   | SHEENA   | 22/3/2013 |
| VET003     | P007   | SAMSON   | 14/5/2014 |
| VET004     | P001   | SHEENA   | 16/7/2022 |
| VET005     | P002   | JONNY    | 15/3/2024 |
| VET006     | P009   | JONNY    | 10/3/2021 |
| VET007     | P005   | JONNY    | 11/3/2021 |
+-----+
7 rows in set (0.00 sec)

```

Figure 25: Insert values into VETANARY table

```

MySQL>
mysql> INSERT INTO GET_MEDICINE VALUES ('P001', 'LANTI', '23/4/2012');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO GET_MEDICINE VALUES ('P001', 'KIMSI', '23/4/2012');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO GET_MEDICINE VALUES ('P005', 'LANTI', '15/3/2024');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO GET_MEDICINE VALUES ('P007', 'NULL', '14/5/2014');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO GET_MEDICINE VALUES ('P001', 'NULL', '23/4/2012');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO GET_MEDICINE VALUES ('P002', 'KANON', '15/3/2024');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO GET_MEDICINE VALUES ('P005', 'Kainthu', '18/3/2024');
Query OK, 1 row affected (0.00 sec)

mysql> SELECT 8 FROM GET_MEDICINE;
+---+
| 8 |
+---+
| 8 |
| 8 |
| 8 |
| 8 |
| 8 |
| 8 |
| 8 |
| 8 |
+---+
7 rows in set (0.00 sec)

mysql> SELECT * FROM GET_MEDICINE;
+-----+
| PET_ID | Medicine | DATE      |
+-----+
| P001   | KIMSI   | 23/4/2012 |
| P001   | LANTI   | 23/4/2012 |
| P001   | NULL    | 23/4/2012 |
| P002   | KANON   | 15/3/2024 |
+-----+

```

Figure 26: Insert data into GET_MEDICINE Table

```

MySQL 8.0 Command Line Cli  +  ~
+-----+
| P007 | NULL      | 14/5/2014 |
+-----+
7 rows in set (0.00 sec)

mysql> INSERT INTO TRANSACTION VALUES ('U010', 'VET003', 'TR1', '5000', 'VETANARY', '14/05/2022');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO TRANSACTION VALUES ('U007', 'VET002', 'TR2', '8000', 'VETANARY', '25/09/2013');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO TRANSACTION VALUES ('U008', NULL, 'TR3', '50000', 'ADOPTION', '14/05/2022');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO TRANSACTION VALUES ('U003', NULL, 'TR4', '600000', 'ADOPTION', '23/12/2015');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO TRANSACTION VALUES ('U008', NULL, 'TR6', '500000', 'DONATION', '24/11/2016');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO TRANSACTION VALUES ('U006', NULL, 'TR7', '200000', 'DONATION', '13/10/2024');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO TRANSACTION VALUES ('U014', NULL, 'TR8', '25000', 'ADOPTION', '17/3/2023');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO TRANSACTION VALUES ('U010', NULL, 'TR10', '45000', 'ADOPTION', '13/2/2023');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO TRANSACTION VALUES ('U013', NULL, 'TR9', '35000', 'ADOPTION', '10/3/2021');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO TRANSACTION VALUES ('U007', NULL, 'TR11', '56000', 'ADOPTION', '24/10/2024');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO TRANSACTION VALUES ('U006', NULL, 'TR12', '76000', 'ADOPTION', '27/10/2024');
Query OK, 1 row affected (0.00 sec)

mysql> SELECT* FROM TRANSACTION;
+-----+
| User_ID | Veterany_ID | Trans_ID | Amount | Trans_Type | Trans_Date |
+-----+
| U010   | VET003     | TR1     | 5000   | VETANARY   | 14/05/2022 |
| U010   | NULL        | TR10    | 45000  | ADOPTION   | 13/2/2023  |
| U007   | NULL        | TR11    | 56000  | ADOPTION   | 24/10/2024 |
| U006   | NULL        | TR12    | 76000  | ADOPTION   | 27/10/2024 |
+-----+

```

Figure 27: Insert values in to transaction table

```

MySQL 8.0 Command Line Cli  +  ~
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO TRANSACTION VALUES ('U003', NULL, 'TR4', '600000', 'ADOTION', '23/12/2015');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO TRANSACTION VALUES ('U008', NULL, 'TR6', '500000', 'DONATION', '24/11/2016');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO TRANSACTION VALUES ('U006', NULL, 'TR7', '200000', 'DONATION', '13/10/2024');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO TRANSACTION VALUES ('U014', NULL, 'TR8', '25000', 'ADOPTION', '17/3/2023');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO TRANSACTION VALUES ('U010', NULL, 'TR10', '45000', 'ADOPTION', '13/2/2023');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO TRANSACTION VALUES ('U013', NULL, 'TR9', '35000', 'ADOPTION', '10/3/2021');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO TRANSACTION VALUES ('U007', NULL, 'TR11', '56000', 'ADOPTION', '24/10/2024');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO TRANSACTION VALUES ('U006', NULL, 'TR12', '76000', 'ADOPTION', '27/10/2024');
Query OK, 1 row affected (0.00 sec)

mysql> SELECT* FROM TRANSACTION;
+-----+
| User_ID | Veterany_ID | Trans_ID | Amount | Trans_Type | Trans_Date |
+-----+
| U010   | VET003     | TR1     | 5000   | VETANARY   | 14/05/2022 |
| U010   | NULL        | TR10    | 45000  | ADOPTION   | 13/2/2023  |
| U007   | NULL        | TR11    | 56000  | ADOPTION   | 24/10/2024 |
| U006   | NULL        | TR12    | 76000  | ADOPTION   | 27/10/2024 |
| U003   | NULL        | TR2     | 8000   | VETANARY   | 25/09/2013 |
| U008   | NULL        | TR3     | 50000  | ADOPTION   | 14/05/2022 |
| U003   | NULL        | TR4     | 600000 | ADOTION   | 23/12/2015 |
| U008   | NULL        | TR6     | 500000 | DONATION  | 24/11/2016 |
| U006   | NULL        | TR7     | 200000 | DONATION  | 13/10/2024 |
| U014   | NULL        | TR8     | 25000  | ADOPTION   | 17/3/2023  |
| U013   | NULL        | TR9     | 35000  | ADOPTION   | 10/3/2021  |
+-----+
11 rows in set (0.00 sec)

mysql>

```

Figure 28: Show all the values of Transaction table

```

MySQL 8.0 Command Line Cli  +  X

| U014 | NULL      | TR8   | 25000 | ADOPTION | 17/3/2023 |
| U013 | NULL      | TR9   | 35000 | ADOPTION | 18/3/2021 |
+-----+-----+-----+-----+-----+-----+
11 rows in set (0.00 sec)

mysql> INSERT INTO Medical_History VALUES ('H001', 'P003', '21/2/2022');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Medical_History VALUES ('H002', 'P003', '20/3/2020');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Medical_History VALUES ('H003', 'P001', '22/4/2021');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Medical_History VALUES ('H004', 'P007', '23/4/2022');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Medical_History VALUES ('H005', 'P005', '20/5/2020');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Medical_History VALUES ('H006', 'P006', '20/4/2012');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Medical_History VALUES ('H007', 'P008', '23/8/2018');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Medical_History VALUES ('H008', 'P002', '25/8/2019');
Query OK, 1 row affected (0.01 sec)

mysql> SELECT* FROM Medical_History;
+-----+-----+-----+
| History_ID | Pet_ID | Pre_Date |
+-----+-----+-----+
| H001 | P003 | 21/2/2022 |
| H002 | P003 | 20/3/2020 |
| H003 | P001 | 22/4/2021 |
| H004 | P007 | 23/4/2022 |
| H005 | P005 | 20/5/2020 |
| H006 | P006 | 20/4/2012 |
| H007 | P008 | 23/8/2018 |
| H008 | P002 | 25/8/2019 |
+-----+-----+-----+
8 rows in set (0.00 sec)

```

Figure 29: Insert values into Medicine_History table

```

MySQL 8.0 Command Line Cli  +  X

| H002 | P003 | 20/3/2020 |
| H003 | P001 | 22/4/2021 |
| H004 | P007 | 23/4/2022 |
| H005 | P005 | 20/5/2020 |
| H006 | P006 | 20/4/2012 |
| H007 | P008 | 23/8/2018 |
| H008 | P002 | 25/8/2019 |
+-----+-----+-----+
8 rows in set (0.00 sec)

mysql> INSERT INTO HISTORY_DETAIL VALUES ('H001', 'NULL OF DISEASES');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO HISTORY_DETAIL VALUES ('H002', 'NULL OF DISEASES');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO HISTORY_DETAIL VALUES ('H003', 'HAS DIABATES');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO HISTORY_DETAIL VALUES ('H004', 'HAS JIMYTI');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO HISTORY_DETAIL VALUES ('H005', 'HAS QUAR');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO HISTORY_DETAIL VALUES ('H006', 'HAS LANG');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO HISTORY_DETAIL VALUES ('H007', 'NULL OF DISEASES');
Query OK, 1 row affected (0.01 sec)

mysql> SELECT* FROM HISTORY_DETAIL;
+-----+-----+
| History_ID | DETAIL |
+-----+-----+
| H001 | NULL OF DISEASES |
| H002 | NULL OF DISEASES |
| H003 | HAS DIABATES |
| H004 | HAS JIMYTI |
| H005 | HAS QUAR |
| H006 | HAS LANG |
| H007 | NULL OF DISEASES |
+-----+-----+
7 rows in set (0.00 sec)

```

Figure 30: Insert data into History_Detail table

```

MySQL 8.0 Command Line Cli  +  -
+-----+
| History_ID | DETAIL          |
+-----+
| H001       | NULL OF DISEASES |
| H002       | NULL OF DISEASES |
| H003       | HAS DIABATES      |
| H004       | HAS JIMYTI        |
| H005       | HAS QUAR          |
| H006       | HAS LANG          |
| H007       | NULL OF DISEASES |
+-----+
7 rows in set (0.00 sec)

mysql> INSERT INTO SHELTER VALUES ('SHEL001', 'U001', 'DIGI PLAN(AMPARA)', 'AMPARA');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO SHELTER VALUES ('SHEL002', 'U002', 'DIGI PLAN(BADULLA)', 'BADULLA');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO SHELTER VALUES ('SHEL003', 'U006', 'DIGI PLAN(CHILAW)', 'CHILAW');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO SHELTER VALUES ('SHEL002', 'U005', 'DIGI PLAN(BADULLA)', 'BADULLA');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO SHELTER VALUES ('SHEL005', 'U0011', 'DIGI PLAN(Hokandara)', 'HOKANDARA');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO SHELTER VALUES ('SHEL002', 'U014', 'DIGI PLAN(BADULLA)', 'BADULLA');
Query OK, 1 row affected (0.01 sec)

mysql> SELECT* FROM SHELTER;
+-----+
| SHELTER_ID | USER_ID | SHELTER_NAME    | SHEELTER_LOCATION |
+-----+
| SHEL001    | U001    | DIGI PLAN(AMPARA) | AMPARA           |
| SHEL002    | U002    | DIGI PLAN(BADULLA) | BADULLA          |
| SHEL002    | U005    | DIGI PLAN(BADULLA) | BADULLA          |
| SHEL002    | U014    | DIGI PLAN(BADULLA) | BADULLA          |
| SHEL003    | U006    | DIGI PLAN(CHILAW) | CHILAW           |
| SHEL005    | U0011   | DIGI PLAN(Hokandara) | HOKANDARA        |
+-----+
6 rows in set (0.00 sec)

```

Figure 31: Insert values to Shelter table

```

MySQL 8.0 Command Line Cli  +  -
+-----+
| SHEL002    | U005    | DIGI PLAN(BADULLA) | BADULLA          |
| SHEL002    | U014    | DIGI PLAN(BADULLA) | BADULLA          |
| SHEL003    | U006    | DIGI PLAN(CHILAW) | CHILAW           |
| SHEL005    | U0011   | DIGI PLAN(Hokandara) | HOKANDARA        |
+-----+
6 rows in set (0.00 sec)

mysql> INSERT INTO FINANCIAL VALUES ('TR1', 'U010', '5000');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO FINANCIAL VALUES ('TR2', 'U007', '8000');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO FINANCIAL VALUES ('TR3', 'U008', '50000');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO FINANCIAL VALUES ('TR4', 'U003', '600000');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO FINANCIAL VALUES ('TR11', 'U007', '56000');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO FINANCIAL VALUES ('TR7', 'U003', '200000');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO FINANCIAL VALUES ('TR9', 'U013', '35000');
Query OK, 1 row affected (0.01 sec)

mysql>
mysql> SELECT* FROM FINANCIAL;
+-----+
| TRANS_ID | User_ID | AMOUNT |
+-----+
| TR1      | U010    | 5000   |
| TR11     | U007    | 56000  |
| TR2      | U007    | 8000   |
| TR3      | U008    | 50000  |
| TR4      | U003    | 600000 |
| TR7      | U003    | 200000 |
| TR9      | U013    | 35000  |
+-----+
7 rows in set (0.00 sec)

```

Figure 32: Insert values to Financial table

```

MySQL> SELECT * FROM VET_VISIT;
+-----+-----+-----+
| TRANS_ID | User_ID | AMOUNT |
+-----+-----+-----+
| TR1      | U010    | 5000   |
| TR11     | U007    | 56000  |
| TR2      | U007    | 8000   |
| TR3      | U008    | 50000  |
| TR4      | U003    | 600000 |
| TR7      | U003    | 200000 |
| TR9      | U013    | 35000  |
+-----+-----+-----+
7 rows in set (0.00 sec)

mysql> INSERT INTO VET_VISIT VALUES ('VSI001', '21/2/2023', 'SAMSON','VET001', 'P001');
Query OK, 1 row affected (0.02 sec)

mysql> INSERT INTO VET_VISIT VALUES ('VSI002', '22/4/2020', 'NULL',NULL, 'P004');
Query OK, 1 row affected (0.02 sec)

mysql> INSERT INTO VET_VISIT VALUES ('VSI003', '14/5/2014', 'SAMSON','VET003', 'P007');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO VET_VISIT VALUES ('VSI004', '26/3/2018', 'SHEENA','VET002', 'P005');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO VET_VISIT VALUES ('VSI005', '14/5/2022', 'NULL',NULL, 'P006');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO VET_VISIT VALUES ('VSI006', '16/7/2022', 'SHEENA','VET004', 'P001');
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM VET_VISIT;
+-----+-----+-----+-----+
| VETVISIT_ID | DATE       | VET_NAME | Veteranary_ID | PET_ID |
+-----+-----+-----+-----+
| VSI001      | 21/2/2023  | SAMSON   | VET001        | P001   |
| VSI002      | 22/4/2020  | NULL     | NULL          | P004   |
| VSI003      | 14/5/2014  | SAMSON   | VET003        | P007   |
| VSI004      | 26/3/2018  | SHEENA   | VET002        | P005   |
| VSI005      | 14/5/2022  | NULL     | NULL          | P006   |
| VSI006      | 16/7/2022  | SHEENA   | VET004        | P001   |
+-----+-----+-----+-----+
6 rows in set (0.00 sec)

```

Figure 33: Insert values to vet_visit table

```

MySQL> SELECT * FROM VISIT_REASON;
+-----+-----+-----+
| VETVISIT_ID | Visit_reason | DATE      |
+-----+-----+-----+
| VSI001      | MEDICINE    | 21/2/2023 |
| VSI002      | ADOPT       | 22/4/2020 |
| VSI003      | MEDICINE    | 14/5/2014 |
| VSI004      | MEDICINE    | 26/3/2018 |
| VSI004      | TO WATCH    | 26/3/2018 |
| VSI005      | TO WATCH    | 14/5/2022 |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>
mysql> INSERT INTO VISIT_REASON VALUES ('VSI001', 'MEDICINE','21/2/2023');
Query OK, 1 row affected (0.02 sec)

mysql> INSERT INTO VISIT_REASON VALUES ('VSI002', 'ADOPT', '22/4/2020');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO VISIT_REASON VALUES ('VSI003', 'MEDICINE','14/5/2014');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO VISIT_REASON VALUES ('VSI004', 'MEDICINE','26/3/2018');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO VISIT_REASON VALUES ('VSI005', 'TO WATCH', '14/5/2022');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO VISIT_REASON VALUES ('VSI004', 'TO WATCH', '26/3/2018');
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM VISIT_REASON;
+-----+-----+-----+
| VETVISIT_ID | Visit_reason | DATE      |
+-----+-----+-----+
| VSI001      | MEDICINE    | 21/2/2023 |
| VSI002      | ADOPT       | 22/4/2020 |
| VSI003      | MEDICINE    | 14/5/2014 |
| VSI004      | MEDICINE    | 26/3/2018 |
| VSI004      | TO WATCH    | 26/3/2018 |
| VSI005      | TO WATCH    | 14/5/2022 |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> |

```

Figure 34: Insert values to vetvisit_reason table

3.1.3 Update



```

MySQL> INSERT INTO USER VALUES ('U001', 'ADMIN', 'Namal Rajapaksha', 'namalrah456@gmail.com', '30/2/2023', '19', 'thissapura', 'chadayanthalawa', 'ampara', 'Srilanka');
Query OK, 1 row affected (0.01 sec)

MySQL> INSERT INTO USER VALUES ('U002', 'ADMIN', 'Kumara welgama ', 'kumar4322@gmail.com', '15/5/2020', '2', 'bogoda', 'marisiwella', 'Welimada', 'Srilanka');
Query OK, 1 row affected (0.00 sec)

MySQL> INSERT INTO USER VALUES ('U003', 'ADOPTER', 'Niranji', 'niranji5664@gmail.com', '24/12/2021', '45', 'weeragoda', 'bogala', 'badulla', 'Srilanka');

MySQL> INSERT INTO USER VALUES ('U004', 'NULL', 'Tharindu', 'tharindu5664@gmail.com', '22/1/2022', '23', 'kithulpe', 'haguranketha', 'Rikillagaskada', 'Srilanka');
Query OK, 1 row affected (0.00 sec)

MySQL> INSERT INTO USER VALUES ('U005', 'EMPLOYEE', 'Anura', 'anura5664@gmempilil.com', '15/2/2024', '1', 'kandakadu', 'kampane', 'badulla', 'Srilanka');

