



SQL Project : Hotel Room and Booking Management System

BY :
Yamuna Saravanan

INTRODUCTION:

This project is a **SQL-based Hotel Booking System** designed to manage data related to **hotels, rooms, customers, and bookings**. It helps organize and track **room availability, customer reservations, and hotel details** efficiently, making **hotel management** easier and more reliable.



Project Objectives:

- Efficiently manage hotel, room, customer, and booking information using a relational database.
- Prevent double bookings by accurately tracking room availability and status.
- Streamline the reservation process to improve user and administrative experience.
- Enable fast and accurate data retrieval through structured SQL queries.

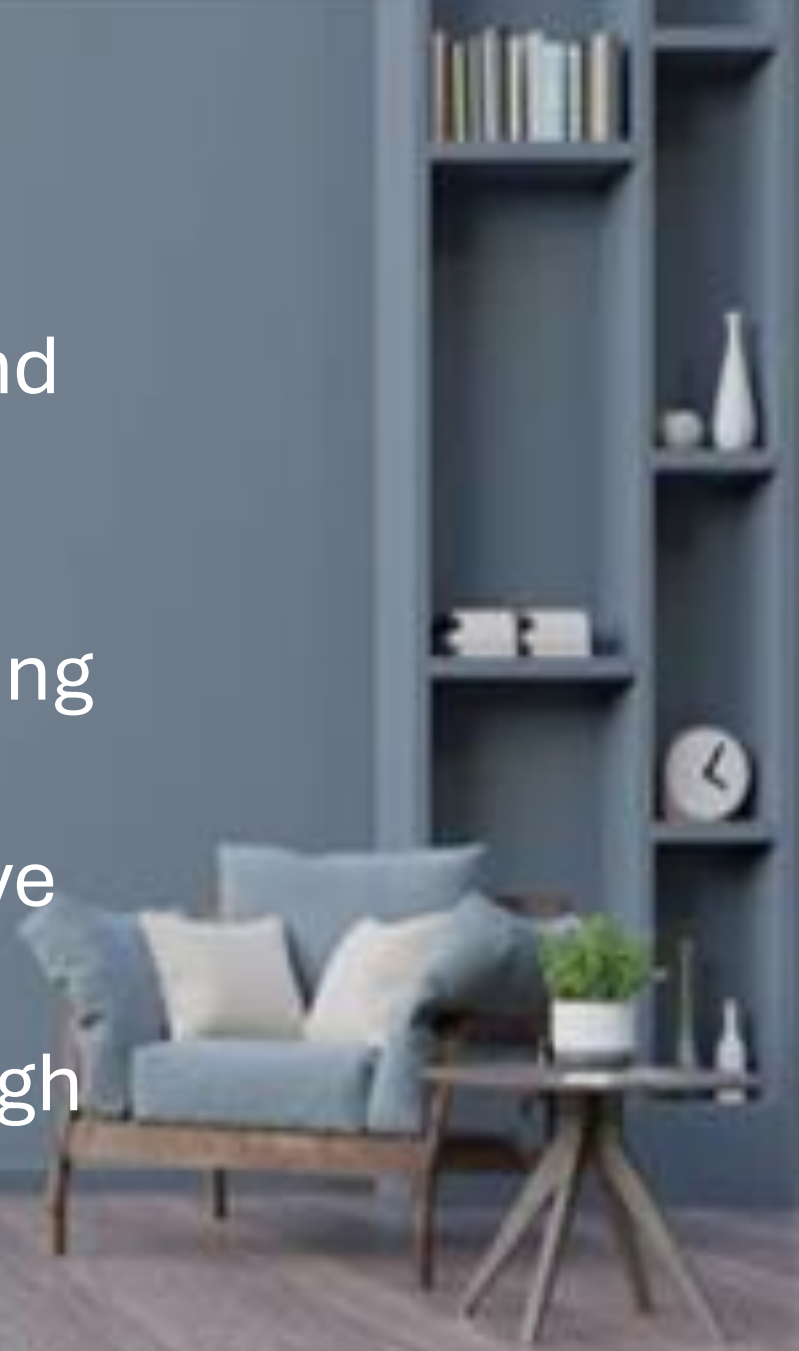


TABLE 1: Hotels (This table stores information about hotels including their name, location, and rating.)

```
create table Hotels  
(Hotel_id int primary key auto_increment,  
Hotel_name varchar(100),  
Location varchar(100),  
Rating decimal(10,2));
```

