

## ➤ DDL Commands

- CREATE and INSERT INTO TABLE PLAYERS

```
mysql> CREATE TABLE PLAYERS (
->     Player_ID INT(100),
->     Player_Name VARCHAR(50),
->     Age INT(100),
->     Player_Role VARCHAR(30)
-> );
Query OK, 0 rows affected, 2 warnings (0.07 sec)

mysql> INSERT INTO PLAYERS (Player_ID, Player_Name, Age, Player_Role) VALUES
-> (1, 'Virat Kohli', 35, 'Batsman'),
-> (2, 'Jasprit Bumrah', 30, 'Bowler'),
-> (3, 'MS Dhoni', 42, 'Wicketkeeper'),
-> (4, 'Rohit Sharma', 36, 'Batsman'),
-> (5, 'Ravindra Jadeja', 34, 'All-Rounder'),
-> (6, 'KL Rahul', 31, 'Batsman'),
-> (7, 'Hardik Pandya', 30, 'All-Rounder'),
-> (8, 'Shreyas Iyer', 29, 'Batsman'),
-> (9, 'Ravichandran Ashwin', 37, 'Bowler'),
-> (10, 'Mohammed Shami', 33, 'Bowler');
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

```
mysql> CREATE TABLE PLAYERS (
->     Player_ID INT(100),
->     Player_Name VARCHAR(50),
->     Age INT(100),
->     Player_Role VARCHAR(30)
-> );
Query OK, 0 rows affected, 2 warnings (0.07 sec)

mysql> INSERT INTO PLAYERS (Player_ID, Player_Name, Age, Player_Role) VALUES
-> (1, 'Virat Kohli', 35, 'Batsman'),
-> (2, 'Jasprit Bumrah', 30, 'Bowler'),
-> (3, 'MS Dhoni', 42, 'Wicketkeeper'),
-> (4, 'Rohit Sharma', 36, 'Batsman'),
-> (5, 'Ravindra Jadeja', 34, 'All-Rounder'),
-> (6, 'KL Rahul', 31, 'Batsman'),
-> (7, 'Hardik Pandya', 30, 'All-Rounder'),
-> (8, 'Shreyas Iyer', 29, 'Batsman'),
-> (9, 'Ravichandran Ashwin', 37, 'Bowler'),
-> (10, 'Mohammed Shami', 33, 'Bowler');
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

```
mysql> SELECT *FROM PLAAYERS;
ERROR 1146 (42S02): Table 'players.plaayers' doesn't exist
mysql> SELECT *FROM PLAYERS;
+-----+-----+-----+-----+
| Player_ID | Player_Name | Age | Player_Role |
+-----+-----+-----+-----+
| 1 | Virat Kohli | 35 | Batsman |
| 2 | Jasprit Bumrah | 30 | Bowler |
| 3 | MS Dhoni | 42 | Wicketkeeper |
| 4 | Rohit Sharma | 36 | Batsman |
| 5 | Ravindra Jadeja | 34 | All-Rounder |
| 6 | KL Rahul | 31 | Batsman |
| 7 | Hardik Pandya | 30 | All-Rounder |
| 8 | Shreyas Iyer | 29 | Batsman |
| 9 | Ravichandran Ashwin | 37 | Bowler |
| 10 | Mohammed Shami | 33 | Bowler |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> ■
```

- CREATE and INSERT INTO TABLE TOURNAMENT

```
mysql> USE TOURNAMENT;
Database changed
mysql>
mysql> CREATE TABLE TOURNAMENT (
    -> Name VARCHAR(100),
    -> Start_Date DATE,
    -> End_Date DATE
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> INSERT INTO TOURNAMENT (Name, Start_Date, End_Date) VALUES
-> ('IPL 2024', '2024-03-23', '2024-05-29'),
-> ('T20 World Cup 2024', '2024-06-01', '2024-06-29'),
-> ('Asia Cup 2024', '2024-09-10', '2024-09-25'),
-> ('Big Bash League 2024', '2024-12-01', '2025-01-25'),
-> ('The Hundred 2024', '2024-08-01', '2024-08-25'),
-> ('CPL 2024', '2024-09-01', '2024-09-30'),
-> ('PSL 2024', '2024-02-15', '2024-03-15'),
-> ('BPL 2024', '2024-01-10', '2024-02-10'),
-> ('Ranji Trophy 2024', '2024-11-05', '2025-03-15'),
-> ('Vitality Blast 2024', '2024-05-20', '2024-07-15');
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

```
mysql> SELECT *FROM TOURNAENTS;
ERROR 1146 (42S02): Table 'tournament.tournaments' doesn't exist
mysql> SELECT *FROM TOURNAMENT;
+-----+-----+-----+
| Name | Start_Date | End_Date |
+-----+-----+-----+
| IPL 2024 | 2024-03-23 | 2024-05-29 |
| T20 World Cup 2024 | 2024-06-01 | 2024-06-29 |
| Asia Cup 2024 | 2024-09-10 | 2024-09-25 |
| Big Bash League 2024 | 2024-12-01 | 2025-01-25 |
| The Hundred 2024 | 2024-08-01 | 2024-08-25 |
| CPL 2024 | 2024-09-01 | 2024-09-30 |
| PSL 2024 | 2024-02-15 | 2024-03-15 |
| BPL 2024 | 2024-01-10 | 2024-02-10 |
| Ranji Trophy 2024 | 2024-11-05 | 2025-03-15 |
| Vitality Blast 2024 | 2024-05-20 | 2024-07-15 |
+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> ■
```

- CREATE and INSERT INTO TABLE MATCHES

```
mysql> CREATE DATABASE MATCH;
ERROR 1064 (42000): You have an error in your SQL syntax; check the
mysql> CREATE DATABASE MATCHES;
Query OK, 1 row affected (0.01 sec)

mysql> USE MATCHES;
Database changed
mysql> CREATE TABLE MATCHES (
    -> Match_ID INT(100),
    -> Date DATE,
    -> Venue VARCHAR(100)
    -> );
Query OK, 0 rows affected, 1 warning (0.07 sec)
```

```
mysql> INSERT INTO MATCHES (Match_ID, Date, Venue) VALUES
-> (1, '2024-03-25', 'Wankhede Stadium, Mumbai'),
-> (2, '2024-03-27', 'Eden Gardens, Kolkata'),
-> (3, '2024-03-30', 'Chinnaswamy Stadium, Bangalore'),
-> (4, '2024-04-02', 'Narendra Modi Stadium, Ahmedabad'),
-> (5, '2024-04-05', 'Arun Jaitley Stadium, Delhi'),
-> (6, '2024-04-08', 'M. A. Chidambaram Stadium, Chennai'),
-> (7, '2024-04-12', 'Rajiv Gandhi International Stadium, Hyderabad'),
-> (8, '2024-04-15', 'Sawai Mansingh Stadium, Jaipur'),
-> (9, '2024-04-18', 'Punjab Cricket Association Stadium, Mohali'),
-> (10, '2024-04-21', 'Greenfield International Stadium, Thiruvananthapuram');
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

```
mysql> SELECT *FROM MATCHES;
+-----+-----+-----+
| Match_ID | Date      | Venue          |
+-----+-----+-----+
| 1 | 2024-03-25 | Wankhede Stadium, Mumbai |
| 2 | 2024-03-27 | Eden Gardens, Kolkata |
| 3 | 2024-03-30 | Chinnaswamy Stadium, Bangalore |
| 4 | 2024-04-02 | Narendra Modi Stadium, Ahmedabad |
| 5 | 2024-04-05 | Arun Jaitley Stadium, Delhi |
| 6 | 2024-04-08 | M. A. Chidambaram Stadium, Chennai |
| 7 | 2024-04-12 | Rajiv Gandhi International Stadium, Hyderabad |
| 8 | 2024-04-15 | Sawai Mansingh Stadium, Jaipur |
| 9 | 2024-04-18 | Punjab Cricket Association Stadium, Mohali |
| 10 | 2024-04-21 | Greenfield International Stadium, Thiruvananthapuram |
+-----+-----+-----+
10 rows in set (0.00 sec)
```

```
mysql>
```

- CREATE and INSERT INTO TABLE VENUE

```

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

mysql> USE VENUE;
Database changed
mysql> CREATE TABLE VENUE (
    -> Venue_ID INT(100),
    -> Name VARCHAR(100),
    -> Location VARCHAR(100)
    -> );
Query OK, 0 rows affected, 1 warning (0.03 sec)

mysql> INSERT INTO VENUE (Venue_ID, Name, Location) VALUES
    -> (1, 'Wankhede Stadium', 'Mumbai'),
    -> (2, 'Eden Gardens', 'Kolkata'),
    -> (3, 'Chinnaswamy Stadium', 'Bangalore'),
    -> (4, 'Narendra Modi Stadium', 'Ahmedabad'),
    -> (5, 'Arun Jaitley Stadium', 'Delhi'),
    -> (6, 'M. A. Chidambaram Stadium', 'Chennai'),
    -> (7, 'Rajiv Gandhi International Stadium', 'Hyderabad'),
    -> (8, 'Sawai Mansingh Stadium', 'Jaipur'),
    -> (9, 'Punjab Cricket Association Stadium', 'Mohali'),
    -> (10, 'Greenfield International Stadium', 'Thiruvananthapuram');
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql>
```

```

mysql>
mysql> SELECT *FROM VENUE;
+-----+-----+-----+
| Venue_ID | Name           | Location |
+-----+-----+-----+
| 1       | Wankhede Stadium | Mumbai   |
| 2       | Eden Gardens     | Kolkata  |
| 3       | Chinnaswamy Stadium | Bangalore |
| 4       | Narendra Modi Stadium | Ahmedabad |
| 5       | Arun Jaitley Stadium | Delhi   |
| 6       | M. A. Chidambaram Stadium | Chennai |
| 7       | Rajiv Gandhi International Stadium | Hyderabad |
| 8       | Sawai Mansingh Stadium | Jaipur  |
| 9       | Punjab Cricket Association Stadium | Mohali  |
| 10      | Greenfield International Stadium | Thiruvananthapuram |
+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> ■
```

- CREATE and INSERT INTO TABLE FANS

```

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

mysql> USE FANS;
Database changed
mysql> CREATE TABLE FANS (
-> Fan_ID INT(100),
-> Name VARCHAR(100)
-> );
Query OK, 0 rows affected, 1 warning (0.06 sec)

mysql> INSERT INTO FANS (Fan_ID, Name) VALUES
-> (1, 'Rahul Sharma'),
-> (2, 'Priya Verma'),
-> (3, 'Amit Singh'),
-> (4, 'Sneha Kapoor'),
-> (5, 'Vikram Patel'),
-> (6, 'Rohit Mehra'),
-> (7, 'Anjali Nair'),
-> (8, 'Siddharth Rao'),
-> (9, 'Pooja Iyer'),
-> (10, 'Kunal Joshi');
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> SELECT *FROM FANS;

```

Fan_ID	Name
1	Rahul Sharma
2	Priya Verma
3	Amit Singh
4	Sneha Kapoor
5	Vikram Patel
6	Rohit Mehra
7	Anjali Nair
8	Siddharth Rao
9	Pooja Iyer
10	Kunal Joshi

10 rows in set (0.00 sec)

- CREATE and INSERT INTO TABLE TICKET

```
mysql> CREATE TABLE TICKET (
-> Ticket_ID INT(100),
-> Match_Name VARCHAR(100)
-> );
Query OK, 0 rows affected, 1 warning (0.06 sec)

mysql> INSERT INTO TICKET (Ticket_ID, Match_Name) VALUES
-> (1, 'Mumbai Indians vs Chennai Super Kings'),
-> (2, 'Royal Challengers Bangalore vs Kolkata Knight Riders'),
-> (3, 'Delhi Capitals vs Punjab Kings'),
-> (4, 'Sunrisers Hyderabad vs Rajasthan Royals'),
-> (5, 'Lucknow Super Giants vs Gujarat Titans'),
-> (6, 'Chennai Super Kings vs Royal Challengers Bangalore'),
-> (7, 'Mumbai Indians vs Kolkata Knight Riders'),
-> (8, 'Punjab Kings vs Sunrisers Hyderabad'),
-> (9, 'Rajasthan Royals vs Lucknow Super Giants'),
-> (10, 'Gujarat Titans vs Delhi Capitals');
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

```
mysql> SELECT * FROM TICKET;
+-----+-----+
| Ticket_ID | Match_Name |
+-----+-----+
| 1 | Mumbai Indians vs Chennai Super Kings |
| 2 | Royal Challengers Bangalore vs Kolkata Knight Riders |
| 3 | Delhi Capitals vs Punjab Kings |
| 4 | Sunrisers Hyderabad vs Rajasthan Royals |
| 5 | Lucknow Super Giants vs Gujarat Titans |
| 6 | Chennai Super Kings vs Royal Challengers Bangalore |
| 7 | Mumbai Indians vs Kolkata Knight Riders |
| 8 | Punjab Kings vs Sunrisers Hyderabad |
| 9 | Rajasthan Royals vs Lucknow Super Giants |
| 10 | Gujarat Titans vs Delhi Capitals |
+-----+-----+
10 rows in set (0.00 sec)
```

- DROP Table Staff

```

mysql> DROP TABLE staff;
Query OK, 0 rows affected (0.04 sec)

mysql> SHOW TABLES;
+-----+
| Tables_in_hostel_management |
+-----+
| hostel
| mess
| payments
| rooms
| students
+-----+
5 rows in set (0.00 sec)

```

- ALTER TABLE TICKET ADD COLUMN TOTAL\_MATCHES

```

mysql> ALTER TICKET
      -> ADD COLUMN TOTAL_MATCHES INT;
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 'TICKET
ADD COLUMN TOTAL_MATCHES INT' at line 1
mysql> ALTER TABLE TICKET
      -> ADD COLUMN TOTAL_MATCHES INT;
Query OK, 0 rows affected (0.01 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> SELECT *FROM TICKET;
+-----+-----+-----+
| Ticket_ID | Match_Name          | TOTAL_MATCHES |
+-----+-----+-----+
| 1 | Mumbai Indians vs Chennai Super Kings | NULL |
| 2 | Royal Challengers Bangalore vs Kolkata Knight Riders | NULL |
| 3 | Delhi Capitals vs Punjab Kings | NULL |
| 4 | Sunrisers Hyderabad vs Rajasthan Royals | NULL |
| 5 | Lucknow Super Giants vs Gujarat Titans | NULL |
| 6 | Chennai Super Kings vs Royal Challengers Bangalore | NULL |
+-----+-----+-----+

```

- ALTER TABLE Staff ADD COLUMN Join Date