MySQL> INSERT INTO USER VALUES ('U006', 'EMPLOYEE', 'Gihan', 'gihan5664@gmempilil.com', '23/3/2022', '35', 'rajagahawewa', 'howewa', 'putththalama', 'Srilanka');
Query OK, 1 row affected (0.00 sec)

MySQL> INSERT INTO USER VALUES ('U007', 'ADOPTER', 'Malinda', 'malinda675@gmail.com', '24/2/2024', '356', 'marathmuni', 'maliyadda', 'mirissa', 'Srilanka');
Query OK, 1 row affected (0.00 sec)

MySQL> INSERT INTO USER VALUES ('U008', 'ADOPTER', 'Kapila', 'kapila4563@gmail.com', '13/2/2021', '108', 'beressa', 'kithulgala', 'hambanthota', 'Srilanka');

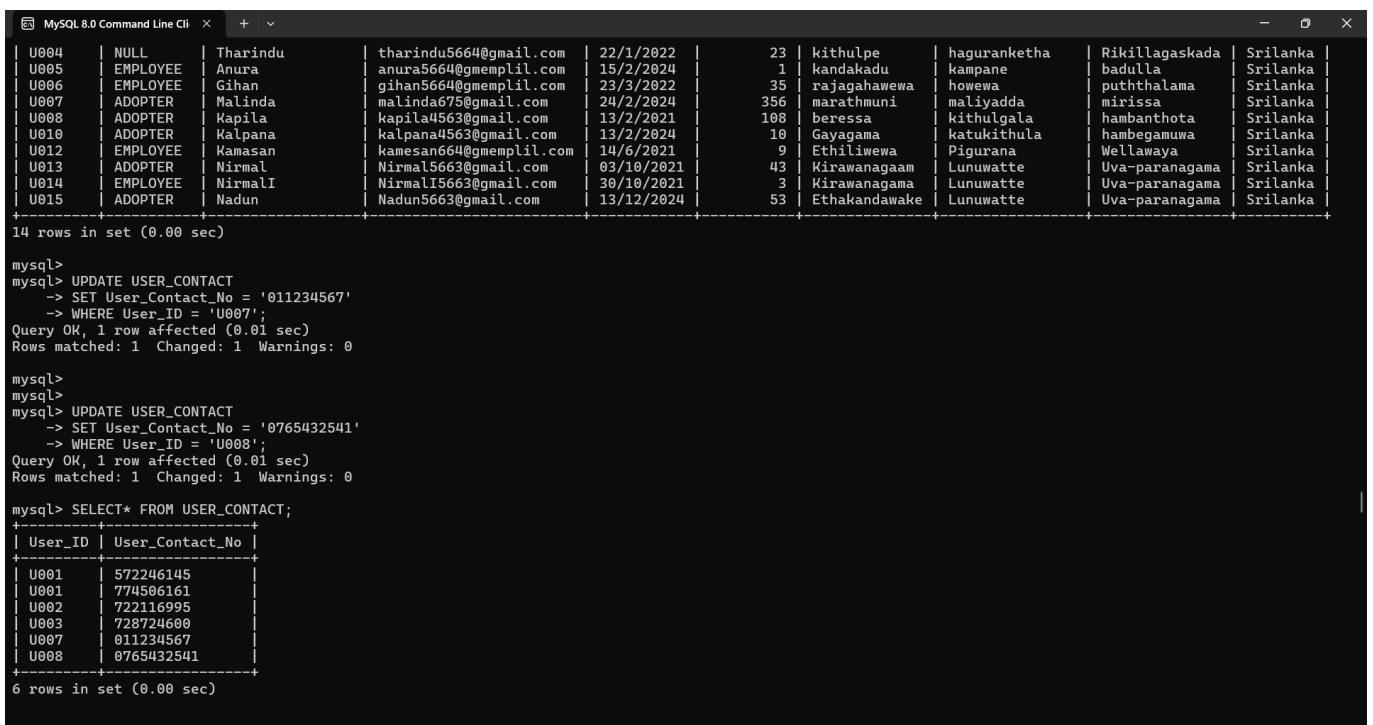
MySQL> INSERT INTO USER VALUES ('U009', 'ADOPTER', 'Kalpana', 'kalpana4563@gmail.com', '13/2/2024', '10', 'Gayagama', 'katukithula', 'hambegamuwa', 'Srilanka');
Query OK, 1 row affected (0.00 sec)

MySQL> INSERT INTO USER VALUES ('U010', 'ADOPTER', 'Nadun', 'Nadun5663@gmail.com', '13/12/2024', '53', 'Ethakandawake', 'Lunuwatte', 'Uva-paranagama', 'Srilanka');
Query OK, 1 row affected (0.00 sec)

MySQL> select* from USER;

```

Figure 35: Update USER Table



```

+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| User_ID | User_Contact_No |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| U001    | 572246145   |
| U001    | 774506161   |
| U002    | 722116995   |
| U003    | 728724600   |
| U007    | 011234567   |
| U008    | 0765432541  |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> UPDATE USER_CONTACT
-> SET User_Contact_No = '011234567'
-> WHERE User_ID = 'U007';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql>
mysql> UPDATE USER_CONTACT
-> SET User_Contact_No = '0765432541'
-> WHERE User_ID = 'U008';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT* FROM USER_CONTACT;
+-----+-----+
| User_ID | User_Contact_No |
+-----+-----+
| U001    | 572246145   |
| U001    | 774506161   |
| U002    | 722116995   |
| U003    | 728724600   |
| U007    | 011234567   |
| U008    | 0765432541  |
+-----+-----+
6 rows in set (0.00 sec)

```

Figure 36: Update User_Contact table

```

MySQL 8.0 Command Line Cli  +  -
+-----+
| U002 | 722116995 |
| U003 | 728724600 |
| U007 | 011234567 |
| U008 | 0765432541 |
+-----+
6 rows in set (0.00 sec)

mysql>
mysql> UPDATE PET
-> SET DateOfBirth = '29/8/2021', Pet_Name = 'Jessy'
-> WHERE Pet_ID = 'P009';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql>
mysql> USE pet_adoption;
Database changed
mysql>
mysql> UPDATE PET
-> SET DateOfBirth = '5/6/2021', Pet_Name = 'KALI'
-> WHERE Pet_ID = 'P0010';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT* FROM PET;
+-----+
| Pet_ID | User_ID | Pet_Type | Pet_Name | Age | Breed      | DateOfBirth | Availability |
+-----+
| P001   | NULL    | Cat      | Sam      | 4   | Abyssinian | 17/03/2020  | Yes          |
| P0010  | NULL    | Dog      | KALI     | 6   | Germen_Shepard | 5/6/2021 | Yes          |
| P002   | NULL    | Dog      | Jimmy    | 3   | Bulldog    | 17/03/2021  | Yes          |
| P003   | U003   | Dog      | Humpy    | 4   | Rottvialet | 17/03/2020  | No           |
| P004   | U004   | Cat      | Larse    | 6   | Balinese   | 17/03/2018  | No           |
| P005   | U007   | Parrot   | Kiw      | 1   | Budgerigar | 17/03/2023  | No           |
| P006   | U008   | Parrot   | Prut    | 2   | Cockatiel  | 17/03/2022  | No           |
| P007   | U010   | Dog      | Roxy    | 5   | Germen_Shepard | 17/03/2019 | Yes          |
| P008   | NULL    | Cat      | Morse   | 4   | Persian    | 17/03/2020  | Yes          |
| P009   | U013   | Dog      | Jessy   | 6   | Germen_Shepard | 29/8/2021 | Yes          |
+-----+
10 rows in set (0.00 sec)

```

Figure 37: Update Pet table

```

MySQL 8.0 Command Line Cli  +  -
+-----+
| P003   | U003   | Dog      | Humpy    | 4   | Rottvialet | 17/03/2020 | No          |
| P004   | U004   | Cat      | Larse    | 6   | Balinese   | 17/03/2018 | No          |
| P005   | U007   | Parrot   | Kiw      | 1   | Budgerigar | 17/03/2023 | No          |
| P006   | U008   | Parrot   | Prut    | 2   | Cockatiel  | 17/03/2022 | No          |
| P007   | U010   | Dog      | Roxy    | 5   | Germen_Shepard | 17/03/2019 | Yes          |
| P008   | NULL    | Cat      | Morse   | 4   | Persian    | 17/03/2020 | Yes          |
| P009   | U013   | Dog      | Jessy   | 6   | Germen_Shepard | 29/8/2021 | Yes          |
+-----+
10 rows in set (0.00 sec)

mysql>
mysql> UPDATE EVENT
-> SET Event_Date= '30/8/2021'
-> WHERE Event_ID = 'E001';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql>
mysql> USE pet_adoption;
Database changed
mysql>
mysql> UPDATE EVENT
-> SET Location = 'Badulla'
-> WHERE Event_ID = 'E005';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT* FROM EVENT;
+-----+
| Event_ID | Event_Name       | Event_Date | Location |
+-----+
| E001    | Pet_Training_Mania | 30/8/2021 | Ampara   |
| E002    | Pet_Palooza      | 13/2/2025  | Badulla  |
| E003    | Felina_Funday    | 23/8/2024 | NuwaraEliya |
| E004    | Wagfest          | 22/9/2024 | NuwaraEliya |
| E005    | Whisker_Wonderland | 25/12/2023 | Badulla  |
| E006    | Wonder_Pets       | 24/11/2026 | Badulla  |
| E007    | Wonder_Pets with happy | 25/12/2026 | Welimada |
+-----+
7 rows in set (0.00 sec)

```

Figure 38: Update Event table

```

MySQL 8.0 Command Line Cli  +  -
+-----+-----+-----+-----+
| Event_ID | Event_Name      | Event_Date | Location |
+-----+-----+-----+-----+
| E001   | Pet_Training_Mania | 30/8/2021  | Ampara   |
| E002   | Pet_Palooza       | 13/2/2025  | Badulla  |
| E003   | Felina_Funday     | 23/8/2024  | NuwaraEliya |
| E004   | Wagfest           | 22/9/2024  | NuwaraEliya |
| E005   | Whisker_Wonderland | 25/12/2023 | Badulla  |
| E006   | Wonder_Pets        | 24/11/2026 | Badulla  |
| E007   | Wonder_Pets with happy | 25/12/2026 | Welimada |
+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql> UPDATE PARTICIPATE_EVENT
    -> SET Event_Date = '30/8/2021'
    -> WHERE Event_ID = 'E001' AND USER_ID = 'U002';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> UPDATE PARTICIPATE_EVENT
    -> SET Event_Date = '23/08/2021'
    -> WHERE Event_ID = 'E006' AND USER_ID = 'U003';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT* FROM PARTICIPATE_EVENT;
+-----+-----+-----+
| Event_ID | User_ID | Event_Date |
+-----+-----+-----+
| E001   | U001   | 14/5/2021 |
| E001   | U002   | 30/8/2021 |
| E002   | U004   | 13/2/2025 |
| E002   | U005   | 13/2/2025 |
| E003   | U008   | 23/8/2024 |
| E005   | U005   | 25/12/2023 |
| E006   | U003   | 23/08/2021 |
+-----+-----+-----+
7 rows in set (0.00 sec)

```

Figure 39: Update Participate_Event table

```

MySQL 8.0 Command Line Cli  +  -
+-----+-----+-----+
| E001   | U002   | 30/8/2021 |
| E002   | U004   | 13/2/2025 |
| E002   | U005   | 13/2/2025 |
| E003   | U008   | 23/8/2024 |
| E005   | U005   | 25/12/2023 |
| E006   | U003   | 23/08/2021 |
+-----+-----+-----+
7 rows in set (0.00 sec)

mysql>
mysql>
mysql> UPDATE VETANARY
    -> SET VET_NAME='JONNY' , DATE = '15/7/2022'
    -> WHERE VETANARY_ID = 'VET004' ;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql>
mysql>
mysql> USE pet_adoption;
Database changed
mysql> UPDATE VETANARY
    -> SET VET_NAME='SAMSON' , DATE = '11/3/2021'
    -> WHERE VETANARY_ID = 'VET007' ;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT* FROM VETANARY;
+-----+-----+-----+-----+
| VETANARY_ID | PET_ID | VET_NAME | DATE      |
+-----+-----+-----+-----+
| VET001      | P001   | SAMSON   | 23/4/2012 |
| VET002      | P005   | SHEENA   | 22/3/2013 |
| VET003      | P007   | SAMSON   | 14/5/2014 |
| VET004      | P001   | JONNY    | 15/7/2022 |
| VET005      | P002   | JONNY    | 15/3/2024 |
| VET006      | P009   | JONNY    | 10/3/2021 |
| VET007      | P005   | SAMSON   | 11/3/2021 |
+-----+-----+-----+-----+
7 rows in set (0.00 sec)

```

Figure 40: Update Vetanary table

```

MySQL 8.0 Command Line Cli  +  -
+-----+-----+-----+
| VETINARY_ID | PET_ID | VET_NAME | DATE |
+-----+-----+-----+
| VET001 | P001 | SAMSON | 23/4/2012 |
| VET002 | P005 | SHEENA | 22/3/2013 |
| VET003 | P007 | SAMSON | 14/5/2014 |
| VET004 | P001 | JONNY | 15/7/2022 |
| VET005 | P002 | JONNY | 15/3/2024 |
| VET006 | P009 | JONNY | 10/3/2021 |
| VET007 | P005 | SAMSON | 11/3/2021 |
+-----+-----+-----+
7 rows in set (0.00 sec)

mysql> UPDATE GET_MEDICINE
-> SET DATE = '24/4/2012'
-> WHERE PET_ID = 'P001' AND Medicine = 'LANTI';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE GET_MEDICINE
-> SET DATE = '24/4/2012'
-> WHERE PET_ID = 'P005' AND Medicine = 'Kinthu';
Query OK, 0 rows affected (0.00 sec)
Rows matched: 0 Changed: 0 Warnings: 0

mysql> SELECT* FROM GET_MEDICINE;
+-----+-----+-----+
| PET_ID | Medicine | DATE |
+-----+-----+-----+
| P001 | KIMSI | 23/4/2012 |
| P001 | LANTI | 24/4/2012 |
| P001 | NULL | 23/4/2012 |
| P002 | KANON | 15/3/2024 |
| P005 | Kainthu | 18/3/2024 |
| P005 | LANTI | 15/3/2024 |
| P007 | NULL | 14/5/2014 |
+-----+-----+-----+
7 rows in set (0.00 sec)

```

Figure 41: Update Get_Medicine table

```

MySQL 8.0 Command Line Cli  +  -
+-----+-----+
| P005 | LANTI | 15/3/2024 |
| P007 | NULL | 14/5/2014 |
+-----+-----+
7 rows in set (0.00 sec)

mysql>
mysql> UPDATE TRANSACTION
-> SET Trans_Date = '24/12/2015', Amount = '60000'
-> WHERE Trans_ID = 'TR4';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql>
mysql> USE pet_adoption;
Database changed
mysql>
mysql> UPDATE TRANSACTION
-> SET Trans_Date = '10/4/2021', Amount = '40000'
-> WHERE Trans_ID = 'TR9';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT* FROM TRANSACTION;
+-----+-----+-----+-----+-----+
| User_ID | Vetary_ID | Trans_ID | Amount | Trans_Type | Trans_Date |
+-----+-----+-----+-----+-----+
| U010 | VET003 | TR1 | 5000 | VETINARY | 14/05/2022 |
| U010 | NULL | TR10 | 45000 | ADOPTION | 13/2/2023 |
| U007 | NULL | TR11 | 56000 | ADOPTION | 24/10/2024 |
| U006 | NULL | TR12 | 76000 | ADOPTION | 27/10/2024 |
| U007 | VET002 | TR2 | 8000 | VETINARY | 25/09/2013 |
| U008 | NULL | TR3 | 50000 | ADOPTION | 14/05/2022 |
| U003 | NULL | TR4 | 60000 | ADOPTION | 24/12/2015 |
| U008 | NULL | TR6 | 500000 | DONATION | 24/11/2016 |
| U006 | NULL | TR7 | 200000 | DONATION | 13/10/2024 |
| U014 | NULL | TR8 | 25000 | ADOPTION | 17/3/2023 |
| U013 | NULL | TR9 | 40000 | ADOPTION | 10/4/2021 |
+-----+-----+-----+-----+-----+
11 rows in set (0.00 sec)

mysql>

```

Figure 42: Update Transaction table

```

MySQL 8.0 Command Line Cli  x  +  v
+-----+-----+-----+-----+-----+-----+
| U006 | NULL  | TR12  | 76000 | ADOPTION | 27/10/2024 |
| U007 | VET002 | TR2   | 8000  | VETINARY  | 25/09/2013 |
| U008 | NULL  | TR3   | 50000 | ADOPTION  | 14/05/2022 |
| U003 | NULL  | TR4   | 60000 | ADOPTION  | 24/12/2015 |
| U008 | NULL  | TR6   | 500000 | DONATION | 24/11/2016 |
| U006 | NULL  | TR7   | 200000 | DONATION | 13/10/2024 |
| U014 | NULL  | TR8   | 25000 | ADOPTION  | 17/3/2023  |
| U013 | NULL  | TR9   | 40000 | ADOPTION  | 10/4/2021  |
+-----+-----+-----+-----+-----+-----+
11 rows in set (0.00 sec)

mysql>
mysql> UPDATE Medical_History
      -> SET Pre_Date= '21/4/2012'
      -> WHERE History_ID = 'H006';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql>
mysql> UPDATE Medical_History
      -> SET Pre_Date= '26/4/2019'
      -> WHERE History_ID = 'H008';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT* FROM Medical_History;
+-----+-----+-----+
| History_ID | Pet_ID | Pre_Date |
+-----+-----+-----+
| H001 | P003 | 21/2/2022 |
| H002 | P003 | 20/3/2020 |
| H003 | P001 | 22/4/2021 |
| H004 | P007 | 23/4/2022 |
| H005 | P005 | 20/5/2020 |
| H006 | P006 | 21/4/2012 |
| H007 | P008 | 23/8/2018 |
| H008 | P002 | 26/4/2019 |
+-----+-----+-----+
8 rows in set (0.00 sec)

```

Figure 43: Update Medical_History table

