



# Organized Hotel Management System Using Basic 'C' Programming Language

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**Abstract** - The Hotel Management System is a computer- based software application that facilitates efficient management of hotel operations. This project aims to provide an automated solution to streamline various tasks involved in hotel management, such as guest bookings, room allocation, billing, and invoice.

The program is developed using the C programming language, which offers simplicity, flexibility, and efficiency for creating robust applications. The system incorporates essential features like a user-friendly interface, data storage, and manipulation capabilities, ensuring seamless operations for both hotel staff and guests.

## Keywords:

**Data structures, Management.**

## INTRODUCTION

The Hotel Management System implemented in C provides a comprehensive and efficient solution for hotel administrators and staff to manage various aspects of hotel operations. The program offers features such as -

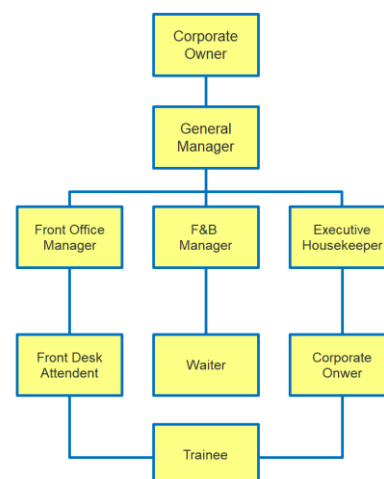
- 1. Guest Management:** The system allows hotel staff to manage guest information, including personal details, contact information, and booking history. It enables easy retrieval of guest records and facilitates efficient communication with guests.
- 2. Room Management:** The program offers room allocation functionalities, allowing hotel staff to assign rooms based on guest preferences, availability, and booking types (single, double, suite). It maintains room inventory and ensures accurate billing based on room rates and duration of stay.
- 3. Billing and Invoicing:** The system automates billing processes, generating invoices based on room charges, additional services availed (such as room service or laundry), and taxes. It provides accurate and detailed invoices, reducing manual errors and saving time.

## METHODOLOGY

The flow of our project goes like this-  
For the customer who wishes to check in, there are hotel options available with the amenities that each one provides. He can also decide the type of room according to his preference. The customer can check-in to any of the unoccupied rooms.  
His name will be taken as input and will be displayed alongside the room number which he has reserved. Also, the period of his stay is taken as input and the charges are displayed. The charges vary based on the type of room he has selected – like AC / non-AC and on the duration of the stay.  
If one has to check-out, he must enter the room number in which he was staying. Then the system will stop displaying his name alongside that room number. Hence the check-out is successful. Check-out can't take place from an already empty room.  
Finally, we have the display rooms' option, which shows if the room is vacant or the customer's name that has reserved it.

## ARCHITECTURE DIAGRAM

Small Hotel Organizational Chart



## RESULT AND DISCUSSION

The Hotel Management System implemented in C provides a comprehensive and efficient solution for hotel administrators and staff to manage various aspects of hotel operations. The program offers features such as guest management, room allocation, billing, and reporting, which streamline day-to-day tasks and enhance overall productivity.

By automating processes like guest bookings and room allocation, the system reduces manual errors, saves time, and ensures accurate record-keeping. The billing and invoicing functionalities simplify the financial aspects of hotel management, generating detailed invoices and facilitating seamless transactions.

Overall, the Hotel Management System implemented in C optimizes hotel operations, enhances customer satisfaction, and improves efficiency. It serves as a reliable tool for hotel administrators and staff, enabling them to focus on providing excellent service and creating memorable experiences for their guests.

## CONCLUSION

In conclusion, a Hotel Management System is a crucial tool for hotels looking to streamline their operations, reduce costs, and enhance guest experience.

While implementing an HMS may come with its challenges, the benefits far outweigh them. As technology continues to evolve, the future of hotel management systems looks promising, and hotels must embrace these changes to stay competitive in the market.

By adopting an HMS, hotels can ensure that they provide a seamless and memorable experience for their guests, which can lead to increased revenue and brand loyalty.

## FUTURE SCOPE

The future of hotel management systems looks promising, with advancements in artificial intelligence, machine learning, and data analytics. These technologies can enable hotels to personalize guest experiences, optimize pricing and inventory management, and improve operational efficiency.

The future scope of this project can also be to store the real check-in and check-out time of the user, adding extra charges if late check-out happens.

Additionally, the rise of block chain technology and crypto currencies can provide secure and transparent payment solutions for hotels. Overall, the adoption of these technologies can help hotels to stay competitive and meet the evolving needs of guests.

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