

Design Overview for hotel management system

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Summary of Program

This program is a hotel management system designed to handle room reservation, cancel reservation and check room availability.

Required Data Types

Describe each of the records and enumerations you will create using the following table (one per record).

Table 1: Room details

Field Name	Type	Notes
number	string	Room number in rooms.txt
type	string	Room type in rooms.txt

Table 2: Guest details

Field Name	Type	Notes
name	string	Guest's name
contact	string	Guest's phone number

Table 3: Reservation details

Field Name	Type	Notes
guest_name	string	Name of guest making reservation
room_number	string	Room that are being reserved
start_date	string	Start date of reservation
end_date	string	End date of reservation

Overview of Program Structure

1. Admin login
 - Name: login
 - Validate admin username and password before granting access to the system
2. Room data handling
 - Name: read_rooms
 - Read room details from room.txt
 - Name: display_rooms
 - Display all rooms
3. Reservation data handling
 - Name: read_reservations
 - Read reservations data in reservations.txt
 - Name: write_reservations
 - Writes updated reservations
 - Name: display_reservations
 - Display all current reservations
4. Reservation management
 - Name: book_room
 - Books room for guest
 - Name: cancel_reservations
 - Cancel existing reservations with guest's name
5. Room availability checker
 - Name: check_room_availability
 - Check if room is available in a specified date range
6. Menu system
 - Name: display_menu
 - Display a menu with option to interact
7. Main system
 - Name: main
 - Manage programs flow