```

MySQL 8.0 Command Line Cli  x  +  v
+-----+-----+-----+
| History_ID | Pet_ID | Pre_Date |
+-----+-----+-----+
| H001 | P003 | 21/2/2022 |
| H002 | P003 | 20/3/2020 |
| H003 | P001 | 22/4/2021 |
| H004 | P007 | 23/4/2022 |
| H005 | P005 | 20/5/2020 |
| H006 | P006 | 21/4/2012 |
| H007 | P008 | 23/8/2018 |
+-----+-----+-----+
7 rows in set (0.00 sec)

mysql>
mysql> UPDATE Medical_History
      -> SET Pre_Date= '21/4/2012'
      -> WHERE History_ID = 'H006';
Query OK, 0 rows affected (0.00 sec)
Rows matched: 1  Changed: 0  Warnings: 0

mysql>
mysql> UPDATE Medical_History
      -> SET Pre_Date= '26/4/2019'
      -> WHERE History_ID = 'H008';
Query OK, 0 rows affected (0.00 sec)
Rows matched: 0  Changed: 0  Warnings: 0

mysql> SELECT* FROM Medical_History;
+-----+-----+-----+
| History_ID | Pet_ID | Pre_Date |
+-----+-----+-----+
| H001 | P003 | 21/2/2022 |
| H002 | P003 | 20/3/2020 |
| H003 | P001 | 22/4/2021 |
| H004 | P007 | 23/4/2022 |
| H005 | P005 | 20/5/2020 |
| H006 | P006 | 21/4/2012 |
| H007 | P008 | 23/8/2018 |
+-----+-----+-----+
7 rows in set (0.00 sec)

mysql> |

```

Figure 44: Update History_Detail table

```

MySQL 8.0 Command Line Cli + X

mysql> UPDATE HISTORY_DETAIL
    -> SET DETAIL = 'HAS ALL THEM'
    -> WHERE History_ID = 'H007';
ERROR 1146 (42S02): Table 'pet_adoption.history_detail' doesn't exist
mysql>
mysql> UPDATE HISTORY_DETAIL
    -> SET DETAIL = 'NULL'
    -> WHERE History_ID = 'H002';
ERROR 1146 (42S02): Table 'pet_adoption.history_detail' doesn't exist
mysql> SELECT* FROM HISTORY_DETAIL;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'FROM HISTORY_DETAIL' at line 1
mysql>
mysql> UPDATE SHELTER
    -> SET SHELTER_LOCATION='BADULLA UP ROAD'
    -> WHERE SHELTER_ID= 'SHEL002'AND USER_ID = 'U005';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> UPDATE SHELTER
    -> SET SHELTER_LOCATION='HORAANA'
    -> WHERE SHELTER_ID= 'SHEL005'AND USER_ID = 'U0011';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT *FROM SHELTER;
+-----+-----+-----+-----+
| SHELTER_ID | USER_ID | SHELTER_NAME | SHELTER_LOCATION |
+-----+-----+-----+-----+
| SHEL001 | U001 | DIGG PLAN(AMPARA) | AMPARA
| SHEL002 | U002 | DOGI PLAN(BADULLA) | BADULLA
| SHEL002 | U005 | DIGII PLAN(BADULLA) | BADULLA UP ROAD
| SHEL002 | U014 | DIGII PLAN(BADULLA) | BADULLA
| SHEL003 | U006 | DOGII PLAN(CHILAW) | CHILAW
| SHEL005 | U0011 | DIGII PLAN(Hokandara) | HORAANA
+-----+-----+-----+-----+
6 rows in set (0.00 sec)

```

Figure 45: Update Shelter table

```

MySQL 8.0 Command Line Cli + X

+-----+-----+-----+-----+
| SHEL001 | U001 | DIGG PLAN(AMPARA) | AMPARA
| SHEL002 | U002 | DOGI PLAN(BADULLA) | BADULLA
| SHEL002 | U005 | DIGII PLAN(BADULLA) | BADULLA UP ROAD
| SHEL002 | U014 | DIGII PLAN(BADULLA) | BADULLA
| SHEL003 | U006 | DOGII PLAN(CHILAW) | CHILAW
| SHEL005 | U0011 | DIGII PLAN(Hokandara) | HORAANA
+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>
mysql> USE pet_adoption;
Database changed
mysql> UPDATE FINANCIAL
    -> SET AMOUNT='60000'
    -> WHERE TRANS_ID= 'TR4'AND USER_ID = 'U003';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> UPDATE FINANCIAL
    -> SET AMOUNT='40000'
    -> WHERE TRANS_ID= 'TR9'AND USER_ID = 'U013';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT *FROM FINANCIAL;
+-----+-----+-----+
| TRANS_ID | User_ID | AMOUNT |
+-----+-----+-----+
| TR1 | U010 | 5000
| TR11 | U007 | 56000
| TR2 | U007 | 8000
| TR3 | U008 | 50000
| TR4 | U003 | 60000
| TR7 | U003 | 200000
| TR9 | U013 | 40000
+-----+-----+-----+
7 rows in set (0.00 sec)

mysql>

```

Figure 46: Update Finance table

```

MySQL 8.0 Command Line Cli  +  X

+-----+-----+-----+
| TRANS_ID | User_ID | AMOUNT |
+-----+-----+-----+
| TR1     | U010    | 5000   |
| TR11    | U007    | 56000  |
| TR2     | U007    | 8000   |
| TR3     | U008    | 50000  |
| TR4     | U003    | 60000  |
| TR7     | U003    | 200000 |
| TR9     | U013    | 40000  |
+-----+-----+-----+
7 rows in set (0.00 sec)

mysql>
mysql> UPDATE VET_VISIT
      -> SET DATE = '6/7/2022' , VET_NAME = 'JONNY'
      -> WHERE VETVISIT_ID ='VSI006';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql>
mysql>
mysql> UPDATE VET_VISIT
      -> SET DATE = '12/3/2021' , VET_NAME = 'SHEENA'
      -> WHERE VETVISIT_ID ='VSI007';
Query OK, 0 rows affected (0.00 sec)
Rows matched: 0  Changed: 0  Warnings: 0

mysql> SELECT* FROM VET_VISIT;
+-----+-----+-----+-----+
| VETVISIT_ID | DATE      | VET_NAME | Veterany_ID | PET_ID |
+-----+-----+-----+-----+
| VSI001      | 21/2/2023 | SAMSON   | VET001    | P001   |
| VSI002      | 22/4/2020  | NULL     | NULL     | P004   |
| VSI003      | 14/5/2014  | SAMSON   | VET003    | P007   |
| VSI004      | 26/3/2018  | SHEENA   | VET002    | P005   |
| VSI005      | 14/5/2022  | NULL     | NULL     | P006   |
| VSI006      | 6/7/2022   | JONNY    | VET004    | P001   |
+-----+-----+-----+-----+
6 rows in set (0.00 sec)

```

Figure 47: Update vet_visit table

```

MySQL 8.0 Command Line Cli  +  X

mysql> SELECT* FROM VET_VISIT;
+-----+-----+-----+-----+
| VETVISIT_ID | DATE      | VET_NAME | Veterany_ID | PET_ID |
+-----+-----+-----+-----+
| VSI001      | 21/2/2023 | SAMSON   | VET001    | P001   |
| VSI002      | 22/4/2020  | NULL     | NULL     | P004   |
| VSI003      | 14/5/2014  | SAMSON   | VET003    | P007   |
| VSI004      | 26/3/2018  | SHEENA   | VET002    | P005   |
| VSI005      | 14/5/2022  | NULL     | NULL     | P006   |
| VSI006      | 6/7/2022   | JONNY    | VET004    | P001   |
+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>
mysql> UPDATE VISIT_REASON
      -> SET DATE = '21/02/2023'
      -> WHERE VETVISIT_ID ='VSI001' AND Visit_reason='MEDICINE';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql>
mysql> UPDATE VISIT_REASON
      -> SET DATE = '26/03/2018'
      -> WHERE VETVISIT_ID ='VSI004' AND Visit_reason='TO WATCH';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT* FROM VISIT_REASON;
+-----+-----+-----+
| VETVISIT_ID | Visit_reason | DATE      |
+-----+-----+-----+
| VSI001      | MEDICINE    | 21/02/2023 |
| VSI002      | ADOPT       | 22/4/2020  |
| VSI003      | MEDICINE    | 14/5/2014  |
| VSI004      | MEDICINE    | 26/3/2018  |
| VSI005      | TO WATCH    | 26/03/2018 |
| VSI006      | TO WATCH    | 14/5/2022  |
+-----+-----+-----+
6 rows in set (0.00 sec)

```

Figure 48: Update vet_visit_reason table

3.1.4 Delete

```

MySQL 8.0 Command Line Cli  +  v

+-----+
| event
| financial
| get_medicine
| medical_history
| participate_event
| pet
| shelter
| transaction
| user
| user_contact
| vet_visit
| veterinary
| visit_reason
+-----+
13 rows in set (0.01 sec)

mysql>
mysql> DELETE FROM USER WHERE User_ID = 'U012';
Query OK, 1 row affected (0.01 sec)

mysql> SELECT* FROM USER;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| User_ID | User_Type | Name      | Email           | Reg_Date   | Appart_No | Street_No | Street_Name | City       | State    |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| U001   | ADMIN     | Namal Rajapaksha | namalrah456@gmail.com | 30/2/2023  | 19        | thissapura | chadayanthalawa | ampara    | Srilanka | |
| U0011  | ADMIN     | Gihara      | gihara664@gmepplil.com | 29/8/2024  | 65        | Katumatiya | Hokandara   | Kiribathwehera | Srilanka |
| U002   | EMPLOYEE  | Kumara welgama | kumar4322@gmail.com  | 16/9/2022  | 12        | bogoda     | marisiwella | Kalutharagama | Srilanka |
| U003   | ADOPTER   | Niranji     | nirangi5664@gmail.com | 24/12/2021 | 45        | weeragoda  | bogala      | badulla    | Rikillagaskada | Srilanka |
| U004   | NULL      | Tharindu    | tharindu5664@gmail.com | 22/1/2022  | 23        | kithulpe   | haguranketha | badulla   | Srilanka |
| U005   | EMPLOYEE  | Anura      | anura5664@gmepplil.com | 15/2/2024  | 1         | kandakadu | kampane     | rajagahawewa | howewa    | Srilanka |
| U006   | EMPLOYEE  | Gihan      | gihan5664@gmepplil.com | 23/3/2022  | 35        |          |            |            |            |            |
| U007   | ADOPTER   | Malinda    | malinda675@gmail.com  | 24/2/2024  | 356       | marathmuni | maliyadda   | mirissa   | Srilanka |
| U008   | ADOPTER   | Kapila     | kapila4563@gmail.com | 13/2/2021  | 108       | beressa    | kithulgala | hambanthota | Srilanka |
| U010   | ADOPTER   | Kalpana    | kalpana4563@gmail.com | 13/2/2024  | 10        | Gayagama   | katukithula | hambegamuwa | Srilanka |
| U013   | ADOPTER   | Nirmal     | Nirmal5663@gmail.com  | 03/10/2021 | 43        | Kirawanagaam | Lunuwatte   | Uva-paranagama | Srilanka |
| U014   | EMPLOYEE  | Nirmali    | Nirmal5663@gmail.com  | 30/10/2021 | 3         | Kirawanagama | Lunuwatte   | Uva-paranagama | Srilanka |
| U015   | ADOPTER   | Nadun      | Nadun5663@gmail.com  | 13/12/2024 | 53        | Ethakandawake | Lunuwatte | Uva-paranagama | Srilanka |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
13 rows in set (0.00 sec)

```

Figure 49: Delete in USER

```

MySQL 8.0 Command Line Cli  +  v

13 rows in set (0.01 sec)

mysql>
mysql> DELETE FROM USER WHERE User_ID = 'U012';
Query OK, 1 row affected (0.01 sec)

mysql> SELECT* FROM USER;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| User_ID | User_Type | Name      | Email           | Reg_Date   | Appart_No | Street_No | Street_Name | City       | State    |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| U001   | ADMIN     | Namal Rajapaksha | namalrah456@gmail.com | 30/2/2023  | 19        | thissapura | chadayanthalawa | ampara    | Srilanka | |
| U0011  | ADMIN     | Gihara      | gihara664@gmepplil.com | 29/8/2024  | 65        | Katumatiya | Hokandara   | Kiribathwehera | Srilanka |
| U002   | EMPLOYEE  | Kumara welgama | kumar4322@gmail.com  | 16/9/2022  | 12        | bogoda     | marisiwella | Kalutharagama | Srilanka |
| U003   | ADOPTER   | Niranji     | nirangi5664@gmail.com | 24/12/2021 | 45        | weeragoda  | bogala      | badulla    | Rikillagaskada | Srilanka |
| U004   | NULL      | Tharindu    | tharindu5664@gmail.com | 22/1/2022  | 23        | kithulpe   | haguranketha | badulla   | Srilanka |
| U005   | EMPLOYEE  | Anura      | anura5664@gmepplil.com | 15/2/2024  | 1         | kandakadu | kampane     | rajagahawewa | howewa    | Srilanka |
| U006   | EMPLOYEE  | Gihan      | gihan5664@gmepplil.com | 23/3/2022  | 35        |          |            |            |            |            |
| U007   | ADOPTER   | Malinda    | malinda675@gmail.com  | 24/2/2024  | 356       | marathmuni | maliyadda   | mirissa   | Srilanka |
| U008   | ADOPTER   | Kapila     | kapila4563@gmail.com | 13/2/2021  | 108       | beressa    | kithulgala | hambanthota | Srilanka |
| U010   | ADOPTER   | Kalpana    | kalpana4563@gmail.com | 13/2/2024  | 10        | Gayagama   | katukithula | hambegamuwa | Srilanka |
| U013   | ADOPTER   | Nirmal     | Nirmal5663@gmail.com  | 03/10/2021 | 43        | Kirawanagaam | Lunuwatte   | Uva-paranagama | Srilanka |
| U014   | EMPLOYEE  | Nirmali    | Nirmal5663@gmail.com  | 30/10/2021 | 3         | Kirawanagama | Lunuwatte   | Uva-paranagama | Srilanka |
| U015   | ADOPTER   | Nadun      | Nadun5663@gmail.com  | 13/12/2024 | 53        | Ethakandawake | Lunuwatte | Uva-paranagama | Srilanka |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
13 rows in set (0.00 sec)

mysql>
mysql> DELETE FROM USER_CONTACT WHERE User_ID = 'U008';
Query OK, 1 row affected (0.01 sec)

mysql> SELECT* FROM USER_CONTACT;
+-----+-----+
| User_ID | User_Contact_No |
+-----+-----+
| U001   | 572246145
| U001   | 774506161
| U002   | 722116995
| U003   | 72874600
| U007   | 011234567
+-----+-----+
5 rows in set (0.00 sec)

```

Figure 50:Delete in USER_CONTACT

```

MySQL 8.0 Command Line Cli - + - X
| U014 | EMPLOYEE | Nirmali           | NirmalI5663@gmail.com | 30/10/2021 |      3 | Kirawanagama | Lunuwatte     | Uva-paranagama | Srilanka |
| U015 | ADOPTER  | Nadun             | Nadun5663@gmail.com  | 13/12/2024 |      53 | Ethakandawake | Lunuwatte     | Uva-paranagama | Srilanka |
+-----+-----+-----+-----+-----+-----+-----+-----+
13 rows in set (0.00 sec)

mysql>
mysql> DELETE FROM USER_CONTACT WHERE User_ID = 'U008';
Query OK, 1 row affected (0.01 sec)

mysql> SELECT* FROM USER_CONTACT;
+-----+-----+
| User_ID | User_Contact_No |
+-----+-----+
| U001   | 572246145
| U001   | 774506161
| U002   | 722116995
| U003   | 728724600
| U007   | 011234567
+-----+-----+
5 rows in set (0.00 sec)

mysql>
mysql> DELETE FROM PET WHERE Pet_ID = 'P0010';
Query OK, 1 row affected (0.00 sec)

mysql> SELECT* FROM PET;
+-----+-----+-----+-----+-----+-----+-----+
| Pet_ID | User_ID | Pet_Type | Pet_Name | Age | Breed    | DateOfBirth | Availability |
+-----+-----+-----+-----+-----+-----+-----+
| P001   | NULL    | Cat      | Sam      | 4   | Abyssinian | 17/03/2020  | Yes
| P002   | NULL    | Dog      | Jimmy    | 3   | Bulldog   | 17/03/2021  | Yes
| P003   | U003   | Dog      | Humpy    | 4   | Rottvialet | 17/03/2020  | No
| P004   | U004   | Cat      | Larse    | 6   | Balinese   | 17/03/2018  | No
| P005   | U007   | Parrot   | Kiw      | 1   | Budgerigar | 17/03/2023  | No
| P006   | U008   | Parrot   | Prut    | 2   | Cockatiel  | 17/03/2022  | No
| P007   | U010   | Dog      | Roxy    | 5   | Germen_Shepard | 17/03/2019 | Yes
| P008   | NULL    | Cat      | Morse   | 4   | Persian    | 17/03/2020  | Yes
| P009   | U013   | Dog      | Jessy   | 6   | Germen_Shepard | 29/8/2021  | Yes
+-----+-----+-----+-----+-----+-----+-----+
9 rows in set (0.00 sec)

```

Figure 51: Delete in PET