```

mysql> ALTER TABLE Staff ADD COLUMN Join_Date DATE;
Query OK, 0 rows affected (0.28 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESCRIBE Staff;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Staff_ID | int | NO | | NULL | |
| Role | varchar(15) | YES | | NULL | |
| Name | varchar(20) | YES | | NULL | |
| Mobile_No | bigint | YES | | NULL | |
| Salary | decimal(10,2) | YES | | NULL | |
| Hostel_ID | int | YES | | NULL | |
| Join_Date | date | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.03 sec)

```

- ALTER TABLE FANS ADD COLUMN FAN\_OF

```

mysql> alter table fans
-> add(Fan_Of varchar(100));
Query OK, 0 rows affected (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> select * from fans;
+-----+-----+-----+
| Fan_ID | Name | Fan_Of |
+-----+-----+-----+
| 1 | Rahul Sharma | NULL |
| 2 | Priya Verma | NULL |
| 3 | Amit Singh | NULL |
| 4 | Sneha Kapoor | NULL |
| 5 | Vikram Patel | NULL |
| 6 | Rohit Mehra | NULL |
| 7 | Anjali Nair | NULL |
| 8 | Siddharth Rao | NULL |
| 9 | Pooja Iyer | NULL |
| 10 | Kunal Joshi | NULL |
+-----+-----+-----+
10 rows in set (0.00 sec)

```

- ALTER TABLE Mess ADD COLUMN Subscription\_End\_Date

```

mysql> ALTER TABLE Mess ADD COLUMN Subscription_End_Date DATE;
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESCRIBE mess;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| Member_id | int | NO | | NULL | |
| Student_ID | int | YES | | NULL | |
| Subescritpion_Type | varchar(15) | YES | | NULL | |
| Meal_Type | varchar(20) | YES | | NULL | |
| Subscription_End_Date | date | YES | | NULL | |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

```

- ALTER TABLE Payment ADD COLUMN Payment\_Status

```
mysql> ALTER TABLE Payment_data ADD COLUMN Payment_Status VARCHAR(20);
```

```
Query OK, 0 rows affected (0.08 sec)
```

```
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> SELECT * FROM Payment_data;
```

Payment_ID	Student_ID	Payment_Type	Payment_Date	Payment_Amt	Payment_Bal	Payment_Status
1	1	Hostel Fee	2025-03-17	500.00	200.00	NULL
2	2	Mess Fee	2025-03-17	1000.00	0.00	NULL
3	3	Hostel Fee	2025-03-17	750.00	100.00	NULL
4	4	Mess Fee	2025-03-17	1200.00	0.00	NULL
5	5	Hostel Fee	2025-03-17	600.00	150.00	NULL

```
5 rows in set (0.00 sec)
```

- ALTER TABLE Hostel ADD COLUMN Warden\_Name

```
mysql> ALTER TABLE hostel ADD COLUMN Warden_Name VARCHAR(50);
```

```
Query OK, 0 rows affected (0.02 sec)
```

```
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> SELECT * FROM hostel;
```

Hostel_ID	Name	Capacity	Rooms	Occupied	Avl_Beds	Warden_Name
1	Bhimashankar	112	28	28	0	NULL
2	Lenyadri	112	28	20	32	NULL
3	Shivneri	112	28	25	12	NULL

```
3 rows in set (0.00 sec)
```

- ALTER TABLE MATCHES MODIFY MATCH\_NO

```
mysql> alter table matches
```

```
    -> modify match_ID INT;
```

```
Query OK, 0 rows affected (0.01 sec)
```

```
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> select * from matches;
```

match_ID	Date	Venue
1	2024-03-25	Wankhede Stadium, Mumbai
2	2024-03-27	Eden Gardens, Kolkata
3	2024-03-30	Chinnaswamy Stadium, Bangalore
4	2024-04-02	Narendra Modi Stadium, Ahmedabad
5	2024-04-05	Arun Jaitley Stadium, Delhi
6	2024-04-08	M. A. Chidambaram Stadium, Chennai
7	2024-04-12	Rajiv Gandhi International Stadium, Hyderabad
8	2024-04-15	Sawai Mansingh Stadium, Jaipur
9	2024-04-18	Punjab Cricket Association Stadium, Mohali
10	2024-04-21	Greenfield International Stadium, Thiruvananthapuram

```
10 rows in set (0.00 sec)
```

- ALTER TABLE Rooms MODIFY Room\_Type

```

mysql> ALTER TABLE rooms MODIFY Room_type varchar(20);
Query OK, 20 rows affected (0.18 sec)
Records: 20  Duplicates: 0  Warnings: 0

mysql> DESCRIBE rooms;
+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| Room_ID | int    | NO   | PRI | NULL    |        |
| Room_type | varchar(20) | YES  |     | NULL    |        |
| Price | decimal(10,2) | YES  |     | NULL    |        |
| Capacity | int    | YES  |     | NULL    |        |
| Occupancy | int    | YES  |     | NULL    |        |
| Hostel_ID | int    | YES  | MUL | NULL    |        |
| Is_Full | tinyint(1) | YES  |     | NULL    |        |
+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

```

- ALTER TABEL Hostel MODIFY Name

```

mysql> ALTER TABLE hostel MODIFY Name VARCHAR(25);
Query OK, 3 rows affected (0.13 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> DESCRIBE hostel;
+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| Hostel_ID | int    | NO   |     | NULL    |        |
| Name | varchar(25) | YES  |     | NULL    |        |
| Capacity | int    | YES  |     | NULL    |        |
| Rooms | int    | YES  |     | NULL    |        |
| Occupied | int    | YES  |     | NULL    |        |
| Avl_Beds | int    | YES  |     | NULL    |        |
+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

```

- ALTER TABLE Payment MODIFY Payment\_Status

```

mysql> ALTER TABLE Payments MODIFY Payment_Status VARCHAR(50);
Query OK, 0 rows affected (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESCRIBE payments;
+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| Payment_ID | int    | NO   | PRI | NULL    |        |
| Student_ID | int    | YES  |     | NULL    |        |
| Payment_Type | varchar(10) | YES  |     | NULL    |        |
| Payment_Date | date   | YES  |     | NULL    |        |
| Payment_Amt | decimal(10,2) | YES  |     | NULL    |        |
| Payment_Bal | decimal(10,2) | YES  |     | NULL    |        |
| Payment_Status | varchar(50) | YES  |     | NULL    |        |
+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

```

- ALTER TABLE Staff MODIFY Mobile\_No

```

mysql> ALTER TABLE staff MODIFY
-> Mobile_No BIGINT(10);
Query OK, 0 rows affected, 1 warning (0.03 sec)
Records: 0  Duplicates: 0  Warnings: 1

```

```
mysql> DESCRIBE staff;
```

Field	Type	Null	Key	Default	Extra
Staff_ID	int	YES		NULL	
Role	varchar(20)	YES		NULL	
Name	varchar(20)	YES		NULL	
Mobile_No	bigint	YES		NULL	
Salary	decimal(10,2)	YES		NULL	
Hostel_ID	int	YES		NULL	

6 rows in set (0.00 sec)

- ALTER TABLE Mess MODIFY Subescription\_Type

```

mysql> ALTER TABLE Mess MODIFY Subescription_Type varchar(15);
Query OK, 0 rows affected (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 0

```

```
mysql> DESCRIBE Mess;
```

Field	Type	Null	Key	Default	Extra
Member_id	int	YES		NULL	
Student_ID	int	YES		NULL	
Subescription_Type	varchar(15)	YES		NULL	
Meal_Type	varchar(20)	YES		NULL	

4 rows in set (0.00 sec)

- ALTER TABLE Student DROP Student\_Email

```

mysql> ALTER TABLE students DROP COLUMN Student_Email;
Query OK, 0 rows affected (0.07 sec)
Records: 0  Duplicates: 0  Warnings: 0

```

```
mysql> DESCRIBE students;
```

Field	Type	Null	Key	Default	Extra
Student_ID	int	NO		NULL	
Name	varchar(50)	YES		NULL	
Parent_Name	varchar(20)	YES		NULL	
Parent_Mob_No	bigint	YES		NULL	
Stu_Mob_No	bigint	YES		NULL	
Dept	varchar(20)	YES		NULL	
age	int	YES		NULL	
Gender	varchar(10)	YES		NULL	
Assigned_Room	int	YES		NULL	

9 rows in set (0.00 sec)

- ALTER TABLE Rooms DROP Is\_Full

```
mysql> ALTER TABLE rooms DROP COLUMN Is_Full;
Query OK, 0 rows affected (0.06 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

```
mysql> DESCRIBE rooms;
```

Field	Type	Null	Key	Default	Extra
Room_ID	int	NO		NULL	
Room_type	varchar(20)	YES		NULL	
Price	decimal(10,2)	YES		NULL	
Capacity	int	YES		NULL	
Occuity	int	YES		NULL	
Hostel_ID	int	YES		NULL	

6 rows in set (0.00 sec)

- ALTER TABLE Staff DROP Join\_Date

```
mysql> ALTER TABLE staff DROP COLUMN Join_Date;
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

```
mysql> DESCRIBE staff;
```

Field	Type	Null	Key	Default	Extra
Staff_ID	int	YES		NULL	
Role	varchar(10)	YES		NULL	
Name	varchar(20)	YES		NULL	
Mobile_No	bigint	YES		NULL	
Salary	decimal(10,2)	YES		NULL	
Hostel_ID	int	YES		NULL	

6 rows in set (0.00 sec)

- ALTER TABLE Payment DROP Payment\_Status

```
mysql> ALTER TABLE Payments DROP COLUMN Payment_Status;
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

```
mysql> DESCRIBE payments;
```

Field	Type	Null	Key	Default	Extra
Payment_ID	int	NO		NULL	
Student_ID	int	YES		NULL	
Payment_Type	varchar(10)	YES		NULL	
Payment_Date	date	YES		NULL	
Payment_Amt	decimal(10,2)	YES		NULL	
Payment_Bal	decimal(10,2)	YES		NULL	

6 rows in set (0.00 sec)

- ALTER TABLE Mess DROP Subscription\_End\_Date

```

mysql> ALTER TABLE Mess DROP COLUMN Subscription_End_Date;
Query OK, 0 rows affected (0.05 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESCRIBE mess;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Member_id | int | NO | | NULL | |
| Student_ID | int | YES | | NULL | |
| Subescription_Type | varchar(15) | YES | | NULL | |
| Meal_Type | varchar(20) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

```

- ALTER TABLE Hostel DROP Warden\_Name

```

mysql> ALTER TABLE hostel DROP COLUMN Warden_Name;
Query OK, 0 rows affected (0.01 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM hostel;
+-----+-----+-----+-----+-----+-----+
| Hostel_ID | Name | Capacity | Rooms | Occupied | Avl_Beds |
+-----+-----+-----+-----+-----+-----+
| 1 | Bhimashankar | 112 | 28 | 28 | 0 |
| 2 | Lenyadri | 112 | 28 | 20 | 32 |
| 3 | Shivneri | 112 | 28 | 25 | 12 |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

```

- TRUNCATE TABLE Staff

```

mysql> TRUNCATE TABLE staff;
Query OK, 0 rows affected (0.10 sec)

mysql> SELECT * FROM staff;
Empty set (0.01 sec)

mysql> DESCRIBE staff;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Staff_ID | int | YES | | NULL | |
| Role | varchar(10) | YES | | NULL | |
| Name | varchar(20) | YES | | NULL | |
| Mobile_No | bigint | YES | | NULL | |
| Salary | decimal(10,2) | YES | | NULL | |
| Hostel_ID | int | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

```

- RENAME TABLE TOURNAMENT TO TOURNAMENTS

```

mysql> ALTER TABLE TOURNAMENT
-> RENAME TOURNMENTS;
Query OK, 0 rows affected (0.01 sec)

mysql> select * from tournament;
ERROR 1146 (42S02): Table 'players.tournament' doesn't exist
mysql> selecet * from tournaments;
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 'selecet * from tournaments' at li
ne 1
mysql> select * from tournaments;
+-----+-----+-----+
| Name | Start_Date | End_Date |
+-----+-----+-----+
| IPL 2024 | 2024-03-23 | 2024-05-29 |
| T20 World Cup 2024 | 2024-06-01 | 2024-06-29 |
| Asia Cup 2024 | 2024-09-10 | 2024-09-25 |
| Big Bash League 2024 | 2024-12-01 | 2025-01-25 |
| The Hundred 2024 | 2024-08-01 | 2024-08-25 |
| CPL 2024 | 2024-09-01 | 2024-09-30 |
| PSL 2024 | 2024-02-15 | 2024-03-15 |
| BPL 2024 | 2024-01-10 | 2024-02-10 |
| Ranji Trophy 2024 | 2024-11-05 | 2025-03-15 |
| Vitality Blast 2024 | 2024-05-20 | 2024-07-15 |
+-----+-----+-----+
10 rows in set (0.01 sec)

```

- RENAME TABLE Payments TO Payment\_Data

```

mysql> RENAME TABLE Payments to Payment_Data;
Query OK, 0 rows affected (0.07 sec)

mysql> SELECT * FROM Payment_data;
+-----+-----+-----+-----+-----+-----+
| Payment_ID | Student_ID | Payment_Type | Payment_Date | Payment_Amt | Payment_Bal |
+-----+-----+-----+-----+-----+-----+
| 1 | 1 | Hostel Fee | 2025-03-17 | 500.00 | 200.00 |
| 2 | 2 | Mess Fee | 2025-03-17 | 1000.00 | 0.00 |
| 3 | 3 | Hostel Fee | 2025-03-17 | 750.00 | 100.00 |
| 4 | 4 | Mess Fee | 2025-03-17 | 1200.00 | 0.00 |
| 5 | 5 | Hostel Fee | 2025-03-17 | 600.00 | 150.00 |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

```

- RENAME TABLE Student TO Student\_Information

```

mysql> RENAME TABLE Student to Student_Information;
Query OK, 0 rows affected (0.05 sec)

mysql> SELECT * FROM Student_Information;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Student_ID | Name | Parent_Name | Parent_Mob_No | Stu_Mob_No | Dept | age | Gender | Assigned_Room |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | Shreyash Ganesh Pawar | Ganesh Pawar | 7894561230 | 7666880095 | AIML | 19 | Male | 104 |
| 2 | Dhanesh Uday Pujare | Uday Pujare | 76668805954 | 9422325698 | AIML | 19 | MALE | 208 |
| 3 | Sanket Vinayak Patil | Vinayak Patil | 8426753951 | 9420159064 | CO | 19 | MALE | 206 |
| 4 | Parth Kishor Ghogare | Kishor Ghogare | 9480621590 | 9420159067 | CO | 19 | MALE | 206 |
| 5 | Aditya Yogesh Pol | Yogesh Pol | 9480612508 | 9422325886 | CO | 19 | MALE | 205 |
| 6 | Ravi Prakash Deshmukh | Prakash Deshmukh | 9876543210 | 9876543211 | AIML | 20 | Male | 101 |
| 7 | Snehal Suresh Patil | Suresh Patil | 9876543222 | 9876543223 | CO | 20 | Female | 102 |
| 8 | Shubham Ramesh Jadhav | Ramesh Jadhav | 9876543233 | 9876543234 | AIML | 19 | Male | 104 |
| 9 | Pooja Rajendra Shinde | Rajendra Shinde | 9876543245 | 9876543246 | CO | 21 | Female | 301 |
| 10 | Ashwini Vinayak Kadam | Vinayak Kadam | 9876543257 | 9876543258 | CO | 20 | Female | 302 |
+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

