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1. Introduction

1.1 System Introduction

The Hotel Room Booking System is a comprehensive software solution designed to streamline the management of room, reservations, guest details and availability in a small hotel. This system addresses the essential needs of hotel management by organizing information related to rooms, guests, and bookings in a centralized database. Key features include the creation of new bookings, management of guest data, and real-time availability checks, providing a seamless booking experience for both the hotel staff and their guests. This system is implemented using HTML and CSS for the front-end interface, PHP for the server-side processing and MySQL for database management, ensuring robust and efficient operation tailored to the requirements of small-scale hotel operations.

1.2 Stakeholders

The stakeholders are people or organizations who have an interest in the development of the system architecture.

Hotel Staff

Hotel staff includes people who are interact with the system. They use system to manage reservations, manage rooms and their availability , and manage guests.

Hotel Guests

Guests do not interact directly with the system back-end. But still they are indirect stakeholders as their reservations, personal details and room preferences are managed through the system.

Hotel Management

Hotel Management relies on the system for accurate reporting, financial tracking, performance analysis etc.

IT Developers / Support

The people who are responsible for maintaining, troubleshooting, and upgrading the system as required. They ensure the system remains functional, secure, and up-to-date with any new requirements or technological improvements.

2. Requirement Analysis

2.1 Use Case Diagram

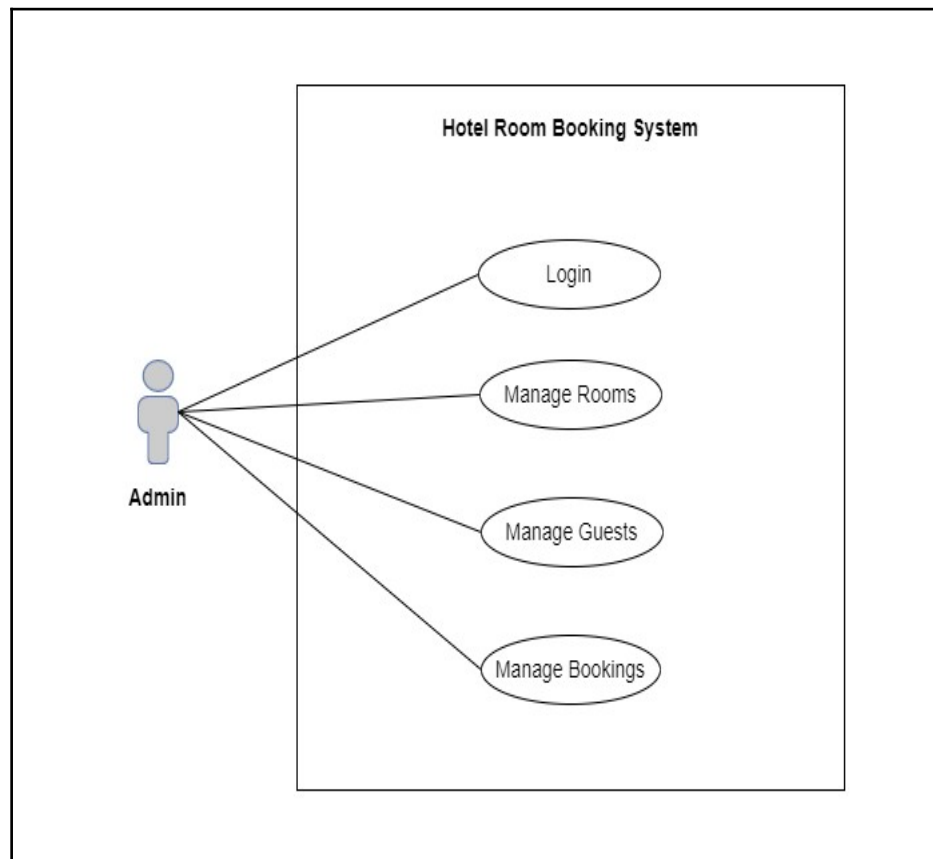


Figure 1 – Use Case Diagram

2.2 Functional and Non-Functional Requirements

Functional Requirements :

- Admin can log into the system using a secure username and password.
- Admin can create, view, and delete bookings.
- The system links each booking to a specific guest and room, tracking check-in and check-out dates.
- Admin shall be able to add, view and delete room details and guests details through relevant interfaces.

Non-Functional Requirements :

- The system should handle multiple bookings ,add guests information efficiently without delays.
- Secure login mechanism with password encryption.
- Clear error messages and validation to guide users.

