```
CREATE TABLE Departments (
    ->     dept_id INT PRIMARY KEY,
    ->     dept_name VARCHAR(50)
    -> );
```

Query OK, 0 rows affected (0.1704 sec)

 MySQL localhost:33060+ ssl student SQL >

 MySQL localhost:33060+ ssl student SQL > CREATE TABLE Doctors (

```
    ->     doctor_id INT PRIMARY KEY,
    ->     doctor_name VARCHAR(100),
    ->     dept_id INT,
    ->     FOREIGN KEY (dept_id) REFERENCES Departments(dept_id)
    -> );
```

Query OK, 0 rows affected (0.0489 sec)

 MySQL localhost:33060+ ssl student SQL >

 MySQL localhost:33060+ ssl student SQL > CREATE TABLE Patients (

```
    ->     patient_id INT PRIMARY KEY,

    ->     patient_name VARCHAR(100),
    ->     city VARCHAR(50)
    -> );
```

Query OK, 0 rows affected (0.0373 sec)

 MySQL localhost:33060+ ssl student SQL >

 MySQL localhost:33060+ ssl student SQL > CREATE TABLE Appointments (

```
    ->     appointment_id INT PRIMARY KEY,
    ->     patient_id INT,
    ->     doctor_id INT,
    ->     appointment_date DATE,
    ->     diagnosis VARCHAR(100),
```

```
        ->     FOREIGN KEY (patient_id) REFERENCES Patients(patient_id),

        ->     FOREIGN KEY (doctor_id) REFERENCES Doctors(doctor_id)

        -> );
```

Query OK, 0 rows affected (0.1405 sec)

 MySQL localhost:33060+ ssl student SQL > -- Departments

Query OK, 0 rows affected (0.0007 sec)

 MySQL localhost:33060+ ssl student SQL > INSERT INTO Departments VALUES (1, 'Cardiology');

Query OK, 1 row affected (0.0859 sec)

 MySQL localhost:33060+ ssl student SQL > INSERT INTO Departments VALUES (2, 'Neurology');

Query OK, 1 row affected (0.0072 sec)

 MySQL localhost:33060+ ssl student SQL >

 MySQL localhost:33060+ ssl student SQL > -- Doctors

Query OK, 0 rows affected (0.0006 sec)

 MySQL localhost:33060+ ssl student SQL > INSERT INTO Doctors VALUES (101, 'Dr. Babu', 1);

Query OK, 1 row affected (0.0099 sec)

 MySQL localhost:33060+ ssl student SQL > INSERT INTO Doctors VALUES (102, 'Dr. Sharma', 2);

Query OK, 1 row affected (0.0054 sec)

 MySQL localhost:33060+ ssl student SQL >

 MySQL localhost:33060+ ssl student SQL > -- Patients

Query OK, 0 rows affected (0.0007 sec)

 MySQL localhost:33060+ ssl student SQL > INSERT INTO Patients VALUES (1, 'Ravi Kumar', 'Delhi');

Query OK, 1 row affected (0.0066 sec)

 MySQL localhost:33060+ ssl student SQL > INSERT INTO Patients VALUES (2, 'Anita Sharma', 'Mumbai');

Query OK, 1 row affected (0.0049 sec)

MySQL localhost:33060+ ssl student SQL > INSERT INTO Patients VALUES (3, 'Sanjay Mehta', 'Delhi');

Query OK, 1 row affected (0.0048 sec)

 MySQL localhost:33060+ ssl student SQL >

 MySQL localhost:33060+ ssl student SQL > -- Appointments

Query OK, 0 rows affected (0.0007 sec)

 MySQL localhost:33060+ ssl student SQL > INSERT INTO Appointments VALUES (1001, 1, 101, '2025-08-01', 'Chest Pain');

Query OK, 1 row affected (0.0072 sec)

 MySQL localhost:33060+ ssl student SQL > INSERT INTO Appointments VALUES (1002, 2, 102, '2025-08-02', 'Migraine');

Query OK, 1 row affected (0.0053 sec)

 MySQL localhost:33060+ ssl student SQL > INSERT INTO Appointments VALUES (1003, 3, 101, '2025-08-03', 'Heart Palpitation');

Query OK, 1 row affected (0.0061 sec)

 MySQL localhost:33060+ ssl student SQL > -- 1. Display all the departments in the hospital.

Query OK, 0 rows affected (0.0009 sec)

 MySQL localhost:33060+ ssl student SQL > SELECT * FROM Departments;

+---------+------------+
| dept_id | dept_name |
+---------+------------+
| 1 | Cardiology |
| 2 | Neurology |
+---------+------------+

2 rows in set (0.0662 sec)

 MySQL localhost:33060+ ssl student SQL >

 MySQL localhost:33060+ ssl student SQL > -- 2. Show all patients who are from elhi'.