```

- RENAME TABLE Staff TO Satff\_Worker

```
mysql> RENAME TABLE staff to Staff_Worker;
Query OK, 0 rows affected (0.05 sec)
```

Staff_ID	Role	Name	Mobile_No	Salary	Hostel_ID
1	Warden	Rajendra Patil	9876543210	45000.00	1
2	Cook	Sushila Deshmukh	9876543211	30000.00	1
3	Cleaner	Vaishali Jadhav	9876543212	15000.00	1
4	Manager	Vikram Gawande	9876543213	55000.00	2
5	Security	Shankar More	9876543214	20000.00	2
6	Warden	Pooja Shinde	9876543215	48000.00	3
7	Cook	Dattatray Kulkarni	9876543216	27000.00	3
8	Cleaner	Anjali Pawar	9876543217	16000.00	3
9	Security	Ajit Bhise	9876543218	21000.00	1
10	Manager	Madhuri Kale	9876543219	60000.00	2

- RENAME TABLE Rooms TO Rooms\_Data

```
mysql> RENAME TABLE Rooms TO Rooms_DATA;
Query OK, 0 rows affected (0.22 sec)
```

Room_ID	Room_type	Price	Capacity	Occuity	Hostel_ID
101	Single Bed Room	1500.00	1	1	1
102	Double Bed Room	2500.00	2	2	1
103	Triple Bed Room	3000.00	3	3	1
104	Four Bed Room	4000.00	4	2	1
201	Single Bed Room	1500.00	1	1	2
202	Double Bed Room	2500.00	2	2	2
203	Triple Bed Room	3000.00	3	3	2
204	Four Bed Room	4000.00	4	3	2
205	AC Room	5000.00	2	1	2
206	Single Bed Room	1700.00	1	1	2
207	AC Room	5000.00	2	2	2
208	Double Bed Room	2200.00	2	1	2
301	Single Bed Room	1500.00	1	1	3
302	Double Bed Room	2500.00	2	2	3
303	Triple Bed Room	3000.00	3	3	3
304	Four Bed Room	4000.00	4	4	3
305	AC Room	5000.00	2	1	3
306	Single Bed Room	1700.00	1	1	3
307	AC Room	5000.00	2	2	3
308	Double Bed Room	2200.00	2	1	3

- RENAME TABLE Mess TO Mess\_Info

```
mysql> RENAME TABLE mess to Mess_info;
Query OK, 0 rows affected (0.05 sec)
```

Member_id	Student_ID	Subescription_Type	Meal_Type
1	1	Monthly	Veg
2	2	Monthly	Non-Veg
3	3	Monthly	Veg
4	4	Daily	Non-Veg
5	5	Weekly	Veg
6	6	Monthly	Non-Veg
7	7	Daily	Veg
8	8	Weekly	Non-Veg
9	9	Monthly	Veg
10	10	Daily	Non-Veg

10 rows in set (0.00 sec)

## ➤ DML Commands

- INSERT INTO Mess

```

mysql> INSERT INTO mess (Member_id, Student_ID, Subescription_Type, Meal_Type)
-- VALUES
-- (1, 1, 'Monthly', 'Veg'),
-- (2, 2, 'Weekly', 'Non-Veg'),
-- (3, 3, 'Monthly', 'Veg'),
-- (4, 4, 'Daily', 'Non-Veg'),
-- (5, 5, 'Weekly', 'Veg'),
-- (6, 1, 'Monthly', 'Non-Veg'),
-- (7, 2, 'Daily', 'Veg'),
-- (8, 3, 'Weekly', 'Non-Veg'),
-- (9, 4, 'Monthly', 'Veg'),
-- (10, 5, 'Daily', 'Non-Veg');
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM mess;
+-----+-----+-----+-----+
| Member_id | Student_ID | Subescription_Type | Meal_Type |
+-----+-----+-----+-----+
| 1 | 1 | Monthly | Veg |
| 2 | 2 | Weekly | Non-Veg |
| 3 | 3 | Monthly | Veg |
| 4 | 4 | Daily | Non-Veg |
| 5 | 5 | Weekly | Veg |
| 6 | 1 | Monthly | Non-Veg |
| 7 | 2 | Daily | Veg |
| 8 | 3 | Weekly | Non-Veg |
| 9 | 4 | Monthly | Veg |
| 10 | 5 | Daily | Non-Veg |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

```

- INSERT INTO Staff

```

mysql> INSERT INTO staff (Staff_ID, Role, Name, Mobile_No, Salary, Hostel_ID)
-- VALUES
-- (1, 'Warden', 'Rajendra Patil', 9876543210, 45000.00, 1),
-- (2, 'Cook', 'Sushila Deshmukh', 9876543211, 25000.00, 1),
-- (3, 'Cleaner', 'Vaishali Jadhav', 9876543212, 15000.00, 1),
-- (4, 'Manager', 'Vikram Gawande', 9876543213, 55000.00, 2),
-- (5, 'Security', 'Shankar More', 9876543214, 20000.00, 2),
-- (6, 'Warden', 'Pooja Shinde', 9876543215, 48000.00, 3),
-- (7, 'Cook', 'Dattatray Kulkarni', 9876543216, 27000.00, 3),
-- (8, 'Cleaner', 'Anjali Pawar', 9876543217, 16000.00, 3),
-- (9, 'Security', 'Ajit Bhise', 9876543218, 21000.00, 1),
-- (10, 'Manager', 'Madhuri Kale', 9876543219, 60000.00, 2);
Query OK, 10 rows affected (0.00 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM staff;
+-----+-----+-----+-----+-----+-----+
| Staff_ID | Role | Name | Mobile_No | Salary | Hostel_ID |
+-----+-----+-----+-----+-----+-----+
| 1 | Warden | Rajendra Patil | 9876543210 | 45000.00 | 1 |
| 2 | Cook | Sushila Deshmukh | 9876543211 | 25000.00 | 1 |
| 3 | Cleaner | Vaishali Jadhav | 9876543212 | 15000.00 | 1 |
| 4 | Manager | Vikram Gawande | 9876543213 | 55000.00 | 2 |
| 5 | Security | Shankar More | 9876543214 | 20000.00 | 2 |
| 6 | Warden | Pooja Shinde | 9876543215 | 48000.00 | 3 |
| 7 | Cook | Dattatray Kulkarni | 9876543216 | 27000.00 | 3 |
| 8 | Cleaner | Anjali Pawar | 9876543217 | 16000.00 | 3 |
| 9 | Security | Ajit Bhise | 9876543218 | 21000.00 | 1 |
| 10 | Manager | Madhuri Kale | 9876543219 | 60000.00 | 2 |
+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

```

- INSERT INTO Student

```

mysql> INSERT INTO student VALUES (1,'Shreyash Ganesh Pawar', 'Ganesh Pawar', 7894561230, 7666880095, 'AIML', 19, 'Male', 105);
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM STUDENT;
+-----+-----+-----+-----+-----+-----+-----+-----+
| Student_ID | Name | Parent_Name | Parent_Mob_No | Stu_Mob_No | Dept | age | Gender | Assigned_Room |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | Shreyash Ganesh Pawar | Ganesh Pawar | 7894561230 | 7666880095 | AIML | 19 | Male | 105 |
+-----+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> INSERT INTO student (Student_ID, Name, Parent_Name, Parent_Mob_No, Stu_Mob_No, Dept, age, Gender, Assigned_Room)
-> VALUES
-> (2, "Dhanesh Uday Pujare", "Uday Pujare", 74108520963, 9422325698, "AIML", 19, "MALE", 208),
-> (3, "Sanket Vinayak Patil", "Vinayak Patil", 84267539510, 9420159064, "CO", 19, "MALE", 206),
-> (4, "Parth Kishor Ghogare", "Kishor Ghogare", 9480621590, 9420159067, "CO", 19, "MALE", 206),
-> (5, "Aditya Yogesh Pol", "Yogesh Pol", 9480612508, 9422325886, "CO", 19, "MALE", 205);
Query OK, 4 rows affected (0.01 sec)
Records: 4 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM students;
ERROR 1146 (42S02): Table 'hostel_management.students' doesn't exist
mysql> SELECT * FROM student;
+-----+-----+-----+-----+-----+-----+-----+-----+
| Student_ID | Name | Parent_Name | Parent_Mob_No | Stu_Mob_No | Dept | age | Gender | Assigned_Room |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | Shreyash Ganesh Pawar | Ganesh Pawar | 7894561230 | 7666880095 | AIML | 19 | Male | 105 |
| 2 | Dhanesh Uday Pujare | Uday Pujare | 74108520963 | 9422325698 | AIML | 19 | MALE | 208 |
| 3 | Sanket Vinayak Patil | Vinayak Patil | 84267539510 | 9420159064 | CO | 19 | MALE | 206 |
| 4 | Parth Kishor Ghogare | Kishor Ghogare | 9480621590 | 9420159067 | CO | 19 | MALE | 206 |
| 5 | Aditya Yogesh Pol | Yogesh Pol | 9480612508 | 9422325886 | CO | 19 | MALE | 205 |
+-----+-----+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

```

- INSERT INTO Payment

```

mysql> INSERT INTO Payments (Payment_ID, Student_ID, Payment_Type, Payment_Date, Payment_Amt, Payment_Bal)
-> VALUES
-> (1, 1, 'Hostel Fee', '2025-03-17', 500.00, 200.00), -- Due 200 after payment
-> (2, 2, 'Mess Fee', '2025-03-17', 1000.00, 0.00), -- No due
-> (3, 3, 'Hostel Fee', '2025-03-17', 750.00, 100.00), -- Due 100 after payment
-> (4, 4, 'Mess Fee', '2025-03-17', 1200.00, 300.00), -- Due 300 after payment
-> (5, 5, 'Hostel Fee', '2025-03-17', 600.00, 150.00); -- Due 150 after payment
Query OK, 5 rows affected (0.00 sec)
Records: 5 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM PAYMENTS;
+-----+-----+-----+-----+-----+-----+
| Payment_ID | Student_ID | Payment_Type | Payment_Date | Payment_Amt | Payment_Bal |
+-----+-----+-----+-----+-----+-----+
| 1 | 1 | Hostel Fee | 2025-03-17 | 500.00 | 200.00 |
| 2 | 2 | Mess Fee | 2025-03-17 | 1000.00 | 0.00 |
| 3 | 3 | Hostel Fee | 2025-03-17 | 750.00 | 100.00 |
| 4 | 4 | Mess Fee | 2025-03-17 | 1200.00 | 300.00 |
| 5 | 5 | Hostel Fee | 2025-03-17 | 600.00 | 150.00 |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

```

- INSERT INTO TABLE Hostel

```

mysql> INSERT INTO hostel VALUES (1,'Bhimashankar',112,28,28,112);
Query OK, 1 row affected (0.02 sec)

mysql> SELECT * FROM hostel;
+-----+-----+-----+-----+-----+-----+
| Hostel_ID | Name | Capacity | Rooms | Occupied | Avl_Beds |
+-----+-----+-----+-----+-----+-----+
| 1 | Bhimashankar | 112 | 28 | 28 | 112 |
+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> INSERT INTO hostel VALUES (2,'Lenyadri',112,28,20,112),(3,'Shivneri',112,28,25,112);
Query OK, 2 rows affected (0.00 sec)
Records: 2 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM hostel;
+-----+-----+-----+-----+-----+-----+
| Hostel_ID | Name | Capacity | Rooms | Occupied | Avl_Beds |
+-----+-----+-----+-----+-----+-----+
| 1 | Bhimashankar | 112 | 28 | 28 | 112 |
| 2 | Lenyadri | 112 | 28 | 20 | 112 |
| 3 | Shivneri | 112 | 28 | 25 | 112 |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

```

- **INSERT INTO Rooms**

```

mysql> INSERT INTO Rooms (Room_ID, Room_type, Price, Capacity, Occupancy, Hostel_ID)
--> VALUES
-->     (101, 'Single Bed Room', 1500.00, 1, 1, 1),
-->     (102, 'Double Bed Room', 2500.00, 2, 2, 1),
-->     (103, 'Triple Bed Room', 3000.00, 3, 3, 1),
-->     (104, 'Four Bed Room', 4000.00, 4, 2, 1);
Query OK, 4 rows affected (0.00 sec)
Records: 4 Duplicates: 0 Warnings: 0

mysql> INSERT INTO Rooms (Room_ID, Room_type, Price, Capacity, Occupancy, Hostel_ID)
--> VALUES
-->     (201, 'Single Bed Room', 1500.00, 1, 1, 2),
-->     (202, 'Double Bed Room', 2500.00, 2, 2, 2),
-->     (203, 'Triple Bed Room', 3000.00, 3, 3, 2),
-->     (204, 'Four Bed Room', 4000.00, 4, 3, 2),
-->     (205, 'AC Room', 3500.00, 2, 1, 2),
-->     (206, 'Single Bed Room', 1700.00, 1, 1, 2),
-->     (207, 'AC Room', 4500.00, 2, 2, 2),
-->     (208, 'Double Bed Room', 2200.00, 2, 1, 2);
Query OK, 8 rows affected (0.00 sec)
Records: 8 Duplicates: 0 Warnings: 0

mysql> INSERT INTO Rooms (Room_ID, Room_type, Price, Capacity, Occupancy, Hostel_ID)
--> VALUES
-->     (301, 'Single Bed Room', 1500.00, 1, 1, 3),
-->     (302, 'Double Bed Room', 2500.00, 2, 2, 3),
-->     (303, 'Triple Bed Room', 3000.00, 3, 3, 3),
-->     (304, 'Four Bed Room', 4000.00, 4, 4, 3),
-->     (305, 'AC Room', 3500.00, 2, 1, 3),
-->     (306, 'Single Bed Room', 1700.00, 1, 1, 3),
-->     (307, 'AC Room', 4500.00, 2, 2, 3),
-->     (308, 'Double Bed Room', 2200.00, 2, 1, 3);
Query OK, 8 rows affected (0.00 sec)
Records: 8 Duplicates: 0 Warnings: 0

