



MINI PROJECT REPORT

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EE4350 Database Systems
By Group 39

ABSTRACT

Database is a concept which is developed to efficiently store, organize and retrieve data ultimately enabling to extract valuable information through organizing data. Through implementation of data into the structure of relational database and utilization of schema and constraints have increased security of data stored, efficiency of data retrieval and mitigate data redundancy to minimize space for data storage.

This report is for a database developed for entertaining TV channel management. The project focuses on optimizing data management to enhance operational efficiency and decision-making processes within the channel's operations.

PREFACE

We develop our thinking and problem-solving abilities through seeking of knowledge. Our ability to think is built on a foundation of information, which allows our minds to work effectively. We advance and overcome obstacles with more ease when we have knowledge. Knowledge organizes every occurrence in the pattern of daily life, directs our actions, and illuminates our way.

The success of this effort is due to the contributions of many people. Above all, we would like to express our gratitude to the Department of Computer Engineering, Faculty of Engineering, University of Ruhuna, for providing this enriching module to the undergraduate candidates. Our sincere thanks to our lecturer Dr. Nadeesha Sandamali, whose brilliant guidance and unwavering support paved the way for this effort.

Finally, we dedicate this work to those who stand as pillars of support our beloved parents, whose influence and encouragement have been the cornerstones of our educational journey. Their presence casts a great shadow of inspiration on our path to progress.

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1 Requirement Analysis

1.1 Functional requirements

Functional requirements describe what system should do. Our aim is to build a database management system to an entertaining TV channel.

At the present TV channels are mostly focusing for entertaining side because there are many telecommunication media for fast and accurate data and information transmission. Entertainment TV channels present movies, TV series and reality shows to the audience for entertainment. At the same time it advertises advertisements. Therefore frontend of the TV channel is combination of these. But in the backend it has a combination with employees who play different roles inside the TV channel and sponsors who provide sponsorship through advertisements. Therefore in the database we have to organize and store data of all these entities and additional entities for them. We organize and store data as data retrieval and updating is efficient. In this database we have mainly focused on employee management. Therefore through the database we will be able to retrieve employee information, extract them according to their job roles, calculate salaries etc. Simultaneously display program broadcasting times and durations and manage them. The database will be used to schedule and organize TV programs by considering their time durations and type. And new programs will be able to add to the database and edit existing programs and delete ended programs from the database will be able to done.

1.2 Data requirements

Data requirements focus on the types of data that will be stored in the database and how it will be organized.

1. Employee Data

- Name(composite attribute)
- Employee ID(should not null)
- Address(composite attribute)
- Date of Birth
- Mobile number (multi valued)
- Salary
- Bonus
- Dependent details
- Gender
- Employee type
- Email(unique)
- Leads By

2. Sponsor

- Sponsor's Company name
- Sponsor's name(composite attribute)
- Sponsor ID(Should not null)
- Company Address(composite attribute)
- Company Email(unique)
- Contact number(multi valued)

3. Advertisement

- Name of the advertisement
- Advertisement ID(Should not be null)
- Advertisement type
- Duration
- Income from the advertisement(float data type)
- Checked by

4. Reality Show

- Type of the reality show
- Program ID(Should not null)
- Name of the reality show
- Round
- Broadcasting time
- Broadcasting date
- Hosted by

5. Competitor

- Name (composite attribute)
- Competitor ID(should not null)
- Address (composite attribute)
- Contact number(multi valued)
- Gender
- Email(unique)
- NIC(unique)

6. Judger

- Name (composite attribute)
- Judger ID(should not null)
- Email(Unique)
- Cost
- Gender
- Contact number(multi valued)
- Date of Birth

7. Movie

- Name
- Show ID(Should not null)
- Language
- Duration
- Broadcast date
- Broadcasting time
- Broadcasts by

8. TV series

- Show ID(should not null)
- Name of the TV series
- Language
- Season
- Episode
- Broadcasting employee
- Broadcasting date
- Broadcasting time

Brief analysis of some important relationships of this schema was done before creating ER diagram. They are,

- One employee can have one or more dependents or no dependents and it is relevant to only that employee. Hence Dependents is a weak entity. (No key attribute)
- As well as one employee can have or haven't bonus and it only relevant to the employee. Therefore bonus is also a weak entity.(No key attribute)
- Different kinds of employees are working on different entities. So they have different kinds of relationships. At the same time employees like managers, they work for (manages) employees. Therefore it shows a recursive relationship.

2 Conceptual Design

ER DIAGRAM

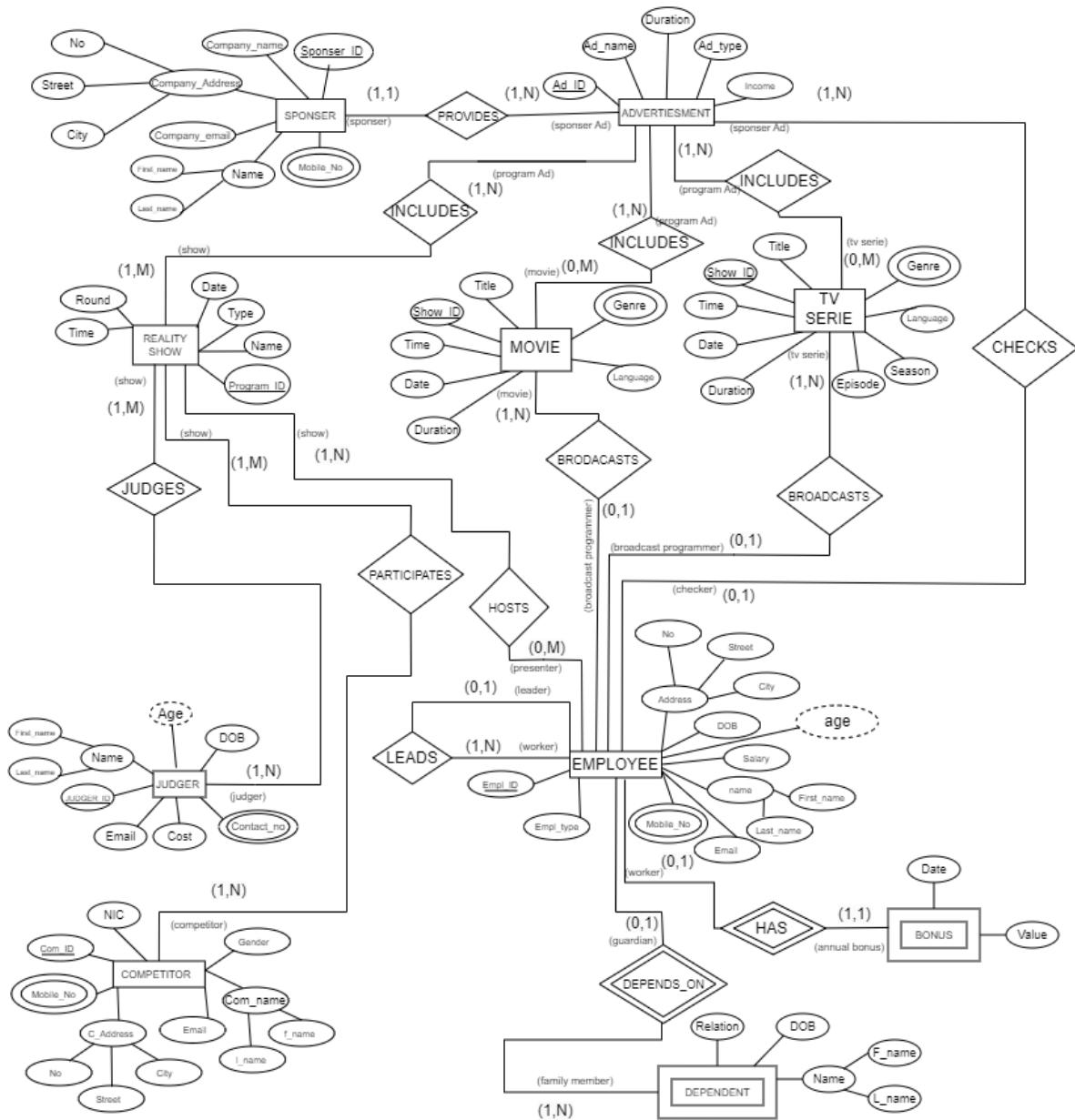
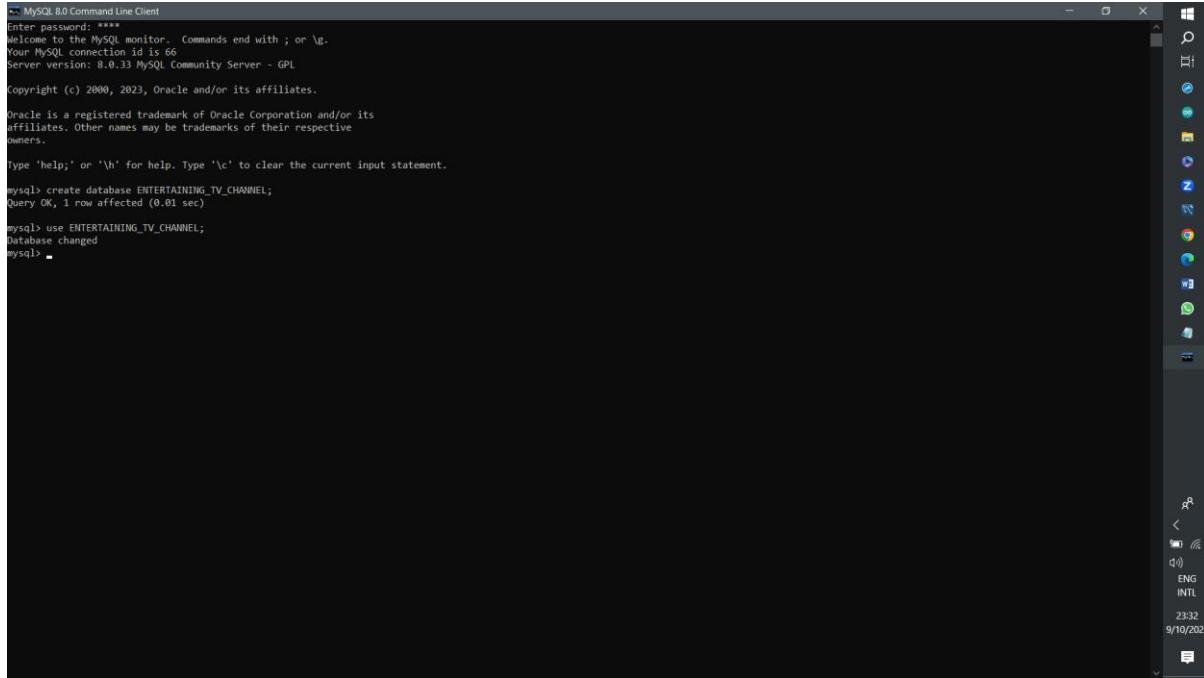


FIGURE 2: 1 ER DIAGRAM FOR ENTERTAINING TV CHANNEL

3 Implementation

3.1 SCHEMA CREATION



The screenshot shows the MySQL 8.0 Command Line Client interface. The command line displays the creation of a database named 'ENTERTAINING_TV_CHANNEL'. The client window has a dark theme with white text. The system tray at the bottom right shows the date as 9/10/2023 and the time as 23:32.

```
-- MySQL 8.0 Command Line Client
Enter password: ****
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 66
Server version: 8.0.33 MySQL Community Server - GPL

Copyright (c) 2000, 2023, 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.

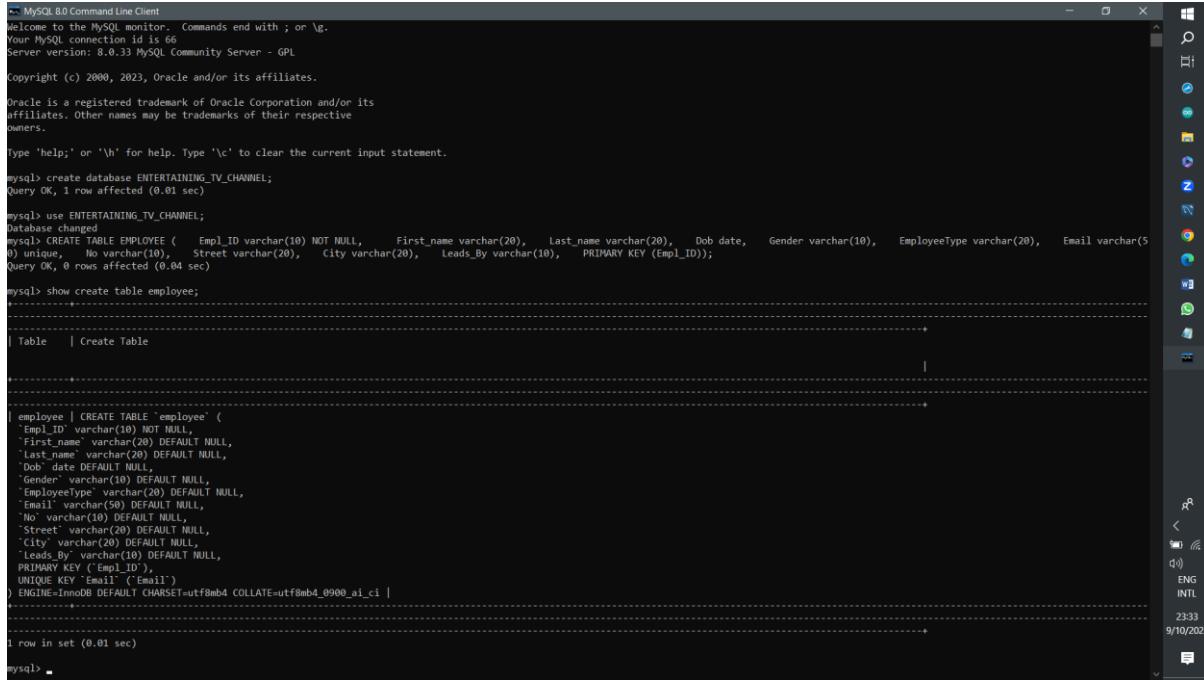
mysql> create database ENTERTAINING_TV_CHANNEL;
Query OK, 1 row affected (0.01 sec)

mysql> use ENTERTAINING_TV_CHANNEL;
Database changed

mysql>
```

FIGURE 3: 1 SCHEMA CREATION

3.2 TABLE DEFINITIONS



The screenshot shows the MySQL 8.0 Command Line Client interface. It displays the creation of a table named 'employee' with various fields like Empl_ID, First_name, Last_name, Dob, Gender, EmployeeType, Email, No, Street, City, Leads_By, and a composite primary key (Empl_ID, Email). The client window has a dark theme with white text. The system tray at the bottom right shows the date as 9/10/2023 and the time as 23:33.

```
-- MySQL 8.0 Command Line Client
Enter password: ****
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 66
Server version: 8.0.33 MySQL Community Server - GPL

Copyright (c) 2000, 2023, 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 ENTERTAINING_TV_CHANNEL;
Query OK, 1 row affected (0.01 sec)

mysql> use ENTERTAINING_TV_CHANNEL;
Database changed
mysql> CREATE TABLE employee (
    `Empl_ID` varchar(10) NOT NULL,
    `First_name` varchar(20) DEFAULT NULL,
    `Last_name` varchar(20) DEFAULT NULL,
    `Dob` date DEFAULT NULL,
    `Gender` varchar(10) DEFAULT NULL,
    `EmployeeType` varchar(20) DEFAULT NULL,
    `Email` varchar(50) DEFAULT NULL,
    `No` varchar(10) DEFAULT NULL,
    `Street` varchar(20) DEFAULT NULL,
    `City` varchar(20) DEFAULT NULL,
    `Leads_By` varchar(10) DEFAULT NULL,
    PRIMARY KEY (`Empl_ID`),
    UNIQUE KEY `Email` (`Email`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
Query OK, 0 rows affected (0.04 sec)

mysql> show create table employee;
+-----+-----+
| Table | Create Table |
+-----+-----+
| employee | CREATE TABLE `employee` (
`Empl_ID` varchar(10) NOT NULL,
`First_name` varchar(20) DEFAULT NULL,
`Last_name` varchar(20) DEFAULT NULL,
`Dob` date DEFAULT NULL,
`Gender` varchar(10) DEFAULT NULL,
`EmployeeType` varchar(20) DEFAULT NULL,
`Email` varchar(50) DEFAULT NULL,
`No` varchar(10) DEFAULT NULL,
`Street` varchar(20) DEFAULT NULL,
`City` varchar(20) DEFAULT NULL,
`Leads_By` varchar(10) DEFAULT NULL,
PRIMARY KEY (`Empl_ID`),
UNIQUE KEY `Email` (`Email`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
+-----+-----+
1 row in set (0.01 sec)

mysql>
```

FIGURE 3: 2 EMPLOYEE TABLE CREATION

```
MySQL 8.0 Command Line Client
-----+
1 row in set (0.01 sec)

mysql> CREATE TABLE CONTACT_NUMBERS_OF_EMPLOYEE (    Empl_ID varchar(10) NOT NULL,    Mobile_No VARCHAR(20) NOT NULL unique,    primary key (Empl_ID,Mobile_No),    CONSTRAINT fk_empl_mobile FOREIGN KEY (Empl_ID) REFERENCES EMPLOYEE(Empl_ID)    ON DELETE CASCADE ON UPDATE CASCADE);
Query OK, 0 rows affected (0.02 sec)

mysql> show create table CONTACT_NUMBERS_OF_EMPLOYEE;
+-----+-----+
| Table | Create Table |
+-----+-----+
| CONTACT_NUMBERS_OF_EMPLOYEE | CREATE TABLE `contact_numbers_of_employee` (
`Empl_ID` varchar(10) NOT NULL,
`Mobile_No` varchar(20) NOT NULL,
PRIMARY KEY (`Empl_ID`, `Mobile_No`),
UNIQUE KEY `Mobile_No` (`Mobile_No`),
CONSTRAINT `fk_empl_mobile` FOREIGN KEY (`Empl_ID`) REFERENCES `employee` (`Empl_ID`) ON DELETE CASCADE ON UPDATE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
+-----+-----+
1 row in set (0.00 sec)

mysql>
```

FIGURE 3: 3 CONTACT NUMBERS OF EMPLOYEE CREATION

```
MySQL 8.0 Command Line Client
-----+
1 row in set (0.00 sec)

mysql> CREATE TABLE JUDGER (    Judger_ID varchar(10) NOT NULL,    First_name varchar(20),    Last_name varchar(20),    Email varchar(50) unique,    Dob date,    Cost float,    Gender varchar(10),    PRIMARY KEY (Judger_ID));
Query OK, 0 rows affected (0.02 sec)

mysql> show create table JUDGER;
+-----+-----+
| Table | Create Table |
+-----+-----+
| JUDGER | CREATE TABLE `judge` (
`Judge_ID` varchar(10) NOT NULL,
`First_name` varchar(20),
`Last_name` varchar(20) DEFAULT NULL,
`Email` varchar(50) DEFAULT NULL,
`Dob` date DEFAULT NULL,
`Cost` float DEFAULT NULL,
`Gender` varchar(10) DEFAULT NULL,
PRIMARY KEY (`Judge_ID`),
UNIQUE KEY `Email` (`Email`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
+-----+-----+
1 row in set (0.02 sec)

mysql>
```

FIGURE 3: 4 JUDGER TABLE CREATION

```
mysql> CREATE TABLE CONTACT_NUMBERS_OF_JUDGER (    Judge_ID varchar(10) NOT NULL,    Contact_Number VARCHAR(20) NOT NULL,    primary key (Judge_ID,Contact_number),    CONSTRAINT fk_judger_mobile FOREIGN KEY (Judge_ID) REFERENCES JUDGER(Judge_ID) ON DELETE CASCADE ON UPDATE CASCADE);
Query OK, 0 rows affected (0.01 sec)

mysql> show create table CONTACT_NUMBERS_OF_JUDGER;
+-----+-----+
| Table | Create Table |
+-----+-----+
| CONTACT_NUMBERS_OF_JUDGER | CREATE TABLE `contact_numbers_of_judger` (
`Judge_ID` varchar(10) NOT NULL,
`Contact_Number` varchar(20) NOT NULL,
PRIMARY KEY (`Judge_ID`,`Contact_Number`),
CONSTRAINT `fk_judger_mobile` FOREIGN KEY (`Judge_ID`) REFERENCES `judger` (`Judge_ID`) ON DELETE CASCADE ON UPDATE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
+-----+-----+
1 row in set (0.00 sec)

mysql>
```

FIGURE 3: 5 CONTACT_NUMBERS_OF_JUDGER TABLE CREATION

```
mysql> CREATE TABLE COMPETITOR (    Com_ID varchar(10) NOT NULL,    First_name varchar(20),    Last_name varchar(20),    Email varchar(50) unique,    NIC varchar(15) unique,    Gender varchar(10),    No varchar(10),    Street varchar(20),    City varchar(20),    PRIMARY KEY (Com_ID));
Query OK, 0 rows affected (0.02 sec)

mysql> show create table COMPETITOR;
+-----+-----+
| Table | Create Table |
+-----+-----+
| COMPETITOR | CREATE TABLE `competitor` (
`Com_ID` varchar(10) NOT NULL,
`First_name` varchar(20) DEFAULT NULL,
`Last_name` varchar(20) DEFAULT NULL,
`Email` varchar(50) DEFAULT NULL,
`NIC` varchar(15) DEFAULT NULL,
`Gender` varchar(10) DEFAULT NULL,
`No` varchar(10) DEFAULT NULL,
`Street` varchar(20) DEFAULT NULL,
`City` varchar(20) DEFAULT NULL,
PRIMARY KEY (`Com_ID`),
UNIQUE KEY `Email` (`Email`),
UNIQUE KEY `NIC` (`NIC`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
+-----+-----+
1 row in set (0.00 sec)

mysql>
```

FIGURE 3: 6 COMPETITOR TABLE CREATION

```

MySQL 8.0 Command Line Client

1 row in set (0.00 sec)

mysql> CREATE TABLE CONTACT_NUMBERS_OF_COMPETITOR (
    Com_ID varchar(10) NOT NULL,
    Contact_Number VARCHAR(20) NOT NULL UNIQUE,
    primary key(Com_ID,Contact_number),
    CONSTRAINT fk_competitor_mobile FOREIGN KEY (Com_ID) REFERENCES competitor(Com_ID) ON DELETE CASCADE ON UPDATE CASCADE;
Query OK, 0 rows affected (0.02 sec)

mysql> show create table CONTACT_NUMBERS_OF_COMPETITOR;

+-----+-----+
| Table          | Create Table           |
+-----+-----+
| CONTACT_NUMBERS_OF_COMPETITOR | CREATE TABLE `contact_numbers_of_competitor` (
`Com_ID` varchar(10) NOT NULL,
`Contact_Number` varchar(20) NOT NULL,
UNIQUE KEY `Contact_Number` (`Contact_Number`),
CONSTRAINT `fk_competitor_mobile` FOREIGN KEY (`Com_ID`) REFERENCES `competitor` (`Com_ID`) ON DELETE CASCADE ON UPDATE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
+-----+-----+
1 row in set (0.00 sec)

mysql>

