Team Name : System React
Team Leader : Mir Rabbi (C233273)
Team Member's : Tanjim Mahmud (C233259)
Joytu Das Nobo (C233262)
Md Shoibul Islam (C233274)

Hotel Reservation System Report

System Overview

The System React team presents a comprehensive Hotel Reservation System designed to streamline and enhance the hotel booking experience. This system is implemented in C and offers a user-friendly command-line interface for easy interaction.

Key Features

1. User Authentication

- Sign Up: Users can create a new account by providing a unique username and password. The system ensures the uniqueness of usernames to avoid duplication.
- Login: Existing users can log in by entering their username and password. Successful authentication grants access to the system's functionalities.

2. Room Booking

- Real-time Room Status: The system displays the current status of each room, including whether it is "Available," "Booked," or other relevant statuses.
- Booking: Users can book available rooms by selecting a room number. The system updates the room status to "Booked" and associates the booking with the user.

3. Booking Management

- View Booking History: Users can view their booking history, including details of the booked room. This feature provides transparency about the user's past reservations.
- Cancel Booking: Users can cancel their existing bookings, freeing up the room for other users. The system updates the room status to "Available" upon successful cancellation.

4. Seamless Navigation

- User-Friendly Menu: The system presents an intuitive menu that guides users through the available options. Users can easily choose the desired operation.

5. Robust System Logic

- Input Validation: The system validates user inputs to ensure the correctness and integrity of the data. For example, it checks for valid room numbers and prevents duplicate usernames during sign-up.

System Usage

1. Sign Up:
   - Users can create an account by providing a unique username and password.
   - Duplicate usernames are not allowed.
2. Login:
   - Existing users can log in with their credentials.
   - Once logged in, users can access the booking features.
3. Book a Room:
   - Users can view available rooms and choose one to book.
   - The system updates the room status and associates the booking with the user.
4. View Booking History:
   - Users can check their booking history, providing insights into past reservations.
5. Cancel Booking:
   - Users can cancel their existing bookings, making the room available for others.
6. Exit:
   - Users can exit the system when done, ensuring a smooth user experience.

Conclusion

The Hotel Reservation System by System React offers a user-friendly and efficient solution for hotel booking management. With features such as user authentication, real-time room status updates, and booking management, the system provides a seamless experience for both users and hotel administrators. The robust system logic ensures data integrity and user satisfaction, making it a reliable tool for hotel reservation needs.