```

MySQL 8.0 Command Line Cli - + - X
| U003   | 728724600
| U007   | 011234567
+-----+-----+
5 rows in set (0.00 sec)

mysql>
mysql> DELETE FROM PET WHERE Pet_ID = 'P0010';
Query OK, 1 row affected (0.00 sec)

mysql> SELECT* FROM PET;
+-----+-----+-----+-----+-----+-----+-----+
| Pet_ID | User_ID | Pet_Type | Pet_Name | Age | Breed    | DateOfBirth | Availability |
+-----+-----+-----+-----+-----+-----+-----+
| P001   | NULL    | Cat      | Sam      | 4   | Abyssinian | 17/03/2020  | Yes
| P002   | NULL    | Dog      | Jimmy    | 3   | Bulldog   | 17/03/2021  | Yes
| P003   | U003   | Dog      | Humpy    | 4   | Rottvialet | 17/03/2020  | No
| P004   | U004   | Cat      | Larse    | 6   | Balinese   | 17/03/2018  | No
| P005   | U007   | Parrot   | Kiw      | 1   | Budgerigar | 17/03/2023  | No
| P006   | U008   | Parrot   | Prut    | 2   | Cockatiel  | 17/03/2022  | No
| P007   | U010   | Dog      | Roxy    | 5   | Germen_Shepard | 17/03/2019 | Yes
| P008   | NULL    | Cat      | Morse   | 4   | Persian    | 17/03/2020  | Yes
| P009   | U013   | Dog      | Jessy   | 6   | Germen_Shepard | 29/8/2021  | Yes
+-----+-----+-----+-----+-----+-----+-----+
9 rows in set (0.00 sec)

mysql>
mysql> DELETE FROM EVENT WHERE Event_ID = 'E007';
Query OK, 1 row affected (0.00 sec)

mysql> SELECT* FROM EVENT;
+-----+-----+-----+
| Event_ID | Event_Name        | Event_Date | Location |
+-----+-----+-----+
| E001   | Pet_Training_Mania | 30/8/2021  | Ampara   |
| E002   | Pet_Palooza       | 13/2/2025  | Badulla  |
| E003   | Felina_Funday     | 23/8/2024  | NuwaraEliya |
| E004   | Wagfest           | 22/9/2024  | NuwaraEliya |
| E005   | Whisker_Wonderland | 25/12/2023 | Badulla  |
| E006   | Wonder_Pets       | 24/11/2026 | Badulla  |
+-----+-----+-----+
6 rows in set (0.00 sec)

```

Figure 52: Delete in EVENT

```

MySQL 8.0 Command Line Cli  +  -
+-----+
| P005 | U007 | Parrot | Kiw    | 1   | Budgerigar | 17/03/2023 | No |
| P006 | U008 | Parrot | Prut   | 2   | Cockatiel  | 17/03/2022 | No |
| P007 | U010 | Dog    | Roxy   | 5   | Germen_Shepard | 17/03/2019 | Yes |
| P008 | NULL  | Cat    | Morse  | 4   | Persian    | 17/03/2020 | Yes |
| P009 | U013 | Dog    | Jessy  | 6   | Germen_Shepard | 29/8/2021 | Yes |
+-----+
9 rows in set (0.00 sec)

mysql>
mysql> DELETE FROM EVENT WHERE Event_ID = 'E007';
Query OK, 1 row affected (0.00 sec)

mysql> SELECT* FROM EVENT;
+-----+
| Event_ID | Event_Name      | Event_Date | Location |
+-----+
| E001    | Pet_Training_Mania | 30/8/2021 | Ampara   |
| E002    | Pet_Palooza       | 13/2/2025 | Badulla  |
| E003    | Felina_Funday     | 23/8/2024 | NuwaraEliya |
| E004    | Wagfest           | 22/9/2024 | NuwaraEliya |
| E005    | Whisker_Wonderland | 25/12/2023 | Badulla  |
| E006    | Wonder_Pets        | 24/11/2026 | Badulla  |
+-----+
6 rows in set (0.00 sec)

mysql>
mysql> DELETE FROM PARTICIPATE_EVENT WHERE Event_ID = 'E006' AND USER_ID = 'U003' ;
Query OK, 1 row affected (0.01 sec)

mysql> SELECT* FROM PARTICIPATE_EVENT;
+-----+
| Event_ID | User_ID | Event_Date |
+-----+
| E001    | U001   | 14/5/2021 |
| E001    | U002   | 30/8/2021 |
| E002    | U004   | 13/2/2025 |
| E002    | U005   | 13/2/2025 |
| E003    | U008   | 23/8/2024 |
| E005    | U005   | 25/12/2023 |
+-----+
6 rows in set (0.00 sec)

```

Figure 53: Delete in Participate_Event

```

MySQL 8.0 Command Line Cli  +  -
+-----+
| E003    | Felina_Funday     | 23/8/2024 | NuwaraEliya |
| E004    | Wagfest           | 22/9/2024 | NuwaraEliya |
| E005    | Whisker_Wonderland | 25/12/2023 | Badulla  |
| E006    | Wonder_Pets        | 24/11/2026 | Badulla  |
+-----+
6 rows in set (0.00 sec)

mysql>
mysql> DELETE FROM PARTICIPATE_EVENT WHERE Event_ID = 'E006' AND USER_ID = 'U003' ;
Query OK, 1 row affected (0.01 sec)

mysql> SELECT* FROM PARTICIPATE_EVENT;
+-----+
| Event_ID | User_ID | Event_Date |
+-----+
| E001    | U001   | 14/5/2021 |
| E001    | U002   | 30/8/2021 |
| E002    | U004   | 13/2/2025 |
| E002    | U005   | 13/2/2025 |
| E003    | U008   | 23/8/2024 |
| E005    | U005   | 25/12/2023 |
+-----+
6 rows in set (0.00 sec)

mysql>
mysql> DELETE FROM VETINARY WHERE VETINARY_ID= 'VET007';
Query OK, 1 row affected (0.00 sec)

mysql> SELECT* FROM VETINARY;
+-----+
| VETINARY_ID | PET_ID | VET_NAME | DATE      |
+-----+
| VET001     | P001   | SAMSON   | 23/4/2012 |
| VET002     | P005   | SHEENA   | 22/3/2013 |
| VET003     | P007   | SAMSON   | 14/5/2014 |
| VET004     | P001   | JONNY    | 15/7/2022 |
| VET005     | P002   | JONNY    | 15/3/2024 |
| VET006     | P009   | JONNY    | 10/3/2021 |
+-----+
6 rows in set (0.00 sec)

```

Figure 54: Delete in Vetinary

```

MySQL 8.0 Command Line Cli  +  -
+-----+
| E003 | U008 | 23/8/2024 |
| E005 | U005 | 25/12/2023 |
+-----+
6 rows in set (0.00 sec)

mysql>
mysql> DELETE FROM VETANARY WHERE VETANARY_ID= 'VET007';
Query OK, 1 row affected (0.00 sec)

mysql> SELECT* FROM VETANARY;
+-----+
| VETANARY_ID | PET_ID | VET_NAME | DATE |
+-----+
| VET001 | P001 | SAMSON | 23/4/2012 |
| VET002 | P005 | SHEENA | 22/3/2013 |
| VET003 | P007 | SAMSON | 14/5/2014 |
| VET004 | P001 | JONNY | 15/7/2022 |
| VET005 | P002 | JONNY | 15/3/2024 |
| VET006 | P009 | JONNY | 10/3/2021 |
+-----+
6 rows in set (0.00 sec)

mysql>
mysql> DELETE FROM GET_MEDICINE WHERE PET_ID= 'P005' AND Medicine = 'Kinthu';
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT* FROM GET_MEDICINE;
+-----+
| PET_ID | Medicine | DATE |
+-----+
| P001 | KIMSI | 23/4/2012 |
| P001 | LANTI | 24/4/2012 |
| P001 | NULL | 23/4/2012 |
| P002 | KANON | 15/3/2024 |
| P005 | Kainthu | 18/3/2024 |
| P005 | LANTI | 15/3/2024 |
| P007 | NULL | 14/5/2014 |
+-----+
7 rows in set (0.00 sec)

mysql>

```

Figure 55: Delete in Get_Medicine

```

MySQL 8.0 Command Line Cli  +  -
+-----+
6 rows in set (0.00 sec)

mysql>
mysql> DELETE FROM GET_MEDICINE WHERE PET_ID= 'P005' AND Medicine = 'Kinthu';
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT* FROM GET_MEDICINE;
+-----+
| PET_ID | Medicine | DATE |
+-----+
| P001 | KIMSI | 23/4/2012 |
| P001 | LANTI | 24/4/2012 |
| P001 | NULL | 23/4/2012 |
| P002 | KANON | 15/3/2024 |
| P005 | Kainthu | 18/3/2024 |
| P005 | LANTI | 15/3/2024 |
| P007 | NULL | 14/5/2014 |
+-----+
7 rows in set (0.00 sec)

mysql>
mysql> DELETE FROM TRANSACTION WHERE Trans_ID = 'TR12';
Query OK, 1 row affected (0.00 sec)

mysql> SELECT* FROM TRANSACTION;
+-----+
| User_ID | Vetary_ID | Trans_ID | Amount | Trans_Type | Trans_Date |
+-----+
| U010 | VET003 | TR1 | 5000 | VETANARY | 14/05/2022 |
| U010 | NULL | TR10 | 45000 | ADOPTION | 13/2/2023 |
| U007 | NULL | TR11 | 56000 | ADOPTION | 24/10/2024 |
| U007 | VET002 | TR2 | 8000 | VETANARY | 25/09/2013 |
| U008 | NULL | TR3 | 50000 | ADOPTION | 14/05/2022 |
| U003 | NULL | TR4 | 60000 | ADOPTION | 24/12/2015 |
| U008 | NULL | TR6 | 500000 | DONATION | 24/11/2016 |
| U006 | NULL | TR7 | 200000 | DONATION | 13/10/2024 |
| U014 | NULL | TR8 | 25000 | ADOPTION | 17/3/2023 |
| U013 | NULL | TR9 | 40000 | ADOPTION | 10/4/2021 |
+-----+
10 rows in set (0.00 sec)

```

Figure 56: Delete in Transaction

```

MySQL 8.0 Command Line Cli  +  -
ERROR 1062 (23000): Duplicate entry 'H005' for key 'medical_history.PRIMARY'
mysql> INSERT INTO Medical_History VALUES ('H006', 'P006', '20/4/2012');
ERROR 1062 (23000): Duplicate entry 'H006' for key 'medical_history.PRIMARY'
mysql> INSERT INTO Medical_History VALUES ('H007', 'P008', '23/8/2018');
ERROR 1062 (23000): Duplicate entry 'H007' for key 'medical_history.PRIMARY'
mysql> INSERT INTO Medical_History VALUES ('H008', 'P002', '25/8/2019');
Query OK, 1 row affected (0.01 sec)

mysql>
mysql> USE pet_adoption;
Database changed
mysql> UPDATE Medical_History
    -> SET Pre_Date='21/4/2012'
    -> WHERE History_ID = 'H006';
Query OK, 0 rows affected (0.00 sec)
Rows matched: 1  Changed: 0  Warnings: 0

mysql>
mysql> UPDATE Medical_History
    -> SET Pre_Date='26/4/2019'
    -> WHERE History_ID = 'H008';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql>
mysql> DELETE FROM Medical_History WHERE History_ID= 'H008';
Query OK, 1 row affected (0.01 sec)

mysql> SELECT* FROM Medical_History;
+-----+-----+-----+
| History_ID | Pet_ID | Pre_Date |
+-----+-----+-----+
| H001      | P003   | 21/2/2022 |
| H002      | P003   | 20/3/2020 |
| H003      | P001   | 22/4/2021 |
| H004      | P007   | 23/4/2022 |
| H005      | P005   | 20/5/2020 |
| H006      | P006   | 21/4/2012 |
| H007      | P008   | 23/8/2018 |
+-----+-----+-----+

```

Figure 57: Delete in Medical_History

```

MySQL 8.0 Command Line Cli  +  -
Rows matched: 1  Changed: 1  Warnings: 0

mysql>
mysql>
mysql> UPDATE HISTORY_DETAIL
    -> SET DETAIL = 'NULL'
    -> WHERE History_ID = 'H002';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT* FROM HISTORY_DETAIL;
+-----+-----+
| History_ID | DETAIL |
+-----+-----+
| H001      | NULL OF DISEASES |
| H002      | NULL              |
| H003      | HAS DIABATES     |
| H004      | HAS JIMMYTI      |
| H005      | HAS QUAR          |
| H006      | HAS LANG          |
| H007      | HAS ALL THEM      |
+-----+-----+
7 rows in set (0.00 sec)

mysql> DELETE FROM HISTORY_DETAIL  WHERE History_ID= 'H007';
Query OK, 1 row affected (0.01 sec)

mysql> SELECT* FROM HISTORY_DETAIL;
+-----+-----+
| History_ID | DETAIL |
+-----+-----+
| H001      | NULL OF DISEASES |
| H002      | NULL              |
| H003      | HAS DIABATES     |
| H004      | HAS JIMMYTI      |
| H005      | HAS QUAR          |
| H006      | HAS LANG          |
+-----+-----+
6 rows in set (0.00 sec)

mysql>

```

Figure 58: Delete in History_Detail

```

MySQL 8.0 Command Line Cli  +  v
+-----+
| H003 | HAS DIABATES |
| H004 | HAS JIMYTI   |
| H005 | HAS QUAR    |
| H006 | HAS LANG    |
| H007 | HAS ALL THEM |
+-----+
7 rows in set (0.00 sec)

mysql> DELETE FROM HISTORY_DETAIL WHERE History_ID= 'H007';
Query OK, 1 row affected (0.01 sec)

mysql> SELECT* FROM HISTORY_DETAIL;
+-----+
| History_ID | DETAIL   |
+-----+
| H001 | NULL OF DISEASES |
| H002 | NULL      |
| H003 | HAS DIABATES |
| H004 | HAS JIMYTI   |
| H005 | HAS QUAR    |
| H006 | HAS LANG    |
+-----+
6 rows in set (0.00 sec)

mysql> DELETE FROM SHELTER WHERE SHELTER_ID= 'SHEL005'AND USER_ID = 'U0011';
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT* FROM SHELTER;
+-----+
| SHELTER_ID | USER_ID | SHELTER_NAME | SHEELTER_LOCATION |
+-----+
| SHEL001 | U001 | DIGG PLAN(AMPARA) | AMPARA
| SHEL002 | U002 | DOGII PLAN(BADULLA) | BADULLA
| SHEL002 | U005 | DIGII PLAN(BADULLA) | BADULLA UP ROAD
| SHEL002 | U014 | DIGII PLAN(BADULLA) | BADULLA
| SHEL003 | U006 | DOGII PLAN(CHILAW) | CHILAW
+-----+
5 rows in set (0.00 sec)

mysql> DELETE FROM FINANCIAL WHERE TRANS_ID= 'TR9'AND USER_ID = 'U013' ;
Query OK, 0 rows affected (0.00 sec)

```

Figure 59: Delete in Shelter

```

MySQL 8.0 Command Line Cli  +  v
+-----+
| H001 | NULL OF DISEASES |
| H002 | NULL      |
| H003 | HAS DIABATES |
| H004 | HAS JIMYTI   |
| H005 | HAS QUAR    |
| H006 | HAS LANG    |
+-----+
6 rows in set (0.00 sec)

mysql> DELETE FROM SHELTER WHERE SHELTER_ID= 'SHEL005'AND USER_ID = 'U0011';
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT* FROM SHELTER;
+-----+
| SHELTER_ID | USER_ID | SHELTER_NAME | SHEELTER_LOCATION |
+-----+
| SHEL001 | U001 | DIGG PLAN(AMPARA) | AMPARA
| SHEL002 | U002 | DOGII PLAN(BADULLA) | BADULLA
| SHEL002 | U005 | DIGII PLAN(BADULLA) | BADULLA UP ROAD
| SHEL002 | U014 | DIGII PLAN(BADULLA) | BADULLA
| SHEL003 | U006 | DOGII PLAN(CHILAW) | CHILAW
+-----+
5 rows in set (0.00 sec)

mysql> DELETE FROM FINANCIAL WHERE TRANS_ID= 'TR9'AND USER_ID = 'U013' ;
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT* FROM FINANCIAL;
+-----+
| TRANS_ID | User_ID | AMOUNT |
+-----+
| TR1     | U010    | 5000  |
| TR11    | U007    | 56000 |
| TR2     | U007    | 8000  |
| TR3     | U008    | 50000 |
| TR4     | U003    | 60000 |
| TR7     | U003    | 200000|
+-----+
6 rows in set (0.00 sec)

```

Figure 60: Delete in Financial

```

MySQL 8.0 Command Line Cli  +  -
+-----+
| SHELTER_ID | USER_ID | SHELTER_NAME      | SHEELTER_LOCATION |
+-----+
| SHEL001    | U001    | DIGG PLAN(AMPARA) | AMPARA
| SHEL002    | U002    | DOGI PLAN(BADULLA) | BADULLA
| SHEL002    | U005    | DIGII PLAN(BADULLA) | BADULLA UP ROAD
| SHEL002    | U014    | DIGII PLAN(BADULLA) | BADULLA
| SHEL003    | U006    | DOGI PLAN(CHILAW)  | CHILAW
+-----+
5 rows in set (0.00 sec)

mysql> DELETE FROM FINANCIAL WHERE TRANS_ID= 'TR9'AND USER_ID  = 'U013' ;
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT* FROM FINANCIAL;
+-----+
| TRANS_ID | User_ID | AMOUNT |
+-----+
| TR1      | U010    | 5000   |
| TR11     | U007    | 56000  |
| TR2      | U007    | 8000   |
| TR3      | U008    | 50000  |
| TR4      | U003    | 60000  |
| TR7      | U003    | 200000 |
+-----+
6 rows in set (0.00 sec)

mysql> DELETE FROM VET_VISIT WHERE VETVISIT_ID ='VSI006';
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT* FROM VET_VISIT;
+-----+
| VETVISIT_ID | DATE      | VET_NAME | Veterany_ID | PET_ID |
+-----+
| VSI001     | 21/2/2023 | SAMSON   | VET001     | P001
| VSI002     | 22/4/2020  | NULL     | NULL       | P004
| VSI003     | 14/5/2014  | SAMSON   | VET003     | P007
| VSI004     | 26/3/2018  | SHEENA   | VET002     | P005
| VSI005     | 14/5/2022  | NULL     | NULL       | P006
+-----+
5 rows in set (0.00 sec)

```

Figure 61: Delete in vet_vist

```

MySQL 8.0 Command Line Cli  +  -
+-----+
| TRANS_ID | User_ID | AMOUNT |
+-----+
| TR1      | U010    | 5000   |
| TR11     | U007    | 56000  |
| TR2      | U007    | 8000   |
| TR3      | U008    | 50000  |
| TR4      | U003    | 60000  |
| TR7      | U003    | 200000 |
+-----+
6 rows in set (0.00 sec)

mysql>
mysql> DELETE FROM VET_VISIT WHERE VETVISIT_ID ='VSI006';
Query OK, 1 row affected (0.00 sec)

mysql> SELECT* FROM VET_VISIT;
+-----+
| VETVISIT_ID | DATE      | VET_NAME | Veterany_ID | PET_ID |
+-----+
| VSI001     | 21/2/2023 | SAMSON   | VET001     | P001
| VSI002     | 22/4/2020  | NULL     | NULL       | P004
| VSI003     | 14/5/2014  | SAMSON   | VET003     | P007
| VSI004     | 26/3/2018  | SHEENA   | VET002     | P005
| VSI005     | 14/5/2022  | NULL     | NULL       | P006
+-----+
5 rows in set (0.00 sec)

mysql>
mysql> DELETE FROM VISIT_REASON WHERE VETVISIT_ID ='VSI004';
Query OK, 2 rows affected (0.01 sec)

mysql> SELECT* FROM VISIT_REASON;
+-----+
| VETVISIT_ID | Visit_reason | DATE      |
+-----+
| VSI001     | MEDICINE    | 21/02/2023 |
| VSI002     | ADOPT       | 22/4/2020  |
| VSI003     | MEDICINE    | 14/5/2014  |
| VSI005     | TO WATCH    | 14/5/2022  |
+-----+
4 rows in set (0.00 sec)

```

Figure 62: Delete in vist_reason

3.2 Transaction

3.2.1 Simple queries

1. Retrieve al tuples from USER table

The screenshot shows a MySQL Command Line Client window. The session starts with a delete operation on the VET_VISIT table, followed by a select query to show the current state of the VET_VISIT table. Then, it executes a series of comments and a select query to retrieve all tuples from the USER table, displaying 13 rows of data.