```

FIGURE 3: 7 CONTACT_NUMBERS_OF_COMPETITOR TABLE CREATION

```

MySQL 8.0 Command Line Client

1 row in set (0.00 sec)

mysql> CREATE TABLE REALITY_SHOW (
    Program_ID varchar(10) NOT NULL,
    Name varchar(20),
    Type varchar(10),
    Broadcast_Date date,
    Broadcast_Time time,
    Round varchar(10),
    Hosted_By varchar(10),
    PRIMARY KEY (Program_ID),
    CONSTRAINT fk_host FOREIGN KEY (Hosted_By) REFERENCES employee(Empl_ID) ON DELETE SET NULL ON UPDATE CASCADE;
Query OK, 0 rows affected (0.02 sec)

mysql> show create table REALITY_SHOW;

+-----+-----+
| Table          | Create Table           |
+-----+-----+
| REALITY_SHOW | CREATE TABLE `reality_show` (
`Program_ID` varchar(10) NOT NULL,
`Name` varchar(20) DEFAULT NULL,
`Type` varchar(10) DEFAULT NULL,
`Broadcast_Date` date DEFAULT NULL,
`Broadcast_Time` time DEFAULT NULL,
`Round` varchar(10) DEFAULT NULL,
`Hosted_By` varchar(10) DEFAULT NULL,
PRIMARY KEY (`Program_ID`),
KEY `fk_host` (`Hosted_By`),
CONSTRAINT `fk_host` FOREIGN KEY (`Hosted_By`) REFERENCES `employee` (`Empl_ID`) ON DELETE SET NULL ON UPDATE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
+-----+-----+
1 row in set (0.00 sec)

mysql>

```

FIGURE 3: 8 REALITY_SHOW TABLE CREATION

```

MySQL 8.0 Command Line Client

1 row in set (0.00 sec)

mysql> CREATE TABLE JUDGERS_OF_REALITYSHOW(`JudgeID` varchar(10) NOT NULL, `ShowID` varchar(10) NOT NULL, PRIMARY KEY (`JudgeID`, `ShowID`), CONSTRAINT fk_judge FOREIGN KEY (`ShowID`) REFERENCES REALITY_SHOW(`Program_ID`) ON DELETE CASCADE);
Query OK, 0 rows affected (0.02 sec)

mysql> show create table JUDGERS_OF_REALITYSHOW;
+-----+-----+
| Table | Create Table |
+-----+-----+
| JUDGERS_OF_REALITYSHOW | CREATE TABLE `judgers_of_realityshow` (
`JudgeID` varchar(10) NOT NULL,
`ShowID` varchar(10) NOT NULL,
PRIMARY KEY (`JudgeID`, `ShowID`),
KEY `fk_judge` (`ShowID`),
CONSTRAINT `fk_judge` FOREIGN KEY (`ShowID`) REFERENCES `reality_show` (`Program_ID`) ON DELETE CASCADE,
CONSTRAINT `fk_realityshow1` FOREIGN KEY (`JudgeID`) REFERENCES `judge` (`Judge_ID`) ON DELETE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
+-----+-----+
1 row in set (0.00 sec)

mysql>

```

FIGURE 3: 9 JUDGERS_OF_REALITY_SHOW TABLE CREATION

```

MySQL 8.0 Command Line Client

1 row in set (0.00 sec)

mysql> CREATE TABLE COMPETITORS_OF_REALITYSHOW(`Com_ID` varchar(10) NOT NULL, `ShowID` varchar(10) NOT NULL, PRIMARY KEY (`Com_ID`, `ShowID`), CONSTRAINT fk_competitor FOREIGN KEY (`ShowID`) REFERENCES REALITY_SHOW(`Program_ID`) ON DELETE CASCADE);
Query OK, 0 rows affected (0.03 sec)

mysql> show create table COMPETITORS_OF_REALITYSHOW;
+-----+-----+
| Table | Create Table |
+-----+-----+
| COMPETITORS_OF_REALITYSHOW | CREATE TABLE `competitors_of_realityshow` (
`Com_ID` varchar(10) NOT NULL,
`ShowID` varchar(10) NOT NULL,
PRIMARY KEY (`Com_ID`, `ShowID`),
KEY `fk_competitor` (`ShowID`),
CONSTRAINT `fk_competitor` FOREIGN KEY (`ShowID`) REFERENCES `reality_show` (`Program_ID`) ON DELETE CASCADE ON UPDATE CASCADE,
CONSTRAINT `fk_realityshow2` FOREIGN KEY (`Com_ID`) REFERENCES `competitor` (`Com_ID`) ON DELETE CASCADE ON UPDATE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
+-----+-----+
1 row in set (0.00 sec)

mysql>

```

FIGURE 3: 10 COMPETITORS_OF_REALITY_SHOW TABLE CREATION

The screenshot shows the MySQL 8.0 Command Line Client interface. The command line area contains the following SQL code:

```
mysql> CREATE TABLE ADVERTIESMENT ( Ad_ID varchar(10) NOT NULL, Ad_Name varchar(50), Ad_Type varchar(50), Income float, Duration varchar(10), Checked_By varchar(10), PRIMARY KEY (Ad_ID), CONSTRAINT fk_ad_empl FOREIGN KEY (Checked_By) REFERENCES employee(Empl_ID) ON DELETE SET NULL ON UPDATE CASCADE);
Query OK, 0 rows affected (0.02 sec)

mysql> show create table ADVERTIESMENT;
+-----+-----+
| Table | Create Table |
+-----+-----+
| ADVERTIESMENT | CREATE TABLE `advertisment` (
`Ad_ID` varchar(10) NOT NULL,
`Ad_Name` varchar(50) DEFAULT NULL,
`Ad_Type` varchar(50) DEFAULT NULL,
`Income` float DEFAULT NULL,
`Duration` varchar(10) DEFAULT NULL,
`Checked_By` varchar(10) DEFAULT NULL,
PRIMARY KEY (`Ad_ID`),
KEY `fk_ad_empl` (`Checked_By`),
CONSTRAINT `fk_ad_empl` FOREIGN KEY (`Checked_By`) REFERENCES `employee` (`Empl_ID`) ON DELETE SET NULL ON UPDATE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
+-----+-----+
1 row in set (0.00 sec)

mysql>
```

FIGURE 3: 11 ADVERTIESMENT TABLE CREATION

The screenshot shows the MySQL 8.0 Command Line Client interface. The command line area contains the following SQL code:

```
mysql> CREATE TABLE ADVERTISEMENTS_OF_REALITYSHOW ( Program_ID varchar(10) NOT NULL, Ad_ID varchar(10) NOT NULL, primary key(Program_ID, Ad_ID), CONSTRAINT fk_prog_realityshow FOREIGN KEY (Program_ID) REFERENCES REALITY_SHOW(Program_ID) ON DELETE CASCADE ON UPDATE CASCADE );
Query OK, 0 rows affected (0.02 sec)

mysql> show create table ADVERTISEMENTS_OF_REALITYSHOW;
+-----+-----+
| Table | Create Table |
+-----+-----+
| ADVERTISEMENTS_OF_REALITYSHOW | CREATE TABLE `advertisments_of_realityshow` (
`Program_ID` varchar(10) NOT NULL,
`Ad_ID` varchar(10) NOT NULL,
PRIMARY KEY (`Program_ID`, `Ad_ID`),
KEY `fk_ad_realityshow` (`Ad_ID`),
CONSTRAINT `fk_ad_realityshow` FOREIGN KEY (`Ad_ID`) REFERENCES `advertisment` (`Ad_ID`) ON DELETE CASCADE ON UPDATE CASCADE,
CONSTRAINT `fk_prog_realityshow` FOREIGN KEY (`Program_ID`) REFERENCES `reality_show` (`Program_ID`) ON DELETE CASCADE ON UPDATE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
+-----+-----+
1 row in set (0.00 sec)

mysql>
```

FIGURE 3: 12 ADVERTISEMENTS_OF_REALITYSHOW TABLE CREATION

```

MySQL 8.0 Command Line Client

1 row in set (0.00 sec)

mysql> CREATE TABLE TV_SERIE (
    Show_ID varchar(10) NOT NULL,
    Name varchar(50),
    Language varchar(50),
    Season int,
    Episode int,
    Duration varchar(10),
    Broadcast_Date date,
    Broadcast_Time time,
    Broadcast_By varchar(10),
    PRIMARY KEY (Show_ID),
    CONSTRAINT fk_tvserie_broadcast FOREIGN KEY (Broadcast_By) REFERENCES employee(Emp1_ID) ON DELETE SET NULL ON UPDATE CASCADE;
Query OK, 0 rows affected (0.01 sec)

mysql> show create table TV_SERIE;
+-----+-----+
| Table | Create Table |
+-----+-----+
| TV_SERIE | CREATE TABLE `tv_serie` (
`Show_ID` varchar(10) NOT NULL,
`Name` varchar(50) DEFAULT NULL,
`Language` varchar(50) DEFAULT NULL,
`Season` int DEFAULT NULL,
`Episode` int DEFAULT NULL,
`Duration` varchar(10) DEFAULT NULL,
`Broadcast_Date` date DEFAULT NULL,
`Broadcast_Time` time DEFAULT NULL,
`Broadcast_By` varchar(10) DEFAULT NULL,
PRIMARY KEY (`Show_ID`),
KEY `fk_tvserie_broadcast` (`Broadcast_By`),
CONSTRAINT `fk_tvserie_broadcast` FOREIGN KEY (`Broadcast_By`) REFERENCES `employee` (`Emp1_ID`) ON DELETE SET NULL ON UPDATE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
+-----+-----+
1 row in set (0.00 sec)

mysql>

```

FIGURE 3: 13 TV_SERIE TABLE CREATION

```

MySQL 8.0 Command Line Client

1 row in set (0.00 sec)

mysql> CREATE TABLE ADVERTISEMENTS_OF_TVSERIE (
    Show_ID varchar(10) NOT NULL,
    Ad_ID varchar(10) NOT NULL,
    primary key(Show_ID,Ad_ID),
    CONSTRAINT fk_ad_tvserie_id FOREIGN KEY (Show_ID) REFERENCES TV_SERIE(Show_ID) ON DELETE CASCADE ON UPDATE CASCADE,
    CONSTRAINT fk_ad_tvserie_adid FOREIGN KEY (Ad_ID) REFERENCES ADVERTISEMENT(Ad_ID) ON DELETE CASCADE ON UPDATE CASCADE;
Query OK, 0 rows affected (0.01 sec)

mysql> show create table ADVERTISEMENTS_OF_TVSERIE;
+-----+-----+
| Table | Create Table |
+-----+-----+
| ADVERTISEMENTS_OF_TVSERIE | CREATE TABLE `advertisements_of_tvserie` (
`Show_ID` varchar(10) NOT NULL,
`Ad_ID` varchar(10) NOT NULL,
PRIMARY KEY (`Show_ID`, `Ad_ID`),
KEY `fk_ad_tvserie_id` (`Ad_ID`),
CONSTRAINT `fk_ad_tvserie_id` FOREIGN KEY (`Ad_ID`) REFERENCES `advertisement` (`Ad_ID`) ON DELETE CASCADE ON UPDATE CASCADE,
CONSTRAINT `fk_ad_tvserie_id` FOREIGN KEY (`Show_ID`) REFERENCES `tv_serie` (`Show_ID`) ON DELETE CASCADE ON UPDATE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
+-----+-----+
1 row in set (0.00 sec)

mysql>

```

FIGURE 3: 14 ADVERTISEMENTS_OF_TVSERIE TABLE CREATION

```
MySQL 8.0 Command Line Client

1 row in set (0.00 sec)

mysql> CREATE TABLE GENRE_OF_TVSERIE (
    Show_ID varchar(10) NOT NULL,      Genre varchar(20) NOT NULL,      primary key(Show_ID,Genre),      CONSTRAINT fk_genre_tv FOREIGN KEY (Show_ID) REFERENCES TV_SERIE(Show_ID) ON DELETE CASCADE ON UPDATE CASCADE;
Query OK, 0 rows affected (0.02 sec)

mysql> show create table GENRE_OF_TVSERIE;
+-----+-----+
| Table | Create Table |
+-----+-----+
| GENRE_OF_TVSERIE | CREATE TABLE `genre_of_tvserie` (
`Show_ID` varchar(10) NOT NULL,
`Genre` varchar(20) NOT NULL,
PRIMARY KEY (`Show_ID`, `Genre`),
CONSTRAINT `fk_genre_tv` FOREIGN KEY (`Show_ID`) REFERENCES `tv_serie` (`Show_ID`) ON DELETE CASCADE ON UPDATE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
+-----+-----+
1 row in set (0.00 sec)

mysql>
```

FIGURE 3: 15 GENRE_OF_TVSERIE TABLE CREATION

```
MySQL 8.0 Command Line Client

1 row in set (0.00 sec)

mysql> CREATE TABLE MOVIE (
    Show_ID varchar(10) NOT NULL,      Name varchar(50),      Language varchar(50),      Duration varchar(10),      Broadcast_Date date,      Broadcast_Time time,      Broadcasts_By varchar(10),
    PRIMARY KEY (Show_ID) REFERENCES employee(`Empl_ID`) ON DELETE SET NULL ON UPDATE CASCADE;
Query OK, 0 rows affected (0.03 sec)

mysql> show create table MOVIE;
+-----+-----+
| Table | Create Table |
+-----+-----+
| MOVIE | CREATE TABLE `movie` (
`Show_ID` varchar(10) NOT NULL,
`Name` varchar(50) DEFAULT NULL,
`Language` varchar(50) DEFAULT NULL,
`Duration` varchar(10) DEFAULT NULL,
`Broadcast_Date` date DEFAULT NULL,
`Broadcast_Time` time DEFAULT NULL,
`Broadcasts_By` varchar(10) DEFAULT NULL,
PRIMARY KEY (`Show_ID`),
KEY `fk_empl_movie` (`Broadcasts_By`),
CONSTRAINT `fk_empl_movie` FOREIGN KEY (`Broadcasts_By`) REFERENCES `employee` (`Empl_ID`) ON DELETE SET NULL ON UPDATE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
+-----+-----+
1 row in set (0.00 sec)

mysql>
```

FIGURE 3: 16 MOVIE TABLE CREATION

```

MySQL 8.0 Command Line Client

1 row in set (0.00 sec)

mysql> CREATE TABLE ADVERTISEMENTS_OF_MOVIE ( Show_ID varchar(10) NOT NULL, Ad_ID varchar(10) NOT NULL, primary key(Show_ID,Ad_ID), CONSTRAINT fk_movie_ad FOREIGN KEY (Show_ID) REFERENCES movie(Show_ID) ON DELETE CASCADE ON UPDATE CASCADE, CONSTRAINT fk_ad_movie FOREIGN KEY (Ad_ID) REFERENCES ADVERTISEMENTS(Ad_ID) ON DELETE CASCADE ON UPDATE CASCADE);
Query OK, 0 rows affected (0.02 sec)

mysql> show create table ADVERTISEMENTS_OF_MOVIE;
+-----+-----+
| Table | Create Table |
+-----+-----+
| ADVERTISEMENTS_OF_MOVIE | CREATE TABLE `advertisements_of_movie` (
`Show_ID` varchar(10) NOT NULL,
`Ad_ID` varchar(10) NOT NULL,
PRIMARY KEY (`Show_ID`, `Ad_ID`),
KEY `fk_ad_movie`(`Ad_ID`),
CONSTRAINT `fk_ad_movie` FOREIGN KEY (`Ad_ID`) REFERENCES `advertisements`(`Ad_ID`) ON DELETE CASCADE ON UPDATE CASCADE,
CONSTRAINT `fk_movie_ad` FOREIGN KEY (`Show_ID`) REFERENCES `movie`(`Show_ID`) ON DELETE CASCADE ON UPDATE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
+-----+-----+
1 row in set (0.00 sec)

mysql>

```

FIGURE 3: 17 ADVERTISEMENTS_OF_MOVIE TABLE CREATION

```

MySQL 8.0 Command Line Client

1 row in set (0.00 sec)

mysql> CREATE TABLE GENRE_OF_MOVIE ( Show_ID varchar(10) NOT NULL, Genre varchar(20)NOT NULL, primary key(Show_ID,Genre), CONSTRAINT fk_genre_movie FOREIGN KEY (Show_ID) REFERENCES movie(Show_ID) ON DELETE CASCADE ON UPDATE CASCADE);
Query OK, 0 rows affected (0.02 sec)

mysql> show create table GENRE_OF_MOVIE;
+-----+-----+
| Table | Create Table |
+-----+-----+
| GENRE_OF_MOVIE | CREATE TABLE `genre_of_movie` (
`Show_ID` varchar(10) NOT NULL,
`Genre` varchar(20) NOT NULL,
PRIMARY KEY (`Show_ID`, `Genre`),
CONSTRAINT `fk_genre_movie` FOREIGN KEY (`Show_ID`) REFERENCES `movie`(`Show_ID`) ON DELETE CASCADE ON UPDATE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
+-----+-----+
1 row in set (0.00 sec)

mysql>

```

FIGURE 3: 18 GENRE_OF_MOVIE TABLE CREATION

The screenshot shows the MySQL 8.0 Command Line Client interface. In the terminal window, the following SQL command is run:

```
mysql> CREATE TABLE SPONSER ( Sponser_ID varchar(10) NOT NULL, First_name varchar(20), Last_name varchar(20), Company_name varchar(30), Company_email varchar(50), No varchar(10), Street varchar(20), City varchar(20), PRIMARY KEY (Sponser_ID));
```

The command is completed successfully with the message "Query OK, 0 rows affected (0.02 sec)". Then, the command "show create table SPONSER;" is run, displaying the table's definition:

```
| Table | Create Table |
```

```
+-----+-----+
| SPONSER | CREATE TABLE `sponser` (
  `Sponser_ID` varchar(10) NOT NULL,
  `First_name` varchar(20) DEFAULT NULL,
  `Last_name` varchar(20) DEFAULT NULL,
  `Company_name` varchar(30) DEFAULT NULL,
  `Company_email` varchar(50) DEFAULT NULL,
  `No` varchar(10) DEFAULT NULL,
  `Street` varchar(20) DEFAULT NULL,
  `City` varchar(20) DEFAULT NULL,
  PRIMARY KEY (`Sponser_ID`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
```

After the table definition, the message "1 row in set (0.00 sec)" is shown. The MySQL prompt "mysql>" is at the bottom.

FIGURE 3: 19 SPONSER TABLE CREATION

The screenshot shows the MySQL 8.0 Command Line Client interface. In the terminal window, the following SQL command is run:

```
mysql> CREATE TABLE CONTACT_NUMBERS_OF_SPONSER ( Sponser_ID varchar(10) NOT NULL, Contact_Number VARCHAR(20) NOT NULL UNIQUE, primary key(Sponser_ID,Contact_number), FOREIGN KEY (Sponser_ID) REFERENCES SPONSER(Sponser_ID) ON DELETE CASCADE ON UPDATE CASCADE);
```

The command is completed successfully with the message "Query OK, 0 rows affected (0.02 sec)". Then, the command "show create table CONTACT_NUMBERS_OF_SPONSER;" is run, displaying the table's definition:

```
| Table | Create Table |
```

```
+-----+-----+
| CONTACT_NUMBERS_OF_SPONSER | CREATE TABLE `contact_numbers_of_sponsor` (
  `Sponser_ID` varchar(10) NOT NULL,
  `Contact_Number` varchar(20) NOT NULL,
  PRIMARY KEY (`Sponser_ID`,`Contact_number`),
  UNIQUE KEY `Contact_Number` (`Contact_Number`),
  CONSTRAINT `fk_sponsor_mobile` FOREIGN KEY (`Sponser_ID`) REFERENCES `sponser` (`Sponser_ID`) ON DELETE CASCADE ON UPDATE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
```

After the table definition, the message "1 row in set (0.00 sec)" is shown. The MySQL prompt "mysql>" is at the bottom.

