3.

```sql
-- Create Hotel table
CREATE TABLE Hotel (
    HotelNo INT PRIMARY KEY,
    Name VARCHAR(100),
    City VARCHAR(100)
);

-- Create Room table
CREATE TABLE Room (
    RoomNo INT,
    HotelNo INT,
    Type VARCHAR(50),
    Price DECIMAL(10, 2),
    PRIMARY KEY (HotelNo, RoomNo),
    FOREIGN KEY (HotelNo) REFERENCES Hotel(HotelNo)
);

-- Create Booking table
CREATE TABLE Booking (
    HotelNo INT,
    GuestNo INT,
    DateFrom DATE,
    DateTo DATE,
    RoomNo INT,
    PRIMARY KEY (HotelNo, GuestNo, DateFrom),
    FOREIGN KEY (HotelNo, RoomNo) REFERENCES Room(HotelNo, RoomNo),
    FOREIGN KEY (GuestNo) REFERENCES Guest(GuestNo)
);

-- Create Guest table
```

```sql
CREATE TABLE Guest (

    GuestNo INT PRIMARY KEY,

    GuestName VARCHAR(100),

    GuestAddress VARCHAR(150)

);


-- Insert sample values into Hotel table

INSERT INTO Hotel (HotelNo, Name, City) VALUES

(1, 'Grosvenor', 'London'),

(2, 'Sample Inn', 'New York'),

(3, 'Coastal View', 'Miami');


-- Insert sample values into Room table

INSERT INTO Room (RoomNo, HotelNo, Type, Price) VALUES

(101, 1, 'Single', 150.00),

(102, 1, 'Double', 200.00),

(201, 2, 'Suite', 300.00),

(202, 2, 'Standard', 180.00),

(301, 3, 'Ocean View', 250.00),

(302, 3, 'Poolside', 220.00);


-- Insert sample values into Guest table

INSERT INTO Guest (GuestNo, GuestName, GuestAddress) VALUES

(1, 'John Doe', '123 Main St, Anytown'),

(2, 'Jane Smith', '456 Broadway, Othercity'),

(3, 'Bob Johnson', '789 Elm St, Anothercity');


-- Insert sample values into Booking table

INSERT INTO Booking (HotelNo, GuestNo, DateFrom, DateTo, RoomNo) VALUES

(1, 1, '2023-11-01', '2023-11-05', 101),

(1, 2, '2023-12-10', '2023-12-15', 102),
```

```
(2, 3, '2023-11-20', '2023-11-25', 201),

(3, 1, '2023-12-05', '2023-12-10', 301);


SELECT *

FROM Hotel;


SELECT COUNT(HotelNo) AS NumberOfHotels

FROM Hotel;


SELECT Type, Price

FROM Room

WHERE HotelNo = (SELECT HotelNo FROM Hotel WHERE Name = 'Grosvenor');


SELECT HotelNo, COUNT(RoomNo) AS NumberOfRooms

FROM Room

GROUP BY HotelNo;


UPDATE Room

SET Price = Price * 1.05;


SELECT *

FROM Hotel

WHERE City = 'London';


SELECT AVG(Price) AS AveragePrice

FROM Room;


SELECT Guest.*

FROM Guest

INNER JOIN Booking ON Guest.GuestNo = Booking.GuestNo

WHERE Booking.HotelNo = (SELECT HotelNo FROM Hotel WHERE Name = 'Grosvenor');
```

```sql
SELECT Hotel.HotelNo, COUNT(Room.RoomNo) AS NumberOfRooms
FROM Hotel
LEFT JOIN Room ON Hotel.HotelNo = Room.HotelNo
WHERE Hotel.City = 'London'
GROUP BY Hotel.HotelNo;
```

```sql
CREATE VIEW HotelRoomDetails AS
SELECT H.*, R.RoomNo, R.Type, R.Price
FROM Hotel H
JOIN Room R ON H.HotelNo = R.HotelNo;
```

```sql
SELECT *
FROM HotelRoomDetails;
```