```

- **UPDATE TABLE FANS**

```

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

mysql> UPDATE FANS SET FAN_OF = 'VIRAT' WHERE FAN_ID = 4;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> UPDATE FANS SET FAN_OF = 'VIRAT' WHERE FAN_ID = 6;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT *FROM FANS;
+-----+-----+
| Fan_ID | Name      | Fan_Of   |
+-----+-----+
| 1     | Rahul Sharma | VIRAT    |
| 2     | Priya Verma  | DHONI    |
| 3     | Amit Singh   | SHARMA   |
| 4     | Sneha Kapoor | VIRAT    |
| 5     | Vikram Patel | NULL     |
| 6     | Rohit Mehra  | VIRAT    |
| 7     | Anjali Nair  | NULL     |
| 8     | Siddharth Rao | NULL    |
| 9     | Pooja Iyer   | NULL     |
| 10    | Kunal Joshi  | NULL     |
+-----+-----+
10 rows in set (0.00 sec)

```

- UPDATE TABLE Payment

```

mysql> UPDATE payments
    -> SET Payment_Bal = 0
    -> WHERE Payment_ID = 4;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT * FROM payments;
+-----+-----+-----+-----+-----+-----+
| Payment_ID | Student_ID | Payment_Type | Payment_Date | Payment_Amt | Payment_Bal |
+-----+-----+-----+-----+-----+-----+
| 1          | 1          | Hostel Fee  | 2025-03-17  | 500.00    | 200.00    |
| 2          | 2          | Mess Fee    | 2025-03-17  | 1000.00   | 0.00     |
| 3          | 3          | Hostel Fee  | 2025-03-17  | 750.00    | 100.00   |
| 4          | 4          | Mess Fee    | 2025-03-17  | 1200.00   | 0.00     |
| 5          | 5          | Hostel Fee  | 2025-03-17  | 600.00    | 150.00   |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

```

- UPDATE TABLE Staff

```

mysql> UPDATE Staff
    -> SET Salary = 30000
    -> WHERE Staff_ID = 2;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT * FROM staff;
+-----+-----+-----+-----+-----+-----+-----+
| Staff_ID | Role      | Name        | Mobile_No | Salary     | Hostel_ID |
+-----+-----+-----+-----+-----+-----+-----+
| 1        | Warden    | Rajendra Patil | 9876543210 | 45000.00 | 1         |
| 2        | Cook       | Sushila Deshmukh | 9876543211 | 30000.00 | 1         |
| 3        | Cleaner    | Vaishali Jadhav | 9876543212 | 15000.00 | 1         |
| 4        | Manager    | Vikram Gawande | 9876543213 | 55000.00 | 2         |
| 5        | Security   | Shankar More  | 9876543214 | 20000.00 | 2         |
| 6        | Warden    | Pooja Shinde | 9876543215 | 48000.00 | 3         |
| 7        | Cook       | Dattatray Kulkarni | 9876543216 | 27000.00 | 3         |
| 8        | Cleaner    | Anjali Pawar  | 9876543217 | 16000.00 | 3         |
| 9        | Security   | Ajit Bhise   | 9876543218 | 21000.00 | 1         |
| 10       | Manager    | Madhuri Kale  | 9876543219 | 60000.00 | 2         |
+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

```

- UPDATE TABLE Room

```

mysql> UPDATE rooms
      -> SET Price = 5000
      -> WHERE Room_type = 'AC Room';
Query OK, 4 rows affected (0.00 sec)
Rows matched: 4  Changed: 4  Warnings: 0

```

```
mysql> SELECT * FROM rooms;
```

Room_ID	Room_type	Price	Capacity	Occuity	Hostel_ID
101	Single Bed Room	1500.00	1	1	1
102	Double Bed Room	2500.00	2	2	1
103	Triple Bed Room	3000.00	3	3	1
104	Four Bed Room	4000.00	4	2	1
201	Single Bed Room	1500.00	1	1	2
202	Double Bed Room	2500.00	2	2	2
203	Triple Bed Room	3000.00	3	3	2
204	Four Bed Room	4000.00	4	3	2
205	AC Room	5000.00	2	1	2
206	Single Bed Room	1700.00	1	1	2
207	AC Room	5000.00	2	2	2
208	Double Bed Room	2200.00	2	1	2
301	Single Bed Room	1500.00	1	1	3
302	Double Bed Room	2500.00	2	2	3
303	Triple Bed Room	3000.00	3	3	3
304	Four Bed Room	4000.00	4	4	3
305	AC Room	5000.00	2	1	3
306	Single Bed Room	1700.00	1	1	3
307	AC Room	5000.00	2	2	3
308	Double Bed Room	2200.00	2	1	3

20 rows in set (0.00 sec)

- UPDATE TABLE Mess

mysql> SELECT * FROM Mess;				
Member_id	Student_ID	Subescription_Type	Meal_Type	
1	1	Monthly	Veg	
2	2	Monthly	Non-Veg	
3	3	Monthly	Veg	
4	4	Daily	Non-Veg	
5	5	Weekly	Veg	
6	6	Monthly	Non-Veg	
7	7	Daily	Veg	
8	8	Weekly	Non-Veg	
9	9	Monthly	Veg	
10	10	Daily	Non-Veg	

10 rows in set (0.00 sec)

- DELETE FROM Staff

```
mysql> DELETE FROM staff
-> WHERE Staff_ID = 3;
Query OK, 1 row affected (0.01 sec)
```

```
mysql> SELECT * FROM staff;
```

Staff_ID	Role	Name	Mobile_No	Salary	Hostel_ID
1	Warden	Rajendra Patil	9876543210	45000.00	1
2	Cook	Sushila Deshmukh	9876543211	30000.00	1
4	Manager	Vikram Gawande	9876543213	55000.00	2
5	Security	Shankar More	9876543214	20000.00	2
6	Warden	Pooja Shinde	9876543215	48000.00	3
7	Cook	Dattatray Kulkarni	9876543216	27000.00	3
8	Cleaner	Anjali Pawar	9876543217	16000.00	3
9	Security	Ajit Bhise	9876543218	21000.00	1
10	Manager	Madhuri Kale	9876543219	60000.00	2

9 rows in set (0.00 sec)

- SELECT \* FROM Payment

```
mysql> USE TEAM;
Database changed
mysql> SELECT *FROM TEAM;
```

TEAM_ID	TEAM_NAME
1	Warriors
2	Titans
3	Dragons
4	Eagles
5	Sharks
6	Lions
7	Panthers
8	Tigers
9	Bears
10	Falcons

10 rows in set (0.01 sec)

- SELECT \* FROM Student

```
mysql> SELECT * FROM student;
```

Student_ID	Name	Parent_Name	Parent_Mob_No	Stu_Mob_No	Dept	age	Gender	Assigned_Room
1	Shreyash Ganesh Pawar	Ganesh Pawar	7894561230	7666880095	AIML	19	Male	104
2	Dhanesh Uday Pujare	Uday Pujare	7666805954	9422325698	AIML	19	MALE	208
3	Sanket Vinayak Patil	Vinayak Patil	8426753951	9420159064	CO	19	MALE	206
4	Parth Kishor Ghogare	Kishor Ghogare	9480621590	9420159067	CO	19	MALE	206
5	Aditya Yogesh Pol	Yogesh Pol	9480612508	9422325886	CO	19	MALE	205
6	Ravi Prakash Deshmukh	Prakash Deshmukh	9876543210	9876543211	AIML	20	Male	101
7	Snehal Suresh Patil	Suresh Patil	9876543222	9876543223	CO	20	Female	102
8	Shubham Ramesh Jadhav	Ramesh Jadhav	9876543233	9876543234	AIML	19	Male	104
9	Pooja Rajendra Shinde	Rajendra Shinde	9876543245	9876543246	CO	21	Female	301
10	Ashwini Vinayak Kadam	Vinayak Kadam	9876543257	9876543258	CO	20	Female	302

10 rows in set (0.01 sec)

## ➤ DCL Commands

- GRANT Command

```
MySQL 8.0 Command Line Cli X + v
+-----+
| 9 | 2024-04-18 | Punjab Cricket Association Stadium, Mohali |
| 10 | 2024-04-21 | Greenfield International Stadium, Thiruvananthapuram |
+-----+
10 rows in set (0.00 sec)

mysql> select user();
+-----+
| user()      |
+-----+
| root@localhost |
+-----+
1 row in set (0.00 sec)

mysql> create user 'Dhanesh'@'localhost';
Query OK, 0 rows affected (0.01 sec)

mysql> show user;
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 'user' at line 1
mysql> show grants for 'Dhanesh'@'localhost';
+-----+
| Grants for Dhanesh@localhost          |
+-----+
| GRANT USAGE ON *.* TO 'Dhanesh'@'localhost' |
+-----+
1 row in set (0.00 sec)
```

- REVOKE Command

```
mysql> REVOKE ALL PRIVILEGES ON hostel_management.* FROM 'shreyash'@'localhost';
Query OK, 0 rows affected (0.01 sec)

mysql> SHOW GRANTS FOR 'shreyash'@'localhost';
+-----+
| Grants for shreyash@localhost          |
+-----+
| GRANT USAGE ON *.* TO 'shreyash'@'localhost' |
+-----+
1 row in set (0.00 sec)
```

## ➤ TCL Commands

- Commit Command

```

mysql> UPDATE staff
-> SET Salary = 32000
-> WHERE Staff_ID = 2;
Query OK, 0 rows affected (0.00 sec)
Rows matched: 1  Changed: 0  Warnings: 0

mysql>
mysql> COMMIT;
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT * FROM staff;
+-----+-----+-----+-----+-----+-----+
| Staff_ID | Role      | Name        | Mobile_No | Salary    | Hostel_ID |
+-----+-----+-----+-----+-----+-----+
|       1  | Warden    | Rajendra Patil | 9876543210 | 45000.00 |      1   |
|       2  | Cook       | Sushila Deshmukh | 9876543211 | 32000.00 |      1   |
|       3  | Cleaner    | Vaishali Jadhav | 9876543212 | 15000.00 |      1   |
|       4  | Manager    | Vikram Gawande | 9876543213 | 55000.00 |      2   |
|       5  | Security   | Shankar More   | 9876543214 | 20000.00 |      2   |
|       6  | Warden    | Pooja Shinde  | 9876543215 | 48000.00 |      3   |
|       7  | Cook       | Dattatray Kulkarni | 9876543216 | 27000.00 |      3   |
|       8  | Cleaner    | Anjali Pawar  | 9876543217 | 16000.00 |      3   |
|       9  | Security   | Ajit Bhise    | 9876543218 | 21000.00 |      1   |
|      10  | Manager    | Madhuri Kale  | 9876543219 | 60000.00 |      2   |
+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

```

- Rollback Command

```

mysql> DELETE FROM staff
-> WHERE Staff_ID = 3;
Query OK, 1 row affected (0.00 sec)

mysql>
mysql> ROLLBACK;
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT * FROM staff;
+-----+-----+-----+-----+-----+-----+
| Staff_ID | Role      | Name        | Mobile_No | Salary    | Hostel_ID |
+-----+-----+-----+-----+-----+-----+
|       1  | Warden    | Rajendra Patil | 9876543210 | 45000.00 |      1   |
|       2  | Cook       | Sushila Deshmukh | 9876543211 | 32000.00 |      1   |
|       3  | Cleaner    | Vaishali Jadhav | 9876543212 | 15000.00 |      1   |
|       4  | Manager    | Vikram Gawande | 9876543213 | 55000.00 |      2   |
|       5  | Security   | Shankar More   | 9876543214 | 20000.00 |      2   |
|       6  | Warden    | Pooja Shinde  | 9876543215 | 48000.00 |      3   |
|       7  | Cook       | Dattatray Kulkarni | 9876543216 | 27000.00 |      3   |
|       8  | Cleaner    | Anjali Pawar  | 9876543217 | 16000.00 |      3   |
|       9  | Security   | Ajit Bhise    | 9876543218 | 21000.00 |      1   |
|      10  | Manager    | Madhuri Kale  | 9876543219 | 60000.00 |      2   |
+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

```

## ➤ Key Constraint

- PRIMARY KEY ON Student TABLE

```

mysql> ALTER TABLE student
-> ADD PRIMARY KEY(Student_ID);
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESCRIBE student;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Student_ID | int | NO | PRI | NULL |       |
| Name | varchar(50) | YES |       | NULL |       |
| Parent_Name | varchar(20) | YES |       | NULL |       |
| Parent_Mob_No | bigint | YES |       | NULL |       |
| Stu_Mob_No | bigint | YES |       | NULL |       |
| Dept | varchar(20) | YES |       | NULL |       |
| age | int | YES |       | NULL |       |
| Gender | varchar(10) | YES |       | NULL |       |
| Assigned_Room | int | YES |       | NULL |       |
+-----+-----+-----+-----+-----+-----+

```

- PRIMARY KEY ON Staff TABLE

```

mysql> ALTER TABLE staff
-> ADD CONSTRAINT pk_staff PRIMARY KEY (Staff_ID);
Query OK, 0 rows affected (0.12 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESCRIBE staff;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Staff_ID | int | NO | PRI | NULL |       |
| Role | varchar(10) | YES |       | NULL |       |
| Name | varchar(20) | YES |       | NULL |       |
| Mobile_No | bigint | YES |       | NULL |       |
| Salary | decimal(10,2) | YES |       | NULL |       |
| Hostel_ID | int | YES |       | NULL |       |
+-----+-----+-----+-----+-----+-----+

```

- PRIMARY KEY ON Mess TABLE

```

mysql> ALTER TABLE MESS
-> ADD PRIMARY KEY(Member_id);
Query OK, 0 rows affected (0.05 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESCRIBE mess;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Member_id | int | NO | PRI | NULL |       |
| Student_ID | int | YES |       | NULL |       |
| Subescription_Type | varchar(15) | YES |       | NULL |       |
| Meal_Type | varchar(20) | YES |       | NULL |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

```

- PRIMARY KEY ON Hostel TABLE

```

mysql> ALTER TABLE hostel
      -> ADD PRIMARY KEY(Hostel_ID);
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESCRIBE hostel;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Hostel_ID | int | NO | PRI | NULL |
| Name | varchar(50) | YES |   | NULL |
| Capacity | int | YES |   | NULL |
| Rooms | int | YES |   | NULL |
| Occupied | int | YES |   | NULL |
| Avl_Beds | int | YES |   | NULL |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.01 sec)

```

- PRIMARY KEY ON Mess TABLE

```

mysql> ALTER TABLE payments
      -> ADD PRIMARY KEY(Payment_ID);
Query OK, 0 rows affected (0.05 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESCRIBE payments;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Payment_ID | int | NO | PRI | NULL |
| Student_ID | int | YES |   | NULL |
| Payment_Type | varchar(10) | YES |   | NULL |
| Payment_Date | date | YES |   | NULL |
| Payment_Amt | decimal(10,2) | YES |   | NULL |
| Payment_Bal | decimal(10,2) | YES |   | NULL |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