FIGURE 3: 20 CONTACT_NUMBERS_OF_SPONSER TABLE CREATION

```

MySQL 8.0 Command Line Client

+-----+
| 1 row in set (0.00 sec)

mysql> CREATE TABLE SPONSER_OF_ADVERTISEMENTS (
    Sponser_ID varchar(10) NOT NULL, Ad_ID varchar(10) NOT NULL, primary key(Sponser_ID,Ad_ID), CONSTRAINT fk_sponser FOREIGN KEY (Sponser_ID) REFERENCES SPONSER(Sponser_ID) ON DELETE CASCADE ON UPDATE CASCADE, CONSTRAINT fk_ad FOREIGN KEY (Ad_ID) REFERENCES ADVERTISEMENT(Ad_ID) ON DELETE CASCADE ON UPDATE CASCADE);
Query OK, 0 rows affected (0.04 sec)

mysql> show create table SPONSER_OF_ADVERTISEMENTS;
+-----+
| Table          | Create Table
+-----+
| SPONSER_OF_ADVERTISEMENTS | CREATE TABLE `sponser_of_advertisements` (
`Sponser_ID` varchar(10) NOT NULL,
`Ad_ID` varchar(10) NOT NULL,
PRIMARY KEY (`Sponser_ID`,`Ad_ID`),
CONSTRAINT `fk_sponser` FOREIGN KEY (`Sponser_ID`) REFERENCES `sponser`(`Sponser_ID`) ON DELETE CASCADE ON UPDATE CASCADE,
CONSTRAINT `fk_ad` FOREIGN KEY (`Ad_ID`) REFERENCES `advertisment`(`Ad_ID`) ON DELETE CASCADE ON UPDATE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
+-----+

1 row in set (0.02 sec)

mysql>

```

FIGURE 3: 21 SPONSER_OF_ADVERTISEMENTS TABLE CREATION

```

MySQL 8.0 Command Line Client

+-----+
| 1 row in set (0.02 sec)

mysql> CREATE TABLE ANNUAL_BONUS (
    Empl_ID varchar(10) NOT NULL, Date date NOT NULL, Value varchar(20), PRIMARY KEY (Empl_ID,Date), CONSTRAINT fk_empl_bonus FOREIGN KEY (Empl_ID) REFERENCES EMPLOYEE(Empl_ID) ON DELETE CASCADE ON UPDATE CASCADE);
Query OK, 0 rows affected (0.02 sec)

mysql> show create table ANNUAL_BONUS;
+-----+
| Table          | Create Table
+-----+
| ANNUAL_BONUS | CREATE TABLE `annual_bonus` (
`Empl_ID` varchar(10) NOT NULL,
`Date` date NOT NULL,
`Value` varchar(20) DEFAULT NULL,
PRIMARY KEY (`Empl_ID`,`Date`),
CONSTRAINT `fk_empl_bonus` FOREIGN KEY (`Empl_ID`) REFERENCES `employee`(`Empl_ID`) ON DELETE CASCADE ON UPDATE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
+-----+

1 row in set (0.00 sec)

mysql>

```

FIGURE 3: 22 ANNUAL_BONUS TABLE CREATION

The screenshot shows a MySQL 8.0 Command Line Client window. The command entered is:

```
mysql> CREATE TABLE DEPENDENT ( `Empl_ID` varchar(10) NOT NULL, `DOB` date, `F_Name` varchar(20) NOT NULL, `L_Name` varchar(20), `Relation` varchar(20) NOT NULL, PRIMARY KEY (`Empl_ID`,F_Name,Relation) );
Query OK, 0 rows affected (0.02 sec)
```

Then, the command to show the create table statement for the newly created table is:

```
mysql> show create table DEPENDENT;
```

The output shows the create table statement for the 'DEPENDENT' table:

```
+-----+-----+
| Table | Create Table |
+-----+-----+
| DEPENDENT | CREATE TABLE `dependent` (
`Empl_ID` varchar(10) NOT NULL,
`DOB` date DEFAULT NULL,
`F_Name` varchar(20) NOT NULL,
`L_Name` varchar(20) DEFAULT NULL,
`Relation` varchar(20) NOT NULL,
PRIMARY KEY (`Empl_ID`,F_Name,`Relation`),
CONSTRAINT `fk_empl_depe` FOREIGN KEY (`Empl_ID`) REFERENCES `employee` (`Empl_ID`) ON DELETE CASCADE ON UPDATE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
```

At the bottom, the status bar shows:

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FIGURE 3: 23 DEPENDANT TABLE CREATION

3.3 Insert, Update, Delete Operations

```

MySQL 8.0 Command Line Client
+-----+
1 row in set (0.00 sec)

mysql> INSERT INTO EMPLOYEE (Empl_ID, First_name, Last_name, Dob, Gender, EmployeeType, Empl_No, Street, City, Leads_By) VALUES ('E001', 'Saman', 'Kumara', '1990-05-15', 'Male', 'Manager', 'samank@gmail.com', '45', 'Main St', 'Colombo', null)
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT * FROM EMPLOYEE;
+-----+
| Empl_ID | First_name | Last_name | Dob       | Gender | EmployeeType | Email      | No    | Street   | City     | Leads_By |
+-----+
| E001   | Saman     | Kumara    | 1990-05-15 | Male   | Manager     | samank@gmail.com | 45   | Main St  | Colombo  | NULL     |
| E002   | Rankoth   | Udawalpola | 1980-05-19  | Male   | Program Director | Rdwipla@gmail.com | 267  | Naulla Rd | Colombo  | E001     |
| E003   | Nisansala | Galahena   | 1991-08-15  | Female | Presenter   | nisans@gmail.com | 65   | KalawanaSt | Biyagama | E001     |
| E004   | Sarith    | Eheliyagoda | 1997-07-14  | Male   | Producer    | srih97@gmail.com | 384  | Egoda Rd | Colombo  | E006     |
| E005   | Kumari    | Gunawardhana | 1990-05-15 | Female | Presenter   | kumari@gmail.com | 47   | Negombo Rd | Colombo  | E003     |
| E006   | Saman     | Kumara    | 1998-08-15  | Male   | Producer    | samanka@gmail.com | 48   | Main St  | Biyagama | E001     |
| E007   | Sadamal   | Kavinda    | 1995-12-10  | Male   | Program Director | sadamalk@gmail.com | 54   | Kothalwala Rd | Rathmalana | E002     |
+-----+
7 rows in set (0.00 sec)

mysql> UPDATE EMPLOYEE SET First_name = 'Kamal' where empl_ID = 'E001';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE EMPLOYEE SET dob = '1995-12-10' where empl_ID = 'E002';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT * FROM EMPLOYEE;
+-----+
| Empl_ID | First_name | Last_name | Dob       | Gender | EmployeeType | Email      | No    | Street   | City     | Leads_By |
+-----+
| E001   | Kamal     | Kumara    | 1990-05-15 | Male   | Manager     | samank@gmail.com | 45   | Main St  | Colombo  | NULL     |
| E002   | Rankoth   | Udawalpola | 1995-12-10 | Male   | Program Director | Rdwipla@gmail.com | 267  | Naulla Rd | Colombo  | E001     |
| E003   | Nisansala | Galahena   | 1991-08-15  | Female | Presenter   | nisans@gmail.com | 65   | KalawanaSt | Biyagama | E001     |
| E004   | Sarith    | Eheliyagoda | 1997-07-14  | Male   | Producer    | srih97@gmail.com | 384  | Egoda Rd | Colombo  | E006     |
| E005   | Kumari    | Gunawardhana | 1990-05-15 | Female | Presenter   | kumari@gmail.com | 47   | Negombo Rd | Colombo  | E003     |
| E006   | Saman     | Kumara    | 1998-08-15  | Male   | Producer    | samanka@gmail.com | 48   | Main St  | Biyagama | E001     |
| E007   | Sadamal   | Kavinda    | 1995-12-10  | Male   | Program Director | sadamalk@gmail.com | 54   | Kothalwala Rd | Rathmalana | E002     |
+-----+
7 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 24 INSERT AND UPDATE TO EMPLOYEE TABLE

```

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

mysql> DELETE FROM EMPLOYEE WHERE empl_ID = 'E007';
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM EMPLOYEE;
+-----+
| Empl_ID | First_name | Last_name | Dob       | Gender | EmployeeType | Email      | No    | Street   | City     | Leads_By |
+-----+
| E001   | Kamal     | Kumara    | 1990-05-15 | Male   | Manager     | samank@gmail.com | 45   | Main St  | Colombo  | NULL     |
| E002   | Rankoth   | Udawalpola | 1995-12-10 | Male   | Program Director | Rdwipla@gmail.com | 267  | Naulla Rd | Colombo  | E001     |
| E003   | Nisansala | Galahena   | 1991-08-15  | Female | Presenter   | nisans@gmail.com | 65   | KalawanaSt | Biyagama | E001     |
| E004   | Sarith    | Eheliyagoda | 1997-07-14  | Male   | Producer    | srih97@gmail.com | 384  | Egoda Rd | Colombo  | E006     |
| E005   | Kumari    | Gunawardhana | 1990-05-15 | Female | Presenter   | kumari@gmail.com | 47   | Negombo Rd | Colombo  | E003     |
| E006   | Saman     | Kumara    | 1998-08-15  | Male   | Producer    | samanka@gmail.com | 48   | Main St  | Biyagama | E001     |
+-----+
6 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 25 DELETE FROM EMPLOYEE TABLE

```

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

mysql> INSERT INTO JUDGER(Judger_ID,First_name,Last_name,Email,Dob,Cost,Gender)VALUES ('J001','Athula','Adhikari','Athulaadhikariofficial@gmail.com','1978-09-20',100000,'Male'), ('J002','Bathiya','Jayakody','bathiya@musician.lk','1973-06-04',110000,'Male'), ('J003','Sanuka','Wickramasinghe','sanuka@musician.lk','1973-06-04',110000,'Male'), ('J004','Umaria','Sinhawansa','umaria@musician.lk','1985-11-30',90000,'Female'), ('J005','Billy','Fernando','billy@musician.lk','1970-08-15',98000,'Male'), ('J006','Jagath','Weerasinghe','JWeerasinghe@gmail.com','1982-03-14',85000,'Male'), ('J007','Senanayake','Weraliyadde','Weraliyadde@gmail.com','1990-05-24',85000,'Male');
Query OK, 7 rows affected (0.01 sec)
Records: 7 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM JUDGER;
+-----+-----+-----+-----+-----+-----+-----+
| Judger_ID | First_name | Last_name | Email | Dob | Cost | Gender |
+-----+-----+-----+-----+-----+-----+-----+
| J001 | Athula | Adhikari | Athulaadhikariofficial@gmail.com | 1978-09-20 | 100000 | Male |
| J002 | Bathiya | Jayakody | bathiya@musician.lk | 1973-06-04 | 110000 | Male |
| J003 | Sanuka | Wickramasinghe | sanuka@musician.lk | 1973-06-04 | 110000 | Male |
| J004 | Umaria | Sinhawansa | umaria@musician.lk | 1985-11-30 | 90000 | Female |
| J005 | Billy | Fernando | billy@musician.lk | 1970-08-15 | 98000 | Male |
| J006 | Jagath | Weerasinghe | JWeerasinghe@gmail.com | 1982-03-14 | 85000 | Male |
| J007 | Senanayake | Weraliyadde | Weraliyadde@gmail.com | 1990-05-24 | 85000 | Male |
+-----+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql> UPDATE JUDGER SET Email = 'Athulaadhikari@gmail.com' where Judger_ID = 'J001';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE JUDGER SET dob = '1997-02-10' where Judger_ID = 'J003';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT * FROM JUDGER;
+-----+-----+-----+-----+-----+-----+-----+
| Judger_ID | First_name | Last_name | Email | Dob | Cost | Gender |
+-----+-----+-----+-----+-----+-----+-----+
| J001 | Athula | Adhikari | Athulaadhikari@gmail.com | 1978-09-20 | 100000 | Male |
| J002 | Bathiya | Jayakody | bathiya@musician.lk | 1973-06-04 | 110000 | Male |
| J003 | Sanuka | Wickramasinghe | sanuka@musician.lk | 1997-02-10 | 95000 | Male |
| J004 | Umaria | Sinhawansa | umaria@musician.lk | 1985-11-30 | 90000 | Female |
| J005 | Billy | Fernando | billy@musician.lk | 1970-08-15 | 98000 | Male |
| J006 | Jagath | Weerasinghe | JWeerasinghe@gmail.com | 1982-03-14 | 85000 | Male |
| J007 | Senanayake | Weraliyadde | Weraliyadde@gmail.com | 1990-05-24 | 85000 | Male |
+-----+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 26 INSERT AND UPDATE TO JUDGER TABLE

```

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

mysql> DELETE FROM JUDGER WHERE Judger_ID = 'J007';
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM JUDGER;
+-----+-----+-----+-----+-----+-----+-----+
| Judger_ID | First_name | Last_name | Email | Dob | Cost | Gender |
+-----+-----+-----+-----+-----+-----+-----+
| J001 | Athula | Adhikari | Athulaadhikari@gmail.com | 1978-09-20 | 100000 | Male |
| J002 | Bathiya | Jayakody | bathiya@musician.lk | 1973-06-04 | 110000 | Male |
| J003 | Sanuka | Wickramasinghe | sanuka@musician.lk | 1973-06-04 | 110000 | Male |
| J004 | Umaria | Sinhawansa | umaria@musician.lk | 1985-11-30 | 90000 | Female |
| J005 | Billy | Fernando | billy@musician.lk | 1970-08-15 | 98000 | Male |
| J006 | Jagath | Weerasinghe | JWeerasinghe@gmail.com | 1982-03-14 | 85000 | Male |
+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 27 DELETE FROM JUDGER TABLE

```

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

mysql> INSERT INTO COMPETITOR (Com_ID, First_name, Last_name, Email, NIC, Gender, No, Street, City)VALUES
('C001', 'Supun', 'Avishka', 'supunAvi@gmail.com', '98564798875V', 'Male', '84', 'Awissawella Rd', 'Kaduwela'),
('C002', 'Nimasha', 'Silva', 'nimashaSilva@gmail.com', '97645321789V', 'Female', '56', 'Galle Rd', 'Colombo'),
('C003', 'Kasun', 'Fernando', 'kasunFernando@gmail.com', '96234678123V', 'Male', '72', 'Main St', 'Kandy'),
('C004', 'Sithara', 'Perera', 'sitharaPerera@gmail.com', '85879634127V', 'Female', '38', 'Negombo Rd', 'Negombo'),
('C005', 'Ajith', 'Ratnayake', 'ajithRatnayake@gmail.com', '77341256980V', 'Male', '45', 'Havelock Rd', 'Jaffna'),
('C006', 'Dilani', 'Fernando', 'dilaniFernando@gmail.com', '64129785324V', 'Female', '61', 'Gampaha Rd', 'Gampaha'),
('C007', 'Dilan', 'Perera', 'dilanperera@gmail.com', '64129785324V', 'Male', '34', 'Ragama Rd', 'Mahabage');
Query OK, 7 rows affected (0.01 sec)
Records: 7 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM COMPETITOR;
+----+----+----+----+----+----+----+----+
| Com_ID | First_name | Last_name | Email | NIC | Gender | No | Street | city |
+----+----+----+----+----+----+----+----+
| C001 | Supun | Avishka | supunAvi@gmail.com | 98564798875V | Male | 84 | Awissawella Rd | Kaduwela |
| C002 | Nimasha | Silva | nimashaSilva@gmail.com | 97645321789V | Female | 56 | Galle Rd | Colombo |
| C003 | Kasun | Fernando | kasunFernando@gmail.com | 96234678123V | Male | 72 | Main St | Kandy |
| C004 | Sithara | Perera | sitharaPerera@gmail.com | 85879634127V | Female | 38 | Negombo Rd | Negombo |
| C005 | Ajith | Ratnayake | ajithRatnayake@gmail.com | 77341256980V | Male | 45 | Havelock Rd | Jaffna |
| C006 | Dilani | Fernando | dilaniFernando@gmail.com | 64129785324V | Female | 61 | Gampaha Rd | Gampaha |
| C007 | Dilan | Perera | dilanperera@gmail.com | 64129785324V | Male | 34 | Ragama Rd | Mahabage |
+----+----+----+----+----+----+----+----+
7 rows in set (0.00 sec)

mysql> UPDATE COMPETITOR SET City = 'Kandy' WHERE COM_ID = 'C007';
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 '=' 'Kandy' WHERE COM_ID = 'C007' at line 1
mysql> UPDATE COMPETITOR SET City = 'Kandy' WHERE COM_ID = 'C007';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE COMPETITOR SET First_name = 'Dilhani' WHERE NIC = '64129785324V';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT * FROM COMPETITOR;
+----+----+----+----+----+----+----+----+
| Com_ID | First_name | Last_name | Email | NIC | Gender | No | Street | city |
+----+----+----+----+----+----+----+----+
| C001 | Supun | Avishka | supunAvi@gmail.com | 98564798875V | Male | 84 | Awissawella Rd | Kaduwela |
| C002 | Nimasha | Silva | nimashaSilva@gmail.com | 97645321789V | Female | 56 | Galle Rd | Colombo |
| C003 | Kasun | Fernando | kasunFernando@gmail.com | 96234678123V | Male | 72 | Main St | Kandy |
| C004 | Sithara | Perera | sitharaPerera@gmail.com | 85879634127V | Female | 38 | Negombo Rd | Negombo |
| C005 | Ajith | Ratnayake | ajithRatnayake@gmail.com | 77341256980V | Male | 45 | Havelock Rd | Jaffna |
| C006 | Dilani | Fernando | dilaniFernando@gmail.com | 64129785324V | Female | 61 | Gampaha Rd | Gampaha |
| C007 | Dilan | Perera | dilanperera@gmail.com | 64129785324V | Male | 34 | Ragama Rd | Kandy |
+----+----+----+----+----+----+----+----+
7 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 28 INSERT AND UPDATE TO COMPETITOR TABLE

```

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

mysql> DELETE FROM COMPETITOR WHERE Com_ID = 'C007';
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM COMPETITOR;
+----+----+----+----+----+----+----+----+
| Com_ID | First_name | Last_name | Email | NIC | Gender | No | Street | city |
+----+----+----+----+----+----+----+----+
| C001 | Supun | Avishka | supunAvi@gmail.com | 98564798875V | Male | 84 | Awissawella Rd | Kaduwela |
| C002 | Nimasha | Silva | nimashaSilva@gmail.com | 97645321789V | Female | 56 | Galle Rd | Colombo |
| C003 | Kasun | Fernando | kasunFernando@gmail.com | 96234678123V | Male | 72 | Main St | Kandy |
| C004 | Sithara | Perera | sitharaPerera@gmail.com | 85879634127V | Female | 38 | Negombo Rd | Negombo |
| C005 | Ajith | Ratnayake | ajithRatnayake@gmail.com | 77341256980V | Male | 45 | Havelock Rd | Jaffna |
| C006 | Dilani | Fernando | dilaniFernando@gmail.com | 64129785324V | Female | 61 | Gampaha Rd | Gampaha |
| C007 | Dilan | Perera | dilanperera@gmail.com | 64129785324V | Male | 34 | Ragama Rd | Kandy |
+----+----+----+----+----+----+----+----+
7 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 29 DELETE FROM COMPETITOR TABLE

```

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

mysql> INSERT INTO REALITY_SHOW (Program_ID, Name, Type, Broadcast_Date, Broadcast_Time, Round, Hosted_By)VALUES ('RS001', 'Talent Hunt', 'Music', '2023-09-15', '20:00:00', '04', 'E003'), ('RS002', 'Dance Off', 'Dance', '2023-05-10', '19:30:00', '01', 'E005'), ('RS003', 'Art Expo', 'Art', '2023-01-25', '20:00:00', '02', 'E005'), ('RS004', 'Fashion Show', 'Fashion', '2023-04-18', '19:30:00', '03', 'E005'), ('RS005', 'Comedy Night', 'Comedy', '2023-03-30', '20:00:00', '05', 'E003'), ('RS006', 'Film Festival', 'Film', '2023-08-22', '19:30:00', '06', 'E003'), ('RS007', 'House Wife', 'Family', '2023-03-20', '20:00:00', '01', 'E004');
Query OK, 7 rows affected (0.00 sec)
Records: 7 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM REALITY_SHOW;
+-----+-----+-----+-----+-----+-----+-----+
| Program_ID | Name | Type | Broadcast_Date | Broadcast_Time | Round | Hosted_By |
+-----+-----+-----+-----+-----+-----+-----+
| RS001 | Talent Hunt | Music | 2023-09-15 | 20:00:00 | 04 | E003 |
| RS002 | Dance Off | Dance | 2023-05-10 | 19:30:00 | 01 | E005 |
| RS003 | Art Expo | Art | 2023-01-25 | 20:00:00 | 02 | E005 |
| RS004 | Fashion Show | Fashion | 2023-04-18 | 19:30:00 | 03 | E005 |
| RS005 | Comedy Night | Comedy | 2023-03-30 | 20:00:00 | 05 | E003 |
| RS006 | Film Festival | Film | 2023-08-22 | 19:30:00 | 06 | E003 |
| RS007 | House Wife | Family | 2023-03-20 | 20:00:00 | 01 | E004 |
+-----+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql> UPDATE REALITY_SHOW SET Broadcast_Date = '2023-05-15' WHERE Program_ID IN ('RS002');
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE REALITY_SHOW SET Round = '01' WHERE Program_ID IN ('RS005');
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT * FROM REALITY_SHOW;
+-----+-----+-----+-----+-----+-----+-----+
| Program_ID | Name | Type | Broadcast_Date | Broadcast_Time | Round | Hosted_By |
+-----+-----+-----+-----+-----+-----+-----+
| RS001 | Talent Hunt | Music | 2023-09-15 | 20:00:00 | 04 | E003 |
| RS002 | Dance Off | Dance | 2023-05-15 | 19:30:00 | 01 | E005 |
| RS003 | Art Expo | Art | 2023-01-25 | 20:00:00 | 02 | E005 |
| RS004 | Fashion Show | Fashion | 2023-04-18 | 19:30:00 | 03 | E005 |
| RS005 | Comedy Night | Comedy | 2023-03-30 | 20:00:00 | 01 | E003 |
| RS006 | Film Festival | Film | 2023-08-22 | 19:30:00 | 06 | E003 |
| RS007 | House Wife | Family | 2023-03-20 | 20:00:00 | 01 | E004 |
+-----+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql>
```

FIGURE 3: 30 INSERT AND UPDATE TO REALITY_SHOW TABLE

```

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

mysql> DELETE FROM REALITY_SHOW WHERE Program_ID = 'RS007';
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM REALITY_SHOW;
+-----+-----+-----+-----+-----+-----+-----+
| Program_ID | Name | Type | Broadcast_Date | Broadcast_Time | Round | Hosted_By |
+-----+-----+-----+-----+-----+-----+-----+
| RS001 | Talent Hunt | Music | 2023-09-15 | 20:00:00 | 04 | E003 |
| RS002 | Dance Off | Dance | 2023-05-15 | 19:30:00 | 01 | E005 |
| RS003 | Art Expo | Art | 2023-01-25 | 20:00:00 | 02 | E005 |
| RS004 | Fashion Show | Fashion | 2023-04-18 | 19:30:00 | 03 | E005 |
| RS005 | Comedy Night | Comedy | 2023-03-30 | 20:00:00 | 01 | E003 |
| RS006 | Film Festival | Film | 2023-08-22 | 19:30:00 | 06 | E003 |
+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>
```

