Omar Al-mukhtar University

Advanced OOP

Hotel Management System

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1. A summary of the system

The Hotel Management System is a system designed to organize the main operations in a hotel, such as managing rooms, bookings, and bills. The system .helps make data management easier and reduces manual work.

The system is used by two types of users: the Manager and the Receptionist The manager is responsible for managing rooms by adding or removing them and for checking all bookings and bills .The receptionist works directly with customers by entering their information, creating bookings, and generating bills for their stay.

The system starts with a login screen that gives each user specific permissions based on their role. After logging in, the manager can control all hotel operations, while the receptionist can check available rooms and make bookings. The system stores and updates data automatically to keep the information accurate and organized.

2. main use-cases

Use Case Name	Login
Actor	Manager, Receptionist
Precondition	user has an account
Steps	1- User opens the login page 2- User enters ID and password 3- System checks the credentials 4- If correct→ user can login 5- System shows the main menu depending on user type
Alternative	If ID or password is wrong → system shows error message

Use Case Name	Add Room
Actor	Manager
Precondition	Manager is logged in
Steps	1- Manager chooses " Add Room " 2- Enters room number, type, and price per night 3- System checks if the room number already exists 4- If not → system adds the room 5- System shows " Room added successfully"
Alternative	If room number exists → system shows error

Use Case Name	Remove Room
Actor	Manager
Precondition	Manager is logged in
Steps	1- Manager chooses "Remove Room" 2- Enters room number 3- System checks if the room exists 4- If exists → system removes the room 5- System shows "Room removed successfully "
Alternative	If room does not exist → system shows Room not found

Use Case Name	View All Bookings
Actor	Manager
Precondition	Manager is logged in
Steps	1- Manager chooses "View All Bookings" 2- System shows all bookings with details

Use Case Name	View All Bills
Actor	Manager
Precondition	Manager is logged in
Steps	1- Manager chooses "View All Bills" . 2- System shows all bills with details

Use Case Name	View All Rooms
Actor	Manager, Receptionist
Precondition	Manager, Receptionist are logged in
Steps	User chooses "View All Rooms" System shows all rooms with details

Use Case Name	Find Available Room
Actor	Receptionist
Precondition	Receptionist is logged in
Steps	1- Receptionist chooses the room type 2- System finds the first available room of that type 3- If found → system shows the room
Alternative	If not → system shows "No available rooms "

Use Case Name	Create Booking
Actor	Receptionist
Actor Precondition	Receptionist is logged in, room is available
Steps	1- Receptionist chooses "Create Booking" 2- Enters customer name, room number, check-in and check-out dates 3- System checks if the room is available If yes → system creates the booking and marks room as 4-booked 5-System shows "Booking created successfully" with booking details
Alternative	If room is booked → system shows "Room is already booked

Use Case Name	Generate Bill
Actor	Receptionist
Precondition	Booking exists
Steps	1- Receptionist chooses "Generate Bill" 2- Selects the booking 3- System calculates total price (nights × room price) 4- System creates the bill 5- System shows "Bill generated successfully" with details

A use case diagram