```

- PRIMARY KEY ON Rooms TABLE

```

mysql> ALTER TABLE rooms
      -> ADD PRIMARY KEY(Room_ID);
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESCRIBE rooms;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Room_ID | int | NO | PRI | NULL |
| Room_type | varchar(30) | YES |   | NULL |
| Price | decimal(10,2) | YES |   | NULL |
| Capacity | int | YES |   | NULL |
| Occupancy | int | YES |   | NULL |
| Hostel_ID | int | YES |   | NULL |
+-----+-----+-----+-----+-----+-----+

```

- FOREIGN KEY ON Staff (Hostel\_ID)

```

mysql> ALTER TABLE staff
      -> ADD CONSTRAINT fk_hostel
      -> FOREIGN KEY (Hostel_ID) REFERENCES hostel(Hostel_ID);
Query OK, 10 rows affected (0.29 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> DESCRIBE staff;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Staff_ID | int | NO | PRI | NULL | 
| Role | varchar(10) | YES |  | NULL | 
| Name | varchar(20) | YES |  | NULL | 
| Mobile_No | bigint | YES | UNI | NULL | 
| Salary | decimal(10,2) | YES |  | NULL | 
| Hostel_ID | int | YES | MUL | NULL | 
+-----+-----+-----+-----+-----+-----+

```

- FOREIGN KEY ON Payment (Student\_ID)

```

mysql> ALTER TABLE payments
      -> ADD CONSTRAINT fk_student
      -> FOREIGN KEY (Student_ID)
      -> REFERENCES students(Student_ID);
Query OK, 10 rows affected (0.17 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> DESCRIBE payments;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Payment_ID | int | NO | PRI | NULL | 
| Student_ID | int | YES | MUL | NULL | 
| Payment_Type | varchar(10) | YES |  | NULL | 
| Payment_Date | date | YES |  | NULL | 
| Payment_Amt | decimal(10,2) | YES |  | NULL | 
| Payment_Bal | decimal(10,2) | YES |  | NULL | 
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

```

- FOREIGN KEY ON Mess (Student\_ID)

```

mysql> ALTER TABLE mess
      -> ADD CONSTRAINT FK_Student_ID
      -> FOREIGN KEY(Student_ID)
      -> REFERENCES student(Student_ID);
Query OK, 10 rows affected (0.04 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> DESCRIBE mess;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Member_id | int | NO | PRI | NULL | 
| Student_ID | int | YES | MUL | NULL | 
| Subescription_Type | varchar(15) | YES |  | NULL | 
| Meal_Type | varchar(20) | YES |  | NULL | 
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

```

- FOREIGN KEY ON Student (Assigned\_Room)

```

mysql> ALTER TABLE students
-> ADD CONSTRAINT fk_room
-> FOREIGN KEY (Assigned_Room)
-> REFERENCES rooms(Room_ID);
Query OK, 10 rows affected (0.35 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> DESCRIBE students;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Student_ID | int | NO | PRI | NULL | 
| Name | varchar(50) | YES | MUL | NULL | 
| Parent_Name | varchar(20) | YES |  | NULL | 
| Parent_Mob_No | bigint | YES | UNI | NULL | 
| Stu_Mob_No | bigint | YES | UNI | NULL | 
| Dept | varchar(20) | YES |  | NULL | 
| age | int | YES |  | NULL | 
| Gender | varchar(10) | YES |  | NULL | 
| Assigned_Room | int | YES | MUL | NULL | 
+-----+-----+-----+-----+-----+-----+
9 rows in set (0.00 sec)

```

- FOREIGN KEY ON Rooms (Hostel\_ID)

```

mysql> ALTER TABLE rooms
-> ADD CONSTRAINT FK_Hostel_ID
-> FOREIGN KEY(Hostel_ID)
-> REFERENCES hostel(Hostel_ID);
Query OK, 20 rows affected (0.04 sec)
Records: 20  Duplicates: 0  Warnings: 0

mysql> DESCRIBE rooms;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Room_ID | int | NO | PRI | NULL | 
| Room_type | varchar(30) | YES |  | NULL | 
| Price | decimal(10,2) | YES |  | NULL | 
| Capacity | int | YES |  | NULL | 
| Occupity | int | YES |  | NULL | 
| Hostel_ID | int | YES | MUL | NULL | 
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

```

- SUPER KEY ON Payments (Payment\_ID, Payment\_Type)

```

mysql> ALTER TABLE payments
      -> ADD CONSTRAINT sk_payment_id_type UNIQUE (Payment_ID, Payment_Type);
Query OK, 0 rows affected (0.11 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESCRIBE payments;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Payment_ID | int | NO | PRI | NULL |       |
| Student_ID | int | YES | MUL | NULL |       |
| Payment_Type | varchar(10) | YES |       | NULL |       |
| Payment_Date | date | YES |       | NULL |       |
| Payment_Amt | decimal(10,2) | YES |       | NULL |       |
| Payment_Bal | decimal(10,2) | YES |       | NULL |       |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.01 sec)

```

- SUPER KEY ON Students (Student\_ID, Name)

```

mysql> ALTER TABLE students
      -> ADD CONSTRAINT sk_student_id_name UNIQUE (Student_ID, Name);
Query OK, 0 rows affected (0.07 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESCRIBE students;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Student_ID | int | NO | PRI | NULL |       |
| Name | varchar(50) | YES | MUL | NULL |       |
| Parent_Name | varchar(20) | YES |       | NULL |       |
| Parent_Mob_No | bigint | YES | UNI | NULL |       |
| Stu_Mob_No | bigint | YES | UNI | NULL |       |
| Dept | varchar(20) | YES |       | NULL |       |
| age | int | YES |       | NULL |       |
| Gender | varchar(10) | YES |       | NULL |       |
| Assigned_Room | int | YES | MUL | NULL |       |
+-----+-----+-----+-----+-----+-----+
9 rows in set (0.00 sec)

```

- CANDIDATE KEY ON Students (Student Mobile No.)

```

mysql> ALTER TABLE students
      -> ADD CONSTRAINT unique_stu_mob UNIQUE (Stu_Mob_No);
Query OK, 0 rows affected (0.10 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESCRIBE students;
+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key  | Default | Extra |
+-----+-----+-----+-----+-----+
| Student_ID | int    | NO   | PRI   | NULL    |        |
| Name        | varchar(50) | YES  |        | NULL    |        |
| Parent_Name | varchar(20) | YES  |        | NULL    |        |
| Parent_Mob_No | bigint | YES  |        | NULL    |        |
| Stu_Mob_No | bigint | YES  | UNI   | NULL    |        |
| Dept        | varchar(20) | YES  |        | NULL    |        |
| age         | int    | YES  |        | NULL    |        |
| Gender      | varchar(10) | YES  |        | NULL    |        |
| Assigned_Room | int   | YES  | MUL   | NULL    |        |
+-----+-----+-----+-----+-----+
9 rows in set (0.00 sec)

```

- CANDIDATE KEY ON Staff (Student Mobile No.)

```

mysql> ALTER TABLE staff
      -> ADD CONSTRAINT unique_staff_mobile UNIQUE (Mobile_No);
Query OK, 0 rows affected, 1 warning (0.12 sec)
Records: 0  Duplicates: 0  Warnings: 1

mysql> DESCRIBE Staff;
+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key  | Default | Extra |
+-----+-----+-----+-----+-----+
| Staff_ID | int    | NO   | PRI   | NULL    |        |
| Role     | varchar(15) | YES  | MUL   | NULL    |        |
| Name     | varchar(20) | YES  |        | NULL    |        |
| Mobile_No | bigint | YES  | UNI   | NULL    |        |
| Salary   | decimal(10,2) | YES  |        | NULL    |        |
| Hostel_ID | int   | YES  | MUL   | NULL    |        |
+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

```

- UNIQUE KEY ON Student (Parent Mobile No.)

```

mysql> ALTER TABLE students
-> ADD CONSTRAINT unique_parent_mob UNIQUE (Parent_Mob_No);
Query OK, 0 rows affected (0.09 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESCRIBE students;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| Student_ID | int | NO | PRI | NULL |
| Name | varchar(50) | YES | | NULL |
| Parent_Name | varchar(20) | YES | | NULL |
| Parent_Mob_No | bigint | YES | UNI | NULL |
| Stu_Mob_No | bigint | YES | UNI | NULL |
| Dept | varchar(20) | YES | | NULL |
| age | int | YES | | NULL |
| Gender | varchar(10) | YES | | NULL |
| Assigned_Room | int | YES | MUL | NULL |
+-----+-----+-----+-----+-----+
9 rows in set (0.00 sec)

```

- UNIQUE KEY ON Student (Parent Mobile No.)

```

mysql> ALTER TABLE hostel
-> ADD CONSTRAINT uq_hostel_name UNIQUE (Name);
Query OK, 0 rows affected, 1 warning (0.10 sec)
Records: 0  Duplicates: 0  Warnings: 1

mysql> DESCRIBE Hostel;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| Hostel_ID | int | NO | PRI | NULL |
| Name | varchar(25) | YES | UNI | NULL |
| Capacity | int | YES | | NULL |
| Rooms | int | YES | | NULL |
| Occupied | int | YES | | NULL |
| Avl_Beds | int | YES | | NULL |
+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

```

- COMPOSITE KEY ON Staff (Role, Hostel\_ID)

```

mysql> ALTER TABLE staff
      -> ADD CONSTRAINT unique_role_per_hostel
      -> UNIQUE (Role, Hostel_ID);
Query OK, 0 rows affected (0.07 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESCRIBE staff;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key  | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Staff_ID | int    | NO   | PRI   | NULL    |       |
| Role      | varchar(15) | YES  | MUL   | NULL    |       |
| Name      | varchar(20)  | YES  |       | NULL    |       |
| Mobile_No | bigint  | YES  | UNI   | NULL    |       |
| Salary    | decimal(10,2) | YES  |       | NULL    |       |
| Hostel_ID | int    | YES  | MUL   | NULL    |       |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

```

- COMPOSITE KEY ON Studnet (Name, Studnet Mobile No)

```

mysql> ALTER TABLE students
      -> ADD CONSTRAINT unique_name_mob UNIQUE (Name, Stu_Mob_No);
Query OK, 0 rows affected (0.10 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESCRIBE students;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key  | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Student_ID | int    | NO   | PRI   | NULL    |       |
| Name        | varchar(50) | YES  | MUL   | NULL    |       |
| Parent_Name | varchar(20)  | YES  |       | NULL    |       |
| Parent_Mob_No | bigint  | YES  | UNI   | NULL    |       |
| Stu_Mob_No  | bigint  | YES  | UNI   | NULL    |       |
| Dept         | varchar(20) | YES  |       | NULL    |       |
| age          | int    | YES  |       | NULL    |       |
| Gender       | varchar(10) | YES  |       | NULL    |       |
| Assigned_Room | int    | YES  | MUL   | NULL    |       |
+-----+-----+-----+-----+-----+-----+
9 rows in set (0.00 sec)

```

## ➤ Operators

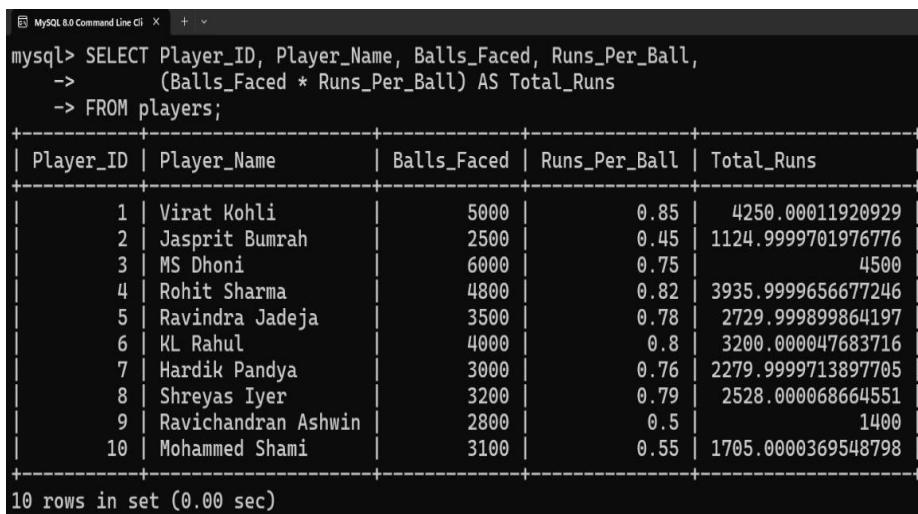
- Arithmetic Operation (+)

```
mysql> SELECT Player_ID, Player_Name, Cricket_Played, Player_Role, CricketNotPlayed, Cricket_Played+CricketNotPlayed AS "Total Age" From Players;
+-----+-----+-----+-----+-----+-----+
| Player_ID | Player_Name | Cricket_Played | Player_Role | CricketNotPlayed | Total Age |
+-----+-----+-----+-----+-----+-----+
| 1 | Virat Kohli | 35 | Batsman | 45 | 80 |
| 2 | Jasprit Bumrah | 30 | Bowler | 55 | 85 |
| 3 | MS Dhoni | 42 | Wicketkeeper | 60 | 102 |
| 4 | Rohit Sharma | 36 | Batsman | 65 | 101 |
| 5 | Ravindra Jadeja | 34 | All-Rounder | 54 | 88 |
| 6 | KL Rahul | 31 | Batsman | 51 | 82 |
| 7 | Hardik Pandya | 30 | All-Rounder | 55 | 85 |
| 8 | Shreyas Iyer | 29 | Batsman | 59 | 88 |
| 9 | Ravichandran Ashwin | 37 | Bowler | 62 | 99 |
| 10 | Mohammed Shami | 33 | Bowler | 61 | 94 |
+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)
```

- Arithmetic Operation (-)

```
mysql> SELECT Player_ID, Player_Name, Cricket_Played, Player_Role, Total_Age, Total_Age-Cricket_Played AS "CricketNotPlayed" From Players;
+-----+-----+-----+-----+-----+-----+
| Player_ID | Player_Name | Cricket_Played | Player_Role | Total_Age | CricketNotPlayed |
+-----+-----+-----+-----+-----+-----+
| 1 | Virat Kohli | 35 | Batsman | 45 | 10 |
| 2 | Jasprit Bumrah | 30 | Bowler | 55 | 25 |
| 3 | MS Dhoni | 42 | Wicketkeeper | 60 | 18 |
| 4 | Rohit Sharma | 36 | Batsman | 65 | 29 |
| 5 | Ravindra Jadeja | 34 | All-Rounder | 54 | 20 |
| 6 | KL Rahul | 31 | Batsman | 51 | 20 |
| 7 | Hardik Pandya | 30 | All-Rounder | 55 | 25 |
| 8 | Shreyas Iyer | 29 | Batsman | 59 | 30 |
| 9 | Ravichandran Ashwin | 37 | Bowler | 62 | 25 |
| 10 | Mohammed Shami | 33 | Bowler | 61 | 28 |
+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)
```