FIGURE 3: 31 DELETE FROM REALITY_SHOW TABLE

```

-- MySQL 8.0 Command Line Client
8 rows in set (0.00 sec)

mysql> INSERT INTO ADVERTISEMENT (Ad_ID, Ad_Name, Ad_Type, Income, Duration, Checked_By)VALUES ('A001', 'Cream Cracker Space', 'Commercial', 5000, '30 seconds', 'E002'), ('A002', 'Keels', 'Promotion', 3000, '45 seconds', 'E002'), ('A003', 'Sri Lankan Airlines', 'Promotion', 4500, '40 seconds', 'E001'), ('A004', 'Sunshine Laundry', 'Commercial', 5500, '35 seconds', 'E001'), ('A005', 'Ceylon Tea', 'Promotion', 4000, '50 seconds', 'E001'), ('A006', 'Singer', 'Commercial', 6500, '35 seconds', 'E002'), ('A007', 'Watawala Tea', 'Promotion', 4000, '50 seconds', 'E001'), ('A008', 'Lanka Mobile', 'Commercial', 4800, '25 seconds', 'E002');
Query OK, 8 rows affected (0.01 sec)
Records: 8 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM ADVERTISEMENT;
+-----+-----+-----+-----+-----+
| Ad_ID | Ad_Name | Ad_Type | Income | Duration | Checked_By |
+-----+-----+-----+-----+-----+
| A001 | Cream Cracker Space | Commercial | 5000 | 30 seconds | E002 |
| A002 | Keels | Promotion | 3000 | 45 seconds | E002 |
| A003 | Sri Lankan Airlines | Promotion | 4500 | 40 seconds | E001 |
| A004 | Sunshine Laundry | Commercial | 5500 | 35 seconds | E001 |
| A005 | Ceylon Tea | Promotion | 4000 | 50 seconds | E001 |
| A006 | Singer | Commercial | 6500 | 35 seconds | E002 |
| A007 | Watawala Tea | Promotion | 4000 | 50 seconds | E001 |
| A008 | Lanka Mobile | Commercial | 4800 | 25 seconds | E002 |
+-----+-----+-----+-----+-----+
8 rows in set (0.00 sec)

mysql> UPDATE ADVERTISEMENT SET Ad_Name = 'Keels Bonus' WHERE Ad_ID IN ('A002');
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE ADVERTISEMENT SET Income = '6500.00' WHERE Ad_ID IN ('A004');
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT * FROM ADVERTISEMENT;
+-----+-----+-----+-----+-----+
| Ad_ID | Ad_Name | Ad_Type | Income | Duration | Checked_By |
+-----+-----+-----+-----+-----+
| A001 | Cream Cracker Space | Commercial | 5000 | 30 seconds | E002 |
| A002 | Keels Bonus | Promotion | 3000 | 45 seconds | E002 |
| A003 | Sri Lankan Airlines | Promotion | 4500 | 40 seconds | E001 |
| A004 | Sunshine Laundry | Commercial | 6500 | 35 seconds | E001 |
| A005 | Ceylon Tea | Promotion | 4000 | 50 seconds | E001 |
| A006 | Singer | Commercial | 6500 | 35 seconds | E002 |
| A007 | Watawala Tea | Promotion | 4000 | 50 seconds | E001 |
| A008 | Lanka Mobile | Commercial | 4800 | 25 seconds | E002 |
+-----+-----+-----+-----+-----+
8 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 32 INSERT AND UPDATE TO ADVERTISEMENT TABLE

```

-- MySQL 8.0 Command Line Client
8 rows in set (0.00 sec)

mysql> DELETE FROM ADVERTISEMENT WHERE Ad_ID = 'A008';
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM ADVERTISEMENT;
+-----+-----+-----+-----+-----+
| Ad_ID | Ad_Name | Ad_Type | Income | Duration | Checked_By |
+-----+-----+-----+-----+-----+
| A001 | Cream Cracker Space | Commercial | 5000 | 30 seconds | E002 |
| A002 | Keels Bonus | Promotion | 3000 | 45 seconds | E002 |
| A003 | Sri Lankan Airlines | Promotion | 4500 | 40 seconds | E001 |
| A004 | Sunshine Laundry | Commercial | 5500 | 35 seconds | E001 |
| A005 | Ceylon Tea | Promotion | 4000 | 50 seconds | E001 |
| A006 | Singer | Commercial | 6500 | 35 seconds | E002 |
| A007 | Watawala Tea | Promotion | 4000 | 50 seconds | E001 |
+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 33 DELETE FROM ADVERTISEMENT TABLE

```

MySQL 8.0 Command Line Client
7 rows in set (0.00 sec)

mysql> INSERT INTO TV_SERIE (Show_ID, Name, Language, Season, Episode, Duration, Broadcast_Date, Broadcast_Time, Broadcasts_By) VALUES ('TS001', 'Prison Break', 'English', 2, 8, '40 minutes', '2023-07-10', '21:00:00', 'E004');
mysql> INSERT INTO TV_SERIE (Show_ID, Name, Language, Season, Episode, Duration, Broadcast_Date, Broadcast_Time, Broadcasts_By) VALUES ('TS002', 'Loop', 'Spanish', 1, 12, '25 minutes', '2023-06-18', '19:30:00', 'E006');
mysql> INSERT INTO TV_SERIE (Show_ID, Name, Language, Season, Episode, Duration, Broadcast_Date, Broadcast_Time, Broadcasts_By) VALUES ('TS003', 'Sci-Fi Odyssey', 'Japanese', 1, 14, '55 minutes', '2023-06-30', '18:20:00', 'E006');
mysql> INSERT INTO TV_SERIE (Show_ID, Name, Language, Season, Episode, Duration, Broadcast_Date, Broadcast_Time, Broadcasts_By) VALUES ('TS004', 'Detective Chronicles', 'German', 2, 15, '50 minutes', '2023-07-25', '22:30:00', 'E006');
mysql> INSERT INTO TV_SERIE (Show_ID, Name, Language, Season, Episode, Duration, Broadcast_Date, Broadcast_Time, Broadcasts_By) VALUES ('TS005', 'Prison Break', 'English', 2, 9, '40 minutes', '2023-07-17', '21:00:00', 'E004');
mysql> INSERT INTO TV_SERIE (Show_ID, Name, Language, Season, Episode, Duration, Broadcast_Date, Broadcast_Time, Broadcasts_By) VALUES ('TS006', 'Loop', 'Spanish', 1, 13, '25 minutes', '2023-06-25', '19:30:00', 'E004');
mysql> INSERT INTO TV_SERIE (Show_ID, Name, Language, Season, Episode, Duration, Broadcast_Date, Broadcast_Time, Broadcasts_By) VALUES ('TS007', 'Sci-Fi Odyssey', 'Japanese', 1, 15, '55 minutes', '2023-07-07', '18:20:00', 'E006');

Records: 7 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM TV_SERIE;
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 '-SERIE' at line 1
mysql> SELECT * FROM TV_SERIE;

+----+----+----+----+----+----+----+----+----+
| Show_ID | Name | Language | Season | Episode | Duration | Broadcast_Date | Broadcast_Time | Broadcasts_By |
+----+----+----+----+----+----+----+----+----+
| TS001 | Prison Break | English | 2 | 8 | 40 minutes | 2023-07-10 | 21:00:00 | E004 |
| TS002 | Loop | Spanish | 1 | 12 | 25 minutes | 2023-06-18 | 19:30:00 | E006 |
| TS003 | Sci-Fi Odyssey | Japanese | 1 | 14 | 55 minutes | 2023-06-30 | 18:20:00 | E006 |
| TS004 | Detective Chronicles | German | 2 | 15 | 50 minutes | 2023-07-25 | 22:30:00 | E006 |
| TS005 | Prison Break | English | 2 | 9 | 40 minutes | 2023-07-17 | 21:00:00 | E004 |
| TS006 | Loop | Spanish | 1 | 13 | 25 minutes | 2023-06-25 | 19:30:00 | E004 |
| TS007 | Sci-Fi Odyssey | Japanese | 1 | 15 | 55 minutes | 2023-07-07 | 18:20:00 | E006 |
+----+----+----+----+----+----+----+----+----+

7 rows in set (0.00 sec)

mysql> UPDATE TV_SERIE SET Language = 'English Dubbed' WHERE Show_ID = 'TS002';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE TV_SERIE SET Duration = '50 minutes' WHERE Show_ID IN ('TS007');
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT * FROM TV_SERIE;
+----+----+----+----+----+----+----+----+----+
| Show_ID | Name | Language | Season | Episode | Duration | Broadcast_Date | Broadcast_Time | Broadcasts_By |
+----+----+----+----+----+----+----+----+----+
| TS001 | Prison Break | English | 2 | 8 | 40 minutes | 2023-07-10 | 21:00:00 | E004 |
| TS002 | Loop | English Dubbed | 1 | 12 | 25 minutes | 2023-06-18 | 19:30:00 | E006 |
| TS003 | Sci-Fi Odyssey | Japanese | 1 | 14 | 55 minutes | 2023-06-30 | 18:20:00 | E006 |
| TS004 | Detective Chronicles | German | 2 | 15 | 50 minutes | 2023-07-25 | 22:30:00 | E006 |
| TS005 | Prison Break | English | 2 | 9 | 40 minutes | 2023-07-17 | 21:00:00 | E004 |
| TS006 | Loop | Spanish | 1 | 13 | 25 minutes | 2023-06-25 | 19:30:00 | E004 |
| TS007 | Sci-Fi Odyssey | Japanese | 1 | 15 | 50 minutes | 2023-07-07 | 18:20:00 | E006 |
+----+----+----+----+----+----+----+----+----+

7 rows in set (0.00 sec)

mysql>
```

FIGURE 3: 34 INSERT AND UPDATE TO TV_SERIE TABLE

```

MySQL 8.0 Command Line Client
7 rows in set (0.00 sec)

mysql> DELETE FROM TV_SERIE WHERE Show_ID = 'TS004';
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM TV_SERIE;
+----+----+----+----+----+----+----+----+----+
| Show_ID | Name | Language | Season | Episode | Duration | Broadcast_Date | Broadcast_Time | Broadcasts_By |
+----+----+----+----+----+----+----+----+----+
| TS001 | Prison Break | English | 2 | 8 | 40 minutes | 2023-07-10 | 21:00:00 | E004 |
| TS002 | Loop | English Dubbed | 1 | 12 | 25 minutes | 2023-06-18 | 19:30:00 | E006 |
| TS003 | Sci-Fi Odyssey | Japanese | 1 | 14 | 55 minutes | 2023-06-30 | 18:20:00 | E006 |
| TS005 | Prison Break | English | 2 | 9 | 40 minutes | 2023-07-17 | 21:00:00 | E004 |
| TS006 | Loop | Spanish | 1 | 13 | 25 minutes | 2023-06-25 | 19:30:00 | E004 |
| TS007 | Sci-Fi Odyssey | Japanese | 1 | 15 | 50 minutes | 2023-07-07 | 18:20:00 | E006 |
+----+----+----+----+----+----+----+----+----+

6 rows in set (0.00 sec)

mysql>
```

FIGURE 3: 35 DELETE FROM TV_SERIE TABLE

```

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

mysql> INSERT INTO MOVIE (Show_ID, Name, Language, Duration, Broadcast_Date, Broadcast_Time, Broadcasts_By)VALUES ('M001', 'The Matrix', 'English', '2h 30m', '2023-09-15', '19:00:00', 'E004'), ('M002', 'Inception', 'English', '2h 28m', '2023-09-16', '20:30:00', 'E006'), ('M003', 'Avatar', 'English', '2h 42m', '2023-09-17', '18:45:00', 'E004'), ('M004', 'Pulp Fiction', 'English', '2h 34m', '2023-09-18', '21:15:00', 'E004'), ('M005', 'Bad Boys', 'English', '2h 38m', '2023-09-08', '21:15:00', 'E004'), ('M006', 'Rush Hour 01', 'English', '2h 15m', '2023-07-18', '21:15:00', 'E006'), ('M007', 'The Shawshank Redemption', 'English', '2h 22m', '2023-09-19', '17:30:00', 'E006');
Query OK, 7 rows affected (0.01 sec)
Records: 7  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM MOVIE;
+-----+-----+-----+-----+-----+-----+-----+
| Show_ID | Name | Language | Duration | Broadcast_Date | Broadcast_Time | Broadcasts_By |
+-----+-----+-----+-----+-----+-----+-----+
| M001 | The Matrix | English | 2h 30m | 2023-09-15 | 19:00:00 | E004 |
| M002 | Inception | English | 2h 28m | 2023-09-16 | 20:30:00 | E006 |
| M003 | Avatar | English | 2h 42m | 2023-09-17 | 18:45:00 | E004 |
| M004 | Pulp Fiction | English | 2h 34m | 2023-09-18 | 21:15:00 | E004 |
| M005 | Bad Boys | English | 2h 38m | 2023-09-08 | 21:15:00 | E004 |
| M006 | Rush Hour 01 | English | 2h 15m | 2023-07-18 | 21:15:00 | E006 |
| M007 | The Shawshank Redemption | English | 2h 22m | 2023-09-19 | 17:30:00 | E006 |
+-----+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql> UPDATE MOVIE SET Duration = '2h 25m', Broadcast_Time = '21:00:00' WHERE Show_ID = 'M002';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> UPDATE MOVIE SET Language = 'Spanish' WHERE Show_ID = 'M004';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT * FROM MOVIE;
+-----+-----+-----+-----+-----+-----+-----+
| Show_ID | Name | Language | Duration | Broadcast_Date | Broadcast_Time | Broadcasts_By |
+-----+-----+-----+-----+-----+-----+-----+
| M001 | The Matrix | English | 2h 30m | 2023-09-15 | 19:00:00 | E004 |
| M002 | Inception | English | 2h 25m | 2023-09-16 | 21:00:00 | E006 |
| M003 | Avatar | English | 2h 42m | 2023-09-17 | 18:45:00 | E004 |
| M004 | Pulp Fiction | Spanish | 2h 34m | 2023-09-18 | 21:15:00 | E004 |
| M005 | Bad Boys | English | 2h 38m | 2023-09-08 | 21:15:00 | E004 |
| M006 | Rush Hour 01 | English | 2h 15m | 2023-07-18 | 21:15:00 | E006 |
| M007 | The Shawshank Redemption | English | 2h 22m | 2023-09-19 | 17:30:00 | E006 |
+-----+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql>
```

FIGURE 3: 36 INSERT AND UPDATE TO MOVIE TABLE

```

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

mysql> DELETE FROM MOVIE WHERE Show_ID = 'M005';
Query OK, 1 row affected (0.02 sec)

mysql> SELECT * FROM MOVIE;
+-----+-----+-----+-----+-----+-----+-----+
| Show_ID | Name | Language | Duration | Broadcast_Date | Broadcast_Time | Broadcasts_By |
+-----+-----+-----+-----+-----+-----+-----+
| M001 | The Matrix | English | 2h 30m | 2023-09-15 | 19:00:00 | E004 |
| M002 | Inception | English | 2h 25m | 2023-09-16 | 21:00:00 | E006 |
| M003 | Avatar | English | 2h 42m | 2023-09-17 | 18:45:00 | E004 |
| M004 | Pulp Fiction | Spanish | 2h 34m | 2023-09-18 | 21:15:00 | E004 |
| M006 | Rush Hour 01 | English | 2h 15m | 2023-07-18 | 21:15:00 | E006 |
| M007 | The Shawshank Redemption | English | 2h 22m | 2023-09-19 | 17:30:00 | E006 |
+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>
```

FIGURE 3: 37 DELETE FROM MOVIE TABLE

```

-- MySQL 8.0 Command Line Client
+-----+-----+-----+-----+-----+-----+
| 0 rows in set (0.00 sec)

mysql> INSERT INTO SPONSER (Sponser_ID, First_name, Last_name, Company_name, Company_email, No, Street, City)VALUES ('S001', 'John', 'Doe', 'Sunshine Corporation', 'sunshine@bccorp.com', '45', 'Market St', 'Colombo');
      ('S002', 'Jane', 'Smith', 'LankaTech Solutions', 'info@lankatech.lk', '28', 'Tech Park Rd', 'Colombo');
      ('S003', 'Mike', 'Jones', 'IslandFoods Ltd', 'info@islandfoods.lk', '36', 'Food Street', 'Kandy');
      ('S004', 'Peter', 'Brown', 'Ceylon Builders Pvt Ltd', 'info@ceylonbuilders.com', '53', 'Construction Ave', 'Negombo');
      ('S005', 'Mary', 'Williams', 'GreenVista Plc', 'info@greenvista.lk', '41', 'Plantation Rd', 'Nuwara Eliya');
      ('S006', 'David', 'Green', 'Oceanic Ventures Pvt Ltd', 'info@oceanicventures.lk', '29', 'Marine Blvd', 'Galle');
      ('S007', 'Will', 'Robinson', 'Highlands Pharma Ltd', 'info@highlandspharma.lk', '32', 'Medical Lane', 'Kandy');

Query OK, 7 rows affected (0.02 sec)
Records: 7 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM SPONSER;
+-----+-----+-----+-----+-----+-----+-----+
| Sponser_ID | First_name | Last_name | Company_name | Company_email | No | Street | City |
+-----+-----+-----+-----+-----+-----+-----+
| S001 | John | Doe | Sunshine Corporation | sunshine@bccorp.com | 45 | Market St | Colombo |
| S002 | Jane | Smith | LankaTech Solutions | info@lankatech.lk | 28 | Tech Park Rd | Colombo |
| S003 | Mike | Jones | IslandFoods Ltd | info@islandfoods.lk | 36 | Food Street | Kandy |
| S004 | Peter | Brown | Ceylon Builders Pvt Ltd | info@ceylonbuilders.com | 53 | Construction Ave | Negombo |
| S005 | Mary | Williams | GreenVista Plc | info@greenvista.lk | 41 | Plantation Rd | Nuwara Eliya |
| S006 | David | Green | Oceanic Ventures Pvt Ltd | info@oceanicventures.lk | 29 | Marine Blvd | Galle |
| S007 | Will | Robinson | Highlands Pharma Ltd | info@highlandspharma.lk | 32 | Medical Lane | Kandy |
+-----+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql> UPDATE SPONSER SET First_name = 'Michelle', Last_name = 'Barbara' WHERE Sponser_ID = 'S003';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE SPONSER SET Company_name = 'GreenTech Solutions', Company_email = 'info@greentech.lk' WHERE Sponser_ID = 'S005';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT * FROM SPONSER;
+-----+-----+-----+-----+-----+-----+-----+
| Sponser_ID | First_name | Last_name | Company_name | Company_email | No | Street | City |
+-----+-----+-----+-----+-----+-----+-----+
| S001 | John | Doe | Sunshine Corporation | sunshine@bccorp.com | 45 | Market St | Colombo |
| S002 | Jane | Smith | LankaTech Solutions | info@lankatech.lk | 28 | Tech Park Rd | Colombo |
| S003 | Michelle | Barbara | IslandFoods Ltd | info@islandfoods.lk | 36 | Food Street | Kandy |
| S004 | Peter | Brown | Ceylon Builders Pvt Ltd | info@ceylonbuilders.com | 53 | Construction Ave | Negombo |
| S005 | Mary | Williams | GreenTech Solutions | info@greentech.lk | 41 | Plantation Rd | Nuwara Eliya |
| S006 | David | Green | Oceanic Ventures Pvt Ltd | info@oceanicventures.lk | 29 | Marine Blvd | Galle |
| S007 | Will | Robinson | Highlands Pharma Ltd | info@highlandspharma.lk | 32 | Medical Lane | Kandy |
+-----+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 38 INSERT AND UPDATE TO SPONSER TABLE

```

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

mysql> DELETE FROM SPONSER WHERE Sponser_ID = 'S007';
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM SPONSER;
+-----+-----+-----+-----+-----+-----+-----+
| Sponser_ID | First_name | Last_name | Company_name | Company_email | No | Street | City |
+-----+-----+-----+-----+-----+-----+-----+
| S001 | John | Doe | Sunshine Corporation | sunshine@bccorp.com | 45 | Market St | Colombo |
| S002 | Jane | Smith | LankaTech Solutions | info@lankatech.lk | 28 | Tech Park Rd | Colombo |
| S003 | Michelle | Barbara | IslandFoods Ltd | info@islandfoods.lk | 36 | Food Street | Kandy |
| S004 | Peter | Brown | Ceylon Builders Pvt Ltd | info@ceylonbuilders.com | 53 | Construction Ave | Negombo |
| S005 | Mary | Williams | GreenTech Solutions | info@greentech.lk | 41 | Plantation Rd | Nuwara Eliya |
| S006 | David | Green | Oceanic Ventures Pvt Ltd | info@oceanicventures.lk | 29 | Marine Blvd | Galle |
+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 39 DELETE FROM SPONSER TABLE

```

MySQL 8.0 Command Line Client
+-----+-----+-----+
| 6 rows in set (0.00 sec) |
+-----+-----+-----+
mysql> INSERT INTO ANNUAL_BONUS (Empl_ID, Date, Value)VALUES ('E001', '2022-12-31', '10000.00'), ('E002', '2022-12-31', '17500.00'), ('E003', '2022-08-31', '20000.00'), ('E004', '2022-12-11', '18500.00'), ('E005', '2022-10-26', '10000.00'), ('E006', '2022-03-04', '10000.00');
Query OK, 6 rows affected (0.00 sec)
Records: 6 Duplicates: 0 Warnings: 0
mysql> SELECT * FROM ANNUAL_BONUS;
+-----+-----+-----+
| Empl_ID | Date      | Value    |
+-----+-----+-----+
| E001    | 2022-12-31 | 10000.00 |
| E002    | 2022-12-31 | 17500.00 |
| E003    | 2022-08-31 | 20000.00 |
| E004    | 2022-12-11 | 18500.00 |
| E005    | 2022-10-26 | 10000.00 |
| E006    | 2022-03-04 | 10000.00 |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> UPDATE ANNUAL_BONUS SET Value = '12000.00' WHERE Empl_ID = 'E001' AND Date = '2022-12-31';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0
mysql> UPDATE ANNUAL_BONUS SET Value = '11000.00' WHERE Empl_ID = 'E006' AND Date = '2022-03-04';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0
mysql> SELECT * FROM ANNUAL_BONUS;
+-----+-----+-----+
| Empl_ID | Date      | Value    |
+-----+-----+-----+
| E001    | 2022-12-31 | 12000.00 |
| E002    | 2022-12-31 | 17500.00 |
| E003    | 2022-08-31 | 20000.00 |
| E004    | 2022-12-11 | 18500.00 |
| E005    | 2022-10-26 | 10000.00 |
| E006    | 2022-03-04 | 11000.00 |
+-----+-----+-----+
6 rows in set (0.00 sec)
mysql>

```

FIGURE 3: 40 INSERT AND UPDATE TO ANNUAL_BONUS TABLE

```

MySQL 8.0 Command Line Client
+-----+-----+
| 6 rows in set (0.00 sec) |
+-----+-----+
mysql> DELETE FROM ANNUAL_BONUS WHERE Empl_ID = 'E006' AND Date = '2022-10-26';
Query OK, 0 rows affected (0.00 sec)
mysql> SELECT * FROM ANNUAL_BONUS;
+-----+-----+-----+
| Empl_ID | Date      | Value    |
+-----+-----+-----+
| E001    | 2022-12-31 | 12000.00 |
| E002    | 2022-12-31 | 17500.00 |
| E003    | 2022-08-31 | 20000.00 |
| E004    | 2022-12-11 | 18500.00 |
| E005    | 2022-10-26 | 10000.00 |
| E006    | 2022-03-04 | 11000.00 |
+-----+-----+-----+
6 rows in set (0.00 sec)
mysql>