```
mysql> DELETE FROM VET_VISIT WHERE VETVISIT_ID ='VSI006';
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT* FROM VET_VISIT;
+-----+-----+-----+-----+
| VETVISIT_ID | DATE | VET_NAME | Veterany_ID | PET_ID |
+-----+-----+-----+-----+
| VSI001 | 21/2/2023 | SAMSON | VET001 | P001 |
| VSI002 | 22/4/2020 | NULL | NULL | P004 |
| VSI003 | 14/5/2014 | SAMSON | VET003 | P007 |
| VSI004 | 26/3/2018 | SHEENA | VET002 | P005 |
| VSI005 | 14/5/2022 | NULL | NULL | P006 |
+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> ^C
mysql> -- SIMPLE QUERIES --
mysql> -- Retrieve al tuples from USER table-----
mysql> SELECT* FROM USER;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| User_ID | User_Type | Name | Email | Reg_Date | Appart_No | Street_No | Street_Name | City | State |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| U001 | ADMIN | Namal Rajapaksha | namalrah456@gmail.com | 30/2/2023 | 19 | thissapura | chadayanthalawa | ampara | Srilanka | |
| U0011 | ADMIN | Gihara | gihara664@gmepplil.com | 29/8/2024 | 65 | Katumatiya | Hokandara | Kiribathwehera | Srilanka |
| U002 | EMPLOYEE | Kumara welgama | kumar4322@gmail.com | 16/9/2022 | 12 | bogoda | marisiwella | Kalutharagama | Srilanka |
| U003 | ADOPTER | Niranji | niranji5664@gmail.com | 24/12/2021 | 45 | weeragoda | bogala | badulla | Srilanka |
| U004 | NULL | Tharindu | tharindu5664@gmail.com | 22/1/2022 | 23 | kithulpe | haguranketha | Rikillagaskada | Srilanka |
| U005 | EMPLOYEE | Anura | anura5664@gmepplil.com | 15/2/2024 | 35 | rajagahawewa | howewa | kampane | badulla | Srilanka |
| U006 | EMPLOYEE | Gihan | gihan5664@gmepplil.com | 23/3/2022 | 1 | kandakadu | kandakadu | kampane | badulla | Srilanka |
| U007 | ADOPTER | Malinda | malinda675@gmail.com | 24/2/2024 | 356 | marathmuni | maliyadda | mirissa | hambantota | Srilanka |
| U008 | ADOPTER | Kapila | kapila4563@gmail.com | 13/2/2021 | 108 | beressa | kithulgala | hambantota | hambantota | Srilanka |
| U010 | ADOPTER | Kalpana | kalpana4563@gmail.com | 13/2/2024 | 10 | Gayagama | katukithula | katukithula | hambegamuwa | Srilanka |
| U013 | ADOPTER | Nirmal | Nirmal5663@gmail.com | 03/10/2021 | 43 | Kirawanagama | Lunuwatte | Lunuwatte | Uva-paranagama | Srilanka |
| U014 | EMPLOYEE | NirmalI | NirmalI5663@gmail.com | 30/10/2021 | 3 | Kirawanagama | Lunuwatte | Lunuwatte | Uva-paranagama | Srilanka |
| U015 | ADOPTER | Nadun | Nadun5663@gmail.com | 13/12/2024 | 53 | Ethakandawake | Lunuwatte | Lunuwatte | Uva-paranagama | Srilanka |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
13 rows in set (0.00 sec)

mysql>
```

Figure 63: Retrieve al tuples from USER table

The screenshot shows a MySQL Command Line Client window. It starts with a delete operation on the VET_VISIT table, followed by a select query to show the current state of the VET_VISIT table. Then, it executes a comment, a select query to retrieve all tuples from the USER table, and finally a select query to retrieve data for the user with user_id = U003, showing 1 row of data.

```
mysql> DELETE FROM VET_VISIT WHERE VETVISIT_ID ='VSI006';
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT* FROM VET_VISIT;
+-----+-----+-----+-----+
| VETVISIT_ID | DATE | VET_NAME | Veterany_ID | PET_ID |
+-----+-----+-----+-----+
| VSI001 | 21/2/2023 | SAMSON | VET001 | P001 |
| VSI002 | 22/4/2020 | NULL | NULL | P004 |
| VSI003 | 14/5/2014 | SAMSON | VET003 | P007 |
| VSI004 | 26/3/2018 | SHEENA | VET002 | P005 |
| VSI005 | 14/5/2022 | NULL | NULL | P006 |
+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> ^C
mysql> -- SIMPLE QUERIES --
mysql> -- Retrieve al tuples from USER table-----
mysql> SELECT* FROM USER;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| User_ID | User_Type | Name | Email | Reg_Date | Appart_No | Street_No | Street_Name | City | State |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| U001 | ADMIN | Namal Rajapaksha | namalrah456@gmail.com | 30/2/2023 | 19 | thissapura | chadayanthalawa | ampara | Srilanka | |
| U0011 | ADMIN | Gihara | gihara664@gmepplil.com | 29/8/2024 | 65 | Katumatiya | Hokandara | Kiribathwehera | Srilanka |
| U002 | EMPLOYEE | Kumara welgama | kumar4322@gmail.com | 16/9/2022 | 12 | bogoda | marisiwella | Kalutharagama | Srilanka |
| U003 | ADOPTER | Niranji | niranji5664@gmail.com | 24/12/2021 | 45 | weeragoda | bogala | badulla | Srilanka |
| U004 | NULL | Tharindu | tharindu5664@gmail.com | 22/1/2022 | 23 | kithulpe | haguranketha | Rikillagaskada | Srilanka |
| U005 | EMPLOYEE | Anura | anura5664@gmepplil.com | 15/2/2024 | 35 | rajagahawewa | howewa | kampane | badulla | Srilanka |
| U006 | EMPLOYEE | Gihan | gihan5664@gmepplil.com | 23/3/2022 | 1 | kandakadu | kandakadu | kampane | badulla | Srilanka |
| U007 | ADOPTER | Malinda | malinda675@gmail.com | 24/2/2024 | 356 | marathmuni | maliyadda | mirissa | hambantota | Srilanka |
| U008 | ADOPTER | Kapila | kapila4563@gmail.com | 13/2/2021 | 108 | beressa | kithulgala | hambantota | hambantota | Srilanka |
| U010 | ADOPTER | Kalpana | kalpana4563@gmail.com | 13/2/2024 | 10 | Gayagama | katukithula | katukithula | hambegamuwa | Srilanka |
| U013 | ADOPTER | Nirmal | Nirmal5663@gmail.com | 03/10/2021 | 43 | Kirawanagama | Lunuwatte | Lunuwatte | Uva-paranagama | Srilanka |
| U014 | EMPLOYEE | NirmalI | NirmalI5663@gmail.com | 30/10/2021 | 3 | Kirawanagama | Lunuwatte | Lunuwatte | Uva-paranagama | Srilanka |
| U015 | ADOPTER | Nadun | Nadun5663@gmail.com | 13/12/2024 | 53 | Ethakandawake | Lunuwatte | Lunuwatte | Uva-paranagama | Srilanka |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
13 rows in set (0.00 sec)

mysql>
mysql> -- Retrieve data of user_id = U003 --
mysql> SELECT * FROM PET WHERE User_ID = 'U003';
+-----+-----+-----+-----+-----+-----+
| Pet_ID | User_ID | Pet_Type | Pet_Name | Age | Breed | DateOfBirth | Availability |
+-----+-----+-----+-----+-----+-----+
| P003 | U003 | Dog | Humpy | 4 | Rottvialet | 17/03/2020 | No |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

Figure 64: Retrieve data of user_id = U003

```

MySQL 8.0 Command Line Cli + v
+-----+
| User_ID | User_Type | Name           | Email          | Reg_Date    | Appart_No | Street_No   | Street_Name  | City        | State      |
+-----+
| U001    | ADMIN     | Namal Rajapaksha | namalrah456@gmail.com | 30/2/2023   | 19         | thissapura  | chadayanthalawa | ampara     | Srilanka   | | |
| U0011   | ADMIN     | Gihara          | gihara664@gmepmlil.com | 29/8/2024   | 65         | Katumatiya  | Hokandara    | Kiribathwehera | Srilanka   |
| U002    | EMPLOYEE  | Kumara welgama | kumar4322@gmail.com   | 16/9/2022   | 12         | bogoda      | marisiwella  | Kalutharagama | Srilanka   |
| U003    | ADOPTER   | Niranji         | niranji5664@gmail.com | 24/12/2021  | 45         | weeragoda   | bogala       | badulla     | Rikillagaskada | Srilanka   |
| U004    | NULL      | Tharindu        | tharindu5664@gmail.com | 22/1/2022   | 23         | kithulpe    | haguranketha | howewa      | putthalama   | Srilanka   |
| U005    | EMPLOYEE  | Anura           | anura5664@gmepmlil.com | 15/2/2024   | 1          | kandakadu  | kamppane    | badulla     | mirissa     | Srilanka   |
| U006    | EMPLOYEE  | Gihan           | gihan5664@gmepmlil.com | 23/3/2022   | 35         | rajagahawewa | howewa      | puththalama | hambantotha  | Srilanka   |
| U007    | ADOPTER   | Malinda         | malinda675@gmail.com  | 24/2/2024   | 356        | marathununi | maliyadda   | hambantotha | hambegamuwa | Srilanka   |
| U008    | ADOPTER   | Kapila          | kapila4563@gmail.com  | 13/2/2021   | 108        | beressa     | kithulgala  | Uva-paranagama | Uva-paranagama | Srilanka   |
| U010    | ADOPTER   | Kalpana         | kalpana4563@gmail.com | 13/2/2024   | 10         | Gayagama    | katukithula | Lunuwatte   | Lunuwatte   | Uva-paranagama | Srilanka   |
| U013    | ADOPTER   | Nirmal           | Nirmal5663@gmail.com  | 03/10/2021  | 43         | Kirawanagaam | Lunuwatte   | Lunuwatte   | Lunuwatte   | Uva-paranagama | Srilanka   |
| U014    | EMPLOYEE  | Nirmali          | Nirmal5663@gmail.com  | 30/10/2021  | 3          | Kirawanagama | Lunuwatte   | Lunuwatte   | Lunuwatte   | Uva-paranagama | Srilanka   |
| U015    | ADOPTER   | Nadun           | Nadun5663@gmail.com   | 13/12/2024  | 53         | Ethakandawake | Lunuwatte   | Lunuwatte   | Lunuwatte   | Uva-paranagama | Srilanka   |
+-----+
13 rows in set (0.00 sec)

mysql>
mysql> -- Retrieve data of user_id = U003 --
mysql> SELECT * FROM PET WHERE User_ID = 'U003';
+-----+
| Pet_ID | User_ID | Pet_Type | Pet_Name | Age | Breed      | DateOfBirth | Availability |
+-----+
| P003   | U003   | Dog      | Humpy    | 4   | Rottvialet | 17/03/2020  | No          |
+-----+
1 row in set (0.00 sec)

mysql>
mysql>
mysql> -- Find the pet_type of dogs --
mysql> SELECT* FROM PET WHERE Pet_Type = 'Dog';
+-----+
| Pet_ID | User_ID | Pet_Type | Pet_Name | Age | Breed      | DateOfBirth | Availability |
+-----+
| P002   | NULL    | Dog      | Jimmy    | 3   | Bulldog    | 17/03/2021 | Yes         |
| P003   | U003   | Dog      | Humpy    | 4   | Rottvialet | 17/03/2020 | No          |
| P007   | U010   | Dog      | Roxy    | 5   | Germen_Shepard | 17/03/2019 | Yes         |
| P009   | U013   | Dog      | Jessy   | 6   | Germen_Shepard | 29/8/2021  | Yes         |
+-----+
4 rows in set (0.00 sec)

```

Figure 65: Find the pet_type of dogs

```

MySQL 8.0 Command Line Cli + v
+-----+
4 rows in set (0.00 sec)

mysql>
mysql>
mysql> -- Sorting the age by disending order --
mysql> SELECT * FROM PET ORDER BY Age DESC;
+-----+
| Pet_ID | User_ID | Pet_Type | Pet_Name | Age | Breed      | DateOfBirth | Availability |
+-----+
| P004   | U004   | Cat      | Larse   | 6   | Balinese   | 17/03/2018 | No          |
| P009   | U013   | Dog      | Jessy   | 6   | Germen_Shepard | 29/8/2021 | Yes         |
| P007   | U010   | Dog      | Roxy   | 5   | Germen_Shepard | 17/03/2019 | Yes         |
| P001   | NULL    | Cat      | Sam     | 4   | Abyssinian | 17/03/2020 | Yes         |
| P003   | U003   | Dog      | Humpy   | 4   | Rottvialet | 17/03/2020 | No          |
| P008   | NULL    | Cat      | Morse   | 4   | Persian    | 17/03/2020 | Yes         |
| P002   | NULL    | Dog      | Jimmy   | 3   | Bulldog    | 17/03/2021 | Yes         |
| P006   | U008   | Parrot   | Prut    | 2   | Cockatiel  | 17/03/2022 | No          |
| P005   | U007   | Parrot   | Kiw     | 1   | Budgerigar | 17/03/2023 | No          |
+-----+
9 rows in set (0.00 sec)

mysql>
mysql> -- like function --
mysql> SELECT * FROM USER WHERE Email LIKE '%gmail%';
+-----+
| User_ID | User_Type | Name           | Email          | Reg_Date    | Appart_No | Street_No   | Street_Name  | City        | State      |
+-----+
| U001    | ADMIN     | Namal Rajapaksha | namalrah456@gmail.com | 30/2/2023   | 19         | thissapura  | chadayanthalawa | ampara     | Srilanka   | | |
| U002    | EMPLOYEE  | Kumara welgama | kumar4322@gmail.com   | 16/9/2022   | 12         | bogoda      | marisiwella  | Kalutharagama | Srilanka   |
| U003    | ADOPTER   | Niranji         | niranji5664@gmail.com | 24/12/2021  | 45         | weeragoda   | bogala       | badulla     | Rikillagaskada | Srilanka   |
| U004    | NULL      | Tharindu        | tharindu5664@gmail.com | 22/1/2022   | 23         | kithulpe    | haguranketha | howewa      | putthalama   | Srilanka   |
| U007    | ADOPTER   | Malinda         | malinda675@gmail.com  | 24/2/2024   | 356        | marathununi | maliyadda   | mirissa     | hambantotha  | Srilanka   |
| U008    | ADOPTER   | Kapila          | kapila4563@gmail.com  | 13/2/2021   | 108        | beressa     | kithulgala  | hambegamuwa | Uva-paranagama | Uva-paranagama | Srilanka   |
| U010    | ADOPTER   | Kalpana         | kalpana4563@gmail.com | 13/2/2024   | 10         | Gayagama    | katukithula | Lunuwatte   | Lunuwatte   | Uva-paranagama | Srilanka   |
| U013    | ADOPTER   | Nirmal           | Nirmal5663@gmail.com  | 03/10/2021  | 43         | Kirawanagaam | Lunuwatte   | Lunuwatte   | Lunuwatte   | Uva-paranagama | Srilanka   |
| U014    | EMPLOYEE  | Nirmali          | Nirmal5663@gmail.com  | 30/10/2021  | 3          | Kirawanagama | Lunuwatte   | Lunuwatte   | Lunuwatte   | Uva-paranagama | Srilanka   |
| U015    | ADOPTER   | Nadun           | Nadun5663@gmail.com   | 13/12/2024  | 53         | Ethakandawake | Lunuwatte   | Lunuwatte   | Lunuwatte   | Uva-paranagama | Srilanka   |
+-----+
10 rows in set (0.00 sec)

mysql>