- Arithmetic Operation (\*)



```
MySQL 8.0 Command Line Cli + x
mysql> SELECT Player_ID, Player_Name, Balls_Faced, Runs_Per_Ball,
->      (Balls_Faced * Runs_Per_Ball) AS Total_Runs
->  FROM players;
+-----+-----+-----+-----+-----+
| Player_ID | Player_Name | Balls_Faced | Runs_Per_Ball | Total_Runs |
+-----+-----+-----+-----+-----+
| 1 | Virat Kohli | 5000 | 0.85 | 4250.00011920929 |
| 2 | Jasprit Bumrah | 2500 | 0.45 | 1124.9999701976776 |
| 3 | MS Dhoni | 6000 | 0.75 | 4500 |
| 4 | Rohit Sharma | 4800 | 0.82 | 3935.9999656677246 |
| 5 | Ravindra Jadeja | 3500 | 0.78 | 2729.999899864197 |
| 6 | KL Rahul | 4000 | 0.8 | 3200.000047683716 |
| 7 | Hardik Pandya | 3000 | 0.76 | 2279.9999713897705 |
| 8 | Shreyas Iyer | 3200 | 0.79 | 2528.000068664551 |
| 9 | Ravichandran Ashwin | 2800 | 0.5 | 1400 |
| 10 | Mohammed Shami | 3100 | 0.55 | 1705.0000369548798 |
+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)
```

- Arithmetic Operation (/)

```
mysql> SELECT Player_ID, Player_Name, Balls_Faced, Runs_Per_Ball,
->      ((Balls_Faced * Runs_Per_Ball) / Balls_Faced) * 100 AS Strike_Rate
->      FROM players;
+-----+-----+-----+-----+
| Player_ID | Player_Name | Balls_Faced | Runs_Per_Ball | Strike_Rate |
+-----+-----+-----+-----+
| 1 | Virat Kohli | 5000 | 0.85 | 85.00000238418579 |
| 2 | Jasprit Bumrah | 2500 | 0.45 | 44.999998807907104 |
| 3 | MS Dhoni | 6000 | 0.75 | 75 |
| 4 | Rohit Sharma | 4800 | 0.82 | 81.99999928474426 |
| 5 | Ravindra Jadeja | 3500 | 0.78 | 77.99999713897705 |
| 6 | KL Rahul | 4000 | 0.8 | 80.0000011920929 |
| 7 | Hardik Pandya | 3000 | 0.76 | 75.99999904632568 |
| 8 | Shreyas Iyer | 3200 | 0.79 | 79.00000214576721 |
| 9 | Ravichandran Ashwin | 2800 | 0.5 | 50 |
| 10 | Mohammed Shami | 3100 | 0.55 | 55.000001192092896 |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)
```

- Logical Operation (NOT)

```
mysql> SELECT * FROM PLAYERS WHERE NOT PLAYER_ROLE='BATSMAN';
+-----+-----+-----+
| Player_ID | Player_Name | Age | Player_Role |
+-----+-----+-----+
| 2 | Jasprit Bumrah | 30 | Bowler |
| 3 | MS Dhoni | 42 | Wicketkeeper |
| 5 | Ravindra Jadeja | 34 | All-Rounder |
| 7 | Hardik Pandya | 30 | All-Rounder |
| 9 | Ravichandran Ashwin | 37 | Bowler |
| 10 | Mohammed Shami | 33 | Bowler |
+-----+-----+-----+
6 rows in set (0.00 sec)
```

- Logical Operation (OR)

```
mysql> SELECT * FROM TOURNAMENT WHERE END_DATE='2024-03-15' OR END_DATE='2025-03-15';
+-----+-----+
| Name | Start_Date | End_Date |
+-----+-----+
| PSL 2024 | 2024-02-15 | 2024-03-15 |
| Ranji Trophy 2024 | 2024-11-05 | 2025-03-15 |
+-----+-----+
2 rows in set (0.00 sec)
```

- Logical Operation (AND)

```
mysql> SELECT * FROM MATCHES WHERE MATCH_ID>5 AND DATE>2024-04-02;
+-----+-----+
| Match_ID | Date      | Venue
+-----+-----+
|   6 | 2024-04-08 | M. A. Chidambaram Stadium, Chennai
|   7 | 2024-04-12 | Rajiv Gandhi International Stadium, Hyderabad
|   8 | 2024-04-15 | Sawai Mansingh Stadium, Jaipur
|   9 | 2024-04-18 | Punjab Cricket Association Stadium, Mohali
|  10 | 2024-04-21 | Greenfield International Stadium, Thiruvananthapuram
+-----+-----+
5 rows in set, 1 warning (0.01 sec)
```

- Comparison Operation (=)

```
mysql> SELECT * FROM FANS WHERE FAN_OF='VIRAT KOHLI';
+-----+-----+
| Fan_ID | Name      | Fan_Of
+-----+-----+
|    1 | Rahul Sharma | Virat Kohli
|   10 | Kunal Joshi  | Virat Kohli
+-----+-----+
2 rows in set (0.00 sec)
```

- Comparison Operation (!=)

```
mysql> SELECT * FROM FANS WHERE FAN_OF!= 'VIRAT KOHLI';
+-----+-----+
| Fan_ID | Name      | Fan_Of
+-----+-----+
|    2 | Priya Verma  | Rohit Sharma
|    3 | Amit Singh   | MS Dhoni
|    4 | Sneha Kapoor  | Hardik Pandya
|    5 | Vikram Patel  | KL Rahul
|    6 | Rohit Mehra   | Jasprit Bumrah
|    7 | Anjali Nair   | Shubman Gill
|    8 | Siddharth Rao | Ravindra Jadeja
|    9 | Pooja Iyer    | Surya Kumar Yadav
+-----+-----+
8 rows in set (0.00 sec)
```

- Comparison Operation (<)

```
mysql> SELECT * FROM TEAM WHERE TOTAL_RUNS<2300;
+-----+-----+
| TEAM_ID | TEAM_NAME | TOTAL_RUNS |
+-----+-----+
|    2 | Titans     |    1985 |
|    3 | Dragons    |    2130 |
|    4 | Eagles     |    2250 |
|    5 | Sharks     |    2050 |
|    6 | Lions      |    1870 |
|    8 | Tigers     |    2205 |
|    9 | Bears      |    1995 |
+-----+-----+
7 rows in set (0.00 sec)
```

- Comparison Operation (>)

```

mysql> SELECT * FROM TEAM WHERE TOTAL_RUNS > 2300;
+-----+-----+-----+
| TEAM_ID | TEAM_NAME | TOTAL_RUNS |
+-----+-----+-----+
|      1 | Warriors   |      2380 |
|      7 | Panthers    |      2415 |
|     10 | Falcons     |      2320 |
+-----+-----+-----+
3 rows in set (0.00 sec)

```

- Comparison Operation (<=)

```

mysql> SELECT * FROM TEAM WHERE TOTAL_RUNS <= 2250;
+-----+-----+-----+
| TEAM_ID | TEAM_NAME | TOTAL_RUNS |
+-----+-----+-----+
|      2 | Titans     |      1985 |
|      3 | Dragons    |      2130 |
|      4 | Eagles     |      2250 |
|      5 | Sharks     |      2050 |
|      6 | Lions      |      1870 |
|      8 | Tigers     |      2205 |
|      9 | Bears      |      1995 |
+-----+-----+-----+
7 rows in set (0.00 sec)

```

- Comparison Operation (>=)

```

mysql> SELECT * FROM TEAM WHERE TOTAL_RUNS >= 2250;
+-----+-----+-----+
| TEAM_ID | TEAM_NAME | TOTAL_RUNS |
+-----+-----+-----+
|      1 | Warriors   |      2380 |
|      4 | Eagles     |      2250 |
|      7 | Panthers    |      2415 |
|     10 | Falcons     |      2320 |
+-----+-----+-----+
4 rows in set (0.00 sec)

```

- Comparison Operation (LIKE)

```

mysql> SELECT * FROM FANS WHERE FAN_OF LIKE 'Vir%';
+-----+-----+-----+
| Fan_ID | Name       | Fan_Of   |
+-----+-----+-----+
|      1 | Rahul Sharma | Virat Kohli |
|     10 | Kunal Joshi  | Virat Kohli |
+-----+-----+-----+
2 rows in set (0.00 sec)

```

- Comparison Operation (BETWEEN)

```

mysql> SELECT * FROM PLAYERS WHERE AGE BETWEEN 30 AND 34;
+-----+-----+-----+-----+
| Player_ID | Player_Name | Age | Player_Role |
+-----+-----+-----+-----+
|      2 | Jasprit Bumrah | 30 | Bowler      |
|      5 | Ravindra Jadeja | 34 | All-Rounder |
|      6 | KL Rahul        | 31 | Batsman     |
|      7 | Hardik Pandya  | 30 | All-Rounder |
|     10 | Mohammed Shami | 33 | Bowler      |
+-----+-----+-----+-----+
5 rows in set (0.00 sec)

```

- Comparison Operation (IN)

```
mysql> SELECT * FROM PLAYERS WHERE PLAYER_ROLE IN ('BOWLER','BATSMAN');
+-----+-----+-----+
| Player_ID | Player_Name | Age | Player_Role |
+-----+-----+-----+
| 1 | Virat Kohli | 35 | Batsman |
| 2 | Jasprit Bumrah | 30 | Bowler |
| 4 | Rohit Sharma | 36 | Batsman |
| 6 | KL Rahul | 31 | Batsman |
| 8 | Shreyas Iyer | 29 | Batsman |
| 9 | Ravichandran Ashwin | 37 | Bowler |
| 10 | Mohammed Shami | 33 | Bowler |
+-----+-----+-----+
7 rows in set (0.00 sec)
```

- Boolean Operation (&&)

```
mysql> SELECT * FROM PLAYERS WHERE PLAYER_ROLE='BATSMAN' && AGE>34;
+-----+-----+-----+
| Player_ID | Player_Name | Age | Player_Role |
+-----+-----+-----+
| 1 | Virat Kohli | 35 | Batsman |
| 4 | Rohit Sharma | 36 | Batsman |
+-----+-----+-----+
2 rows in set, 1 warning (0.00 sec)
```

- Boolean Operation (||)

```
mysql> SELECT * FROM PLAYERS WHERE PLAYER_ROLE='BATSMAN' || AGE>34;
+-----+-----+-----+
| Player_ID | Player_Name | Age | Player_Role |
+-----+-----+-----+
| 1 | Virat Kohli | 35 | Batsman |
| 3 | MS Dhoni | 42 | Wicketkeeper |
| 4 | Rohit Sharma | 36 | Batsman |
| 6 | KL Rahul | 31 | Batsman |
| 8 | Shreyas Iyer | 29 | Batsman |
| 9 | Ravichandran Ashwin | 37 | Bowler |
+-----+-----+-----+
6 rows in set, 1 warning (0.00 sec)
```

- Boolean Operation (^)

```
mysql> SELECT * FROM PLAYERS WHERE (PLAYER_ROLE='BATSMAN') ^ (PLAYER_ID>2);
+-----+-----+-----+
| Player_ID | Player_Name | Age | Player_Role |
+-----+-----+-----+
| 1 | Virat Kohli | 35 | Batsman |
| 3 | MS Dhoni | 42 | Wicketkeeper |
| 5 | Ravindra Jadeja | 34 | All-Rounder |
| 7 | Hardik Pandya | 30 | All-Rounder |
| 9 | Ravichandran Ashwin | 37 | Bowler |
| 10 | Mohammed Shami | 33 | Bowler |
+-----+-----+-----+
6 rows in set (0.00 sec)
```

## ➤ Aggregate Functions

- SUM ()

```
mysql> SELECT SUM(DATE) FROM MATCHES;
+-----+
| SUM(DATE) |
+-----+
| 202403863 |
+-----+
1 row in set (0.00 sec)
```

- AVG ()

```
mysql> SELECT AVG(TOTAL_MATCHES) FROM TICKET;
+-----+
| AVG(TOTAL_MATCHES) |
+-----+
|      45.0000 |
+-----+
1 row in set (0.00 sec)
```

- MIN ()

```
mysql> SELECT MIN(TOTAL_MATCHES) FROM TICKET;
+-----+
| MIN(TOTAL_MATCHES) |
+-----+
|          0 |
+-----+
1 row in set (0.00 sec)
```

- MAX ()

```
MySQL 8.0 Command Line Cli X + -
mysql> SELECT MAX(TOTAL_MATCHES) FROM TICKET;
+-----+
| MAX(TOTAL_MATCHES) |
+-----+
|         90 |
+-----+
1 row in set (0.00 sec)
```

- COUNT ()

```
mysql> SELECT COUNT(TOTAL_MATCHES+TICKET_ID) FROM TICKET;
+-----+
| COUNT(TOTAL_MATCHES+TICKET_ID) |
+-----+
|           10 |
+-----+
1 row in set (0.00 sec)
```

```

mysql> SELECT COUNT(TOTAL_MATCHES) FROM TICKET;
+-----+
| COUNT(TOTAL_MATCHES) |
+-----+
|          10          |
+-----+
1 row in set (0.00 sec)

```

## ➤ SET Operation

- UNION Operation

```

mysql> SELECT *FROM FANS WHERE FAN_ID<7 UNION SELECT *FROM FANS WHERE FAN_OF='VIRAT';
+-----+-----+-----+
| Fan_ID | Name      | Fan_Of |
+-----+-----+-----+
|      1 | Rahul Sharma | VIRAT  |
|      2 | Priya Verma  | DHONI   |
|      3 | Amit Singh   | SHARMA |
|      4 | Sneha Kapoor  | VIRAT  |
|      5 | Vikram Patel | NULL    |
|      6 | Rohit Mehra  | VIRAT  |
+-----+-----+-----+
6 rows in set (0.01 sec)

```

- INTERSECT Operation

```

MySQL 8.0 Command Line Cli X + 
mysql> USE FANS;
Database changed
mysql> SELECT *FROM FANS WHERE FAN_ID<7 INTERSECT SELECT *FROM FANS WHERE FAN_OF='VIRAT';
+-----+-----+-----+
| Fan_ID | Name      | Fan_Of |
+-----+-----+-----+
|      1 | Rahul Sharma | VIRAT  |
|      4 | Sneha Kapoor  | VIRAT  |
|      6 | Rohit Mehra  | VIRAT  |
+-----+-----+-----+
3 rows in set (0.00 sec)