```

FIGURE 3: 41 DELETE FROM ANNUAL_BONUS TABLE

```

MySQL 8.0 Command Line Client
+-----+-----+-----+
| 6 rows in set (0.00 sec) |
+-----+-----+-----+
mysql> INSERT INTO DEPENDENT (Empl_ID, DOB, F_Name, L_Name, Relation)VALUES ('E001', '2005-03-02', 'Kamala', 'Perera', 'Wife'), ('E001', '2010-08-15', 'Sapumal', 'Nithila', 'Son'), ('E002', '2020-04-15', 'Ananda', 'Nithila', 'Son'), ('E004', '2008-06-02', 'Krishu', 'Punsari', 'Daughter'), ('E006', '2010-08-15', 'Sadarawan', 'Pasindu', 'Son');
Query OK, 6 rows affected (0.01 sec)
Records: 6 Duplicates: 0 Warnings: 0
mysql> SELECT * FROM DEPENDENT;
+-----+-----+-----+
| Empl_ID | DOB      | F_Name   | L_Name   | Relation |
+-----+-----+-----+
| E001   | 2005-03-02 | Kamala   | Perera   | Wife      |
| E001   | 2010-08-15 | Sapumal  | Nithila  | Son       |
| E002   | 2020-04-15 | Ananda   | Nithila  | Son       |
| E002   | 2007-03-07 | Avishka  | Perera   | Daughter  |
| E004   | 2008-06-02 | Krishu   | Punsari  | Daughter  |
| E006   | 2010-08-15 | Sadarawan | Pasindu  | Son       |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> UPDATE DEPENDENT SET DOB = '2005-04-02' WHERE Empl_ID = 'E001' AND F_Name = 'Subodha' AND Relation = 'Daughter';
Query OK, 0 rows affected (0.00 sec)
Rows matched: 0 Changed: 0 Warnings: 0
mysql> UPDATE DEPENDENT SET L_Name = 'Punsari' WHERE Empl_ID = 'E004' AND F_Name = 'Krishu' AND Relation = 'Daughter';
':>C
mysql> UPDATE DEPENDENT SET L_Name = 'Punsari' WHERE Empl_ID = 'E004' AND F_Name = 'Krishu' AND Relation = 'Daughter';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0
mysql> SELECT * FROM DEPENDENT;
+-----+-----+-----+
| Empl_ID | DOB      | F_Name   | L_Name   | Relation |
+-----+-----+-----+
| E001   | 2005-03-02 | Kamala   | Perera   | Wife      |
| E001   | 2010-08-15 | Sapumal  | Nithila  | Son       |
| E002   | 2020-04-15 | Ananda   | Nithila  | Son       |
| E002   | 2007-03-07 | Avishka  | Perera   | Daughter  |
| E004   | 2008-06-02 | Krishu   | Punsari  | Daughter  |
| E006   | 2010-08-15 | Sadarawan | Pasindu  | Son       |
+-----+-----+-----+
6 rows in set (0.00 sec)
mysql>

```

FIGURE 3: 42 INSERT AND UPDATE TO DEPENDANT TABLE

```

MySQL 8.0 Command Line Client
+-----+-----+-----+
| 6 rows in set (0.00 sec) |
+-----+-----+-----+
mysql> DELETE FROM DEPENDENT WHERE Empl_ID = 'E002' AND F_Name = 'Avishka' AND Relation = 'Daughter';
Query OK, 1 row affected (0.00 sec)
mysql> SELECT * FROM DEPENDENT;
+-----+-----+-----+
| Empl_ID | DOB      | F_Name   | L_Name   | Relation |
+-----+-----+-----+
| E001   | 2005-03-02 | Kamala   | Perera   | Wife      |
| E001   | 2010-08-15 | Sapumal  | Nithila  | Son       |
| E002   | 2020-04-15 | Ananda   | Nithila  | Son       |
| E004   | 2008-06-02 | Krishu   | Punsari  | Daughter  |
| E006   | 2010-08-15 | Sadarawan | Pasindu  | Son       |
+-----+-----+-----+
5 rows in set (0.00 sec)
mysql>

```

FIGURE 3: 43 DELETE FROM DEPENDANT TABLE

```

MySQL 8.0 Command Line Client
+-----+-----+
| 9 rows in set (0.00 sec) |

mysql> INSERT INTO CONTACT_NUMBERS_OF_EMPLOYEE (Empl_ID, Mobile_No)VALUES ('E001', '0715688569'), ('E002', '0745689534'), ('E002', '0766496215'), ('E003', '0745836619'), ('E004', '075158627');
Query OK, 8 rows affected (0.00 sec)
Records: 8 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM CONTACT_NUMBERS_OF_EMPLOYEE;
+-----+-----+
| Empl_ID | Mobile_No |
+-----+-----+
| E001    | 0715688569 |
| E004    | 0745652634 |
| E002    | 0745689534 |
| E003    | 0745836619 |
| E004    | 075158627 |
| E006    | 0762546626 |
| E005    | 0762911394 |
| E002    | 0766496215 |
+-----+-----+
8 rows in set (0.00 sec)

mysql> UPDATE CONTACT_NUMBERS_OF_JUDGER SET Contact_Number = '0766441216' WHERE Judger_ID = 'J002' AND Contact_Number = '0766441215';
Query OK, 0 rows affected (0.00 sec)
Rows matched: 0 Changed: 0 Warnings: 0

mysql> UPDATE CONTACT_NUMBERS_OF_JUDGER SET Contact_Number = '0766452577' WHERE Judger_ID = 'J004' AND Contact_Number = '0745651874';
Query OK, 0 rows affected (0.00 sec)
Rows matched: 0 Changed: 0 Warnings: 0

mysql> SELECT * FROM CONTACT_NUMBERS_OF_EMPLOYEE;
+-----+-----+
| Empl_ID | Mobile_No |
+-----+-----+
| E001    | 0715688569 |
| E004    | 0745652634 |
| E002    | 0745689534 |
| E003    | 0745836619 |
| E004    | 075158627 |
| E006    | 0762546626 |
| E005    | 0762911394 |
| E002    | 0766496215 |
+-----+-----+
8 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 44 INSERT AND UPDATE TO CONTACT NUMBERS OF EMPLOYEE TABLE

```

MySQL 8.0 Command Line Client
+-----+-----+
| 0 rows in set (0.00 sec) |

mysql> DELETE FROM CONTACT_NUMBERS_OF_EMPLOYEE WHERE Empl_ID = 'E005' AND Mobile_No = '0762911394';
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM CONTACT_NUMBERS_OF_EMPLOYEE;
+-----+-----+
| Empl_ID | Mobile_No |
+-----+-----+
| E001    | 0715688569 |
| E004    | 0745652634 |
| E002    | 0745689534 |
| E003    | 0745836619 |
| E004    | 075158627 |
| E006    | 0762546626 |
| E002    | 0766496215 |
+-----+-----+
7 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 45 DELETE FROM CONTACT NUMBERS OF EMPLOYEE TABLE

```

MySQL 8.0 Command Line Client
7 rows in set (0.00 sec)

mysql> INSERT INTO CONTACT_NUMBERS_OF_JUDGER (Judge_ID, Contact_Number)VALUES ('J001', '0715688597'), ('J002', '0745689534'), ('J003', '0766441215'), ('J004', '0745651874'), ('J005', '0762918794'), ('J006', '0762487626');
Query OK, 8 rows affected (0.00 sec)
Records: 8 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM CONTACT_NUMBERS_OF_JUDGER;
+-----+-----+
| Judge_ID | Contact_Number |
+-----+-----+
| J001     | 0715688597   |
| J002     | 0745689534   |
| J003     | 0766441215   |
| J004     | 0745848619   |
| J005     | 0745651874   |
| J006     | 0762918794   |
| J007     | 0762487626   |
| J008     | 0762487626   |
+-----+-----+
8 rows in set (0.00 sec)

mysql> UPDATE CONTACT_NUMBERS_OF_JUDGER SET Contact_Number = '0766441216' WHERE Judge_ID = 'J002' AND Contact_Number = '0766441215';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE CONTACT_NUMBERS_OF_JUDGER SET Contact_Number = '0766452577' WHERE Judge_ID = 'J004' AND Contact_Number = '0745651874';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT * FROM CONTACT_NUMBERS_OF_JUDGER;
+-----+-----+
| Judge_ID | Contact_Number |
+-----+-----+
| J001     | 0715688597   |
| J002     | 0745689534   |
| J003     | 0766441216   |
| J004     | 0751626267   |
| J005     | 0766452577   |
| J006     | 0762918794   |
| J007     | 0762487626   |
| J008     | 0762487626   |
+-----+-----+
8 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 46 INSERT AND UPDATE TO CONTACT_NUMBERS_OF_JUDGERS TABLE

```

MySQL 8.0 Command Line Client
8 rows in set (0.00 sec)

mysql> DELETE FROM CONTACT_NUMBERS_OF_JUDGER WHERE Judge_ID = 'J006' AND Contact_Number = '0751626267';
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT * FROM CONTACT_NUMBERS_OF_JUDGER;
+-----+-----+
| Judge_ID | Contact_Number |
+-----+-----+
| J001     | 0715688597   |
| J002     | 0745689534   |
| J003     | 0766441216   |
| J004     | 0751626267   |
| J005     | 0766452577   |
| J006     | 0762918794   |
| J007     | 0762487626   |
| J008     | 0762487626   |
+-----+-----+
8 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 47 DELETE FROM CONTACT_NUMBERS_OF_JUDGERS TABLE

```

MySQL 8.0 Command Line Client
B rows in set (0.00 sec)

mysql> INSERT INTO CONTACT_NUMBERS_OF_COMPETITOR (Com_ID, Contact_Number)VALUES ('C001', '0715627957'), ('C002', '0745674564'), ('C003', '0766459715'), ('C003', '0745848719'), ('C004', '0751489467');
Query OK, 8 rows affected (0.00 sec)
Records: 8 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM CONTACT_NUMBERS_OF_COMPETITOR;
+-----+-----+
| Com_ID | Contact_Number |
+-----+-----+
| C001  | 0715627957   |
| C004  | 0745648784   |
| C002  | 0745674564   |
| C003  | 0745848719   |
| C004  | 0751489467   |
| C006  | 0762484786   |
| C005  | 0762917894   |
| C002  | 0766459715   |
+-----+-----+
8 rows in set (0.00 sec)

mysql> UPDATE CONTACT_NUMBERS_OF_COMPETITOR SET Contact_Number = '0766459716' WHERE Com_ID = 'C002' AND Contact_Number = '0766459715';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE CONTACT_NUMBERS_OF_COMPETITOR SET Contact_Number = '0766472716' WHERE Com_ID = 'C006' AND Contact_Number = '0762484786';
Query OK, 1 row affected (0.02 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT * FROM CONTACT_NUMBERS_OF_COMPETITOR;
+-----+-----+
| Com_ID | Contact_Number |
+-----+-----+
| C001  | 0715627957   |
| C004  | 0745648784   |
| C002  | 0745674564   |
| C003  | 0745848719   |
| C004  | 0751489467   |
| C005  | 0762917894   |
| C002  | 0766459716   |
| C006  | 0766472716   |
+-----+-----+
8 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 48 INSERT AND UPDATE TO CONTACT_NUMBERS_OF_COMPETITOR TABLE

```

MySQL 8.0 Command Line Client
+-----+-----+
2 rows in set (0.00 sec)

mysql> DELETE FROM CONTACT_NUMBERS_OF_COMPETITOR WHERE Com_ID = 'C004' AND Contact_Number = '0751489467';
Query OK, 1 row affected (0.02 sec)

mysql> select * from CONTACT_NUMBERS_OF_COMPETITOR;
+-----+-----+
| Com_ID | Contact_Number |
+-----+-----+
| C001  | 0715627957   |
| C004  | 0745648784   |
| C002  | 0745674564   |
| C003  | 0745848719   |
| C005  | 0762917894   |
| C002  | 0766459715   |
| C006  | 0766472716   |
+-----+-----+
7 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 49 DELETE FROM CONTACT_NUMBERS_OF_COMPETITOR TABLE

```

-- MySQL 8.0 Command Line Client
8 rows in set (0.00 sec)

mysql> INSERT INTO CONTACT_NUMBERS_OF_SPONSER (Sponser_ID, Contact_Number)VALUES ('S001', '0715628797'), ('S001', '0745618534'), ('S002', '0766448575'), ('S003', '0745187619'), ('S004', '0751626054'), ('S004', '0745651654'), ('S005', '0762941894'), ('S006', '0762487488');
Query OK, 8 rows affected (0.01 sec)
Records: 8 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM CONTACT_NUMBERS_OF_SPONSER;
+-----+-----+
| Sponser_ID | Contact_Number |
+-----+-----+
| S001       | 0715628797   |
| S003       | 0745187619   |
| S001       | 0745618534   |
| S004       | 0745651654   |
| S004       | 0751626054   |
| S006       | 0762487488   |
| S005       | 0762941894   |
| S002       | 0766448575   |
+-----+-----+
8 rows in set (0.00 sec)

mysql> UPDATE CONTACT_NUMBERS_OF_SPONSER SET Contact_Number = '0751626055' WHERE Sponser_ID = 'S004' AND Contact_Number = '0751626054';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE CONTACT_NUMBERS_OF_SPONSER SET Contact_Number = '0751973055' WHERE Sponser_ID = 'S001' AND Contact_Number = '0751626054';
Query OK, 0 rows affected (0.00 sec)
Rows matched: 0 Changed: 0 Warnings: 0

mysql> SELECT * FROM CONTACT_NUMBERS_OF_SPONSER;
+-----+-----+
| Sponser_ID | Contact_Number |
+-----+-----+
| S001       | 0715628797   |
| S003       | 0745187619   |
| S001       | 0745618534   |
| S004       | 0745651654   |
| S004       | 0751626055   |
| S006       | 0762487488   |
| S005       | 0762941894   |
| S002       | 0766448575   |
+-----+-----+
8 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 50 INSERT AND UPDATE TO CONTACT_NUMBERS_OF_SPONSER TABLE

```

-- MySQL 8.0 Command Line Client
8 rows in set (0.00 sec)

mysql> DELETE FROM CONTACT_NUMBERS_OF_SPONSER WHERE Sponser_ID = 'S004' AND Contact_Number = '0745187619';
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT * FROM CONTACT_NUMBERS_OF_SPONSER;
+-----+-----+
| Sponser_ID | Contact_Number |
+-----+-----+
| S001       | 0715628797   |
| S003       | 0745187619   |
| S001       | 0745618534   |
| S004       | 0745651654   |
| S004       | 0751626055   |
| S006       | 0762487488   |
| S005       | 0762941894   |
| S002       | 0766448575   |
+-----+-----+
8 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 51 DELETE FROM CONTACT_NUMBERS_OF_SPONSER TABLE

```

MySQL 8.0 Command Line Client
+-----+-----+
| 0 rows in set (0.00 sec) |

mysql> INSERT INTO ADVERTISEMENTS_OF_REALITYSHOW (Program_ID, Ad_ID)VALUES ('RS001', 'A001'), ('RS002', 'A002'), ('RS003', 'A003'), ('RS004', 'A004'), ('RS005', 'A005'), ('RS001', 'A002'), ('RS002', 'A003'), ('RS003', 'A004'), ('RS004', 'A005');
Query OK, 10 rows affected (0.00 sec)
Records: 10 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM ADVERTISEMENTS_OF_REALITYSHOW;
+-----+-----+
| Program_ID | Ad_ID |
+-----+-----+
| RS001      | A001 |
| RS005      | A001 |
| RS001      | A002 |
| RS002      | A002 |
| RS002      | A003 |
| RS003      | A003 |
| RS003      | A004 |
| RS004      | A004 |
| RS004      | A005 |
| RS005      | A005 |
+-----+-----+
10 rows in set (0.00 sec)

mysql> UPDATE ADVERTISEMENTS_OF_REALITYSHOW SET Ad_ID = 'A006' WHERE Program_ID = 'RS002' AND Ad_ID = 'A002';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE ADVERTISEMENTS_OF_REALITYSHOW SET Ad_ID = 'A005' WHERE Program_ID = 'RS003' AND Ad_ID = 'A004';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT * FROM ADVERTISEMENTS_OF_REALITYSHOW;
+-----+-----+
| Program_ID | Ad_ID |
+-----+-----+
| RS001      | A001 |
| RS005      | A001 |
| RS001      | A002 |
| RS002      | A003 |
| RS003      | A003 |
| RS004      | A004 |
| RS003      | A005 |
| RS004      | A005 |
| RS005      | A005 |
| RS002      | A006 |
+-----+-----+
10 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 52 INSERT AND UPDATE TO ADVERTISEMENTS_OF_REALITYSHOW TABLE

```

MySQL 8.0 Command Line Client
+-----+-----+
| 0 rows in set (0.00 sec) |

mysql> DELETE FROM ADVERTISEMENTS_OF_REALITYSHOW WHERE Program_ID = 'RS003' AND Ad_ID = 'A003';
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM ADVERTISEMENTS_OF_REALITYSHOW;
+-----+-----+
| Program_ID | Ad_ID |
+-----+-----+
| RS001      | A001 |
| RS005      | A001 |
| RS001      | A002 |
| RS002      | A003 |
| RS004      | A004 |
| RS003      | A005 |
| RS004      | A005 |
| RS005      | A005 |
| RS002      | A006 |
+-----+-----+
0 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 53 DELETE FROM ADVERTISEMENTS_OF_REALITYSHOW TABLE

```

MySQL 8.0 Command Line Client
9 rows in set (0.00 sec)

mysql> INSERT INTO ADVERTISEMENTS_OF_MOVIE (Show_ID, Ad_ID)VALUES ('M001', 'A001'), ('M002', 'A002'), ('M003', 'A003'), ('M004', 'A004'), ('M004', 'A005'), ('M001', 'A003'), ('M002', 'A004'), ('M003', 'A001'), ('M004', 'A002');
Query OK, 9 rows affected (0.00 sec)
Records: 9 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM ADVERTISEMENTS_OF_MOVIE;
+-----+-----+
| Show_ID | Ad_ID |
+-----+-----+
|M001| A001 |
|M004| M001 |
|M002| L A002 |
|M001| A003 |
|M003| A003 |
|M002| A004 |
|M004| A004 |
|M003| A005 |
|M004| A005 |
+-----+-----+
9 rows in set (0.00 sec)

mysql> UPDATE ADVERTISEMENTS_OF_MOVIE SET Ad_ID = 'A006' WHERE Show_ID = 'M004' AND Ad_ID = 'A004';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE ADVERTISEMENTS_OF_MOVIE SET Ad_ID = 'A002' WHERE Show_ID = 'M004' AND Ad_ID = 'A001';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT * FROM ADVERTISEMENTS_OF_MOVIE;
+-----+-----+
| Show_ID | Ad_ID |
+-----+-----+
|M001| A001 |
|M002| A002 |
|M004| A002 |
|M001| A003 |
|M003| A003 |
|M002| M004 |
|M002| L A005 |
|M004| A005 |
|M004| A006 |
+-----+-----+
9 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 54 INSERT AND UPDATE TO ADVERTISEMENTS_OF_MOVIE TABLE

```

MySQL 8.0 Command Line Client
9 rows in set (0.00 sec)

mysql> DELETE FROM ADVERTISEMENTS_OF_MOVIE WHERE Show_ID = 'M004' AND Ad_ID = 'A001';
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT * FROM ADVERTISEMENTS_OF_MOVIE;
+-----+-----+
| Show_ID | Ad_ID |
+-----+-----+
|M001| A001 |
|M002| A002 |
|M004| A002 |
|M001| A003 |
|M003| A003 |
|M002| A004 |
|M003| M004 |
|M004| A005 |
|M004| A006 |
+-----+-----+
9 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 55 DELETE FROM ADVERTISEMENTS_OF_MOVIE TABLE

```

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

mysql> INSERT INTO ADVERTISEMENTS_OF_TVSERIE (Show_ID, Ad_ID)VALUES ('TS001', 'A001'), ('TS002', 'A002'), ('TS003', 'A003'), ('TS004', 'A004'), ('TS005', 'A005'), ('TS001', 'A004'), ('TS002', 'A001'), ('TS003', 'A002'), ('TS004', 'A003');
Query OK, 10 rows affected (0.01 sec)
Records: 10 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM ADVERTISEMENTS_OF_TVSERIE;
+-----+
| Show_ID | Ad_ID |
+-----+
| TS001   | A001  |
| TS003   | A001  |
| TS002   | A002  |
| TS003   | A002  |
| TS003   | A003  |
| TS005   | A003  |
| TS001   | A004  |
| TS002   | A004  |
| TS002   | A005  |
| TS005   | A005  |
+-----+
10 rows in set (0.00 sec)

mysql> UPDATE ADVERTISEMENTS_OF_TVSERIE SET Ad_ID = 'A006' WHERE Show_ID = 'TS004' AND Ad_ID = 'A004';
Query OK, 0 rows affected (0.00 sec)
Rows matched: 0 Changed: 0 Warnings: 0

mysql> UPDATE ADVERTISEMENTS_OF_TVSERIE SET Ad_ID = 'A005' WHERE Show_ID = 'TS004' AND Ad_ID = 'A002';
Query OK, 0 rows affected (0.00 sec)
Rows matched: 0 Changed: 0 Warnings: 0

mysql> SELECT * FROM ADVERTISEMENTS_OF_TVSERIE;
+-----+
| Show_ID | Ad_ID |
+-----+
| TS001   | A001  |
| TS003   | A001  |
| TS002   | A002  |
| TS003   | A002  |
| TS003   | A003  |
| TS005   | A003  |
| TS001   | A004  |
| TS002   | A004  |
| TS002   | A005  |
| TS005   | A005  |
+-----+
10 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 56 INSERT AND UPDATE TO ADVERTISEMENTS_OF_TVSERIE TABLE

```

MySQL 8.0 Command Line Client
+-----+
10 rows in set (0.00 sec)

mysql> DELETE FROM ADVERTISEMENTS_OF_TVSERIE WHERE Show_ID = 'TS001' AND Ad_ID = 'A001';
Query OK, 1 row affected (0.02 sec)

mysql> SELECT * FROM ADVERTISEMENTS_OF_TVSERIE;
+-----+
| Show_ID | Ad_ID |
+-----+
| TS003   | A001  |
| TS002   | A002  |
| TS003   | A003  |
| TS005   | A003  |
| TS003   | A004  |
| TS002   | A004  |
| TS002   | A005  |
| TS005   | A005  |
+-----+
9 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 57 DELETE FROM ADVERTISEMENTS_OF_TVSERIE TABLE

```

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

mysql> INSERT INTO SPONSER_OF_ADVERTIESMENTS (Sponser_ID, Ad_ID)VALUES ('S001', 'A001'), ('S002', 'A002'), ('S002', 'A003'), ('S004', 'A004'), ('S005', 'A005'), ('S001', 'A002'), ('S003', 'A004'), ('S004', 'A005'), ('S005', 'A006');
Query OK, 10 rows affected (0.01 sec)
Records: 10 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM SPONSER_OF_ADVERTIESMENTS;
+-----+
| Sponser_ID | Ad_ID |
+-----+
| S001       | A001  |
| S001       | A002  |
| S002       | A002  |
| S002       | A003  |
| S003       | A004  |
| S004       | A004  |
| S005       | A004  |
| S004       | A005  |
| S005       | A005  |
| S006       | A006  |
+-----+
10 rows in set (0.00 sec)

mysql> UPDATE SPONSER_OF_ADVERTIESMENTS SET Ad_ID = 'A006' WHERE Sponser_ID = 'S005' AND Ad_ID = 'A004';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE SPONSER_OF_ADVERTIESMENTS SET Ad_ID = 'A005' WHERE Sponser_ID = 'S003' AND Ad_ID = 'A004';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT * FROM SPONSER_OF_ADVERTIESMENTS;
+-----+
| Sponser_ID | Ad_ID |
+-----+
| S001       | A001  |
| S001       | A002  |
| S002       | A002  |
| S002       | A003  |
| S003       | A004  |
| S003       | A005  |
| S004       | A005  |
| S005       | A005  |
| S005       | A006  |
| S006       | A006  |
+-----+
10 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 58 INSERT AND UPDATE TO SPONSER_OF_ADVERTIESMENTS TABLE

