

Software Requirements Specification

Hotel Room Management System

Introduction:

Purpose:

This system will help hotel staff manage room bookings, customer details, room availability, payments, and housekeeping operations.

Project overview:

The Hotel Room Management System is a software application designed to manage hotel room bookings, guest check-in/check-out, billing, and housekeeping tasks. It replaces manual processes with a digital system that shows real-time room status, stores guest information, and automates reservation and payment operations. The system helps hotel staff work faster, reduces errors, and improves guest experience through efficient room and service management.

Scope:

HRMS is designed to automate all tasks related to hotel room management, including:

- Room reservation and cancellation

- - Check-in / Check-out process
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 - Customer record management
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 - Managing room availability
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 - Generating bills and receipts
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 - Housekeeping and room status updates
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 - Admin management (staff accounts, setting
- The system will increase efficiency, reduce manual errors, and provide real-time room status.

Overall System Description:

User Characteristics:

Admin

- The admin controls the whole system.
- They add rooms, create staff accounts, and update settings.
- They should know basic computer use.

Receptionist

- Uses the system the most.

- Handles bookings, check-ins, and check-outs.
- Needs simple computer and typing skills.
- Must enter guest information correctly.

Manager

- Use the system to see reports and hotel performance.
- I should understand hotel work and finances.

Accounts Staff

- Handles payments and billing.
- Should know how to print bills and check payment details.

Guests (optional for online booking)

- If the hotel allows online booking, guests will book rooms using their phone or computer.

Operating Environment:

Hardware Environment

- Computers or laptops at reception and admin office.
- Printer for printing bills or receipts.
- Card reader for debit/credit payments (optional).

Software Environment

- Operating System: Windows/Linux
- Web browser (if software is web-based): Chrome, Edge, Firefox
- Database: MySQL / SQL Server
- Application runs on LAN (local network) or internet.

Network Requirements

- Stable LAN connection inside the hotel.
- Internet connection if online booking or cloud storage is used.

Usage Locations

- Reception desk
- Admin office
- Manager's room
- Works 24 hours daily

functional Requirements:

These are the things the system must be able to do.

User Login and Authentication

- The system must allow users to log in with a username and password.
- The system must show only the features allowed for each user (Admin, Receptionist, Manager).

- The system must allow the admin to create, edit, or remove user accounts.

Room Management

- The system must allow the admin to add new rooms.
- The system must allow editing room details (room type, price, status).
- The system must show the current status of every room (Available, Occupied, Booked, Cleaning, Maintenance).
- The system must update room status automatically after check-in or check-out.

Booking & Reservation Management

- The system must allow the receptionist to create new bookings.
- The system must check room availability before booking.
- The system must assign a unique booking ID for each reservation.
- The system must store customer details (name, contact, CNIC/passport).
- The system must allow modifying or cancelling bookings.

Guest Check-In

- The system must allow check-in only if the room is available.
- The system must save the guest's stay duration.
- The system must change the room status to Occupied after check-in.

Guest Check-Out

- The system must calculate total charges based on number of days stayed.

- The system must update the room status to Cleaning after check-out.
- The system must allow the receptionist to complete the check-out process.

Billing and Payment

- The system must calculate the room cost automatically.
- The system must allow adding extra charges (food, laundry, services).
- The system must generate the final bill for the guest.
- The system must support different payment methods (cash, card, online).
- The system must store all payment records.

Reporting

- The system must generate daily room status reports.
- The system must generate booking reports (daily/weekly/monthly).
- The system must generate income and payment reports for the manager.

Notifications and Alerts

- The system must show alerts for rooms with upcoming check-outs.
- The system must notify the admin if a room is under maintenance.

Data Storage and Management

- The system must save all data in a secure database.
- The system must allow searching for records (rooms, guests, bookings).
- The system must allow backup and restore of all hotel data.

Non-Functional Requirements

performance Requirements:

- The system should respond to user actions (like booking or check-in) within 2–3 seconds.
- It should handle multiple users at the same time without slowing down.
- Room status should update immediately after booking, check-in, or check-out.
- Reports should be generated within a few seconds.
- The system should work smoothly even when there are many records (rooms, bookings, guests).
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Safety Requirements

- The system must automatically back up data daily to prevent data loss.
- In case of power failure, the system should not lose any saved data.
- The system should handle incorrect input safely (example: invalid dates).
- The system should prevent accidental deletion of important records by asking for confirmation.
- Only authorized staff should handle system maintenance.

Security Requirements

- All users must log in with a valid username and password.
- Passwords should be stored safely (encrypted).
- Each user should have different access levels (Admin, Receptionist, Manager).
- The system must lock or log out automatically after a period of inactivity.
- Sensitive information (guest details, payments) must be protected and not shown to unauthorized people.
- Only the admin can add or remove user accounts.
- Data sent between computers (if networked) must be secure.

User Documents

User Manual

- Step-by-step instructions on how to use the software
- Screenshots of menus and features
- How to do bookings, check-ins, check-outs
- How to generate bills and reports

2. Installation Guide

- How to install the software on hotel computers
- System requirements
- Network setup instructions

3. Troubleshooting Guide

- Common problems and solutions
- How to reset passwords
- What to do if the system stops responding

4. Quick Start Guide

- A short guide for new staff
- Basic actions like login, booking, and check-in

5. Admin Guide

- Instructions for managing rooms, users, settings, and backups
- How to update prices or add new room types