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Hotel Management System

Problem Statement:

Developing a user-friendly Hotel Management System for All Stakeholders

The objective of this project is to develop a hotel management system that meets the needs of all stakeholders involved in the hotel's operations. The stakeholders include the receptionist, cashier/accounts department, customers, manager, managing director, and the board of directors or trust. Currently, the hotel management system is not integrated, and different stakeholders use different systems to manage their tasks. This leads to inefficiencies, delays, and errors in the hotel's operations. For example, the receptionist may not have access to the latest information about room availability or customer preferences, which can lead to double bookings or unsatisfied customers. The cashier/accounts department may have difficulty keeping track of billing and payments, which can lead to revenue leakage or errors in accounting.

To overcome these challenges, a hotel management system is required that integrates all the different systems and provides a unified platform for all stakeholders to manage their tasks. The hotel management system should have the following features:

1. Receptionist Management: The receptionist should be able to manage room reservations, view room availability, check-in guests, manage guest requests, and update guest preferences.
2. Cashier/Accounts Management: The cashier/accounts department should be able to manage billing and payments, generate bills, view payment history, and send reminders to customers.
3. Customer Management: Customers should be able to make reservations, view room availability, manage their bookings, and provide feedback on their experience.
4. Manager Management: The manager should be able to view reports on occupancy rates, room revenue, guest preferences, and other important aspects of hotel operations.
5. Managing Director/Board of Directors Management: The managing director/board of directors should be able to view reports on the overall performance of the hotel, including revenue, expenses, profitability, and customer satisfaction.

The hotel management system should be designed to be user-friendly, secure, and scalable. It should be accessible from anywhere, and it should be designed to integrate with other systems used by the hotel. The hotel management system will help the hotel to improve efficiency, reduce costs, and provide a better experience to customers.

Software Requirement Specification(SRS)

1 Introduction

1.1 Purpose of this document

The purpose of this document is to define the software requirement specification for the development of a Hotel Management System application that will be used to automate the day-to-day operations of a hotel. This document will outline the software requirements and features necessary to meet the needs of the hotel's stakeholders, including receptionists, cashiers/accountants, customers, managers, managing directors, and the board of directors.

1.2 Scope of this document

This document defines the requirements for the development of the Hotel Management System application. The application will be used to manage room reservations, check-ins, checkouts, guest information, billing, and other important aspects of hotel operations. The system will be designed to be user-friendly, secure, and scalable. It will be accessible from anywhere and will integrate with other systems used by the hotel.

1.3 Overview

The Hotel Management System application will automate the current manual system and provide an online platform for hotel staff to manage their tasks efficiently. The system will be designed to meet the needs of various stakeholders, including receptionists, cashiers/accountants, customers, managers, managing directors, and the board of directors. The system will provide real-time access, allowing stakeholders to make informed decisions and manage the hotel's operations more effectively.

2 General Description

The Hotel Management System application will consist of several modules, including Room Reservation Management, Check-in/Check-out Management, Guest Management, Billing and Payment Management, Inventory Management, and Reports. Each module will have specific requirements that will be detailed in the following sections.

3 Functional Requirements

- The system should be able to manage reservations, bookings, and cancellations of hotel rooms.
- The system should allow customers to search and view available rooms, rates, and packages.
- The system should allow customers to book a room by selecting the date, time, and room type.
- The system should allow customers to modify or cancel their bookings.
- The system should allow hotel staff to manage room availability and allocation.
- The system should allow hotel staff to view and manage customer bookings, cancellations, and modifications.
- The system should allow hotel staff to generate bills and invoices for customers.
- The system should allow hotel staff to manage payments and payment options.
- The system should allow hotel staff to manage room service orders, housekeeping requests, and other services.

4 Interface Requirements

4.1 User Interface

- The user interface should be user-friendly and intuitive.
- The user interface should be accessible from any device with an internet connection.
- The user interface should allow for customization based on user roles.

4.2 Integration Interface

- The system should be able to integrate.

5 Performance Requirements

- The system should be able to handle a large volume of requests and transactions without performance degradation.
- The system should have a response time of less than 2 seconds for most functions.
- The system should have a high level of availability and reliability, with a minimum uptime of 99.9%.
- The system should be scalable and able to handle increases in traffic and demand.
- The system should have adequate security measures to protect customer data and prevent unauthorized access.
- The system should have a backup and recovery mechanism to ensure business continuity in case of system failure or disaster.
- The system should comply with relevant industry standards and regulations for data privacy, security, and accessibility.

6 Design Constraints

- The system should have a user-friendly and intuitive interface.
- The system should follow industry-standard design principles and guidelines.
- The system should be responsive and adaptable to different screen sizes and resolutions.
- The system should follow a three-tier architecture with a presentation layer, business logic layer, and data access layer.
- The system should be modular and extensible to allow for future enhancements and modifications.
- The system should be designed to handle high traffic loads and large amounts of data.
- The system should use caching mechanisms to improve performance.
- The system should have a secure architecture that prevents unauthorized access and data breaches.
- The system should use encryption mechanisms to protect sensitive data.
- The system should have a backup and recovery plan in place to prevent data loss in case of security breaches.

7 Non-Functional Attributes

- **Usability**: The system should be user-friendly and intuitive, with a low learning curve for customers and hotel staff.
- **Accessibility**: The system should be accessible from multiple devices and platforms, including desktops, laptops, tablets, and smartphones.
- **Reliability**: The system should have a high level of availability and reliability, with a minimum uptime of 99.9%.
- **Security**: The system should have adequate security measures to protect customer data and prevent unauthorized access.
- **Performance**: The system should have a response time of less than 2 seconds for most functions, and be able to handle a large volume of requests and transactions without performance degradation.
- **Scalability**: The system should be scalable and able to handle increases in traffic and demand.
- **Maintainability**: The system should be easy to maintain and update, with clear documentation and modular architecture.
- **Compatibility:** The system should be compatible with different browsers, operating systems, and hardware configurations.

8 Preliminary Schedule and Budget

It is estimated that the complete development of the project and deployment of the project will likely take 8 months and given is the preliminary schedule and budget:

Requirements Gathering:
Timeline: 3-6 weeks
Cost: $15,000-$30,000

Design and Architecture:
Timeline: 6-10 weeks
Cost: $30,000-$60,000

Development:
Timeline: 20-30 weeks
Cost: $150,000-$300,000

Testing and Quality Assurance:
Timeline: 6-10 weeks
Cost: $30,000-$60,000

Deployment and Maintenance:
Timeline: Ongoing
Cost: $75,000-$150,000 per year