```

MySQL 8.0 Command Line Client
+-----+
10 rows in set (0.00 sec)

mysql> DELETE FROM SPONSER_OF_ADVERTIESMENTS WHERE Sponser_ID = 'S001' AND Ad_ID = 'A001';
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM SPONSER_OF_ADVERTIESMENTS;
+-----+
| Sponser_ID | Ad_ID |
+-----+
| S001       | A002  |
| S002       | A003  |
| S004       | A004  |
| S003       | A005  |
| S004       | A005  |
| S005       | A005  |
| S005       | A006  |
| S006       | A006  |
+-----+
9 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 59 DELETE FROM SPONSER_OF_ADVERTISEMENTS TABLE

```

-- MySQL 8.0 Command Line Client
mysql> INSERT INTO JUDGERS_OF_REALITYSHOW (JudgeID, ShowID)VALUES ('J001', 'RS001'), ('J002', 'RS001'), ('J003', 'RS001'), ('J004', 'RS004'), ('J001', 'RS005'), ('J002', 'RS005'), ('J003', 'RS004'), ('J005', 'RS002'), ('J001', 'RS002'), ('J002', 'RS001'), ('J003', 'RS002'), ('J004', 'RS002'), ('J005', 'RS003'), ('J001', 'RS003'), ('J002', 'RS004'), ('J003', 'RS005'), ('J004', 'RS004'), ('J005', 'RS003');
Query OK, 13 rows affected (0.01 sec)
Records: 13 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM JUDGERS_OF_REALITYSHOW;
+-----+-----+
| JudgeID | ShowID |
+-----+-----+
| J001    | RS001  |
| J002    | RS001  |
| J003    | RS001  |
| J004    | RS002  |
| J005    | RS002  |
| J001    | RS002  |
| J002    | RS003  |
| J003    | RS003  |
| J004    | RS004  |
| J005    | RS005  |
| J001    | RS005  |
| J002    | RS005  |
+-----+-----+
13 rows in set (0.00 sec)

mysql> UPDATE JUDGERS_OF_REALITYSHOW SET JudgeID = 'J006' WHERE ShowID = 'RS003' AND JudgeID = 'J003';
Query OK, 0 rows affected (0.00 sec)
Rows matched: 0 Changed: 0 Warnings: 0

mysql> UPDATE JUDGERS_OF_REALITYSHOW SET ShowID = 'RS004' WHERE ShowID = 'J004' AND JudgeID = 'J004';
Query OK, 0 rows affected (0.00 sec)
Rows matched: 0 Changed: 0 Warnings: 0

mysql> SELECT * FROM JUDGERS_OF_REALITYSHOW;
+-----+-----+
| JudgeID | ShowID |
+-----+-----+
| J001    | RS001  |
| J002    | RS001  |
| J003    | RS001  |
| J004    | RS002  |
| J005    | RS002  |
| J001    | RS002  |
| J002    | RS003  |
| J003    | RS003  |
| J004    | RS004  |
| J005    | RS005  |
| J001    | RS005  |
| J002    | RS005  |
+-----+-----+
13 rows in set (0.00 sec)

```

FIGURE 3: 60 INSERT AND UPDATE TO JUDGERS_OF_REALITYSHOW TABLE

```

-- MySQL 8.0 Command Line Client
+-----+-----+
| JudgeID | ShowID |
+-----+-----+
13 rows in set (0.00 sec)

mysql> DELETE FROM JUDGERS_OF_REALITYSHOW WHERE ShowID = 'RS005' AND JudgeID = 'J001';
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM JUDGERS_OF_REALITYSHOW;
+-----+-----+
| JudgeID | ShowID |
+-----+-----+
| J001    | RS001  |
| J002    | RS001  |
| J003    | RS001  |
| J001    | RS002  |
| J003    | RS002  |
| J004    | RS002  |
| J005    | RS002  |
| J002    | RS003  |
| J003    | RS003  |
| J004    | RS004  |
| J002    | RS005  |
+-----+-----+
12 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 61 DELETE FROM JUDGERS_OF_REALITYSHOW TABLE

```

MySQL 8.0 Command Line Client
12 rows in set (0.00 sec)

mysql> INSERT INTO COMPETITORS_OF_REALITYSHOW (Com_ID, ShowID)VALUES ('C001', 'RS001'), ('C001', 'RS005'), ('C002', 'RS001'), ('C002', 'RS002'), ('C003', 'RS004'), ('C003', 'RS005'), ('C004', 'RS001'), ('C004', 'RS002'), ('C005', 'RS002');
Query OK, 11 rows affected (0.01 sec)
Records: 11 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM COMPETITORS_OF_REALITYSHOW;
+-----+-----+
| Com_ID | ShowID |
+-----+-----+
| C001   | RS001  |
| C002   | RS001  |
| C004   | RS001  |
| C005   | RS002  |
| C003   | RS002  |
| C004   | RS002  |
| C005   | RS002  |
| C001   | RS003  |
| C002   | RS004  |
| C001   | RS005  |
| C003   | RS005  |
+-----+-----+
11 rows in set (0.00 sec)

mysql> UPDATE COMPETITORS_OF_REALITYSHOW SET ShowID = 'RS004' WHERE ShowID = 'RS005' AND Com_ID = 'C001';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE COMPETITORS_OF_REALITYSHOW SET ShowID = 'RS004' WHERE ShowID = 'RS003' AND Com_ID = 'C005';
Query OK, 0 rows affected (0.00 sec)
Rows matched: 0 Changed: 0 Warnings: 0

mysql> SELECT * FROM COMPETITORS_OF_REALITYSHOW;
+-----+-----+
| Com_ID | ShowID |
+-----+-----+
| C001   | RS001  |
| C002   | RS001  |
| C004   | RS001  |
| C001   | RS002  |
| C003   | RS002  |
| C004   | RS002  |
| C005   | RS002  |
| C004   | RS003  |
| C001   | RS004  |
| C002   | RS004  |
| C003   | RS005  |
+-----+-----+
11 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 62 INSERT AND UPDATE TO COMPETITORS_OF_REALITYSHOW TABLE

```

MySQL 8.0 Command Line Client
11 rows in set (0.00 sec)

mysql> DELETE FROM COMPETITORS_OF_REALITYSHOW WHERE ShowID = 'RS002' AND Com_ID = 'C003';
Query OK, 1 row affected (0.02 sec)

mysql> SELECT * FROM COMPETITORS_OF_REALITYSHOW;
+-----+-----+
| Com_ID | ShowID |
+-----+-----+
| C001   | RS001  |
| C002   | RS001  |
| C004   | RS001  |
| C001   | RS002  |
| C004   | RS002  |
| C005   | RS002  |
| C001   | RS003  |
| C005   | RS004  |
| C002   | RS004  |
| C003   | RS005  |
+-----+-----+
10 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 63 DELETE FROM JUDGERS_OF_REALITYSHOW TABLE

```

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

mysql> INSERT INTO GENRE_OF_MOVIE (Show_ID, Genre)VALUES ('M001', 'Action'), ('M001', 'Sifi'), ('M002', 'Science Fiction'), ('M003', 'Adventure'), ('M003', 'Action'), ('M004', 'Crime')
Query OK, 7 rows affected (0.01 sec)
Records: 7 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM GENRE_OF_MOVIE;
+-----+-----+
| Show_ID | Genre |
+-----+-----+
|M001| Action |
|M001| Sifi |
|M002| Science Fiction |
|M003| Action |
|M003| Adventure |
|M004| Crime |
|M007| Drama |
+-----+-----+
7 rows in set (0.00 sec)

mysql> UPDATE GENRE_OF_MOVIE SET Genre = 'Adventure' WHERE Show_ID = 'M001' AND Genre = 'Action';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE GENRE_OF_MOVIE SET Genre = 'Drama' WHERE Show_ID = 'M004' AND Genre = 'Crime';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT * FROM GENRE_OF_MOVIE;
+-----+-----+
| Show_ID | Genre |
+-----+-----+
|M001| Adventure |
|M001| Sifi |
|M002| Science Fiction |
|M003| Action |
|M003| Adventure |
|M004| Drama |
|M007| Drama |
+-----+-----+
7 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 64 INSERT AND UPDATE TO GENRE_OF_MOVIE TABLE

```

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

mysql> DELETE FROM GENRE_OF_MOVIE WHERE Show_ID = 'M002' AND Genre = 'Science Fiction';
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM GENRE_OF_MOVIE;
+-----+-----+
| Show_ID | Genre |
+-----+-----+
|M001| Adventure |
|M001| Sifi |
|M003| Action |
|M003| Adventure |
|M004| Drama |
|M007| Drama |
+-----+-----+
6 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 65 DELETE FROM GENRE_OF_MOVIE TABLE

```

MySQL 8.0 Command Line Client
0 rows in set (0.00 sec)

mysql> INSERT INTO GENRE_OF_TVSERIE (Show_ID, Genre)VALUES ('TS001', 'Action'), ('TS002', 'Mystery'), ('TS003', 'Science Fiction'), ('TS001', 'Crime'), ('TS005', 'Action'), ('TS006', 'Mystery'), ('TS007', 'Science Fiction');
Query OK, 7 rows affected (0.01 sec)
Records: 7 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM GENRE_OF_TVSERIE;
+-----+-----+
| Show_ID | Genre |
+-----+-----+
| TS001 | Action |
| TS001 | Crime |
| TS002 | Mystery |
| TS003 | Science Fiction |
| TS005 | Action |
| TS006 | Mystery |
| TS007 | Science Fiction |
+-----+-----+
7 rows in set (0.00 sec)

mysql> UPDATE GENRE_OF_TVSERIE SET Genre = 'SciFi' WHERE Show_ID = 'TS006' AND Genre = 'Mystery';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE GENRE_OF_TVSERIE SET Genre = 'Drama' WHERE Show_ID = 'TS002' AND Genre = 'Mystery';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT * FROM GENRE_OF_TVSERIE;
+-----+-----+
| Show_ID | Genre |
+-----+-----+
| TS001 | Action |
| TS001 | Crime |
| TS002 | Drama |
| TS003 | Science Fiction |
| TS005 | Action |
| TS006 | SciFi |
| TS007 | Science Fiction |
+-----+-----+
7 rows in set (0.00 sec)

mysql>

```

FIGURE 3: 66 INSERT AND UPDATE TO GENRE_OF_TVSERIE TABLE

```

MySQL 8.0 Command Line Client
7 rows in set (0.00 sec)

mysql> DELETE FROM GENRE_OF_TVSERIE WHERE Show_ID = 'TS004' AND Genre = 'Action';
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT * FROM GENRE_OF_TVSERIE;
+-----+-----+
| Show_ID | Genre |
+-----+-----+
| TS001 | Action |
| TS001 | Crime |
| TS002 | Drama |
| TS003 | Science Fiction |
| TS005 | Action |
| TS006 | SciFi |
| TS007 | Science Fiction |
+-----+-----+
7 rows in set (0.00 sec)

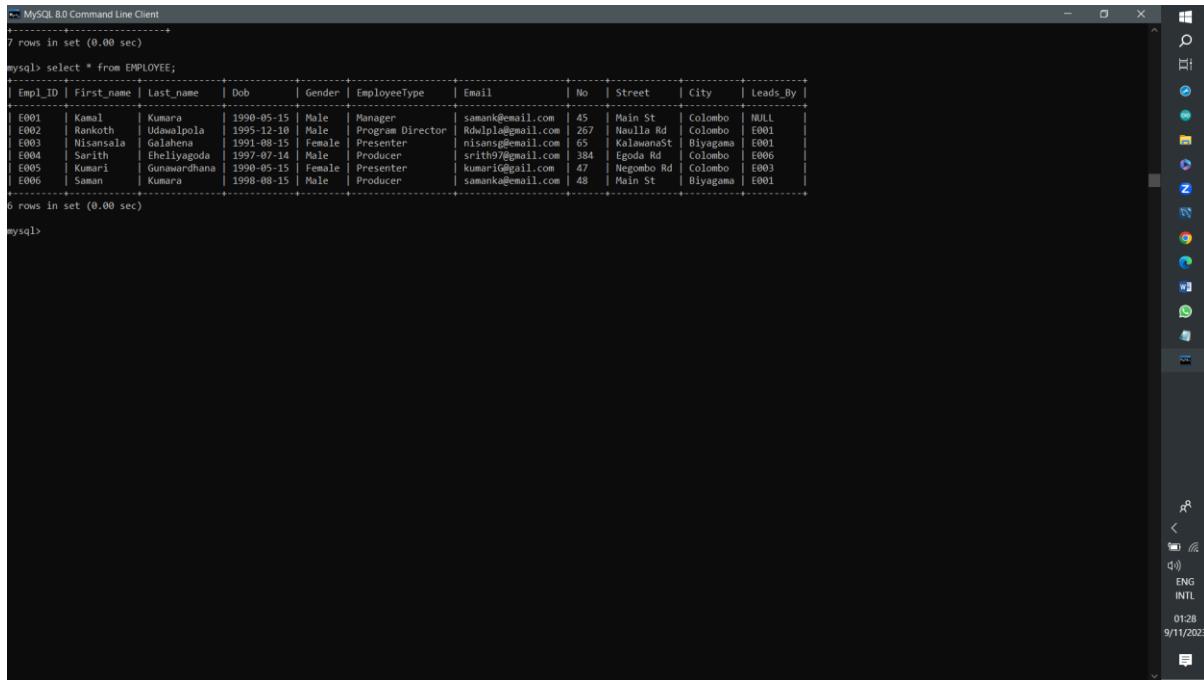
mysql>

```

FIGURE 3: 67 DELETE FROM GENRE_OF_TVSERIE TABLE

4 Transactions

4.1 SIMPLE QUERIES

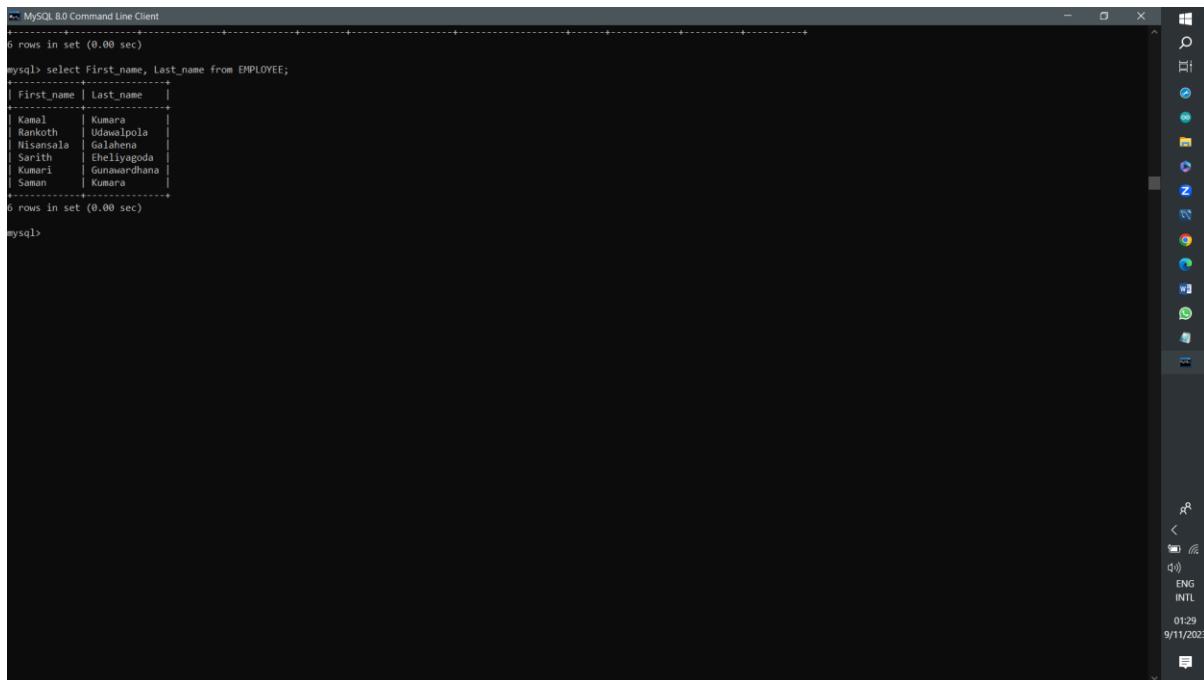


MySQL 8.0 Command Line Client

```
mysql> select * from EMPLOYEE;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Emp_ID | First_name | Last_name | Dob | Gender | EmployeeType | Email | No | Street | City | Leads_By |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| E001 | Kamal | Kumara | 1990-05-15 | Male | Manager | samank@email.com | 45 | Main St | Colombo | NULL |
| E002 | Rankoth | Udwawipola | 1995-12-10 | Male | Program Director | Rdwipl@gmail.com | 267 | Naulla Rd | Colombo | E001 |
| E003 | Nisansala | Galahena | 1991-08-15 | Female | Presenter | nisansp@gmail.com | 65 | Kalawana St | Biyagama | E001 |
| E004 | Sarith | Eheliyagoda | 1997-07-14 | Male | Producer | srith9@gmail.com | 384 | Egoda Rd | Colombo | E006 |
| E005 | Kumari | Gunawardhana | 1990-05-15 | Female | Presenter | kumari@gmail.com | 47 | Negombo Rd | Colombo | E003 |
| E006 | Saman | Kumara | 1998-08-15 | Male | Producer | samanko@gmail.com | 48 | Main St | Biyagama | E001 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

mysql>

FIGURE 4: 1 SELECT OPERATION



MySQL 8.0 Command Line Client

```
mysql> select First_name, Last_name from EMPLOYEE;
+-----+-----+
| First_name | Last_name |
+-----+-----+
| Kamal | Kumara |
| Rankoth | Udwawipola |
| Nisansala | Galahena |
| Sarith | Eheliyagoda |
| Kumari | Gunawardhana |
| Saman | Kumara |
+-----+-----+
6 rows in set (0.00 sec)
```

mysql>

FIGURE 4: 2 PROJECT OPERATIONS

```
MySQL 8.0 Command Line Client
4 rows in set (0.00 sec)

mysql> select * from EMPLOYEE cross join CONTACT_NUMBERS_OF_EMPLOYEE;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Empl_ID | First_name | Last_name | Dob | Gender | EmployeeType | Email | No | Street | City | Leads_By | Empl_ID | Mobile_No |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| E006 | Saman | Kumara | 1998-08-15 | Male | Producer | samanka@gmail.com | 48 | Main St | Biyagama | E001 | E001 | 0715688569 |
| E005 | Kumar | Gunawardhana | 1990-05-15 | Female | Presenter | kumarig@gmail.com | 47 | Negombo Rd | Colombo | E003 | E001 | 0715688569 |
| E004 | Sarith | Eheliyagoda | 1997-07-14 | Male | Producer | srith9@gmail.com | 384 | Egoda Rd | Colombo | E006 | E001 | 0715688569 |
| E003 | Nisansala | Galahena | 1991-08-15 | Female | Presenter | nisanse@gmail.com | 65 | KalawanaSt | Biyagama | E001 | E001 | 0715688569 |
| E002 | Rankoth | Udawalipola | 1995-12-10 | Male | Program Director | rdwlpld@gmail.com | 267 | Naualla Rd | Colombo | E003 | E001 | 0715688569 |
| E001 | Kamal | Kumara | 1990-05-15 | Male | Manager | samank@gmail.com | 45 | Main St | Colombo | NULL | E001 | 0715688569 |
| E006 | Saman | Kumara | 1998-08-15 | Male | Producer | samanka@gmail.com | 48 | Main St | Biyagama | E001 | E001 | 0745652634 |
| E005 | Kumar | Gunawardhana | 1990-05-15 | Female | Presenter | kumarig@gmail.com | 47 | Negombo Rd | Colombo | E003 | E001 | 0745652634 |
| E004 | Sarith | Eheliyagoda | 1997-07-14 | Male | Producer | srith9@gmail.com | 384 | Egoda Rd | Colombo | E006 | E001 | 0745652634 |
| E003 | Nisansala | Galahena | 1991-08-15 | Female | Presenter | nisanse@gmail.com | 65 | KalawanaSt | Biyagama | E001 | E002 | 0745652634 |
| E002 | Rankoth | Udawalipola | 1995-12-10 | Male | Program Director | rdwlpld@gmail.com | 267 | Naualla Rd | Colombo | E001 | E002 | 0745652634 |
| E001 | Kamal | Kumara | 1990-05-15 | Male | Manager | samank@gmail.com | 45 | Main St | Colombo | NULL | E002 | 0745652634 |
| E006 | Saman | Kumara | 1998-08-15 | Male | Producer | samanka@gmail.com | 48 | Main St | Biyagama | E001 | E003 | 0745652634 |
| E005 | Kumar | Gunawardhana | 1990-05-15 | Female | Presenter | kumarig@gmail.com | 47 | Negombo Rd | Colombo | E003 | E003 | 0745652634 |
| E004 | Sarith | Eheliyagoda | 1997-07-14 | Male | Producer | srith9@gmail.com | 384 | Egoda Rd | Colombo | E006 | E003 | 0745652634 |
| E003 | Nisansala | Galahena | 1991-08-15 | Female | Presenter | nisanse@gmail.com | 65 | KalawanaSt | Biyagama | E001 | E002 | 0745652634 |
| E002 | Rankoth | Udawalipola | 1995-12-10 | Male | Program Director | rdwlpld@gmail.com | 267 | Naualla Rd | Colombo | E001 | E002 | 0745652634 |
| E001 | Kamal | Kumara | 1990-05-15 | Male | Manager | samank@gmail.com | 45 | Main St | Colombo | NULL | E002 | 0745652634 |
| E006 | Saman | Kumara | 1998-08-15 | Male | Producer | samanka@gmail.com | 48 | Main St | Biyagama | E001 | E003 | 0745652634 |
| E005 | Kumar | Gunawardhana | 1990-05-15 | Female | Presenter | kumarig@gmail.com | 47 | Negombo Rd | Colombo | E003 | E003 | 0745652634 |
| E004 | Sarith | Eheliyagoda | 1997-07-14 | Male | Producer | srith9@gmail.com | 384 | Egoda Rd | Colombo | E006 | E003 | 0745652634 |
| E003 | Nisansala | Galahena | 1991-08-15 | Female | Presenter | nisanse@gmail.com | 65 | KalawanaSt | Biyagama | E001 | E005 | 0751586267 |
| E002 | Rankoth | Udawalipola | 1995-12-10 | Male | Program Director | rdwlpld@gmail.com | 267 | Naualla Rd | Colombo | E001 | E005 | 0751586267 |
| E001 | Kamal | Kumara | 1990-05-15 | Male | Manager | samank@gmail.com | 45 | Main St | Colombo | NULL | E005 | 0751586267 |
| E006 | Saman | Kumara | 1998-08-15 | Male | Producer | samanka@gmail.com | 48 | Main St | Biyagama | E001 | E005 | 0751586267 |
| E005 | Kumar | Gunawardhana | 1990-05-15 | Female | Presenter | kumarig@gmail.com | 47 | Negombo Rd | Colombo | E003 | E005 | 0751586267 |
| E004 | Sarith | Eheliyagoda | 1997-07-14 | Male | Producer | srith9@gmail.com | 384 | Egoda Rd | Colombo | E006 | E005 | 0751586267 |
| E003 | Nisansala | Galahena | 1991-08-15 | Female | Presenter | nisanse@gmail.com | 65 | KalawanaSt | Biyagama | E001 | E006 | 0762546626 |
| E002 | Rankoth | Udawalipola | 1995-12-10 | Male | Program Director | rdwlpld@gmail.com | 267 | Naualla Rd | Colombo | E001 | E006 | 0762546626 |
| E001 | Kamal | Kumara | 1990-05-15 | Male | Manager | samank@gmail.com | 45 | Main St | Colombo | NULL | E006 | 0762546626 |
| E006 | Saman | Kumara | 1998-08-15 | Male | Producer | samanka@gmail.com | 48 | Main St | Biyagama | E001 | E002 | 0766496215 |
| E005 | Kumar | Gunawardhana | 1990-05-15 | Female | Presenter | kumarig@gmail.com | 47 | Negombo Rd | Colombo | E003 | E002 | 0766496215 |
| E004 | Sarith | Eheliyagoda | 1997-07-14 | Male | Producer | srith9@gmail.com | 384 | Egoda Rd | Colombo | E006 | E002 | 0766496215 |
| E003 | Nisansala | Galahena | 1991-08-15 | Female | Presenter | nisanse@gmail.com | 65 | KalawanaSt | Biyagama | E001 | E002 | 0766496215 |
| E002 | Rankoth | Udawalipola | 1995-12-10 | Male | Program Director | rdwlpld@gmail.com | 267 | Naualla Rd | Colombo | E001 | E002 | 0766496215 |
| E001 | Kamal | Kumara | 1990-05-15 | Male | Manager | samank@gmail.com | 45 | Main St | Colombo | NULL | E002 | 0766496215 |
42 rows in set (0.01 sec)

mysql>
```

