

Hotel Management Program - Project Proposal

1. Introduction

The Hotel Management Program is a software application designed to streamline and automate various hotel management tasks. The primary objective of this project is to create an efficient and user-friendly program that can handle tasks related to reservations, room management, guest information, billing, and reporting.

2. Project Scope

The Hotel Management Program will include the following key features:

a. Room Management

- Ability to add, modify and delete room details (e.g., room number, type, rate, availability).
- Assigning and unassigning rooms to guests based on their preferences.

b. Reservation System

- An intuitive reservation system to manage guest bookings.
- Checking room availability for specific dates and room types.
- Handling room reservations and cancellations.

c. Guest Information

- Storing and managing guest details, such as name, contact information, and check-in/check-out dates.
- Keeping track of guests' preferences for future stays.

d. Billing and Invoicing

- Automatic calculation of bills based on room rates, additional services, and duration of stay.
- Generation of invoices for guests upon check-out.

e. Reporting

- Generating reports such as occupancy rate, revenue analysis, and popular room types.
- Providing statistical insights for better decision-making.

3. Technical Implementation

The Hotel Management Program will be implemented in C++ due to its efficiency and versatility. The user interface will be created using the console, making it accessible across different platforms. Data will be stored using file handling techniques, ensuring persistence of information even after the program closes.

Key components of the program:

- **Class Design:** Using object-oriented programming principles, we will design classes for rooms, guests, reservations, and billing.
- **File Handling:** Data related to rooms, reservations, and guest information will be stored in text files to maintain a persistent database.
- **Input Validation:** The program will incorporate robust input validation mechanisms to prevent errors and ensure data integrity.
- **Reporting:** Custom reporting functions will be implemented to extract and present relevant statistics to hotel management.

4. Project Timeline

The project will be divided into the following phases:

1. Requirements Gathering and Analysis - 1 week
2. System Design and Class Structure - 1 week
3. Implementation of Room Management - 2 weeks
4. Implementation of Reservation System - 2 weeks
5. Implementation of Guest Information - 1 week
6. Billing and Invoicing - 1 week
7. Reporting Functionality - 1 week
8. Testing and Debugging - 2 weeks
9. User Documentation - 1 week

5. Team Members

The project will be developed by a team of skilled C++ developers, led by a project manager responsible for overseeing the development process, ensuring timely completion, and coordinating with stakeholders.

6. Expected Outcomes

Upon successful completion of the Hotel Management Program, the following outcomes are expected:

- A fully functional and reliable software application to manage hotel operations efficiently.
- Increased staff productivity and reduced manual paperwork.
- Improved guest satisfaction through streamlined reservation and check-in/out processes.
- Enhanced decision-making for hotel management based on detailed reports and statistics.

7. Conclusion

The Hotel Management Program is a vital project that aims to automate and optimise various hotel management tasks, leading to increased efficiency and better guest experiences. By implementing this project in C++, we can create a robust, user-friendly, and versatile solution for hotel owners and staff.