- The system should be scalable enough to bare growing number of rooms and guests.
- The system should be structured so that updates, bug fixes, or feature additions can be applied with minimal disruption.

3. High Level Design

3.1 Classes

For the Hotel Room Booking System, followings are the classes that can be identified.

- Guest
- Room
- Booking
- User / Admin

3.2 Class Diagram

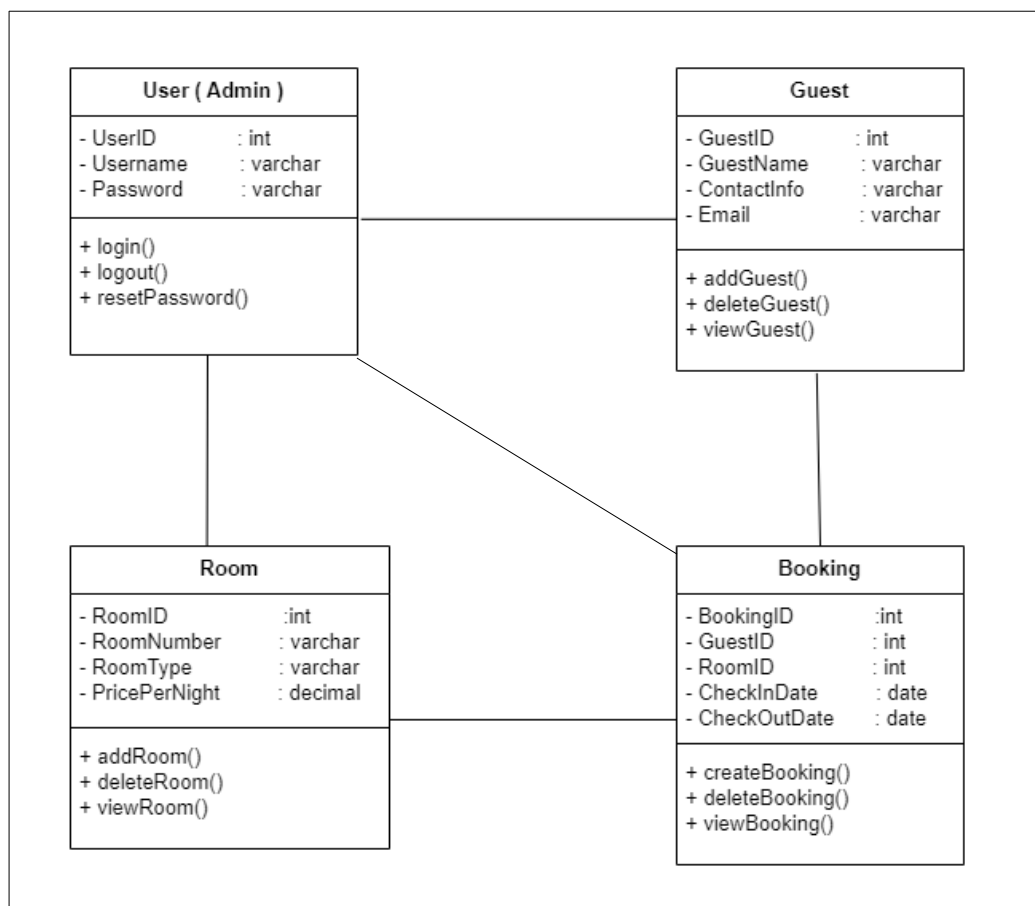


Figure 2 – Class Diagram

4. Data Modeling

4.1 Entity Relationship Diagram

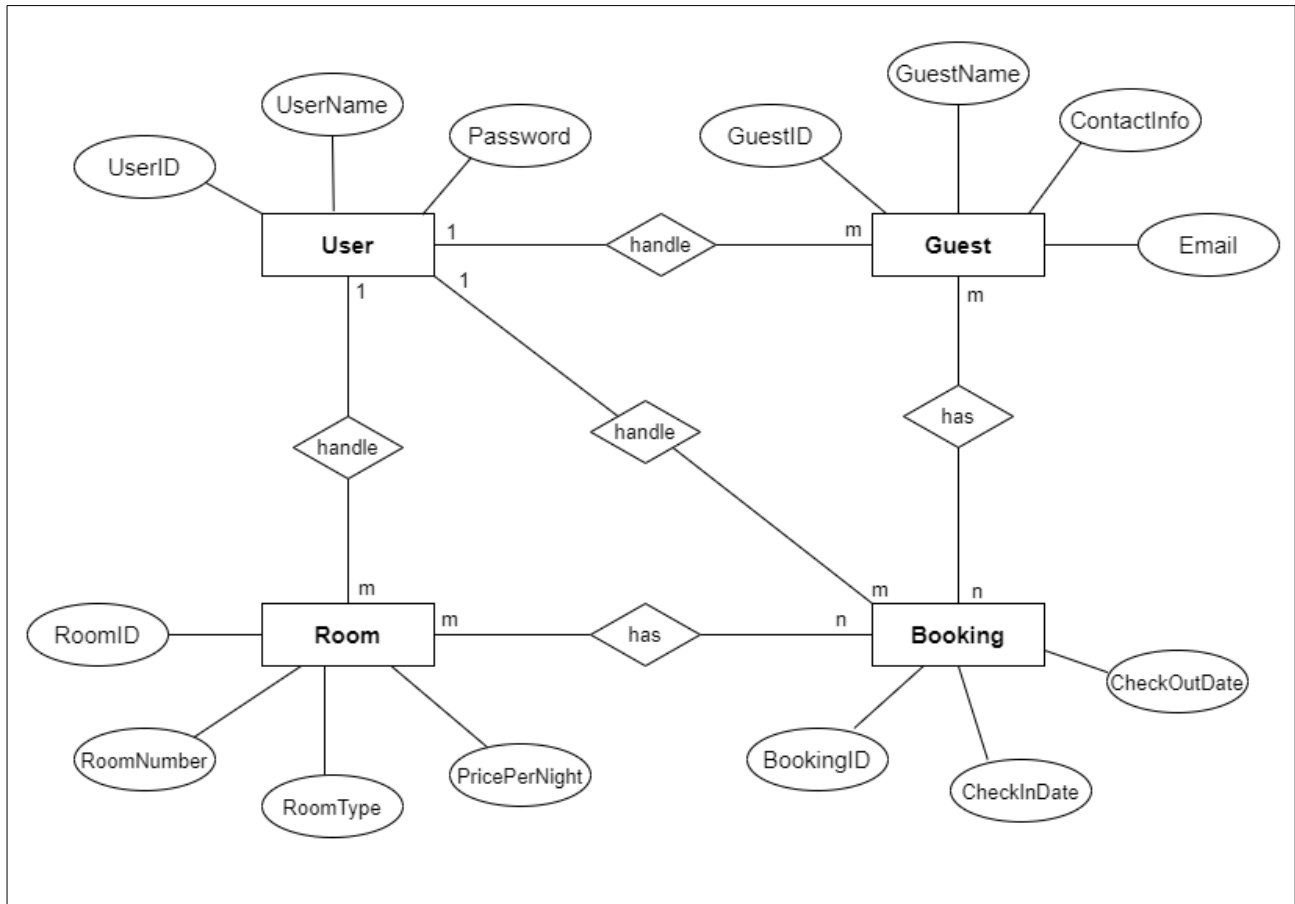


Figure 3 – ER Diagram

5. Detail Design

5.1 Screen Flow Diagram

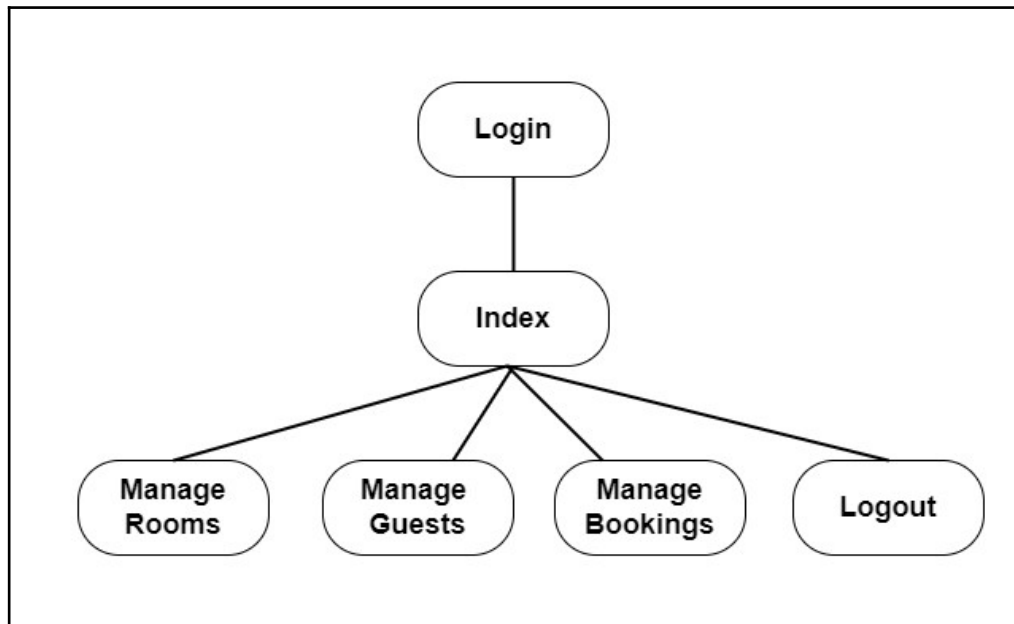
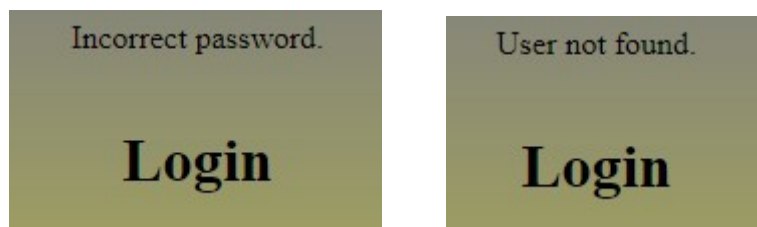


Figure 4 – Screen Flow Diagram

6. System Testing

6.1 Login Testing

- Login page will display an error message when entered incorrect credentials.



- Correct credentials will direct user to the dashboard.

Welcome to the Hotel Booking System, admin!

6.2 Add Data Testing

6.2.1 Add Room

User has to fill the Add New Room form with relevant data types, in order to add new room.

Add New Room

Room Number: 108

Room Type: family

Price per Night: 7500

Add Room

Click to Add New Room

After entering the room, it will show in the Current Rooms table.

