

## **Activity 3:-**

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## **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 | MUL | NULL |
| Capacity | int | YES | MUL | 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 | MUL | NULL |
| Department | varchar(50) | YES | MUL | 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 | MUL | NULL |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)

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```

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 | MUL | NULL |
| Capacity | int | YES | MUL | 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 | MUL | NULL |
| Department | varchar(50) | YES | MUL | 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 | MUL | NULL |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)

```