```

Figure 66: Sorting the age by disending order

```

MySQL 8.0 Command Line Cli  + - x
4 rows in set (0.00 sec)

mysql>
mysql> -- Sorting the age by disending order --
mysql> SELECT * FROM PET ORDER BY Age DESC;
+-----+-----+-----+-----+-----+-----+
| Pet_ID | User_ID | Pet_Type | Pet_Name | Age | Breed      | DateOfBirth | Availability |
+-----+-----+-----+-----+-----+-----+
| P004   | U004   | Cat     | Larse    | 6   | Balinese   | 17/03/2018  | No          |
| P009   | U013   | Dog     | Jessy    | 6   | Germen_Shepard | 29/8/2021  | Yes         |
| P007   | U010   | Dog     | Roxy    | 5   | Germen_Shepard | 17/03/2019  | Yes         |
| P001   | NULL    | Cat     | Sam     | 4   | Abyssinian  | 17/03/2020  | Yes         |
| P003   | U003   | Dog     | Humpy   | 4   | Rottvialet  | 17/03/2020  | No          |
| P008   | NULL    | Cat     | Morse   | 4   | Persian    | 17/03/2020  | Yes         |
| P002   | NULL    | Dog     | Jimmy   | 3   | Bulldog    | 17/03/2021  | Yes         |
| P006   | U008   | Parrot  | Prut   | 2   | Cockatiel  | 17/03/2022  | No          |
| P005   | U007   | Parrot  | Kiw    | 1   | Budgerigar | 17/03/2023  | No          |
+-----+-----+-----+-----+-----+-----+
9 rows in set (0.00 sec)

mysql> -- like function --
mysql> SELECT * FROM USER WHERE Email LIKE '%gmail%';
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| User_ID | User_Type | Name      | Email           | Reg_Date | Appart_No | Street_No | Street_Name | City       | State      |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| U001   | ADMIN    | Namal Rajapaksha | namalrah456@gmail.com | 30/2/2023 | 19        | thissapura | chadayanthalawa | ampara    | Srilanka   |
| U002   | EMPLOYEE | Kumara welgama  | kumar4322@gmail.com  | 16/9/2022  | 12        | bogoda     | marisiwella   | Kalutharagama | Srilanka   |
| U003   | ADOPTER  | Niranji   | niranji5664@gmail.com | 24/12/2021 | 45        | weeragoda  | bogala      | badulla    | Srilanka   |
| U004   | NULL     | Tharindu  | tharindu5664@gmail.com | 22/1/2022  | 23        | kithulpe   | haguranketha | Rikillagaskada | Srilanka   |
| U007   | ADOPTER  | Malinda   | malinda675@gmail.com | 24/2/2024  | 356       | marathunni | maliyadda   | mirissa   | Srilanka   |
| U008   | ADOPTER  | Kapila    | kapila4563@gmail.com | 13/2/2021  | 108       | beressa    | kithulgala  | hambanthota | Srilanka   |
| U010   | ADOPTER  | Kalpana   | kalpana4563@gmail.com | 13/2/2024  | 10        | Gayagama   | katukithula | hambegamuwa | Srilanka   |
| U013   | ADOPTER  | Nirmal    | Nirmal5663@gmail.com | 03/10/2021 | 43        | Kirawanagaa | Lunuwatte   | Uva-paranagama | Srilanka   |
| U014   | EMPLOYEE | Nirmali   | NirmalI5663@gmail.com | 30/10/2021 | 3         | Kirawanagama | Lunuwatte   | Uva-paranagama | Srilanka   |
| U015   | ADOPTER  | Nadun    | Nadun5663@gmail.com  | 13/12/2024 | 53        | Ethakandawake | Lunuwatte   | Uva-paranagama | Srilanka   |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>

```

Figure 67: like function

```

MySQL 8.0 Command Line Cli  + - x
9 rows in set (0.00 sec)

mysql>
mysql> -- like function --
mysql> SELECT * FROM USER WHERE Email LIKE '%gmail%';
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| User_ID | User_Type | Name      | Email           | Reg_Date | Appart_No | Street_No | Street_Name | City       | State      |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| U004   | U004   | Cat     | Larse    | 6   | Balinese   | 17/03/2018  | No          |
| P009   | U013   | Dog     | Jessy    | 6   | Germen_Shepard | 29/8/2021  | Yes         |
| P007   | U010   | Dog     | Roxy    | 5   | Germen_Shepard | 17/03/2019  | Yes         |
| P001   | NULL    | Cat     | Sam     | 4   | Abyssinian  | 17/03/2020  | Yes         |
| P003   | U003   | Dog     | Humpy   | 4   | Rottvialet  | 17/03/2020  | No          |
| P008   | NULL    | Cat     | Morse   | 4   | Persian    | 17/03/2020  | Yes         |
| P002   | NULL    | Dog     | Jimmy   | 3   | Bulldog    | 17/03/2021  | Yes         |
| P006   | U008   | Parrot  | Prut   | 2   | Cockatiel  | 17/03/2022  | No          |
| P005   | U007   | Parrot  | Kiw    | 1   | Budgerigar | 17/03/2023  | No          |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
9 rows in set (0.00 sec)

mysql> -- COUNT THE ROWS OF USER --
mysql> SELECT COUNT(*) FROM USER;
+-----+
| COUNT(*) |
+-----+
| 13 |
+-----+
1 row in set (0.01 sec)

```

Figure 68: COUNT THE ROWS OF USER

```

MySQL> -- like function --
MySQL> SELECT * FROM USER WHERE Email LIKE '%gmail%';
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| User_ID | User_Type | Name      | Email           | Reg_Date   | Appart_No | Street_No | Street_Name | City        | State     |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| U001    | ADMIN     | Namal Rajapaksha | namalrah456@gmail.com | 30/2/2023  | 19         | thissapura | chadayanthalawa | ampara     | Srilanka  |
| U002    | EMPLOYEE  | Kumara welgama  | kumar4322@gmail.com  | 16/9/2022  | 12         | bogoda     | marisiwella   | Kalutharagama | Srilanka  |
| U003    | ADOPTER   | Niranji       | niranji5664@gmail.com | 24/12/2021 | 45         | weeragoda  | bogala       | badulla     | Srilanka  |
| U004    | NULL      | Tharindu       | tharindu5664@gmail.com | 22/1/2022  | 23         | kithulpe   | haguranketha | Rikillagaskada | Srilanka  |
| U007    | ADOPTER   | Malinda       | malinda675@gmail.com | 24/2/2024  | 356        | marathmuni | maliyadda   | mirissa    | Srilanka  |
| U008    | ADOPTER   | Kapila        | kapila4563@gmail.com | 13/2/2021  | 108        | beressa    | kithulgala  | hambanthota | Srilanka  |
| U010    | ADOPTER   | Kalpana       | kalpana4563@gmail.com | 13/2/2024  | 10         | Gayagama   | katukithula | hambegamuwa | Srilanka  |
| U013    | ADOPTER   | Nirmal        | Nirmal5663@gmail.com | 03/10/2021 | 43         | Kirawanaagam | Lunuwatte   | Uva-paranagama | Srilanka  |
| U014    | EMPLOYEE  | NirmalI       | NirmalI5663@gmail.com | 30/10/2021 | 3          | Kirawanaagam | Lunuwatte   | Uva-paranagama | Srilanka  |
| U015    | ADOPTER   | Nadun        | Nadun5663@gmail.com  | 13/12/2024 | 53         | Ethakandawake | Lunuwatte   | Uva-paranagama | Srilanka  |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

MySQL> -- COUNT THE ROWS OF USER --
MySQL> SELECT COUNT(*) FROM USER;
+-----+
| COUNT(*) |
+-----+
| 13 |
+-----+
1 row in set (0.01 sec)

MySQL> -- Find the maximum Age --
MySQL> SELECT MAX(Age) FROM PET;
+-----+
| MAX(Age) |
+-----+
| 6 |
+-----+
1 row in set (0.00 sec)

```

Figure 69: Find the maximum Age

```

MySQL> -- Find the maximum Age --
MySQL> SELECT MAX(Age) FROM PET;
+-----+
| MAX(Age) |
+-----+
| 6 |
+-----+
1 row in set (0.00 sec)

MySQL> -- COUNT THE ROWS OF USER --
MySQL> SELECT COUNT(*) FROM USER;
+-----+
| COUNT(*) |
+-----+
| 13 |
+-----+
1 row in set (0.01 sec)

MySQL> -- Find the maximum Age --
MySQL> SELECT MAX(Age) FROM PET;
+-----+
| MAX(Age) |
+-----+
| 6 |
+-----+
1 row in set (0.00 sec)

MySQL> -- SELECT the pet s age from 4 to 6 --
MySQL> SELECT * FROM PET WHERE Age BETWEEN 2 AND 6;
+-----+-----+-----+-----+-----+-----+-----+
| Pet_ID | User_ID | Pet_Type | Pet_Name | Age | Breed      | DateOfBirth | Availability |
+-----+-----+-----+-----+-----+-----+-----+
| P001   | NULL    | Cat      | Sam      | 4   | Abyssinian | 17/03/2020  | Yes        |
| P002   | NULL    | Dog      | Jimmy    | 3   | Bulldog    | 17/03/2021  | Yes        |
| P003   | U003    | Dog      | Humpy    | 4   | Rottvialet | 17/03/2020  | No         |
| P004   | U004    | Cat      | Larse    | 6   | Balinese   | 17/03/2018  | No         |
| P006   | U008    | Parrot   | Prut    | 2   | Cockatiel  | 17/03/2022  | No         |
| P007   | U010    | Dog      | Roxy    | 5   | German_Shepard | 17/03/2019 | Yes        |
| P008   | NULL    | Cat      | Morse   | 4   | Persian    | 17/03/2020  | Yes        |
| P009   | U013    | Dog      | Jessy   | 6   | German_Shepard | 29/8/2021  | Yes        |
+-----+-----+-----+-----+-----+-----+-----+
8 rows in set (0.00 sec)

```

Figure 70: SELECT the pet s age from 4 to 6

3.2.2 COMPLEX QUERIES

1. Sum of the transaction

```
MySQL> -- Find the maximum Age --
MySQL> SELECT MAX(Age) FROM PET;
+-----+
| MAX(Age) |
+-----+
| 6 |
+-----+
1 row in set (0.00 sec)

MySQL> -- SELECT the pet s age from 4 to 6 --
MySQL> SELECT * FROM PET WHERE Age BETWEEN 2 AND 6;
+-----+-----+-----+-----+-----+-----+-----+
| Pet_ID | User_ID | Pet_Type | Pet_Name | Age | Breed | DateOfBirth | Availability |
+-----+-----+-----+-----+-----+-----+-----+
| P001 | NULL | Cat | Sam | 4 | Abyssinian | 17/03/2020 | Yes |
| P002 | NULL | Dog | Jimmy | 3 | Bulldog | 17/03/2021 | Yes |
| P003 | U003 | Dog | Humpy | 4 | Rottvialet | 17/03/2020 | No |
| P004 | U004 | Cat | Larse | 6 | Balinese | 17/03/2018 | No |
| P006 | U008 | Parrot | Prut | 2 | Cockatiel | 17/03/2022 | No |
| P007 | U010 | Dog | Roxy | 5 | Germen_Shepard | 17/03/2019 | Yes |
| P008 | NULL | Cat | Morse | 4 | Persian | 17/03/2020 | Yes |
| P009 | U013 | Dog | Jessy | 6 | Germen_Shepard | 29/8/2021 | Yes |
+-----+-----+-----+-----+-----+-----+-----+
8 rows in set (0.00 sec)

MySQL>
MySQL> --
MySQL> -- COMPLEX QUERIES --
MySQL> -- Sum of the transaction --
MySQL> SELECT SUM(Amount) FROM TRANSACTION;
+-----+
| SUM(Amount) |
+-----+
| 989000 |
+-----+
1 row in set (0.00 sec)
```

Figure 71: Sum of the transaction

```
MySQL> -- Find the user who has adopted and participate the event
MySQL> SELECT DISTINCT u.Name
   >   FROM USER u WHERE EXISTS (SELECT *
   >     FROM PET p
   >     WHERE P.User_ID = u.User_ID) AND EXISTS (SELECT *
   >       FROM PARTICIPATE_EVENT pe
   >       WHERE pe.User_ID = u.User_ID);
+-----+
| Name |
+-----+
| Tharindu |
| Kapila |
+-----+
2 rows in set (0.00 sec)
```

Figure 72: DEVISION (Find the user who has adopted and participate the event)

```

MySQL 8.0 Command Line Cli  +  -
mysql> SELECT DISTINCT u.Name
->   FROM USER u WHERE EXISTS (SELECT *
->     FROM PET p
->     WHERE P.User_ID = u.User_ID) AND EXISTS (SELECT *
->     FROM PARTICIPATE_EVENT pe
->     WHERE pe.User_ID = u.User_ID);
+-----+
| Name |
+-----+
| Tharindu |
| Kapila  |
+-----+
2 rows in set (0.00 sec)

mysql> -- Union Operation --
mysql> (
->   SELECT 'ADOPTION' AS Transaction_Type, Trans_ID, User_ID, Amount, Trans_Date
->     FROM TRANSACTION
->     WHERE Trans_Type = 'ADOPTION'
->   )
-> UNION
-> (
->   SELECT 'DONATION' AS Transaction_Type, Trans_ID, User_ID, Amount, Trans_Date
->     FROM TRANSACTION
->     WHERE Trans_Type = 'DONATION'
->   )
-> ORDER BY Trans_Date DESC;
+-----+-----+-----+-----+
| Transaction_Type | Trans_ID | User_ID | Amount | Trans_Date |
+-----+-----+-----+-----+
| DONATION        | TR6      | U008    | 500000 | 24/11/2016
| ADOPTION         | TR11     | U007    | 56000  | 24/10/2024
| ADOPTION         | TR8      | U014    | 25000  | 17/3/2023
| ADOPTION         | TR3      | U008    | 50000  | 14/05/2022
| ADOPTION         | TR10     | U010    | 45000  | 13/2/2023
| DONATION         | TR7      | U006    | 260000 | 13/10/2024
| ADOPTION         | TR9      | U013    | 40000  | 10/4/2021
+-----+-----+-----+-----+
7 rows in set (0.00 sec)

```

Figure 73: Union Operation

```

MySQL 8.0 Command Line Cli  +  -
7 rows in set (0.00 sec)

mysql>
mysql>
mysql> -- create a view and union operation --
mysql> -- Create UV1 view
mysql> CREATE VIEW UV1 AS
->   SELECT User_ID, Reg_Date
->     FROM USER
->     WHERE User_Type = 'EMPLOYEE';
Query OK, 0 rows affected (0.01 sec)

mysql>
mysql> -- Create UV2 view
mysql> CREATE VIEW UV2 AS
->   SELECT User_ID, Reg_Date
->     FROM USER
->     WHERE User_Type = 'ADOPTER';
Query OK, 0 rows affected (0.01 sec)

mysql>
mysql> -- Perform union operation
mysql> SELECT * FROM UV1
-> UNION
-> SELECT * FROM UV2;
+-----+-----+
| User_ID | Reg_Date |
+-----+-----+
| U002    | 16/9/2022
| U005    | 15/2/2024
| U006    | 23/3/2022
| U014    | 30/10/2021
| U003    | 24/12/2021
| U007    | 24/2/2024
| U008    | 13/2/2021
| U010    | 13/2/2024
| U013    | 03/10/2021
| U015    | 13/12/2024
+-----+-----+
10 rows in set (0.00 sec)

```

Figure 74: create a view and union operation

```

mysql> -- Aggragation complex query --
mysql> -- Find the count of who have adopted more than one pet --
mysql> SELECT User_ID
    -> FROM(SELECT User_ID, COUNT(*) AS Num_Adoptions
    -> FROM TRANSACTION
    -> WHERE Trans_Type = 'ADOPTION'
    -> Group by User_ID)
    -> AS Adoption_Count
    -> WHERE Num_Adoptions >1;
Empty set (0.00 sec)

mysql> SELECT DISTINCT U1.Name
    -> FROM
    -> (SELECT U.Name
    -> FROM USER U
    -> INNER JOIN PARTICIPATE_EVENT PE ON U.User_ID = PE.User_ID) AS U1
    -> INNER JOIN
    -> (SELECT U.Name
    -> FROM USER U
    -> INNER JOIN PET P ON U.User_ID = P.User_ID) AS U2
    -> ON U1.Name = U2.Name;
ERROR 1054 (42S22): Unknown column 'U1.Name' in 'on clause'

mysql> -- SET DIFFERENCE--
mysql> SELECT User_ID FROM USER
    -> EXCEPT
    -> SELECT User_ID FROM PARTICIPATE_EVENT;
+-----+
| User_ID |
+-----+
| U0011   |
| U003    |
| U006    |
| U007    |
| U010    |
| U013    |
| U014    |
| U015    |
+-----+

```

Figure 75: Aggragation and Set Difference complex query

```

| U014   |
| U015   |
+-----+
8 rows in set (0.00 sec)

mysql> -- JOIN --
mysql> -- CREATE VIEWS --
mysql> -- VIEW FOR USERS --
mysql>
mysql> CREATE VIEW View_Users AS SELECT User_ID , Name, City FROM USER;
Query OK, 0 rows affected (0.01 sec)

mysql>
mysql> -- View for Pets --
mysql>
mysql> CREATE VIEW View_Pets AS SELECT Pet_ID ,User_ID,Pet_Name, Pet_Type FROM PET;
Query OK, 0 rows affected (0.01 sec)

mysql>
mysql> -- View for PetEvents --
mysql>
mysql> CREATE VIEW View_PetEvents AS SELECT Event_ID,Event_Name,Location FROM EVENT;
Query OK, 0 rows affected (0.01 sec)

mysql>
mysql> -- INNER JOIN --
mysql>
mysql> SELECT VU.Name , VP.Pet_Name FROM View_Users VU INNER JOIN View_Pets VP ON VU.User_ID = VP.User_ID;
+-----+
| Name   | Pet_Name |
+-----+
| Niranji | Humpy  |
| Tharindu | Larse  |
| Malinda | Kiw    |
| Kapila  | Prut   |
| Kalpana | Roxy   |
| Nirmal  | Jessy  |
+-----+
6 rows in set (0.01 sec)

```

Figure 76: Inner Join Operation

```

MySQL> Query OK, 0 rows affected (0.01 sec)

mysql> -- INNER JOIN --
mysql>
mysql> SELECT VU.Name , VP.Pet_Name FROM View_Users VU INNER JOIN View_Pets VP ON VU.User_ID = VP.User_ID;
+-----+-----+
| Name | Pet_Name |
+-----+-----+
| Niranji | Humpy |
| Tharindu | Larse |
| Malinda | Kiw |
| Kapila | Prut |
| Kalpana | Roxy |
| Nirmal | Jessy |
+-----+-----+
6 rows in set (0.01 sec)

mysql> -- LEFT OUTER JOIN --
mysql>
mysql> SELECT VU.Name , VP.Pet_Name , VP.Pet_Type FROM View_Users VU LEFT JOIN View_Pets VP on VU.User_ID = VP.User_ID;
+-----+-----+-----+
| Name | Pet_Name | Pet_Type |
+-----+-----+-----+
| Namal Rajapaksha | NULL | NULL |
| Gihara | NULL | NULL |
| Kumara welgama | NULL | NULL |
| Niranji | Humpy | Dog |
| Tharindu | Larse | Cat |
| Anura | NULL | NULL |
| Gihan | NULL | NULL |
| Malinda | Kiw | Parrot |
| Kapila | Prut | Parrot |
| Kalpana | Roxy | Dog |
| Nirmal | Jessy | Dog |
| Nirmal.I | NULL | NULL |
| Nadun | NULL | NULL |
+-----+-----+-----+
13 rows in set (0.00 sec)