```

- UNION ALL Operation

```

mysql> SELECT *FROM FANS WHERE FAN_ID<7 UNION ALL SELECT *FROM FANS WHERE FAN_OF='VIRAT';
+-----+-----+-----+
| Fan_ID | Name      | Fan_Of |
+-----+-----+-----+
|      1 | Rahul Sharma | VIRAT  |
|      2 | Priya Verma  | DHONI   |
|      3 | Amit Singh   | SHARMA |
|      4 | Sneha Kapoor  | VIRAT  |
|      5 | Vikram Patel | NULL    |
|      6 | Rohit Mehra  | VIRAT  |
|      1 | Rahul Sharma | VIRAT  |
|      4 | Sneha Kapoor  | VIRAT  |
|      6 | Rohit Mehra  | VIRAT  |
+-----+-----+-----+
9 rows in set (0.00 sec)

```

- EXCEPT Operation

```

mysql> SELECT *FROM FANS WHERE FAN_ID<7 EXCEPT SELECT *FROM FANS WHERE FAN_OF='VIRAT';
+-----+-----+-----+
| Fan_ID | Name      | Fan_Of |
+-----+-----+-----+
|     2 | Priya Verma | DHONI   |
|     3 | Amit Singh   | SHARMA  |
|     5 | Vikram Patel | NULL    |
+-----+-----+-----+
3 rows in set (0.00 sec)

```

## ➤ VIEW

- CREATE VIEW Players

```

mysql> CREATE VIEW PlayerSummary AS
-> SELECT Player_ID, Player_Name, Age, Player_Role
-> FROM PLAYERS;
Query OK, 0 rows affected (0.02 sec)

mysql> SELECT * FROM PlayerSummary;
+-----+-----+-----+-----+
| Player_ID | Player_Name | Age | Player_Role |
+-----+-----+-----+-----+
|       1 | Virat Kohli | 35 | Batsman    |
|       2 | Jasprit Bumrah | 30 | Bowler     |
|       3 | MS Dhoni | 42 | Wicketkeeper |
|       4 | Rohit Sharma | 36 | Batsman    |
|       5 | Ravindra Jadeja | 34 | All-Rounder |
|       6 | KL Rahul | 31 | Batsman    |
|       7 | Hardik Pandya | 30 | All-Rounder |
|       8 | Shreyas Iyer | 29 | Batsman    |
|       9 | Ravichandran Ashwin | 37 | Bowler     |
|      10 | Mohammed Shami | 33 | Bowler     |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

```

- CREATE VIEW Tournament

```

mysql> CREATE VIEW UpcomingTournaments AS
-> SELECT Name, Start_Date, End_Date
-> FROM TOURNAMENT
-> WHERE Start_Date > '2024-05-01';
ERROR 2013 (HY000): Lost connection to MySQL server during query
No connection. Trying to reconnect...
Connection id: 10
Current database: tournament

Query OK, 0 rows affected (0.06 sec)

mysql> SELECT * FROM RenamedTournaments;
ERROR 1146 (42S02): Table 'tournament.renamedtournaments' doesn't exist
mysql> SELECT * FROM UpcomingTournaments;
+-----+-----+-----+
| Name          | Start_Date | End_Date |
+-----+-----+-----+
| T20 World Cup 2024 | 2024-06-01 | 2024-06-29 |
| Asia Cup 2024 | 2024-09-10 | 2024-09-25 |
| Big Bash League 2024 | 2024-12-01 | 2025-01-25 |
| The Hundred 2024 | 2024-08-01 | 2024-08-25 |
| CPL 2024 | 2024-09-01 | 2024-09-30 |
| Ranji Trophy 2024 | 2024-11-05 | 2025-03-15 |
| Vitality Blast 2024 | 2024-05-20 | 2024-07-15 |
+-----+-----+-----+
7 rows in set (0.00 sec)

```

## ➤ ALTER VIEW Players

```

mysql> ALTER VIEW PlayerSummary AS
    -> SELECT Player_ID, Player_Name, Player_Role
    -> FROM PLAYERS
    -> WHERE Age < 35;
Query OK, 0 rows affected (0.01 sec)

mysql> SELECT * FROM PlayerSummary;
+-----+-----+-----+
| Player_ID | Player_Name | Player_Role |
+-----+-----+-----+
|      2 | Jasprit Bumrah | Bowler |
|      5 | Ravindra Jadeja | All-Rounder |
|      6 | KL Rahul | Batsman |
|      7 | Hardik Pandya | All-Rounder |
|      8 | Shreyas Iyer | Batsman |
|     10 | Mohammed Shami | Bowler |
+-----+-----+-----+
6 rows in set (0.00 sec)

```

➤ ALTER VIEW Tournaments

```

mysql> ALTER VIEW UpcomingTournaments AS
    -> SELECT Name, Start_Date, End_Date
    -> FROM TOURNAMENT
    -> WHERE Start_Date > '2024-06-01';
Query OK, 0 rows affected (0.01 sec)

mysql> SELECT * FROM UpcomingTournaments;
+-----+-----+-----+
| Name          | Start_Date | End_Date |
+-----+-----+-----+
| Asia Cup 2024 | 2024-09-10 | 2024-09-25 |
| Big Bash League 2024 | 2024-12-01 | 2025-01-25 |
| The Hundred 2024 | 2024-08-01 | 2024-08-25 |
| CPL 2024 | 2024-09-01 | 2024-09-30 |
| Ranji Trophy 2024 | 2024-11-05 | 2025-03-15 |
+-----+-----+-----+
5 rows in set (0.00 sec)

```

➤ RENAME VIEW Players

```

mysql> CREATE VIEW PlayerSummarys AS
    -> SELECT * FROM PlayerSummary;
Query OK, 0 rows affected (0.02 sec)

mysql> SELECT * FROM PlayerSummarys;
+-----+-----+-----+
| Player_ID | Player_Name | Player_Role |
+-----+-----+-----+
|      2 | Jasprit Bumrah | Bowler |
|      5 | Ravindra Jadeja | All-Rounder |
|      6 | KL Rahul | Batsman |
|      7 | Hardik Pandya | All-Rounder |
|      8 | Shreyas Iyer | Batsman |
|     10 | Mohammed Shami | Bowler |
+-----+-----+-----+
6 rows in set (0.00 sec)

```

➤ RENAME VIEW Tournament

```

mysql> CREATE VIEW RenamedTournaments AS
-> SELECT * FROM UpcomingTournaments;
Query OK, 0 rows affected (0.01 sec)

mysql> SELECT * FROM RenamedTournaments;
+-----+-----+-----+
| Name | Start_Date | End_Date |
+-----+-----+-----+
| Asia Cup 2024 | 2024-09-10 | 2024-09-25 |
| Big Bash League 2024 | 2024-12-01 | 2025-01-25 |
| The Hundred 2024 | 2024-08-01 | 2024-08-25 |
| CPL 2024 | 2024-09-01 | 2024-09-30 |
| Ranji Trophy 2024 | 2024-11-05 | 2025-03-15 |
+-----+-----+-----+
5 rows in set (0.00 sec)

```

➤ SELECT VIEW Players

```

mysql> SELECT * FROM PlayerSummary;
+-----+-----+-----+
| Player_ID | Player_Name | Player_Role |
+-----+-----+-----+
| 2 | Jasprit Bumrah | Bowler |
| 5 | Ravindra Jadeja | All-Rounder |
| 6 | KL Rahul | Batsman |
| 7 | Hardik Pandya | All-Rounder |
| 8 | Shreyas Iyer | Batsman |
| 10 | Mohammed Shami | Bowler |
+-----+-----+-----+
6 rows in set (0.00 sec)

```

➤ SELECT VIEW Tournament

```

mysql> SELECT * FROM RenamedTournaments;
+-----+-----+-----+
| Name | Start_Date | End_Date |
+-----+-----+-----+
| Asia Cup 2024 | 2024-09-10 | 2024-09-25 |
| Big Bash League 2024 | 2024-12-01 | 2025-01-25 |
| The Hundred 2024 | 2024-08-01 | 2024-08-25 |
| CPL 2024 | 2024-09-01 | 2024-09-30 |
| Ranji Trophy 2024 | 2024-11-05 | 2025-03-15 |
+-----+-----+-----+
5 rows in set (0.00 sec)

```

➤ INSERT IN VIEW Players

```

mysql> INSERT INTO PlayerSummary (Player_ID, Player_Name, Age, Player_Role)
-> VALUES (11, 'Shikhar Dhawan', 37, 'Batsman');
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM PLAYERS;
+-----+-----+-----+-----+
| Player_ID | Player_Name | Age | Player_Role |
+-----+-----+-----+-----+
| 1 | Virat Kohli | 35 | Batsman |
| 2 | Jasprit Bumrah | 30 | Bowler |
| 3 | MS Dhoni | 42 | Wicketkeeper |
| 4 | Rohit Sharma | 36 | Batsman |
| 5 | Ravindra Jadeja | 34 | All-Rounder |
| 6 | KL Rahul | 31 | Batsman |
| 7 | Hardik Pandya | 30 | All-Rounder |
| 8 | Shreyas Iyer | 29 | Batsman |
| 9 | Ravichandran Ashwin | 37 | Bowler |
| 10 | Mohammed Shami | 33 | Bowler |
| 11 | Shikhar Dhawan | NULL | Batsman |
| 11 | Shikhar Dhawan | 37 | Batsman |
+-----+-----+-----+-----+
12 rows in set (0.00 sec)

```

## ➤ INSERT IN VIEW Tournament

```

mysql> INSERT INTO SimpleTournaments (Name, Start_Date, End_Date)
-> VALUES ('Legends Trophy 2024', '2024-10-01', '2024-10-20');
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM SimpleTournaments;
+-----+-----+-----+
| Name | Start_Date | End_Date |
+-----+-----+-----+
| IPL 2024 | 2024-03-23 | 2024-05-29 |
| T20 World Cup 2024 | 2024-06-01 | 2024-06-29 |
| Asia Cup 2024 | 2024-09-10 | 2024-09-25 |
| Big Bash League 2024 | 2024-12-01 | 2025-01-25 |
| The Hundred 2024 | 2024-08-01 | 2024-08-25 |
| CPL 2024 | 2024-09-01 | 2024-09-30 |
| PSL 2024 | 2024-02-15 | 2024-03-15 |
| BPL 2024 | 2024-01-10 | 2024-02-10 |
| Ranji Trophy 2024 | 2024-11-05 | 2025-03-15 |
| Vitality Blast 2024 | 2024-05-20 | 2024-07-15 |
| Legends Trophy 2024 | 2024-10-01 | 2024-10-20 |
+-----+-----+-----+
11 rows in set (0.00 sec)

```

## ➤ DELETE VIEW FROM Players

```

mysql> DELETE FROM PlayerSummary
-> WHERE Player_ID = 11;
Query OK, 3 rows affected (0.01 sec)

mysql> SELECT * FROM PLAYERSUMMARY;
+-----+-----+-----+-----+
| Player_ID | Player_Name | Age | Player_Role |
+-----+-----+-----+-----+
| 1 | Virat Kohli | 35 | Batsman |
| 2 | Jasprit Bumrah | 30 | Bowler |
| 3 | MS Dhoni | 42 | Wicketkeeper |
| 4 | Rohit Sharma | 36 | Batsman |
| 5 | Ravindra Jadeja | 34 | All-Rounder |
| 6 | KL Rahul | 31 | Batsman |
| 7 | Hardik Pandya | 30 | All-Rounder |
| 8 | Shreyas Iyer | 29 | Batsman |
| 9 | Ravichandran Ashwin | 37 | Bowler |
| 10 | Mohammed Shami | 33 | Bowler |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

```

➤ DELETE VIEW FROM Tournaments

```
mysql> DELETE FROM SimpleTournaments
      -> WHERE Name = 'Legends Trophy 2024';
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM SimpleTournaments;
+-----+-----+-----+
| Name | Start_Date | End_Date |
+-----+-----+-----+
| IPL 2024 | 2024-03-23 | 2024-05-29 |
| T20 World Cup 2024 | 2024-06-01 | 2024-06-29 |
| Asia Cup 2024 | 2024-09-10 | 2024-09-25 |
| Big Bash League 2024 | 2024-12-01 | 2025-01-25 |
| The Hundred 2024 | 2024-08-01 | 2024-08-25 |
| CPL 2024 | 2024-09-01 | 2024-09-30 |
| PSL 2024 | 2024-02-15 | 2024-03-15 |
| BPL 2024 | 2024-01-10 | 2024-02-10 |
| Ranji Trophy 2024 | 2024-11-05 | 2025-03-15 |
| Vitality Blast 2024 | 2024-05-20 | 2024-07-15 |
+-----+-----+-----+
10 rows in set (0.00 sec)
```

➤ DROP VIEW Players

```
mysql> DROP VIEW PlayerSummary;
Query OK, 0 rows affected (0.02 sec)

mysql> SHOW TABLES;
+-----+
| Tables_in_players |
+-----+
| players           |
| playersummaryrenamed |
| playersummarys   |
| view_players      |
+-----+
4 rows in set (0.02 sec)
```

➤ DROP VIEW Tournaments

```
mysql> DROP VIEW SimpleTournaments;
Query OK, 0 rows affected (0.01 sec)

mysql> show tables;
+-----+
| Tables_in_tournament |
+-----+
| renamedtournaments  |
| tournament          |
| upcomingtournaments |
+-----+
3 rows in set (0.00 sec)
```

## ➤ JOINS

### ➤ Inner Join

```
mysql> SELECT m.Match_ID, m.Date, v.Name, v.Location
-> FROM matches m
-> INNER JOIN venue v ON m.Venue_ID = v.Venue_ID;
+-----+-----+-----+-----+
| Match_ID | Date      | Name        | Location   |
+-----+-----+-----+-----+
| 1 | 2024-03-25 | Wankhede Stadium | Mumbai     |
| 2 | 2024-03-27 | Eden Gardens    | Kolkata    |
| 3 | 2024-03-30 | Chinnaswamy Stadium | Bangalore |
| 4 | 2024-04-02 | Narendra Modi Stadium | Ahmedabad |
| 5 | 2024-04-05 | Arun Jaitley Stadium | Delhi      |
| 6 | 2024-04-08 | M. A. Chidambaram Stadium | Chennai    |
| 7 | 2024-04-12 | Rajiv Gandhi International Stadium | Hyderabad |
| 8 | 2024-04-15 | Sawai Mansingh Stadium | Jaipur     |
| 9 | 2024-04-18 | Punjab Cricket Association Stadium | Mohali    |
| 10 | 2024-04-21 | Greenfield International Stadium | Thiruvananthapuram |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)
```