TABLE 2: Customer (This table stores information about customers including their name, email, and phone number.)

```
create table customer
(customer_id int primary key auto_increment,
c_name varchar(100),
c_email varchar(100),
c_phone varchar(100));
```

TABLE 3: Rooms (This table stores details of rooms including type, price, status, and the hotel they belong to.)

```
create table Rooms
(room_id int primary key auto_increment,
Hotel_id int,
room_typr varchar(100),
price decimal(10,2),
R_status varchar(20),
foreign key(Hotel_id) references Hotels(Hotel_id));
```


TABLE 4: Bookings (This table stores booking details including customer, room, check-in/check-out dates, and booking date.)

```
create table Bookings
(booking_id INT AUTO_INCREMENT PRIMARY KEY,
customer_id INT,
room_id INT,
check_in DATE,
check_out DATE,
booking_date DATE,
FOREIGN KEY (customer_id) REFERENCES Customer(customer_id),
FOREIGN KEY (room_id) REFERENCES Rooms(room_id));
```

QUERY 1: Displays booking details with customer name, hotel name, room type, and check-in/check-out dates.

Select

```
B.booking_id,  
C.name AS customer_name,  
H.name AS hotel_name,  
R.room_type,  
B.check_in,  
B.check_out  
FROM Bookings B  
JOIN Customers C ON B.customer_id = C.customer_id  
JOIN Rooms R ON B.room_id = R.room_id  
JOIN Hotels H ON R.hotel_id = H.hotel_id  
ORDER BY B.check_in;
```

Result Grid						
		Filter Rows:	Export:	Wrap Cell Content:		
	booking_id	customer_name	hotel_name	room_typr	check_in	check_out
▶	8	james	mountain lodge	Suite	2025-04-10	2025-05-20
	6	john doe	sunset inn	Single	2025-05-01	2025-05-05
	7	jane smith	sea view resort	Double	2025-05-10	2025-05-12
	9	sherlock	Nestly	Suite	2025-06-03	2025-06-16

QUERY 2: Displays hotels with more than one booking along with the total number of bookings.

```
SELECT
    H.H_name AS hotel_name,
    COUNT(B.booking_id) AS total_bookings
from Bookings B
join Rooms R ON B.room_id = R.room_id
join Hotels H ON R.hotel_id = H.hotel_id
Group by H.H_name
Having COUNT(B.booking_id) >1 ;
```

QUERY 3: Displays room price along with the corresponding hotel name

```
SELECT
    R.price AS Room_Price,
    H.H_name AS Hotel_Name
FROM Rooms R
JOIN Hotels H ON R.Hotel_id = H.Hotel_id
LIMIT 0, 1000;
```

Result Grid			Filter Rows:	Export:
	Room_Price	Hotel_Name		
▶	1500.00	sunset inn		
	2500.00	sea view resort		
	4000.00	mountain lodge		

QUERY 4: Displays all customer contact details along with a sample prospect user using UNION.

```
select c_name,c_email, c_phone FROM Customer  
  
union  
  
select 'Prospect User', 'prospect@example.com', '0000000000';
```

Result Grid				Filter Rows:	Export:
	c_name	c_email	c_phone		
▶	john doe	johndeo@34gmail.com	1235456667		
	jane smith	janesmith@gmail.com	98765432		
	james	jamesdevi	456789321		

Report Generated:

- **Shows rooms that are currently booked** and the guest hasn't checked out yet.
- **Helpful for front desk staff** to see which rooms are occupied.
- **Includes hotel name, guest name, room type, check-in, and check-out dates.**
- **Useful for managing daily operations** and planning room availability.



Advantages of the Library Management System:

- Efficient Booking Management
- Real-Time Room Availability
- Better Customer Experience
- Easy Data Retrieval & Reporting



Thank You

BY :
Yamuna Saravanan