FIGURE 4: 3 CARTESIAN PRODUCT

```
-- MySQL 8.0 Command Line Client
mysql> create view employee_details as select First_name, Last_name, Gender,No,street,city from EMPLOYEE;
Query OK, 0 rows affected (0.01 sec)

mysql> select * from employee_details;
+-----+-----+-----+-----+-----+
| First_name | Last_name | Gender | No | street | city |
+-----+-----+-----+-----+-----+
| Kamal | Kumar | Male | 45 | Main St | Colombo |
| Rankoth | Udawalipola | Male | 267 | Naulia Rd | Colombo |
| Nisansala | Galahena | Female | 65 | KaluwanaSt | Biyagama |
| Sarith | Eheliyagoda | Male | 384 | Egoda Rd | Colombo |
| Kumari | Gunawardhana | Female | 47 | Negombo Rd | Colombo |
| Saman | Kumar | Male | 48 | Main St | Biyagama |
+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>
```

FIGURE 4: 4 CREATE USER VIEW OPERATION

```
-- MySQL 8.0 Command Line Client
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 6 rows in set (0.00 sec)

mysql> alter table employee rename column employeeType to EmplType;
Query OK, 0 rows affected (0.03 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> select * from EMPLOYEE;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Emp_ID | First_name | Last_name | Dob       | Gender | Empltype | Email    | No     | Street   | city    | Leads_By |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| E001  | Kamal      | Maara     | 1990-05-15 | Male   | Manager   | samank@email.com | 45    | Main St  | colombo | N01    |
| E002  | Ranjith    | Udugampola | 1991-12-25 | Male   | Program Director | Rdwip1@gmail.com | 29    | Naulla Rd | Colombo | E001   |
| E003  | Nisanella   | Galahewa   | 1991-01-30 | Female | Presenter  | nishan@gmail.com | 45    | Kalambal St | Biyagama | E001   |
| E004  | Smith      | Cheliyagoda | 1997-07-14 | Male   | Producer  | sriith@gmail.com | 584   | Embalda Rd | Colombo | E006   |
| E005  | Kumarli    | Gunawardhana | 1990-05-15 | Female | Presenter  | kumari@gmail.com | 47    | Negombo Rd | Colombo | E003   |
| E006  | Saman      | Kumara     | 1998-08-15 | Male   | Producer  | samank@email.com | 48    | Main St  | Biyagama | E001   |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>
```

FIGURE 4: 5 RENAME OPERATION

```
-- MySQL 8.0 Command Line Client
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 6 rows in set (0.00 sec)

mysql> select round(avg(Cost)) as Average_Cost_Rupees from JUDGER;
+-----+
| Average_Cost_Rupees |
+-----+
| 96333 |
+-----+
1 row in set (0.00 sec)

mysql>
```

FIGURE 4: 6 AGGREGATION OPERATION FOR QUARY DEMONSTRATION

The screenshot shows the MySQL 8.0 Command Line Client interface. The command entered is:

```
mysql> select * from EMPLOYEE where Last_name like 'G%';
```

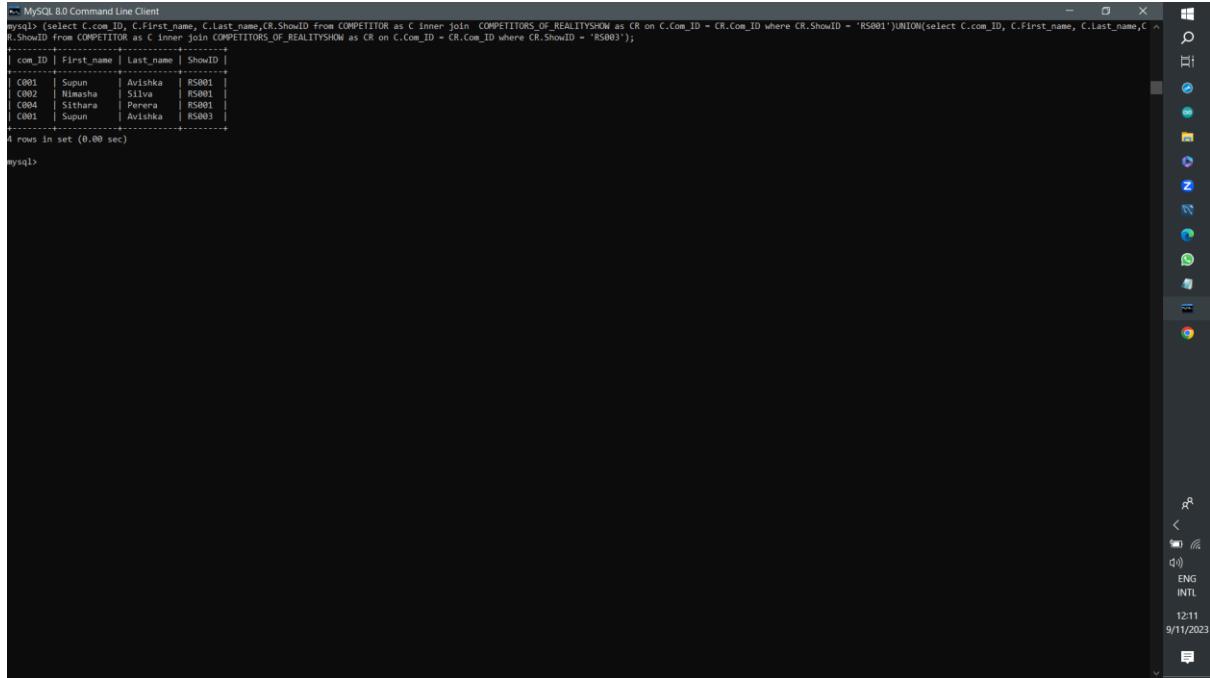
The resulting table output is:

Empl_ID	First_name	Last_name	Dob	Gender	EmplType	Email	No	Street	City	Leads_By
E003	Nisansala	Galahena	1991-08-15	Female	Presenter	nisans@gmail.com	65	KalawanaSt	Biyagama	E001
E005	Kumari	Gunawardhana	1990-05-15	Female	Presenter	kumari@gmail.com	47	Negombo Rd	Colombo	E003

There are 2 rows in the result set.

FIGURE 4: 7 LIKE KETWORD FOR QUARY DEMONSTRATION

4.2 COMPLEX QUERIES



MySQL 8.0 Command Line Client

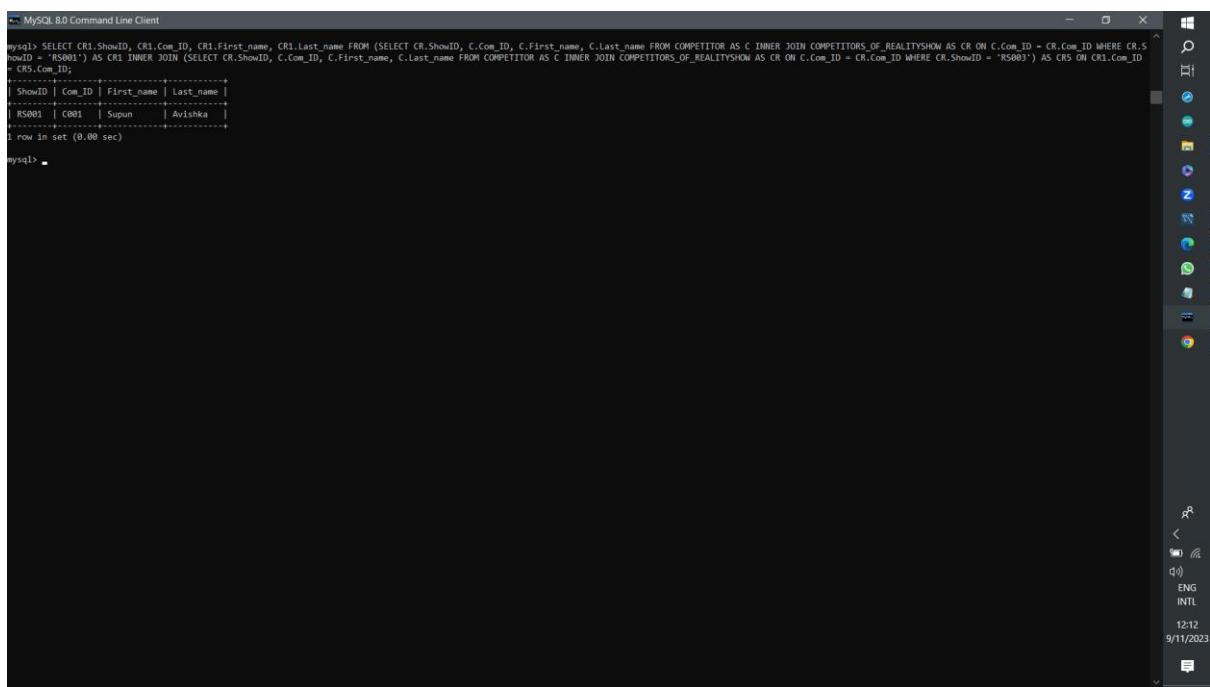
```
mysql> (select C.com_ID, C.First_name, C.Last_name, CR.ShowID from COMPETITOR as C inner join COMPETITORS_OF_REALITYSHOW as CR on C.Com_ID = CR.Com_ID where CR.ShowID = 'RS001')UNION(select C.com_ID, C.First_name, C.Last_name, CR.ShowID from COMPETITOR as C inner join COMPETITORS_OF_REALITYSHOW as CR on C.Com_ID = CR.Com_ID where CR.ShowID = 'RS003');
```

com_ID	First_name	Last_name	ShowID
C001	Supun	Avishka	RS001
C002	Mihansha	Jliva	RS001
C004	Sithara	Pemera	RS001
C001	Supun	Avishka	RS003

4 rows in set (0.00 sec)

mysql>

FIGURE 4: 8 UNION OPERATION



MySQL 8.0 Command Line Client

```
mysql> SELECT CR1.ShowID, CR1.Com_ID, CR1.First_name, CR1.Last_name FROM (SELECT CR.ShowID, C.Com_ID, C.First_name, C.Last_name FROM COMPETITOR AS C INNER JOIN COMPETITORS_OF_REALITYSHOW AS CR ON C.Com_ID = CR.Com_ID WHERE CR.ShowID = 'RS001') AS CR1 INNER JOIN (SELECT CR.ShowID, C.Com_ID, C.First_name, C.Last_name FROM COMPETITOR AS C INNER JOIN COMPETITORS_OF_REALITYSHOW AS CR ON C.Com_ID = CR.Com_ID WHERE CR.ShowID = 'RS003') AS CRS ON CR1.Com_ID = CRS.Com_ID;
```

ShowID	Com_ID	First_name	Last_name
RS001	C001	Supun	Avishka

1 row in set (0.00 sec)

mysql>

FIGURE 4: 9 INTERSECTION OPERATIONS

```
MySQL 8.0 Command Line Client
mysql> SELECT E.* FROM Employee E Inner join Employee M ON E.Empl_ID = M.Empl_ID AND M.Emplytype = 'Manager';
+-----+-----+-----+-----+-----+-----+-----+-----+
| EmpID | First_name | Last_name | Dob      | Gender | Emplytype | Email    | No       |
|       |             |           |          |         |           |          |          |
+-----+-----+-----+-----+-----+-----+-----+-----+
| E001  | Kanal     | Kumar     | 1990-05-15 | Male   | Manager   | samank@mail.com | 45      |
|       |             |           |          |         |           |          |          |
+-----+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql>
```

FIGURE 4: 10 SET DIFFERENCE

```
MySQL 8.0 Command Line Client
mysql> create view uv1 as select R.name, E.First_name, E.Last_name, R.Broadcast_Time from REALITY_SHOW as R inner join Employee as E on E.Empl_ID = R.Hosted_By where R.Broadcast_Time > '19:30:00';
Query OK, 0 rows affected (0.04 sec)

mysql> select * from uv1;
+-----+-----+-----+-----+
| name      | First_name | Last_name | Broadcast_Time |
|           |             |           |                |
+-----+-----+-----+-----+
| Talent Hunt | Nisansala | Galahena | 20:00:00 |
| Art Expo   | Kumar     | Gunawardhana | 20:00:00 |
| Comedy Night | Nisansala | Galahena | 20:00:00 |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql>
```

FIGURE 4: 11 INNER JOIN

```

-- MySQL 8.0 Command Line Client
mysql> create view uv2 as select * from ADVERTISEMENT natural join SPONSER_OF_ADVERTISEMENTS;
Query OK, 0 rows affected (0.01 sec)

mysql> select * from uv2;
+-----+-----+-----+-----+-----+-----+
| Ad_ID | Ad_Name | Ad_Type | Income | Duration | Checked_By | Sponsor_ID |
+-----+-----+-----+-----+-----+-----+
| A002 | Keels Bonus | Promotion | 3000 | 45 seconds | E002 | S001
| A002 | Keels Bonus | Promotion | 3000 | 45 seconds | E002 | S002
| A003 | Sri Lankan Airlines | Promotion | 4500 | 40 seconds | E001 | S002
| A004 | Sunshine Laundry | Commercial | 6500 | 35 seconds | E001 | S004
| A005 | Ceylon Tea | Promotion | 4000 | 50 seconds | E001 | S003
| A005 | Ceylon Tea | Promotion | 4000 | 50 seconds | E001 | S004
| A006 | Ceylon Tea | Promotion | 4000 | 50 seconds | E001 | S005
| A006 | Singer | Commercial | 6500 | 35 seconds | E002 | S005
| A006 | Singer | Commercial | 6500 | 35 seconds | E002 | S006
+-----+-----+-----+-----+-----+-----+
9 rows in set (0.00 sec)

mysql>

```

FIGURE 4: 12 NATURAL JOIN

```

-- MySQL 8.0 Command Line Client
mysql> create view uv3 as select E.Empl_ID,E.First_name,E.Last_name,D.F_name,D.L_name,D.Relation from EMPLOYEE as E left outer join DEPENDENT as D on E.Empl_ID = D.Empl_ID where gender like 'Male';
Query OK, 0 rows affected (0.01 sec)

mysql> select * from uv3;
+-----+-----+-----+-----+-----+-----+
| Emp_ID | First_name | Last_name | F_name | L_name | Relation |
+-----+-----+-----+-----+-----+-----+
| E001 | Kamal | Kumara | Kamala | Perera | Wife
| E001 | Kamal | Kumara | Sapumal | Nithila | Son
| E002 | Rankoth | Udawalpola | Ananda | Nithila | Son
| E004 | Sarith | Eheliyogoda | Krishu | Punsari | Daughter
| E006 | Saman | Kumara | Sadarwan | Pasindu | Son
+-----+-----+-----+-----+-----+-----+
9 rows in set (0.00 sec)

mysql>

```

FIGURE 4: 13 LEFT OUTER JOIN

```

MySQL 8.0 Command Line Client
mysql> create view uv4 as select E.Empl_ID,E.First_name,E.Last_name,M.Name from EMPLOYEE as E right outer join MOVIE as M on M.Broadcasts_By = E.empl_ID where M.Broadcast_Date > '2023-09-16';
Query OK, 0 rows affected (0.01 sec)

mysql> select * from uv4;
+-----+-----+-----+
| Empl_ID | First_name | Last_name | Name
+-----+-----+-----+
| E004 | Sarith | Eheliyagoda | Avatar
| E004 | Sarith | Eheliyagoda | Pulp Fiction
| E006 | Saman | Kumara | The Shawshank Redemption
+-----+-----+-----+
3 rows in set (0.00 sec)

mysql>

```

FIGURE 4: 14 RIGHT OUTER JOIN

```

MySQL 8.0 Command Line Client
mysql> create view uv5 as select E.First_name, E.Last_name,E.dob, T.Show_ID,T.Name as SHOW_NAME from EMPLOYEE as E right join TV_SERIE as T on T.Broadcasts_By = E.empl_ID where E.dob > '1995-12-10';
Query OK, 0 rows affected (0.01 sec)

mysql> create view uv6 as select E.First_name, E.Last_name,E.dob, T.Show_ID,T.Name as SHOW_NAME from EMPLOYEE as E left join TV_SERIE as T on T.Broadcasts_By = E.empl_ID where E.dob < '1995-12-10';
Query OK, 0 rows affected (0.02 sec)

mysql> (select * from uv5) UNION (select * from uv6);
+-----+-----+-----+-----+-----+
| First_name | Last_name | dob | Show_ID | SHOW_NAME
+-----+-----+-----+-----+-----+
| Sarith | Eheliyagoda | 1997-07-14 | TS001 | Prison Break
| Saman | Kumara | 1998-08-15 | TS002 | Loop
| Saman | Kumara | 1998-08-15 | TS003 | Sci-Fi Odyssey
| Sarith | Eheliyagoda | 1997-07-14 | TS005 | Prison Break
| Sarith | Eheliyagoda | 1997-07-14 | TS006 | Loop
| Saman | Kumara | 1998-08-15 | TS007 | Sci-Fi Odyssey
| Rankoth | Udawalpola | 1995-12-10 | NULL | NULL
+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql>

```

FIGURE 4: 15 FULL OUTER JOIN

```

MySQL 8.0 Command Line Client

mysql> create view uv7 as select E.First_name, E.Last_name, AB.Date, AB.Value from Employee as E right outer join ANNUAL_BONUS as AB on AB.Empl_ID = E.Empl_ID where AB.Value > '17500.00';
Query OK, 0 rows affected (0.01 sec)

mysql> create view uv8 as select E.First_name, E.Last_name, AB.Date, AB.Value from Employee as E left outer join ANNUAL_BONUS as AB on AB.Empl_ID = E.Empl_ID where AB.Value > '17500.00';
Query OK, 0 rows affected (0.01 sec)

mysql> (select * from uv7) UNION ALL(select * from uv8);
+ First_name | Last_name | Date      | Value    |
| Nisansala  | Galahena  | 2022-08-31 | 20000.00 |
| Sarith     | Eheliyagoda | 2022-12-11 | 18500.00 |
| Nisansala  | Galahena  | 2022-08-31 | 20000.00 |
| Sarith     | Eheliyagoda | 2022-12-11 | 18500.00 |
4 rows in set (0.00 sec)

mysql>