### ➤ Left Join

```
mysql> SELECT m.Match_ID, m.Date, v.Name, v.Location
-> FROM matches m
-> LEFT JOIN venue v ON m.Venue_ID = v.Venue_ID;
+-----+-----+-----+-----+
| Match_ID | Date      | Name        | Location   |
+-----+-----+-----+-----+
| 1 | 2024-03-25 | Wankhede Stadium | Mumbai     |
| 2 | 2024-03-27 | Eden Gardens    | Kolkata    |
| 3 | 2024-03-30 | Chinnaswamy Stadium | Bangalore |
| 4 | 2024-04-02 | Narendra Modi Stadium | Ahmedabad |
| 5 | 2024-04-05 | Arun Jaitley Stadium | Delhi      |
| 6 | 2024-04-08 | M. A. Chidambaram Stadium | Chennai    |
| 7 | 2024-04-12 | Rajiv Gandhi International Stadium | Hyderabad |
| 8 | 2024-04-15 | Sawai Mansingh Stadium | Jaipur     |
| 9 | 2024-04-18 | Punjab Cricket Association Stadium | Mohali    |
| 10 | 2024-04-21 | Greenfield International Stadium | Thiruvananthapuram |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)
```

### ➤ Right Join

```
mysql> SELECT m.Match_ID, m.Date, v.Name, v.Location
-> FROM matches m
-> RIGHT JOIN venue v ON m.Venue_ID = v.Venue_ID;
+-----+-----+-----+-----+
| Match_ID | Date      | Name        | Location   |
+-----+-----+-----+-----+
| 1 | 2024-03-25 | Wankhede Stadium | Mumbai     |
| 2 | 2024-03-27 | Eden Gardens    | Kolkata    |
| 3 | 2024-03-30 | Chinnaswamy Stadium | Bangalore |
| 4 | 2024-04-02 | Narendra Modi Stadium | Ahmedabad |
| 5 | 2024-04-05 | Arun Jaitley Stadium | Delhi      |
| 6 | 2024-04-08 | M. A. Chidambaram Stadium | Chennai    |
| 7 | 2024-04-12 | Rajiv Gandhi International Stadium | Hyderabad |
| 8 | 2024-04-15 | Sawai Mansingh Stadium | Jaipur     |
| 9 | 2024-04-18 | Punjab Cricket Association Stadium | Mohali    |
| 10 | 2024-04-21 | Greenfield International Stadium | Thiruvananthapuram |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)
```

➤ Full Outer Join

```
mysql> SELECT m.Match_ID, m.Date, v.Name, v.Location
-> FROM matches m
-> LEFT JOIN venue v ON m.Venue_ID = v.Venue_ID
->
-> UNION
->
-> SELECT m.Match_ID, m.Date, v.Name, v.Location
-> FROM matches m
-> RIGHT JOIN venue v ON m.Venue_ID = v.Venue_ID;
+-----+-----+-----+-----+
| Match_ID | Date      | Name        | Location    |
+-----+-----+-----+-----+
| 1 | 2024-03-25 | Wankhede Stadium | Mumbai      |
| 2 | 2024-03-27 | Eden Gardens   | Kolkata     |
| 3 | 2024-03-30 | Chinnaswamy Stadium | Bangalore  |
| 4 | 2024-04-02 | Narendra Modi Stadium | Ahmedabad  |
| 5 | 2024-04-05 | Arun Jaitley Stadium | Delhi       |
| 6 | 2024-04-08 | M. A. Chidambaram Stadium | Chennai    |
| 7 | 2024-04-12 | Rajiv Gandhi International Stadium | Hyderabad |
| 8 | 2024-04-15 | Sawai Mansingh Stadium | Jaipur     |
| 9 | 2024-04-18 | Punjab Cricket Association Stadium | Mohali    |
| 10 | 2024-04-21 | Greenfield International Stadium | Thiruvananthapuram |
+-----+-----+-----+-----+
10 rows in set (0.01 sec)
```

➤ TRIGGERS

➤ BEFORE INSERT TRIGGER

```
mysql> DELIMITER $$
mysql>
mysql> CREATE TRIGGER trg_before_insert_ticket
-> BEFORE INSERT ON ticket
-> FOR EACH ROW
-> BEGIN
->     INSERT INTO ticket_log (operation_type, ticket_id)
->     VALUES ('INSERT', NEW.Ticket_ID);
-> END$$
Query OK, 0 rows affected (0.02 sec)

mysql>
mysql> DELIMITER ;
mysql> INSERT INTO ticket (Ticket_ID, Match_Name)
->     VALUES (11, 'Mumbai Indians vs Kolkata Knight Riders');
Query OK, 1 row affected (0.02 sec)

mysql> SELECT * FROM ticket_log;
+-----+-----+-----+
| log_id | operation_type | ticket_id | change_time      |
+-----+-----+-----+
|      1 | INSERT        |      11 | 2025-05-10 18:23:37 |
+-----+-----+-----+
1 row in set (0.00 sec)
```

➤ BEFORE UPDATE TRIGGER

```

mysql> DELIMITER $$  

mysql>  

mysql> CREATE TRIGGER trg_before_update_ticket  

    -> BEFORE UPDATE ON ticket  

    -> FOR EACH ROW  

    -> BEGIN  

    ->     INSERT INTO ticket_log (operation_type, ticket_id)  

    ->         VALUES ('BEFORE UPDATE', OLD.Ticket_ID);  

    -> END$$  

Query OK, 0 rows affected (0.01 sec)

mysql>  

mysql> DELIMITER ;  

mysql> UPDATE ticket  

    -> SET Match_Name = 'CSK vs RCB'  

    -> WHERE Ticket_ID = 100;  

Query OK, 0 rows affected (0.01 sec)
Rows matched: 0  Changed: 0  Warnings: 0

mysql> SELECT * FROM ticket_log;
+-----+-----+-----+-----+
| log_id | operation_type | ticket_id | change_time |
+-----+-----+-----+-----+
| 1 | INSERT | 11 | 2025-05-10 18:23:37 |
| 2 | INSERT | 101 | 2025-05-10 18:29:35 |
| 3 | INSERT | 101 | 2025-05-10 19:32:48 |
| 4 | AFTER INSERT | 101 | 2025-05-10 19:32:48 |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)

```

## ➤ BEFORO DELETE TRIGGER

```

mysql> DELIMITER $$  

mysql>  

mysql> CREATE TRIGGER trg_before_delete_ticket  

    -> BEFORE DELETE ON ticket  

    -> FOR EACH ROW  

    -> BEGIN  

    ->     INSERT INTO ticket_log (operation_type, ticket_id)  

    ->         VALUES ('BEFORE DELETE', OLD.Ticket_ID);  

    -> END$$  

Query OK, 0 rows affected (0.01 sec)

mysql>  

mysql> DELIMITER ;  

mysql> DELETE FROM ticket  

    -> WHERE Ticket_ID = 100;  

Query OK, 0 rows affected (0.00 sec)

mysql> SELECT * FROM ticket_log;
+-----+-----+-----+-----+
| log_id | operation_type | ticket_id | change_time |
+-----+-----+-----+-----+
| 1 | INSERT | 11 | 2025-05-10 18:23:37 |
| 2 | INSERT | 101 | 2025-05-10 18:29:35 |
| 3 | INSERT | 101 | 2025-05-10 19:32:48 |
| 4 | AFTER INSERT | 101 | 2025-05-10 19:32:48 |
| 5 | BEFORE UPDATE | 101 | 2025-05-10 19:35:13 |
| 6 | AFTER UPDATE | 101 | 2025-05-10 19:35:13 |
| 7 | BEFORE UPDATE | 101 | 2025-05-10 19:35:13 |
| 8 | AFTER UPDATE | 101 | 2025-05-10 19:35:13 |
+-----+-----+-----+-----+
8 rows in set (0.00 sec)

```

## ➤ AFTER INSERT TRIGGER

```
mysql> DELIMITER $$  
mysql>  
mysql> CREATE TRIGGER trg_after_insert_ticket  
    -> AFTER INSERT ON ticket  
    -> FOR EACH ROW  
    -> BEGIN  
    ->     INSERT INTO ticket_log (operation_type, ticket_id)  
    ->     VALUES ('AFTER INSERT', NEW.Ticket_ID);  
    -> END$$  
Query OK, 0 rows affected (0.02 sec)  
  
mysql>  
mysql> DELIMITER ;  
mysql>  
mysql> INSERT INTO ticket (Ticket_ID, Match_Name)  
    -> VALUES (101, 'CSK vs KKR');  
Query OK, 1 row affected (0.01 sec)  
  
mysql> SELECT * FROM ticket_log;  
+-----+-----+-----+-----+  
| log_id | operation_type | ticket_id | change_time |  
+-----+-----+-----+-----+  
| 1      | INSERT        | 11       | 2025-05-10 18:23:37 |  
| 2      | INSERT        | 101      | 2025-05-10 18:29:35 |  
| 3      | INSERT        | 101      | 2025-05-10 19:32:48 |  
| 4      | AFTER INSERT  | 101      | 2025-05-10 19:32:48 |  
+-----+-----+-----+-----+  
4 rows in set (0.00 sec)
```

## ➤ AFTER UPDATE TRIGGER

```
mysql> DELIMITER $$  
mysql>  
mysql> CREATE TRIGGER trg_after_update_ticket  
    -> AFTER UPDATE ON ticket  
    -> FOR EACH ROW  
    -> BEGIN  
    ->     INSERT INTO ticket_log (operation_type, ticket_id)  
    ->     VALUES ('AFTER UPDATE', NEW.Ticket_ID);  
    -> END$$  
Query OK, 0 rows affected (0.01 sec)  
  
mysql>  
mysql> DELIMITER ;  
mysql> UPDATE ticket  
    -> SET Match_Name = 'GT vs MI'  
    -> WHERE Ticket_ID = 101;  
Query OK, 2 rows affected (0.01 sec)  
Rows matched: 2  Changed: 2  Warnings: 0  
  
mysql> SELECT * FROM ticket_log;  
+-----+-----+-----+-----+  
| log_id | operation_type | ticket_id | change_time |  
+-----+-----+-----+-----+  
| 1      | INSERT        | 11       | 2025-05-10 18:23:37 |  
| 2      | INSERT        | 101      | 2025-05-10 18:29:35 |  
| 3      | INSERT        | 101      | 2025-05-10 19:32:48 |  
| 4      | AFTER INSERT  | 101      | 2025-05-10 19:32:48 |  
| 5      | BEFORE UPDATE | 101      | 2025-05-10 19:35:13 |  
| 6      | AFTER UPDATE  | 101      | 2025-05-10 19:35:13 |  
| 7      | BEFORE UPDATE | 101      | 2025-05-10 19:35:13 |  
| 8      | AFTER UPDATE  | 101      | 2025-05-10 19:35:13 |  
+-----+-----+-----+-----+  
8 rows in set (0.00 sec)
```

➤ AFTER DELETE TRIGGER

```
mysql> DELIMITER $$  
mysql>  
mysql> CREATE TRIGGER trg_after_delete_ticket  
    -> AFTER DELETE ON ticket  
    -> FOR EACH ROW  
    -> BEGIN  
    ->     INSERT INTO ticket_log (operation_type, ticket_id)  
    ->         VALUES ('AFTER DELETE', OLD.Ticket_ID);  
    -> END$$  
Query OK, 0 rows affected (0.01 sec)  
  
mysql>  
mysql> DELIMITER ;  
mysql> DELETE FROM ticket  
    -> WHERE Ticket_ID = 101;  
Query OK, 2 rows affected (0.01 sec)  
  
mysql> SELECT * FROM ticket_log;  
+-----+-----+-----+-----+  
| log_id | operation_type | ticket_id | change_time |  
+-----+-----+-----+-----+  
| 1      | INSERT        | 11       | 2025-05-10 18:23:37 |  
| 2      | INSERT        | 101      | 2025-05-10 18:29:35 |  
| 3      | INSERT        | 101      | 2025-05-10 19:32:48 |  
| 4      | AFTER INSERT   | 101      | 2025-05-10 19:32:48 |  
| 5      | BEFORE UPDATE  | 101      | 2025-05-10 19:35:13 |  
| 6      | AFTER UPDATE   | 101      | 2025-05-10 19:35:13 |  
| 7      | BEFORE UPDATE  | 101      | 2025-05-10 19:35:13 |  
| 8      | AFTER UPDATE   | 101      | 2025-05-10 19:35:13 |  
| 9      | BEFORE DELETE  | 101      | 2025-05-10 19:41:23 |  
| 10     | AFTER DELETE   | 101      | 2025-05-10 19:41:23 |  
| 11     | BEFORE DELETE  | 101      | 2025-05-10 19:41:23 |  
| 12     | AFTER DELETE   | 101      | 2025-05-10 19:41:23 |  
+-----+-----+-----+-----+  
12 rows in set (0.00 sec)
```

➤ Stored Procedure

```
mysql> DELIMITER $$  
mysql>  
mysql> CREATE PROCEDURE UpdateMatchName(  
    ->     IN t_id INT,  
    ->     IN new_match VARCHAR(255)  
    -> )  
    -> BEGIN  
    ->     UPDATE ticket  
    ->     SET Match_Name = new_match  
    ->     WHERE Ticket_ID = t_id;  
    -> END$$  
Query OK, 0 rows affected (0.03 sec)  
  
mysql>  
mysql> DELIMITER ;  
mysql> CALL UpdateMatchName(1, 'Mumbai Indians vs RCB');  
Query OK, 1 row affected (0.01 sec)  
  
mysql> SELECT * FROM ticket;  
+-----+-----+  
| Ticket_ID | Match_Name |  
+-----+-----+  
| 1          | Mumbai Indians vs RCB |  
| 2          | Royal Challengers Bangalore vs Kolkata Knight Riders |  
| 3          | Delhi Capitals vs Punjab Kings |  
| 4          | Sunrisers Hyderabad vs Rajasthan Royals |  
| 5          | Lucknow Super Giants vs Gujarat Titans |  
| 6          | Chennai Super Kings vs Royal Challengers Bangalore |  
| 7          | Mumbai Indians vs Kolkata Knight Riders |  
| 8          | Punjab Kings vs Sunrisers Hyderabad |  
| 9          | Rajasthan Royals vs Lucknow Super Giants |  
| 10         | Gujarat Titans vs Delhi Capitals |  
| 11         | Mumbai Indians vs Kolkata Knight Riders |  
+-----+-----+  
11 rows in set (0.00 sec)
```

➤ Function

```
mysql> DELIMITER $$  
mysql>  
mysql> CREATE FUNCTION GetMatchNameUpper(t_id INT)  
-> RETURNS VARCHAR(255)  
-> DETERMINISTIC  
-> BEGIN  
->     DECLARE match_upper VARCHAR(255);  
->  
->     SELECT UPPER(Match_Name)  
->     INTO match_upper  
->     FROM ticket  
->     WHERE Ticket_ID = t_id;  
->  
->     RETURN match_upper;  
-> END$$  
Query OK, 0 rows affected (0.01 sec)  
  
mysql>  
mysql> DELIMITER ;  
mysql> SELECT GetMatchNameUpper(1) AS MatchNameUpperCase;  
+-----+  
| MatchNameUpperCase |  
+-----+  
| MUMBAI INDIANS VS RCB |  
+-----+  
1 row in set (0.01 sec)
```