

### Activity 3:-

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Roll.No:31

### **Student Hostel Allocation:**

#### **INSERT**

1. Insert a hostel room with RoomID=301, Type='Single', Capacity=1.
2. Insert a student with StudentID=8, Name='Eve', Department='CS';.
3. Allocate the room with AllocationID=1, RoomID=301, StudentID=8, StartDate='2025-10-01';.

#### **SELECT**

4. Retrieve all rooms.
5. Retrieve all students.
6. Retrieve allocations of StudentID=8.

#### **UPDATE**

7. Update RoomID=301 type to 'Double';.
8. Update Eve's department to 'IT';.
9. Update AllocationID=1 StartDate to '2025-10-02';.

#### **DELETE**

10. Delete RoomID=301.
11. Delete StudentID=8.
12. Delete AllocationID=1.

```
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 14
Server version: 8.0.44 MySQL Community Server - GPL

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

mysql> Create database Student_Hostel_Allocation;
Query OK, 1 row affected (0.07 sec)

mysql> CREATE TABLE Rooms (RoomID INT PRIMARY KEY,Type VARCHAR(20),Capacity INT);
ERROR 1046 (3D000): No database selected
mysql> Use database Student_Hostel_Allocation;
ERROR 1049 (42000): Unknown database 'database'
mysql> Use Student_Hostel_Allocation;
Database changed
mysql> CREATE TABLE Rooms (RoomID INT PRIMARY KEY,Type VARCHAR(20),Capacity INT);
Query OK, 0 rows affected (0.03 sec)

mysql> CREATE TABLE Students (StudentID INT PRIMARY KEY,Name VARCHAR(50),Department VARCHAR(50));
Query OK, 0 rows affected (0.09 sec)

mysql> CREATE TABLE Allocations (AllocationID INT PRIMARY KEY,RoomID INT,StudentID INT,StartDate DATE,FOREIGN KEY (RoomID) REFERENCES Rooms(RoomID),
FOREIGN KEY (StudentID) REFERENCES Students(StudentID));
Query OK, 0 rows affected (0.11 sec)
```

```
mysql> INSERT INTO Rooms (RoomID, Type, Capacity)VALUES (301, 'Single', 1);
Query OK, 1 row affected (0.07 sec)

mysql> INSERT INTO Students (StudentID, Name, Department)VALUES (8, 'Eve', 'CS');
Query OK, 1 row affected (0.06 sec)

mysql> INSERT INTO Allocations (AllocationID, RoomID, StudentID, StartDate)VALUES (1, 301, 8, '2025-10-01');
Query OK, 1 row affected (0.06 sec)

mysql> Desc Rooms;
+-----+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| RoomID | int       | NO   | PRI | NULL    |       |
| Type   | varchar(20) | YES  |     | NULL    |       |
| Capacity | int      | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.04 sec)

mysql> Desc Students;
+-----+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| StudentID | int       | NO   | PRI | NULL    |       |
| Name      | varchar(50) | YES  |     | NULL    |       |
| Department | varchar(50) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> Desc Allocations;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| AllocationID | int | NO   | PRI | NULL    |       |
| RoomID       | int | YES  | MUL | NULL    |       |
| StudentID    | int | YES  | MUL | NULL    |       |
| StartDate    | date | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM Rooms;
+-----+-----+-----+
| RoomID | Type   | Capacity |
+-----+-----+-----+
| 301    | Single | 1         |
+-----+-----+-----+
1 row in set (0.00 sec)

mysql> SELECT * FROM Students;
+-----+-----+-----+
| StudentID | Name | Department |
+-----+-----+-----+
| 8         | Eve  | CS         |
+-----+-----+-----+
1 row in set (0.00 sec)

mysql> SELECT * FROM Allocations WHERE StudentID = 8;
+-----+-----+-----+-----+
| AllocationID | RoomID | StudentID | StartDate |
+-----+-----+-----+-----+
| 1            | 301    | 8         | 2025-10-01 |
+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> UPDATE Rooms SET Type = 'Double' WHERE RoomID = 301;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> UPDATE Students SET Department = 'IT' WHERE StudentID = 8;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> UPDATE Allocations SET StartDate = '2025-10-02' WHERE AllocationID = 1;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

```
mysql> Desc Rooms;
+-----+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| RoomID | int       | NO   | PRI | NULL    |       |
| Type   | varchar(20) | YES  |     | NULL    |       |
| Capacity | int      | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> Desc Students;
+-----+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| StudentID | int       | NO   | PRI | NULL    |       |
| Name      | varchar(50) | YES  |     | NULL    |       |
| Department | varchar(50) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> Desc Allocations;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| AllocationID | int | NO   | PRI | NULL    |       |
| RoomID       | int | YES  | MUL | NULL    |       |
| StudentID    | int | YES  | MUL | NULL    |       |
| StartDate    | date | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```