Query OK, 0 rows affected (0.0011 sec)

 MySQL localhost:33060+ ssl student SQL > SELECT * FROM Patients WHERE city = 'Delhi';

```
+------------+--------------+-------+
| patient_id | patient_name | city  |
+------------+--------------+-------+
|          1 | Ravi Kumar   | Delhi |
|          3 | Sanjay Mehta | Delhi |
+------------+--------------+-------+
2 rows in set (0.0020 sec)
```

 MySQL localhost:33060+ ssl student SQL >

 MySQL localhost:33060+ ssl student SQL > -- 3. Display the details of appointments including patient name, doctor name, date, and diagnosis.

Query OK, 0 rows affected (0.0008 sec)

 MySQL localhost:33060+ ssl student SQL > SELECT

```
                   ->    a.appointment_id,
                   ->    p.patient_name,
                   ->    d.doctor_name,
                   ->    a.appointment_date,
                   ->    a.diagnosis
                   -> FROM Appointments a
                   -> JOIN Patients p ON a.patient_id = p.patient_id
                   -> JOIN Doctors d ON a.doctor_id = d.doctor_id;
+----------------+--------------+-------------+------------------+-------------------+
| appointment_id | patient_name | doctor_name | appointment_date | diagnosis         |
+----------------+--------------+-------------+------------------+-------------------+
|           1001 | Ravi Kumar   | Dr. Babu    | 2025-08-01       | Chest Pain        |
|           1003 | Sanjay Mehta | Dr. Babu    | 2025-08-03       | Heart Palpitation |
|           1002 | Anita Sharma | Dr. Sharma  | 2025-08-02       | Migraine          |
+----------------+--------------+-------------+------------------+-------------------+
3 rows in set (0.0015 sec)
```

MySQL localhost:33060+ ssl student SQL >

MySQL localhost:33060+ ssl student SQL > -- 4. Find the number of appointments handled by each doctor.

Query OK, 0 rows affected (0.0007 sec)

MySQL localhost:33060+ ssl student SQL > SELECT

->   d.doctor_name,

->   COUNT(a.appointment_id) AS appointment_count

-> FROM Doctors d

-> LEFT JOIN Appointments a ON d.doctor_id = a.doctor_id

-> GROUP BY d.doctor_name;

```
+-------------+-------------------+
| doctor_name | appointment_count |
+-------------+-------------------+
| Dr. Babu    |         2 |
| Dr. Sharma  |          1 |
+-------------+-------------------+
```

2 rows in set (0.0024 sec)

MySQL localhost:33060+ ssl student SQL >

MySQL localhost:33060+ ssl student SQL > -- 5. List patients who visited r. Babu'.

Query OK, 0 rows affected (0.0005 sec)

MySQL localhost:33060+ ssl student SQL > SELECT

->   p.patient_name

-> FROM Appointments a

-> JOIN Patients p ON a.patient_id = p.patient_id

-> JOIN Doctors d ON a.doctor_id = d.doctor_id

-> WHERE d.doctor_name = 'Dr. Babu';

```
+--------------+
| patient_name |
```

```
+--------------+
| Ravi Kumar   |
| Sanjay Mehta |
+--------------+
2 rows in set (0.0020 sec)
 MySQL  localhost:33060+ ssl  student  SQL >
 MySQL  localhost:33060+ ssl  student  SQL > -- 6. Update the diagnosis for appointment ID
1001 to ild Chest Pain'.
Query OK, 0 rows affected (0.0004 sec)
 MySQL  localhost:33060+ ssl  student  SQL > UPDATE Appointments
                    -> SET diagnosis = 'Mild Chest Pain'
                    -> WHERE appointment_id = 1001;
Query OK, 1 row affected (0.0049 sec)

Rows matched: 1  Changed: 1  Warnings: 0
 MySQL  localhost:33060+ ssl  student  SQL >
 MySQL  localhost:33060+ ssl  student  SQL > -- 7. Delete the appointment for patient ID 3.
Query OK, 0 rows affected (0.0008 sec)
 MySQL  localhost:33060+ ssl  student  SQL > DELETE FROM Appointments
                    -> WHERE patient_id = 3;
Query OK, 1 row affected (0.0055 sec)
 MySQL  localhost:33060+ ssl  student  SQL > select * from Appointments
                    -> ;
+----------------+------------+-----------+------------------+-----------------+
| appointment_id | patient_id | doctor_id | appointment_date | diagnosis       |
+----------------+------------+-----------+------------------+-----------------+
|           1001 |          1 |       101 | 2025-08-01       | Mild Chest Pain |
|           1002 |          2 |       102 | 2025-08-02       | Migraine        |
```

```
+---------------+-----------+----------+----------------+---------------+
```

2 rows in set (0.0014 sec)

 MySQL localhost:33060+ ssl student SQL >