```

Figure 77: Inner Join And Left Outer Join Operation

```

MySQL> -- LEFT OUTER JOIN --
mysql>
mysql> SELECT VU.Name , VP.Pet_Name , VP.Pet_Type FROM View_Users VU LEFT JOIN View_Pets VP on VU.User_ID = VP.User_ID;
+-----+-----+-----+
| Name | Pet_Name | Pet_Type |
+-----+-----+-----+
| Namal Rajapaksha | NULL | NULL |
| Gihara | NULL | NULL |
| Kumara welgama | NULL | NULL |
| Niranji | Humpy | Dog |
| Tharindu | Larse | Cat |
| Anura | NULL | NULL |
| Gihan | NULL | NULL |
| Malinda | Kiw | Parrot |
| Kapila | Prut | Parrot |
| Kalpana | Roxy | Dog |
| Nirmal | Jessy | Dog |
| Nirmal.I | NULL | NULL |
| Nadun | NULL | NULL |
+-----+-----+-----+
13 rows in set (0.00 sec)

mysql> -- RIGTH OUTER JOIN --
mysql>
mysql> SELECT VU.Name , VP.Pet_Name , VP.Pet_ID FROM View_Users VU RIGHT JOIN View_Pets VP ON VU.User_ID = VP.User_ID;
+-----+-----+-----+
| Name | Pet_Name | Pet_ID |
+-----+-----+-----+
| NULL | Sam | P001 |
| NULL | Jimmy | P002 |
| Niranji | Humpy | P003 |
| Tharindu | Larse | P004 |
| Malinda | Kiw | P005 |
| Kapila | Prut | P006 |
| Kalpana | Roxy | P007 |
| NULL | Morse | P008 |
| Nirmal | Jessy | P009 |
+-----+-----+-----+
9 rows in set (0.00 sec)

```

Figure 78: RIGTH OUTER JOIN

```

MySQL> 
MySQL> -- FULL OUTER JOIN
MySQL>
MySQL> SELECT VU.Name, VP.Pet_Name, VP.Pet_Type FROM View_Users VU LEFT JOIN View_Pets VP on VU.User_ID = VP.User_ID
      -> UNION
      -> SELECT VU.Name, VP.Pet_Name , VP.Pet_ID FROM View_Users VU RIGHT JOIN View_Pets VP ON VU.User_ID = VP.User_ID;
+-----+-----+-----+
| Name | Pet_Name | Pet_Type |
+-----+-----+-----+
| Namal Rajapaksha | NULL | NULL
| Gihara | NULL | NULL
| Kumara welgama | NULL | NULL
| Niranji | Humpy | Dog
| Tharindu | Larse | Cat
| Anura | NULL | NULL
| Gihan | NULL | NULL
| Malinda | Kiw | Parrot
| Kapila | Prut | Parrot
| Kalpana | Roxy | Dog
| Nirmal | Jessy | Dog
| Nirmali | NULL | NULL
| Nadun | NULL | NULL
| NULL | Sam | P001
| NULL | Jimmy | P002
| Niranji | Humpy | P003
| Tharindu | Larse | P004
| Malinda | Kiw | P005
| Kapila | Prut | P006
| Kalpana | Roxy | P007
| NULL | Morse | P008
| Nirmal | Jessy | P009
+-----+-----+-----+

```

Figure 79: FULL OUTER JOIN

```

MySQL> 
MySQL> -- NATURAL JOIN --
MySQL>
MySQL> SELECT VU.Name , VP.Pet_Name FROM View_Users VU JOIN View_Pets VP ON VU.User_ID = VP.User_ID;
+-----+-----+
| Name | Pet_Name |
+-----+-----+
| Niranji | Humpy |
| Tharindu | Larse |
| Malinda | Kiw |
| Kapila | Prut |
| Kalpana | Roxy |
| Nirmal | Jessy |
+-----+-----+
6 rows in set (0.00 sec)

```

Figure 80: NATURAL JOIN

```

MySQL> SELECT VU.Name , VP.Pet_Name FROM View_Users VU JOIN View_Pets VP ON VU.User_ID = VP.User_ID;
+-----+-----+
| Name | Pet_Name |
+-----+-----+
| Niranji | Humpy |
| Tharindu | Larse |
| Malinda | Kiw |
| Kapila | Prut |
| Kalpana | Roxy |
| Nirmal | Jessy |
+-----+-----+
6 rows in set (0.00 sec)

MySQL> -- OUTER UNION --
MySQL> SELECT User_ID,Name, NULL AS Event_Name, NULL AS Location FROM View_Users UNION ALL SELECT NULL AS User_ID, NULL AS Name, Event_Name, Location FROM View_PetsEvents;
+-----+-----+-----+-----+
| User_ID | Name | Event_Name | Location |
+-----+-----+-----+-----+
| U001 | Namal Rajapaksha | NULL | NULL |
| U0011 | Gihara | NULL | NULL |
| U002 | Kumara welgama | NULL | NULL |
| U003 | Niranji | NULL | NULL |
| U004 | Tharindu | NULL | NULL |
| U005 | Anura | NULL | NULL |
| U006 | Gihan | NULL | NULL |
| U007 | Malinda | NULL | NULL |
| U008 | Kapila | NULL | NULL |
| U010 | Kalpana | NULL | NULL |
| U013 | Nirmal | NULL | NULL |
| U014 | NirmalI | NULL | NULL |
| U015 | Nadun | NULL | NULL |
| NULL | NULL | Pet_Training_Mania | Ampara |
| NULL | NULL | Pet_Paloza | Badulla |
| NULL | NULL | FeLina_Funday | NuwaraEliya |
| NULL | NULL | Wagfest | NuwaraEliya |
| NULL | NULL | Whisker_Wonderland | Badulla |
| NULL | NULL | Wonder_Pets | Badulla |
+-----+-----+-----+-----+
19 rows in set (0.00 sec)

```

Figure 81: OUTER UNION

```

MySQL> SELECT User_ID,Name, Event_Name, Location FROM View_Users UNION ALL SELECT NULL AS User_ID, NULL AS Name, Event_Name, Location FROM View_PetsEvents;
+-----+-----+-----+-----+
| User_ID | Name | Event_Name | Location |
+-----+-----+-----+-----+
| U001 | Namal Rajapaksha | NULL | NULL |
| U0011 | Gihara | NULL | NULL |
| U002 | Kumara welgama | NULL | NULL |
| U003 | Niranji | NULL | NULL |
| U004 | Tharindu | NULL | NULL |
| U005 | Anura | NULL | NULL |
| U006 | Gihan | NULL | NULL |
| U007 | Malinda | NULL | NULL |
| U008 | Kapila | NULL | NULL |
| U010 | Kalpana | NULL | NULL |
| U013 | Nirmal | NULL | NULL |
| U014 | NirmalI | NULL | NULL |
| U015 | Nadun | NULL | NULL |
| NULL | NULL | Pet_Training_Mania | Ampara |
| NULL | NULL | Pet_Paloza | Badulla |
| NULL | NULL | FeLina_Funday | NuwaraEliya |
| NULL | NULL | Wagfest | NuwaraEliya |
| NULL | NULL | Whisker_Wonderland | Badulla |
| NULL | NULL | Wonder_Pets | Badulla |
+-----+-----+-----+-----+
19 rows in set (0.00 sec)

MySQL> -- Nested queries --
MySQL> -- Nestedquery with Aggregation function and set difference --
MySQL> SELECT DISTINCT User_ID FROM USER WHERE User_ID NOT IN (SELECT User_ID FROM TRANSACTION);
+-----+
| User_ID |
+-----+
| U001 |
| U0011 |
| U002 |
| U004 |
| U005 |
| U015 |
+-----+
6 rows in set (0.00 sec)

```

Figure 82: Nestedquery with Aggregation function and set difference

```
MySQL 8.0 Command Line Cli x + v
+-----+
| NULL | NULL | Pet_Paloza | Badulla |
| NULL | NULL | Felina_Funday | NuwaraEliya |
| NULL | NULL | Wagfest | NuwaraEliya |
| NULL | NULL | Whisker_Wonderland | Badulla |
| NULL | NULL | Wonder_Pets | Badulla |
+-----+
19 rows in set (0.00 sec)

mysql> -- Nested queries --
mysql> -- Nestedquery with Aggregation function and set difference --
mysql>
mysql> SELECT DISTINCT User_ID FROM USER WHERE User_ID NOT IN (SELECT User_ID FROM TRANSACTION);
+-----+
| User_ID |
+-----+
| U001 |
| U0011 |
| U002 |
| U004 |
| U005 |
| U015 |
+-----+
6 rows in set (0.00 sec)

mysql> -- Nested query with Join and Projection --
mysql>
mysql> SELECT Name, City FROM (SELECT User_ID,Name,City FROM USER) AS U JOIN (SELECT User_ID FROM PET) AS P ON U.User_ID = P.User_ID;
+-----+
| Name | City |
+-----+
| Niranji | badulla |
| Tharindu | Rikillagaskada |
| Malinda | mirissa |
| Kapila | hambanthota |
| Kalpana | hambegamuwa |
| Nirmal | Uva-paranagama |
+-----+
6 rows in set (0.00 sec)
```

Figure 83: Nested query with Join and Projection

```
MySQL 8.0 Command Line Cli X + | - □ ×

+-----+-----+
| Niranji | badulla
| Tharindu | Rikillagaskada
| Malinda | mirissa
| Kapila   | hambanthota
| Kalpana  | hambegamuwa
| Nirmal   | Uva-paranagama
+-----+
6 rows in set (0.00 sec)

mysql>
mysql> -- Nested query with aggregation function and division --
mysql>
mysql> SELECT User_ID FROM USER WHERE EXISTS (SELECT 1 FROM PET WHERE Pet_Type = 'Cat' AND PET.User_ID = USER.User_ID) AND NOT EXISTS (SELECT 1 User_ID FROM PET WHERE Pet_Type = 'Dog' AND PET.User_ID = USER.User_ID );
ERROR 1054 (42S22): Unknown column 'USER.User_ID' in 'where clause'
mysql>
mysql> SELECT User_ID FROM USER WHERE EXISTS (SELECT 1 FROM PET WHERE Pet_Type = 'Cat' AND PET.User_ID = USER.User_ID) AND NOT EXISTS (SELECT 1 User_ID FROM PET WHERE Pet_Type = 'Dog' AND PET.User_ID = USER.User_ID );
ERROR 1054 (42S22): Unknown column 'USER.User_ID' in 'where clause'
mysql> SELECT Name,City FROM (SELECT User_ID,Name,City FROM USER) AS SELECT User_ID FROM USER WHERE EXISTS (SELECT 1 FROM PET WHERE Pet_Type = 'Cat' AND PET.User_ID = USER.User_ID) AND NOT EXISTS (SELECT 1 User_ID FROM PET WHERE Pet_Type = 'Dog' AND PET.User_ID = USER.User_ID );
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'SELECT User_ID FROM USER WHERE EXISTS (SELECT 1 FROM PET WHERE Pet_Type = 'Cat'' at line 1
mysql> SELECT User_ID FROM USER WHERE EXISTS (SELECT 1 FROM PET WHERE Pet_Type = 'Cat' AND PET.User_ID = USER.User_ID ) AND NOT EXISTS (SELECT 1 User_ID FROM PET WHERE Pet_Type = 'Dog' AND PET.User_ID = USER.User_ID );
+-----+
| User_ID |
+-----+
| U004    |
+-----+
1 row in set (0.00 sec)

mysql>
```

Figure 84: Nested query with aggregation function and division

3.3 DATABASE TUNING

1. Tuning 1 (sum of the transactions)

```
mysql> SELECT SUM(Amount) FROM TRANSACTION;
+-----+
| SUM(Amount) |
+-----+
| 989000 |
+-----+
1 row in set (0.00 sec)

mysql>
mysql> CREATE INDEX idx_transaction_amount ON TRANSACTION(Amount);
Query OK, 0 rows affected (0.14 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql>
mysql> -- tuned
mysql> EXPLAIN SELECT SUM(Amount) FROM TRANSACTION;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref | rows | filtered | Extra |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | SIMPLE | TRANSACTION | NULL | index | NULL | idx_transaction_amount | 403 | NULL | 10 | 100.00 | Using index |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
1 row in set, 1 warning (0.00 sec)

mysql> |
```

Figure 85: TUNING 1 (sum of the transactions)

2. TUNING 2 (user whose has adopted and participated events)

```
MySQL 8.0 Command Line Cli  x  +  v

mysql> EXPLAIN SELECT DISTINCT u.Name
--> FROM USER u
--> WHERE EXISTS (
-->   -->   SELECT * FROM PET p WHERE p.User_ID = u.User_ID
--> )
--> AND EXISTS (
-->   -->   SELECT * FROM PARTICIPATE_EVENT pe WHERE pe.User_ID = u.User_ID
--> );
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref | rows | filtered | Extra |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | SIMPLE | pe | NULL | index | User_ID | User_ID | 182 | NULL | 6 | 100.00 | Using index; Using temporary; LooseScan |
| 1 | SIMPLE | u | NULL | eq_ref | PRIMARY | PRIMARY | 182 | pet_adoption.pe.User_ID | 1 | 100.00 | NULL |
| 1 | SIMPLE | p | NULL | ref | User_ID | User_ID | 183 | pet_adoption.pe.User_ID | 1 | 100.00 | Using index; Distinct; FirstMatch(u) |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set, 3 warnings (0.00 sec)

mysql>
mysql> CREATE INDEX idx_pet_user_id ON PET(User_ID);
Query OK, 0 rows affected (0.08 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> CREATE INDEX idx_participate_event_user_id ON PARTICIPATE_EVENT(User_ID);
Query OK, 0 rows affected (0.07 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql>
mysql> -- TUNED
mysql> EXPLAIN SELECT DISTINCT u.Name
--> FROM USER u
--> WHERE EXISTS (
-->   -->   SELECT * FROM PET p WHERE p.User_ID = u.User_ID
--> )
```

Figure 86: Tuning 2 (User Whose Has Adopted And Participated Events)(1)

```

MySQL 8.0 Command Line Cli  + 
+-----+
3 rows in set, 3 warnings (0.00 sec)

mysql>
mysql> CREATE INDEX idx_pet_user_id ON PET(User_ID);
Query OK, 0 rows affected (0.08 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> CREATE INDEX idx_participate_event_user_id ON PARTICIPATE_EVENT(User_ID);
Query OK, 0 rows affected (0.07 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql>
mysql> -- TUNED
mysql> EXPLAIN SELECT DISTINCT u.Name
--> FROM USER u
--> WHERE EXISTS (
-->   --> SELECT * FROM PET p WHERE p.User_ID = u.User_ID
--> )
--> AND EXISTS (
-->   --> SELECT * FROM PARTICIPATE_EVENT pe WHERE pe.User_ID = u.User_ID
--> );
+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref | rows |
| filtered | Extra |          |           |        |              |      |          |     |       |
+-----+
| 1 | SIMPLE    | pe    | NULL      | index | idx_participate_event_user_id | idx_participate_event_user_id | 182 | NULL    |      | 6
| 83.33 | Using index; Using temporary; LooseScan |
| 1 | SIMPLE    | u     | NULL      | eq_ref | PRIMARY          | PRIMARY          | 182 | pet_adoption.pe.User_ID | 1
| 100.00 | NULL          |          |          |          |          |          |          |          |
| 1 | SIMPLE    | p     | NULL      | ref   | idx_pet_user_id   | idx_pet_user_id   | 183 | pet_adoption.pe.User_ID | 1
| 100.00 | Using index; Distinct; FirstMatch(u)   |          |          |          |          |          |          |
+-----+
3 rows in set, 3 warnings (0.00 sec)

mysql>
mysql> |

```

Figure 87: tuning 2 (user whose has adopted and participated events)(2)

3. TUNING 3 (union of transactions underadoption and donations)

```

MySQL 8.0 Command Line Cli  + 
+-----+
mysql> -- TUNED
mysql> EXPLAIN SELECT DISTINCT u.Name
--> FROM USER u
--> WHERE EXISTS (
-->   --> SELECT * FROM PET p WHERE p.User_ID = u.User_ID
--> )
--> AND EXISTS (
-->   --> SELECT * FROM PARTICIPATE_EVENT pe WHERE pe.User_ID = u.User_ID
--> );
+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref | rows |
| filtered | Extra |          |           |        |              |      |          |     |       |
+-----+
| 1 | SIMPLE    | pe    | NULL      | index | idx_participate_event_user_id | idx_participate_event_user_id | 182 | NULL    |      | 6
| 83.33 | Using index; Using temporary; LooseScan |
| 1 | SIMPLE    | u     | NULL      | eq_ref | PRIMARY          | PRIMARY          | 182 | pet_adoption.pe.User_ID | 1
| 100.00 | NULL          |          |          |          |          |          |          |          |
| 1 | SIMPLE    | p     | NULL      | ref   | idx_pet_user_id   | idx_pet_user_id   | 183 | pet_adoption.pe.User_ID | 1
| 100.00 | Using index; Distinct; FirstMatch(u)   |          |          |          |          |          |          |
+-----+
3 rows in set, 3 warnings (0.00 sec)

mysql>
mysql> (
-->   --> SELECT 'ADOPTION' AS Transaction_Type, Trans_ID, User_ID, Amount, Trans_Date
-->   --> FROM TRANSACTION
-->   --> WHERE Trans_Type = 'ADOPTION'
--> )
--> UNION (
-->   --> SELECT 'DONATION' AS Transaction_Type, Trans_ID, User_ID, Amount, Trans_Date
-->   --> FROM TRANSACTION
-->   --> WHERE Trans_Type = 'DONATION'
--> )
--> ORDER BY Trans_Date DESC;
+-----+
| Transaction_Type | Trans_ID | User_ID | Amount | Trans_Date |
+-----+