Current Rooms

Room ID	Room Number	Room Type	Price per Night	Actions
1	101	Single	100.00	Delete
2	102	Double	150.00	Delete
9	105	single	4500.00	Delete
11	108	family	7500.00	Delete

6.2.2. Add Guest

User has to fill the Add Guest form with relevant data types, in order to add new guest.

Add Guest

Guest Name: Lina Ferd

Contact Info: 785-698-5263

Email: lina@example.com

Add Guest

Click to add New Guest

Guest added successfully!

Added Guest will show in the Existing Guests table.

Existing Guests				
Guest ID	Guest Name	Contact Info	Email	Actions
1	John Doe	123-456-7890	johndoe@example.com	Delete
2	Jane Smith	098-765-4321	janesmith@example.com	Delete
3	Zara Oseph	752-869-5865	zara@example.com	Delete
5	Lina Ferd	785-698-5263	lina@example.com	Delete


6.2.3 Add Booking


User has to fill the Add Booking form with relevant data types, in order to add new booking. And added booking will show in the Existing Bookings table.

Add New Booking

Guest ID:

Room ID:

Check-In Date: 

Check-Out Date: 

Click to add New Booking

Existing Bookings					
Booking ID	Guest Name	Room Number	Check-In Date	Check-Out Date	Actions
4	John Doe	102	2024-10-24	2024-10-26	Delete
15	Lina Ferd	108	2024-11-04	2024-11-06	Delete

6.3 Delete Data

6.3.1 Delete Room

User can easily delete a room by clicking on Delete Button in the Actions column in Current Rooms table.

6.3.2 Delete Guest

User can easily delete a guest by clicking on Delete Button in the Actions column in Existing Guests table.

6.3.3 Delete Booking

User can easily delete a booking by clicking on Delete Button in the Actions column in Existing Bookings table.

7. Conclusion

In conclusion, the Hotel Room Booking System was designed and developed to streamline the reservation process, improve guest data management, and facilitate room availability tracking for a small hotel. By implementing essential functionalities such as room and guest management, secure login, and a user-friendly booking interface, this system successfully supports the hotel's operational needs. Utilizing HTML, PHP, and MySQL, the system leverages a robust relational database structure and an accessible web interface that simplifies administrative tasks. Overall, this project demonstrates a practical approach to developing an admin-controlled booking system, providing a foundation for potential future enhancements such as real-time availability updates and customer-facing reservation features.