```

FIGURE 4: 16 OUTER UNION

☰

```

MySQL 8.0 Command Line Client

mysql> select * from EMPLOYEE where Empl_ID in (    select Empl_ID from DEPENDENT as D where D.Relation = 'Son');
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Empl_ID | First_name | Last_name | Dob       | Gender | EmplType | Email        | No      | Street   | City      | Leads_By |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| E001    | Kamal      | Kumara    | 1990-05-15 | Male   | Manager   | samank@mail.com | 45     | Main St  | Colombo   | NULL      |
| E002    | Rankoth    | Udawalpola | 1995-12-10 | Male   | Program Director | Rdwlipa@gmail.com | 267    | Naulla Rd | Colombo   | E001      |
| E006    | Saman      | Kumara    | 1998-08-15 | Male   | Producer  | samank@email.com | 48     | Main St  | Biyagama  | E001      |
3 rows in set (0.00 sec)

mysql> select * from EMPLOYEE where Empl_ID not in (    select Empl_ID from EMPLOYEE where city = 'Colombo');
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Empl_ID | First_name | Last_name | Dob       | Gender | EmplType | Email        | No      | Street   | City      | Leads_By |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| E003    | Nisansala  | Galahena  | 1991-08-15 | Female | Presenter | nisanp@gmail.com | 65     | Kalawana St | Biyagama  | E001      |
| E006    | Saman      | Kumara    | 1998-08-15 | Male   | Producer  | samanka@email.com | 48     | Main St  | Biyagama  | E001      |
2 rows in set (0.00 sec)

mysql> SELECT R.Name AS Reality_Show, JS.First_name, JS.Last_name FROM REALITY_SHOW as R INNER JOIN (SELECT JR.ShowID, JR.First_name, JR.Last_name FROM JUDGERS_OF_REALITYSHOW as JR INNER JOIN JUDGE_PROGRAMS as JP ON JR.Judge_ID = JP.Judge_ID WHERE JP.Program_ID = JS.ShowID WHERE R.Hosted_By = 'E003';
+-----+-----+-----+
| Reality_Show | First_name | Last_name |
+-----+-----+-----+
| Talent Hunt | Athula    | Adhikari  |
| Talent Hunt | Bathiya   | Jayakody  |
| Talent Hunt | Sanuka    | Wickramasinghe |
| Comedy Night | Bathiya   | Jayakody  |
4 rows in set (0.01 sec)

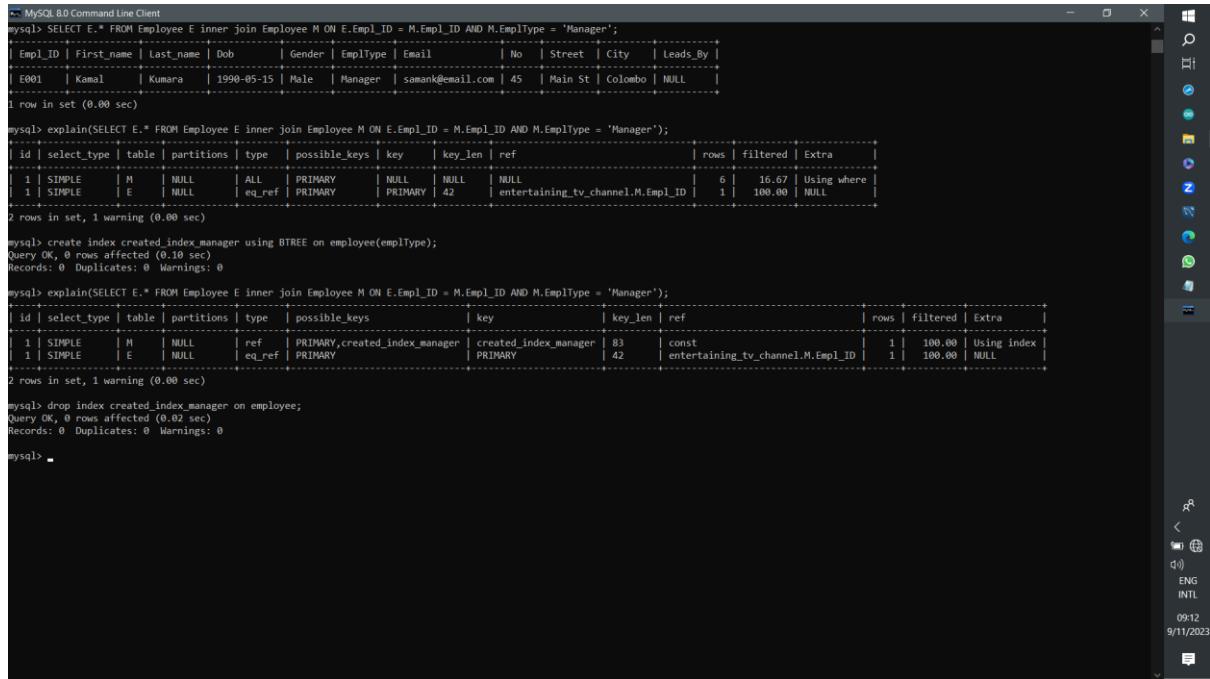
mysql>

```

FIGURE 4: 17 NESTED QUERIES

5 Database Tuning

The goal of database tuning is to ensure that the database can handle the workload efficiently, respond quickly to user queries, and minimize resource consumption.



```

MySQL 8.0 Command Line Client
mysql> SELECT E.* FROM Employee E inner join Employee M ON E.Emp1_ID = M.Emp1_ID AND M.EmpType = 'Manager';
+ Emp1_ID | First_name | Last_name | Dob | Gender | EmplType | Email | No | Street | City | leads_By |
| E001 | Kamal | Kumara | 1990-05-15 | Male | Manager | somank@mail.com | 45 | Main St | colombo | NULL |
1 row in set (0.00 sec)

mysql> explain(SELECT E.* FROM Employee E inner join Employee M ON E.Emp1_ID = M.Emp1_ID AND M.EmpType = 'Manager');
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref | rows | filtered | Extra |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | SIMPLE | M | NULL | ALL | PRIMARY | PRIMARY | NULL | NULL | 6 | 16.67 | Using where |
| 1 | SIMPLE | E | NULL | eq_ref | PRIMARY | PRIMARY | 42 | entertaining_tv_channel.M.Emp1_ID | 1 | 100.00 | NULL |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set, 1 warning (0.00 sec)

mysql> create index created_index_manager using BTREE on employee(emplType);
Query OK, 0 rows affected (0.10 sec)
Records: 0 Duplicates: 0 Warnings: 0

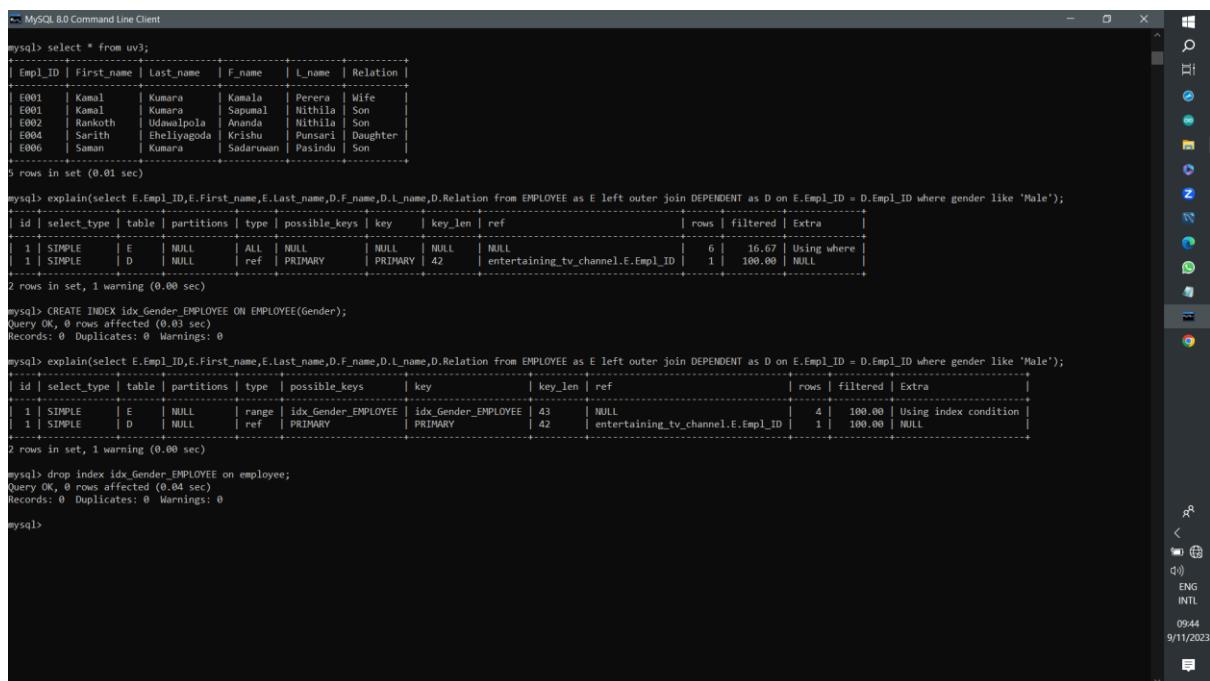
mysql> explain(SELECT E.* FROM Employee E inner join Employee M ON E.Emp1_ID = M.Emp1_ID AND M.EmpType = 'Manager');
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref | rows | filtered | Extra |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | SIMPLE | M | NULL | ref | PRIMARY,created_index_manager | created_index_manager | 83 | const | 1 | 100.00 | Using index |
| 1 | SIMPLE | E | NULL | eq_ref | PRIMARY | PRIMARY | 42 | entertaining_tv_channel.M.Emp1_ID | 1 | 100.00 | NULL |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set, 1 warning (0.00 sec)

mysql> drop index created_index_manager on employee;
Query OK, 0 rows affected (0.02 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql>

```

FIGURE 5: 1 TUNNING OF DIFFERENCE OPERATION



```

MySQL 8.0 Command Line Client
mysql> select * from uv3;
+-----+-----+-----+-----+-----+
| Emp1_ID | First_name | Last_name | F_name | L_name | Relation |
+-----+-----+-----+-----+-----+
| E001 | Kamal | Kumara | Kamala | Perera | Wife |
| E001 | Kamal | Kumara | Sapumal | Nithila | Son |
| E002 | Rankoth | Idawalpola | Ananda | Nithila | Son |
| E004 | Sarith | Idalliyagoda | Krishan | Punsuri | Daughter |
| E005 | Iman | Kumara | Sudarshana | Pasindu | Son |
5 rows in set (0.01 sec)

mysql> explain(select E.Emp1_ID,E.First_name,E.Last_name,D.F_name,D.L_name,D.Relation from EMPLOYEE as E left outer join DEPENDENT as D on E.Emp1_ID = D.Emp1_ID where gender like 'Male');
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref | rows | filtered | Extra |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | SIMPLE | E | NULL | ALL | NULL | NULL | NULL | NULL | 6 | 16.67 | Using where |
| 1 | SIMPLE | D | NULL | ref | PRIMARY | PRIMARY | 42 | entertaining_tv_channel.E.Emp1_ID | 1 | 100.00 | NULL |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set, 1 warning (0.00 sec)

mysql> CREATE INDEX idx_Gender_EMPLOYEE ON EMPLOYEE(Gender);
Query OK, 0 rows affected (0.03 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> explain(select E.Emp1_ID,E.First_name,E.Last_name,D.F_name,D.L_name,D.Relation from EMPLOYEE as E left outer join DEPENDENT as D on E.Emp1_ID = D.Emp1_ID where gender like 'Male');
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref | rows | filtered | Extra |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | SIMPLE | E | NULL | range | idx_Gender_EMPLOYEE | idx_Gender_EMPLOYEE | 43 | NULL | 4 | 100.00 | Using index condition |
| 1 | SIMPLE | D | NULL | ref | PRIMARY | PRIMARY | 42 | entertaining_tv_channel.E.Emp1_ID | 1 | 100.00 | NULL |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set, 1 warning (0.00 sec)

mysql> drop index idx_Gender_EMPLOYEE on employee;
Query OK, 0 rows affected (0.04 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql>

```

FIGURE 5: 2 TUNNING OF LEFT OUTER JOIN

```

mysql> select * from EMPLOYEE where Empl_ID in (select Empl_ID from DEPENDENT as D where D.Relation = 'Son');
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| Empl_ID | First_name | Last_name | Dob | Gender | Emptype | Email | No | Street | City | Leads_By |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| E001 | Kamal | Kumara | 1990-05-15 | Male | Manager | samani@gmail.com | 45 | Main St | Colombo | NULL |
| E002 | Rankoth | Udawalipola | 1995-12-10 | Male | Program Director | Rukpita@gmail.com | 267 | Nauha Rd | Colombo | E001 |
| E006 | Saman | Kumara | 1998-08-15 | Male | Producer | somanika@gmail.com | 48 | Main St | Biyagama | E001 |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> explain(select * from EMPLOYEE where Empl_ID in (select Empl_ID from DEPENDENT as D where D.Relation = 'Son'));
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | SIMPLE | D | NULL | index | PRIMARY | PRIMARY | 206 | NULL |
| 1 | SIMPLE | EMPLOYEE | NULL | eq_ref | PRIMARY | PRIMARY | 42 | entertaining_tv_channel.D.Empl_ID |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set, 1 warning (0.00 sec)

mysql> CREATE INDEX idx_Relation_DEPENDENT ON DEPENDENT(Relation);
Query OK, 0 rows affected (0.04 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> explain(select * from EMPLOYEE where Empl_ID in (select Empl_ID from DEPENDENT as D where D.Relation = 'Son'));
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | SIMPLE | D | NULL | ref | PRIMARY, idx_Relation_DEPENDENT | idx_Relation_DEPENDENT | 82 | const |
| 1 | SIMPLE | EMPLOYEE | NULL | eq_ref | PRIMARY | PRIMARY | 42 | entertaining_tv_channel.D.Empl_ID |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set, 1 warning (0.00 sec)

mysql> drop index idx_Relation_DEPENDENT on DEPENDENT;
Query OK, 0 rows affected (0.00 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql>

```

FIGURE 5: 3 TUNNING OF NESTED QUARY 01

```

mysql> select * from EMPLOYEE where Empl_ID not in (select Empl_ID from EMPLOYEE where city = 'colombo');
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| Empl_ID | First_name | Last_name | Dob | Gender | Emptype | Email | No | Street | City | Leads_By |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| E003 | Nisansala | Galahena | 1991-08-15 | Female | Presenter | nisan@gmail.com | 65 | KalawanaSt | Biyagama | E001 |
| E006 | Saman | Kumara | 1998-08-15 | Male | Producer | somanika@gmail.com | 48 | Main St | Biyagama | E001 |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> explain(select * from EMPLOYEE where Empl_ID not in (select Empl_ID from EMPLOYEE where city = 'colombo'));
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | SIMPLE | EMPLOYEE | NULL | ALL | NULL | NULL | NULL |
| 1 | SIMPLE | EMPLOYEE | NULL | eq_ref | PRIMARY | PRIMARY | 42 | entertaining_tv_channel.EMPLOYEE.Empl_ID |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set, 1 warning (0.00 sec)

mysql> CREATE INDEX idx_City_EMPLOYEE ON EMPLOYEE(City);
Query OK, 0 rows affected (0.04 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> explain(select * from EMPLOYEE where Empl_ID not in (select Empl_ID from EMPLOYEE where city = 'colombo'));
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | SIMPLE | EMPLOYEE | NULL | ALL | NULL | NULL | NULL |
| 1 | SIMPLE | EMPLOYEE | NULL | eq_ref | PRIMARY, idx_City_EMPLOYEE | PRIMARY | 42 | entertaining_tv_channel.EMPLOYEE.Empl_ID |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set, 1 warning (0.00 sec)

mysql> drop index idx_City_EMPLOYEE on employee;
Query OK, 0 rows affected (0.02 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql>

```

FIGURE 5: 4 TUNNING OF NESTED QUARY 02

MySQL 8.0 Command Line Client

```

mysql> (select * from uv7) UNION ALL(select * from uv8);
+-----+-----+-----+-----+
| First_name | Last_name | Date      | Value   |
+-----+-----+-----+-----+
| Nisensalo | Galaheme | 2022-08-14 | 20000.00 |
| Sarith   | Eheliyagoda | 2022-12-11 | 18500.00 |
| Nisensalo | Galaheme | 2022-08-31 | 20000.00 |
| Sarith   | Eheliyagoda | 2022-12-11 | 18500.00 |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> explain((select * from uv7) UNION ALL(select * from uv8));
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref | rows | filtered | Extra |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | PRIMARY    | ab    | NULL       | ALL  |              | NULL | NULL    | NULL | 6    | 33.33  | Using where |
| 1 | PRIMARY    | e     | NULL       | eq_ref| PRIMARY     | PRIMARY | 42    | NULL | 1    | 100.00 | NULL      |
| 2 | UNION      | ab    | NULL       | ALL  |              | NULL | NULL    | NULL | 6    | 33.33  | Using where |
| 2 | UNION      | e     | NULL       | eq_ref| PRIMARY     | PRIMARY | 42    | NULL | 1    | 100.00 | NULL      |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set, 1 warning (0.00 sec)

mysql> CREATE INDEX idx_Annual_bounus on ANNUAL_BONUS(value);
Query OK, 0 rows affected (0.03 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> explain((select * from uv7) UNION ALL(select * from uv8));
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref | rows | filtered | Extra |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | PRIMARY    | ab    | NULL       | range | idx_Annual_bounus | idx_Annual_bounus | 83  | NULL | 2    | 100.00 | Using where; Using index |
| 1 | PRIMARY    | e     | NULL       | eq_ref| PRIMARY     | PRIMARY | 42    | NULL | 1    | 100.00 | NULL      |
| 2 | UNION      | ab    | NULL       | range | PRIMARY, idx_Annual_bounus | idx_Annual_bounus | 83  | NULL | 2    | 100.00 | Using where; Using index |
| 2 | UNION      | e     | NULL       | eq_ref| PRIMARY     | PRIMARY | 42    | NULL | 1    | 100.00 | NULL      |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set, 1 warning (0.00 sec)

mysql> drop index idx_Annual_bounus on ANNUAL_BONUS;
Query OK, 0 rows affected (0.01 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql>

```

FIGURE 5: 5 TUNNING OF OUTER UNION

MySQL 8.0 Command Line Client

```

mysql> (select * from uv5) UNION (select * from uv6);
+-----+-----+-----+-----+
| First_name | Last_name | dob      | Show_ID | SHOW_NAME |
+-----+-----+-----+-----+
| Sarith   | Eheliyagoda | 1997-07-14 | TS001 | Prison Break |
| Saman   | Kumar        | 1998-08-15 | TS002 | Loop          |
| Saman   | Kumar        | 1998-08-15 | TS003 | Sci-Fi Odyssey |
| Sarith   | Eheliyagoda | 1997-07-14 | TS005 | Prison Break |
| Sarith   | Eheliyagoda | 1997-07-14 | TS006 | Loop          |
| Saman   | Kumar        | 1998-08-15 | TS007 | Sci-Fi Odyssey |
| Rankoth | Udwalwadpa  | 1995-12-10 | NULL  | NULL          |
+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql> explain((select * from uv5) UNION (select * from uv6));
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref | rows | filtered | Extra |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | PRIMARY    | e     | NULL       | ALL  | PRIMARY     | PRIMARY | 42    | NULL | 6    | 33.33  | Using where |
| 1 | PRIMARY    | t     | NULL       | ALL  | fk_tvserie_broadcast | fk_tvserie_broadcast | 4    | NULL | 7    | 50.00  | Using where; Using join buffer (hash join) |
| 2 | UNION      | e     | NULL       | ALL  | NULL        | NULL    | NULL   | NULL | 6    | 33.33  | Using where |
| 2 | UNION      | t     | NULL       | ALL  | fk_tvserie_broadcast | fk_tvserie_broadcast | 4    | NULL | 7    | 100.00 | Using where; Using join buffer (hash join) |
| 3 | UNION RESULT | <union1,2> | NULL  | ALL  | NULL        | NULL    | NULL   | NULL | 7    | 100.00 | Using temporary |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
5 rows in set, 1 warning (0.00 sec)

mysql> create index idx_dob on EMPLOYEE(dob);
Query OK, 0 rows affected (0.06 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> explain((select * From uv5) UNION (select * from uv6));
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref | rows | filtered | Extra |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | PRIMARY    | t     | NULL       | ALL  | fk_tvserie_broadcast | fk_tvserie_broadcast | 4    | NULL | 7    | 100.00 | NULL          | |
| 1 | PRIMARY    | e     | NULL       | eq_ref| PRIMARY, idx_dob  | PRIMARY | 42    | fk_tvserie_broadcast | 1    | 50.00  | Using where |
| 2 | UNION      | e     | NULL       | range | idx_dob        | idx_dob | 4     | NULL | 3    | 100.00 | Using index condition |
| 2 | UNION      | t     | NULL       | ALL  | fk_tvserie_broadcast | fk_tvserie_broadcast | 4    | NULL | 7    | 100.00 | Using where; Using join buffer (hash join) |
| 3 | UNION RESULT | <union1,2> | NULL  | ALL  | NULL        | NULL    | NULL   | NULL | NULL | NULL | NULL | Using temporary |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
5 rows in set, 1 warning (0.00 sec)

mysql> drop index idx_dob on EMPLOYEE;
Query OK, 0 rows affected (0.02 sec)
Records: 0 Duplicates: 0 Warnings: 0

```

FIGURE 5: 6 TUNNING OF FULL OUTER UNION

FIGURE 5: 7 TUNNING OF RIGHT OUTER JOIN

```
mysql> select * from uv1;
+-----+-----+-----+-----+
| name | First_name | Last_name | Broadcast_Time |
+-----+-----+-----+-----+
| Talent Hunt | Nisansala | Galahena | 20:00:00 |
| Art Expo | Kumarl | Gunawardhana | 20:00:00 |
| Comedy Night | Nisansala | Galahena | 20:00:00 |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> explain(select R.name, E.First_name, E.Last_name, R.Broadcast_Time from REALITY_SHOW as R inner join Employee as E on E.Emp_ID = R.Hosted_By where R.Broadcast_Time > '19:30:00');
+----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref | rows | filtered | Extra |
+----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | SIMPLE | R | NULL | ALL | fk_host | NULL | NULL | NULL | 6 | 33.33 | Using where |
| 1 | SIMPLE | E | NULL | eq_ref | PRIMARY | PRIMARY | 42 | entertaining_tv_channel.R.Hosted_By | 1 | 100.00 | NULL |
+----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set, 1 warning (0.00 sec)

mysql> CREATE INDEX idx_Broadcast_time ON REALITY_SHOW(Broadcast_Time);
Query OK, 0 rows affected (0.06 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> explain(select R.name, E.First_name, E.Last_name, R.Broadcast_Time from REALITY_SHOW as R inner join Employee as E on E.Emp_ID = R.Hosted_By where R.Broadcast_Time > '19:30:00');
+----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref | rows | filtered | Extra |
+----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | SIMPLE | R | NULL | range | fk_host,`idx_Broadcast_time` | `idx_Broadcast_time` | 4 | NULL | 3 | 100.00 | Using index condition; Using where |
| 1 | SIMPLE | E | NULL | eq_ref | PRIMARY | PRIMARY | 42 | entertaining_tv_channel.R.Hosted_By | 1 | 100.00 | NULL |
+----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set, 1 warning (0.00 sec)

mysql> drop index idx_Broadcast_time on REALITY_SHOW;
Query OK, 0 rows affected (0.03 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql>
```

FIGURE 5: 8 TUNNING OF INNER JOIN

Other operations have already been tuned because they have already indexed according to their primary key.