```

Figure 88: TUNING 3 (Union Of Transactions Underadoption And Donations)(1)

```

MySQL 8.0 Command Line Cli + v
+-----+
| DONATION | TR6   | U008   | 500000 | 24/11/2016 |
| ADOPTION | TR11  | U007   | 56000  | 24/10/2024 |
| ADOPTION | TR8   | U014   | 25000  | 17/3/2023  |
| ADOPTION | TR3   | U008   | 50000  | 14/05/2022 |
| ADOPTION | TR10  | U010   | 45000  | 13/2/2023  |
| DONATION | TR7   | U006   | 280000 | 13/10/2024 |
| ADOPTION | TR9   | U013   | 40000  | 10/4/2021  |
+-----+
7 rows in set (0.00 sec)

mysql>
mysql> CREATE INDEX idx_transaction_trans_type_trans_date ON TRANSACTION(Trans_Type, Trans_Date);
Query OK, 0 rows affected (0.07 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql>
mysql> -- TUNED
mysql> EXPLAIN
-- (
--   SELECT 'ADOPTION' AS Transaction_Type, Trans_ID, User_ID, Amount, Trans_Date
--   FROM TRANSACTION
--   WHERE Trans_Type = 'ADOPTION'
-- ) UNION (
--   SELECT 'DONATION' AS Transaction_Type, Trans_ID, User_ID, Amount, Trans_Date
--   FROM TRANSACTION
--   WHERE Trans_Type = 'DONATION'
-- )
-- ORDER BY Trans_Date DESC;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | select_type | table      | partitions | type | possible_keys | key           | key_len | ref    | rows   |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1  | PRIMARY     | TRANSACTION | NULL      | ref  | idx_transaction_trans_type_trans_date | idx_transaction_trans_type_trans_date | 403    | const  | 1
| 5  | 100.00      | NULL       |           |      |               |               |         |        | 403
| 2  | UNION       | TRANSACTION | NULL      | ref  | idx_transaction_trans_type_trans_date | idx_transaction_trans_type_trans_date | 403    | const  | 1
| 2  | 100.00      | NULL       |           |      |               |               |         |        | 403
| 3  | UNION RESULT | <union1,2> | NULL      | ALL   | NULL          | NULL          | NULL   | NULL   | NULL
LL |   NULL        | Using temporary; Using filesort |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+

```

Figure 89: TUNING 3 (union of transactions under adoption and donations)(2)

4. TUNING 4 (creation pf union of views)

```

MySQL 8.0 Command Line Cli + v
+-----+
| 1  | PRIMARY     | TRANSACTION | NULL      | ref  | idx_transaction_trans_type_trans_date | idx_transaction_trans_type_trans_date | 403    | const  | 1
| 5  | 100.00      | NULL       |           |      |               |               |         |        | 403
| 2  | UNION       | TRANSACTION | NULL      | ref  | idx_transaction_trans_type_trans_date | idx_transaction_trans_type_trans_date | 403    | const  | 1
| 2  | 100.00      | NULL       |           |      |               |               |         |        | 403
| 3  | UNION RESULT | <union1,2> | NULL      | ALL   | NULL          | NULL          | NULL   | NULL   | NULL
|     |             |           |           |      |               |               |         |        | Using temporary; Using filesort |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set, 1 warning (0.00 sec)

mysql> -- TUNING 4 (creation pf union of views)
mysql> -- ORIGINAL
mysql> EXPLAIN SELECT * FROM UV1 UNION SELECT * FROM UV2;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | select_type | table      | partitions | type | possible_keys | key           | key_len | ref    | rows   | filtered | Extra |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1  | PRIMARY     | user       | NULL      | ALL   | NULL          | NULL          | NULL   | NULL   | 13     | 10.00    | Using where
| 2  | UNION       | user       | NULL      | ALL   | NULL          | NULL          | NULL   | NULL   | 13     | 10.00    | Using where
| 3  | UNION RESULT | <union1,2> | NULL      | ALL   | NULL          | NULL          | NULL   | NULL   | NULL   | NULL    | Using temporary |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set, 1 warning (0.00 sec)

mysql>
mysql> CREATE INDEX idx_user_user_type ON USER(User_Type);
Query OK, 0 rows affected (0.21 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql>
mysql> -- TUNED
mysql> EXPLAIN SELECT * FROM UV1 UNION SELECT * FROM UV2;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | select_type | table      | partitions | type | possible_keys | key           | key_len | ref    | rows   | filtered | Extra |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1  | PRIMARY     | user       | NULL      | ref   | idx_user_user_type | idx_user_user_type | 182    | const  | 4      | 100.00  | NULL
| 2  | UNION       | user       | NULL      | ref   | idx_user_user_type | idx_user_user_type | 182    | const  | 6      | 100.00  | NULL
| 3  | UNION RESULT | <union1,2> | NULL      | ALL   | NULL          | NULL          | NULL   | NULL   | NULL   | NULL    | Using temporary |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set, 1 warning (0.00 sec)

mysql>

```

Figure 90: TUNING 4 (creation pf union of views)

5. TUNING 5 (cont how many users who have adopt more than one pet)

```

MySQL> EXPLAIN SELECT User_ID FROM (
    ->     SELECT User_ID, COUNT(*) AS Num_Adoptions FROM TRANSACTION
    ->     WHERE Trans_Type = 'ADOPTION' GROUP BY User_ID
    -> ) AS Adoption_Count WHERE Num_Adoptions > 1;
+-----+-----+-----+-----+-----+
| id | select_type | table      | partitions | type | possible_keys
| rows | filtered | Extra      |           |       |
+-----+-----+-----+-----+-----+
| 1 | PRIMARY    | <derived2> | NULL      | ALL  | NULL
| 5 | 100.00 | NULL      |           |       |
| 2 | DERIVED    | TRANSACTION | NULL      | ref  | User_ID, idx_transaction_trans_type_trans_date | idx_transaction_trans_type_trans_date | 403 | con
st | 5 | 100.00 | Using temporary |           |       |
+-----+-----+-----+-----+-----+
2 rows in set, 1 warning (0.00 sec)

mysql>
mysql> CREATE INDEX idx_transaction_user_id_type ON TRANSACTION(User_ID, Trans_Type);
Query OK, 0 rows affected (0.09 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql>
mysql> -- TUNED
mysql> EXPLAIN SELECT User_ID FROM (
    ->     SELECT User_ID, COUNT(*) AS Num_Adoptions FROM TRANSACTION
    ->     WHERE Trans_Type = 'ADOPTION' GROUP BY User_ID
    -> ) AS Adoption_Count WHERE Num_Adoptions > 1;
+-----+-----+-----+-----+-----+
| id | select_type | table      | partitions | type | possible_keys
| key_len | ref   | rows | filtered | Extra      | key
+-----+-----+-----+-----+-----+
| 1 | PRIMARY    | <derived2> | NULL      | ALL  | NULL
| NULL      | NULL      | 5 | 100.00 | NULL      | NULL
| 2 | DERIVED    | TRANSACTION | NULL      | ref  | idx_transaction_trans_type_trans_date, idx_transaction_user_id_type | idx_transaction_trans_type_trans_date | 403 | const
| 5 | 100.00 | Using temporary |           |       |
+-----+-----+-----+-----+-----+

```

Figure 91: TUNING 5 (cont how many users who have adopt more than one pet)

6. TUNING 6

```

MySQL> EXPLAIN SELECT User_ID, COUNT(*) AS Num_Adoptions FROM TRANSACTION
    -> WHERE Trans_Type = 'ADOPTION' GROUP BY User_ID
    -> ) AS Adoption_Count WHERE Num_Adoptions > 1;
+-----+-----+-----+-----+-----+
| id | select_type | table      | partitions | type | possible_keys
| key_len | ref   | rows | filtered | Extra      | key
+-----+-----+-----+-----+-----+
| 1 | PRIMARY    | <derived2> | NULL      | ALL  | NULL
| NULL      | NULL      | 5 | 100.00 | NULL      | NULL
| 2 | DERIVED    | TRANSACTION | NULL      | ref  | idx_transaction_trans_type_trans_date, idx_transaction_user_id_type | idx_transaction_trans_type_trans_date | 403 | const
| 5 | 100.00 | Using temporary |           |       |
+-----+-----+-----+-----+-----+
2 rows in set, 1 warning (0.00 sec)

mysql>
mysql> -- Already INDEXED (idx_pet_user_id, idx_participate_event_user_id)
mysql> -- TUNED
mysql> EXPLAIN SELECT U.Name
    -> FROM USER U
    -> INNER JOIN PARTICIPATE_EVENT PE ON U.User_ID = PE.User_ID
    -> INNER JOIN PET P ON U.User_ID = P.User_ID;
+-----+-----+-----+-----+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref | rows
| filtered | Extra |           |           |       |           |     |          |    |      |
+-----+-----+-----+-----+-----+-----+-----+
| 1 | SIMPLE     | PE    | NULL      | index | idx_participate_event_user_id | idx_participate_event_user_id | 182 | NULL      | 6
| 100.00 | Using index |
| 1 | SIMPLE     | U     | NULL      | eq_ref | PRIMARY                | PRIMARY                | 182 | pet_adoption.PE.User_ID | 1
| 100.00 | NULL      |           |           |       |           |           | 183 | pet_adoption.PE.User_ID | 1
| 1 | SIMPLE     | P     | NULL      | ref   | idx_pet_user_id        | idx_pet_user_id        | 100.00 | Using index |
+-----+-----+-----+-----+-----+-----+-----+
3 rows in set, 1 warning (0.01 sec)

mysql> |

```

Figure 92: Tuning 6

7. TUNING 7

```

MySQL> -- TUNED
mysql> EXPLAIN SELECT U.Name
   > FROM USER U
   > INNER JOIN PARTICIPATE_EVENT PE ON U.User_ID = PE.User_ID
   > INNER JOIN PET P ON U.User_ID = P.User_ID;
+-----+-----+-----+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref | rows |
+-----+-----+-----+-----+-----+-----+
| 1 | SIMPLE | PE | NULL | index | idx_participate_event_user_id | idx_participate_event_user_id | 182 | NULL | 6
| 100.00 | Using index |
| 1 | SIMPLE | U | NULL | eq_ref | PRIMARY | PRIMARY | 182 | pet_adoption.PE.User_ID | 1
| 100.00 | NULL |
| 1 | SIMPLE | P | NULL | ref | idx_pet_user_id | idx_pet_user_id | 183 | pet_adoption.PE.User_ID | 1
| 100.00 | Using index |
+-----+-----+-----+-----+-----+-----+
3 rows in set, 1 warning (0.01 sec)

mysql> -- Already INDEXED (idx_user_user_id ,idx_participate_event_user_id)
mysql> EXPLAIN SELECT User_ID FROM USER
   > WHERE User_ID NOT IN (SELECT User_ID FROM PARTICIPATE_EVENT);
+-----+-----+-----+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref |
+-----+-----+-----+-----+-----+-----+
| 1 | SIMPLE | USER | NULL | index | NULL | idx_user_user_type | 182 | NULL |
| 13 | 100.00 | Using index |
| 1 | SIMPLE | <subquery2> | NULL | eq_ref | <auto_distinct_key> | <auto_distinct_key> | 183 | pet_adoption.USER.
User_ID | 1 | 100.00 | Using where; Not exists |
| 2 | MATERIALIZED | PARTICIPATE_EVENT | NULL | index | idx_participate_event_user_id | idx_participate_event_user_id | 182 | NULL
| 6 | 100.00 | Using index |
+-----+-----+-----+-----+-----+-----+
3 rows in set, 1 warning (0.00 sec)

mysql> |

```

Figure 93: Tuning 7

8. TUNING8

```

MySQL>
MySQL>
MySQL> -- TUNING 7
MySQL> -- Already INDEXED (idx_user_user_id ,idx_participate_event_user_id)

MySQL> EXPLAIN SELECT User_ID FROM USER
   > WHERE User_ID NOT IN (SELECT User_ID FROM PARTICIPATE_EVENT);
+-----+-----+-----+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref |
+-----+-----+-----+-----+-----+-----+
| 1 | SIMPLE | USER | NULL | index | NULL | idx_user_user_type | 182 | NULL |
| 13 | 100.00 | Using index |
| 1 | SIMPLE | <subquery2> | NULL | eq_ref | <auto_distinct_key> | <auto_distinct_key> | 183 | pet_adoption.USER.
User_ID | 1 | 100.00 | Using where; Not exists |
| 2 | MATERIALIZED | PARTICIPATE_EVENT | NULL | index | idx_participate_event_user_id | idx_participate_event_user_id | 182 | NULL
| 6 | 100.00 | Using index |
+-----+-----+-----+-----+-----+-----+
3 rows in set, 1 warning (0.00 sec)

MySQL>
MySQL> -- TUNING 8
MySQL> -- Already INDEXED (idx_user_user_id, idx_pet_user_id)
MySQL> EXPLAIN SELECT VU.Name, VP.Pet_Name
   > FROM View_Users VU
   > JOIN View_Pets VP ON VU.User_ID = VP.User_ID;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref | rows | filtered | Extra |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | SIMPLE | pet | NULL | ALL | idx_pet_user_id | NULL | NULL | NULL | 9 | 100.00 | Using where |
| 1 | SIMPLE | user | NULL | eq_ref | PRIMARY | PRIMARY | 182 | pet_adoption.pet.User_ID | 1 | 100.00 | NULL |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set, 1 warning (0.00 sec)

```

Figure 94: Tuning 8

9. TUNING 9

```

MySQL 8.0 Command Line Cli + x
+-----+
| 1 | SIMPLE   | USER      | NULL    | index  | NULL
|   |          | idx_user_user_type | 182    |       |
| 1 | SIMPLE   | <subquery2> | NULL    | eq_ref  | <auto_distinct_key>      | <auto_distinct_key>      | 183    | pet_adoption.USER.
User_ID | 1 | 100.00 | Using where; Not exists |
| 2 | MATERIALIZED | PARTICIPATE_EVENT | NULL    | index  | idx_participate_event_user_id | idx_participate_event_user_id | 182    | NULL
|   |          | 6 | 100.00 | Using index |
+-----+
3 rows in set, 1 warning (0.00 sec)

mysql> -- TUNING 8
mysql> -- Already INDEXED (idx_user_user_id, idx_pet_user_id)
mysql> EXPLAIN SELECT VU.Name, VP.Pet_Name
   > FROM View_Users VU
   > JOIN View_Pets VP ON VU.User_ID = VP.User_ID;
+-----+
| id | select_type | table | partitions | type | possible_keys | key     | key_len | ref           | rows | filtered | Extra |
+-----+
| 1 | SIMPLE     | pet    | NULL      | ALL  | idx_pet_user_id | NULL    | NULL    | pet_adoption.pet.User_ID | 9    | 100.00  | Using where |
| 1 | SIMPLE     | user   | NULL      | eq_ref| PRIMARY        | PRIMARY | 182    |                | 1    | 100.00  | NULL      |
+-----+
2 rows in set, 1 warning (0.00 sec)

mysql> -- TUNING 9
mysql> -- Already INDEXED(idx_user_user_id, )
mysql> EXPLAIN SELECT User_ID, Name, NULL AS Event_Name, NULL AS Location FROM View_Users
   > UNION ALL
   >   > SELECT NULL AS User_ID, NULL AS Name, Event_Name, Location FROM View_PetEvents;
+-----+
| id | select_type | table | partitions | type | possible_keys | key     | key_len | ref           | rows | filtered | Extra |
+-----+
| 1 | PRIMARY    | user   | NULL      | ALL  | NULL          | NULL    | NULL    |                | 13  | 100.00  | NULL      |
| 2 | UNION      | event  | NULL      | ALL  | NULL          | NULL    | NULL    |                | 6   | 100.00  | NULL      |
+-----+
2 rows in set, 1 warning (0.00 sec)

```

Figure 95: tuning 9

10 . TUNING 10

```

MySQL 8.0 Command Line Cli + x
+-----+
2 rows in set, 1 warning (0.00 sec)

mysql> -- Already INDEXED(idx_user_user_id, )
mysql> EXPLAIN SELECT User_ID, Name, NULL AS Event_Name, NULL AS Location FROM View_Users
   > UNION ALL
   >   > SELECT NULL AS User_ID, NULL AS Name, Event_Name, Location FROM View_PetEvents;
+-----+
| id | select_type | table | partitions | type | possible_keys | key     | key_len | ref           | rows | filtered | Extra |
+-----+
| 1 | PRIMARY    | user   | NULL      | ALL  | NULL          | NULL    | NULL    |                | 13  | 100.00  | NULL      |
| 2 | UNION      | event  | NULL      | ALL  | NULL          | NULL    | NULL    |                | 6   | 100.00  | NULL      |
+-----+
2 rows in set, 1 warning (0.00 sec)

mysql> -- Already indexed{idx_pet_user_id on PET(User_ID)}
mysql> CREATE INDEX idx_pet_pet_type ON PET(Pet_Type);
Query OK, 0 rows affected (0.09 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> -- tuned query
mysql> EXPLAIN SELECT User_ID FROM USER WHERE EXISTS (SELECT 1 FROM PET WHERE Pet_Type = 'Cat' AND PET.User_ID=USER.User_ID) AND NOT EXISTS (SELECT 1 FROM PET WHERE Pet_Type = 'Dog' AND PET.User_ID = USER.User_ID);
+-----+
| id | select_type | table | partitions | type | possible_keys | key     | key_len | ref           | rows | filtered | Extra |
+-----+
| 1 | SIMPLE     | <subquery2> | NULL    | ALL  | NULL          | NULL    | NULL    |                | 1   | 100.00  | Using where |
| 1 | SIMPLE     | USER      | NULL    | eq_ref| PRIMARY        | PRIMARY | 182    | <subquery2>.User_ID | 1   | 100.00  | Using index |
| 1 | SIMPLE     | PET       | NULL    | ref   | idx_pet_user_id, idx_pet_pet_type | idx_pet_user_id | 183    | <subquery2>.User_ID | 1   | 100.00  | Using where; Not exists |
| 2 | MATERIALIZED | PET      | NULL    | ref   | idx_pet_user_id, idx_pet_pet_type | idx_pet_user_id | 42     | const            | 3   | 100.00  | NULL      |
+-----+
4 rows in set, 3 warnings (0.00 sec)

mysql> |

```

Figure 96: Tuning 10