VISVESVARAYA TECHNOLOGICAL UNIVERSITY,

BELAGAVI - 590 018

Mini Project Report On

"HOTEL RESERVATION MANAGEMENT"

A report submitted in partial fulfilment of the requirements for

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INFORMATION SCIENCE AND ENGINEERING

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CERTIFICATE

This is to certify that the Mini Project entitled **"HOTEL RESERVATION MANAGEMENT"** has been successfully completed by

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in the partial fulfilment for the award of Degree of Bachelor of Engineering in Information Science and Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all corrections/suggestions indicated have been incorporated in the report. The Mini project report has been approved as it satisfies the academic requirements in respect of Mini Project Work prescribed for the award of Bachelor of Engineering Degree.

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Declaration

We,

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Hereby declare that the dissertation entitled, "HOTEL RESERVATION MANAGEMENT SYSTEM" is completed and written by us under the supervision of my guide Dr. Manjunath H R, Associate Professor, Alva's Institute of Engineering and Technology, Moodbidri, Department of Information Science & Engineering under VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI during the academic year 2022-2023.The dissertation report is original and it has not been submitted for any other degree in any university.

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ABSTRACT

The Hotel Reservation Management System (HRMS) is a simplified software solution designed to manage customer and room information for efficient hotel reservation processes. This project focuses on the development of two main classes: the Customer class and the Room class.

The Customer class serves as a central repository for storing and managing guest information. It includes attributes such as customer ID, name, contact details, and reservation history. The class provides methods for creating new customer records, updating existing information, and retrieving customer details when needed.

The Room class represents the different types of rooms available in the hotel. It encapsulates attributes such as room number, room type, occupancy status, and price. The class includes methods to check room availability, book rooms, and update the occupancy status accordingly.

The HRMS utilizes these two classes to facilitate the reservation process. It allows hotel staff to create new customer records, search for available rooms based on specific criteria, and make room reservations for customers. The system also provides functionality for modifying and cancelling reservations as needed.

TABLE OF CONTENTS

CHAPTER 1. INTRODUCTION ……..1 – 2

1.1 Introduction about the Topic…….……...…....1

1.2 Problem Statement…….……...…...1

1.3 Objective of the Project……2

CHAPTER 2. SYSTEM REQUIREMENT SPECIFICATION…….3

2.1 Software Requirements…….....3

2.2 Hardware Requirements…….…....3

CHAPTER 3. SYSTEM DESIGN AND IMPLEMENTATION…….4-8

3.1 Implementation Details……4

3.2 Implementation Code……..……5

CHAPTER 4. RESULTS…….....9-11

4.1 Snapshots……..9

CHAPTER 5. CONCLUSION……...12-13

5.1 Conclusion……12

5.2 References…….13

LIST OF FIGURES

Figure no.	Description	Page no.
Fig 4.1	Snapshot 1	9
Fig 4.2	Snapshot 2	9
Fig 4.3	Snapshot 3	10
Fig 4.4	Snapshot 4	10
Fig 4.5	Snapshot 5	10

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION ABOUT THE TOPIC

The Hotel Reservation Management System is a software application designed to automate and streamline the process of managing hotel reservations, bookings, and guest information. It provides hotel staff with a centralized platform to efficiently handle various tasks related to reservations, room management, guest services, and billing.

The system allows hotel administrators to create and maintain a database of available rooms, along with their types, rates, and amenities. It enables easy reservation and booking of rooms, either online or through manual entry by hotel staff. The system keeps track of room availability, ensuring that double bookings or overbookings are avoided.

Customers can search for available rooms based on their preferences such as room type, date range, and number of guests. They can make reservations, view room details, and receive confirmation of their bookings. The system also supports online payment processing for secure and convenient transactions.

Hotel staff can access the system to manage room allocations, assign rooms to guests, and update the status of reservations. They can view guest information, including personal details, special requests, and length of stay. The system generates reports and provides analytics on occupancy rates, revenue, and other key metrics, helping hotel management make informed decisions.

1.2 PROBLEM STATEMENT

The hotel industry relies heavily on efficient management of reservations, bookings, and guest information. However, many hotels still face challenges in effectively handling these processes, leading to inefficiencies, errors, and unsatisfactory guest experiences. Therefore, the need for a robust Hotel Reservation Management System (HRMS) arises to address these issues and streamline operations. This problem statement outlines the key challenges faced by hotels and the objectives of implementing an HRMS.

1.3 OBJECTIVE OF THE PROJECT

The objective of the Hotel Reservation Management System is to provide an efficient and streamlined solution for managing hotel reservations, bookings, and overall operations. The system aims to achieve the following objectives:

- Simplify Reservation Process: The system aims to simplify the reservation process by providing an intuitive interface for hotel staff to manage and process reservations. It eliminates the need for manual paperwork, reduces errors, and ensures smooth and accurate reservation handling.
- Real-Time Room Availability: The system provides real-time information about room availability, allowing hotel staff to check the availability of rooms instantly. This feature helps avoid double bookings or overbookings and ensures that guests are assigned appropriate rooms based on their preferences and requirements.
- Optimize Resource Utilization: The system helps optimize resource utilization by providing insights into occupancy rates, room utilization, and demand patterns. This data enables hotel managers to make informed decisions regarding room allocation, pricing strategies, and staffing requirements, leading to improved efficiency and cost savings.
- Improve Communication and Collaboration: The system facilitates smooth communication and collaboration among hotel staff, ensuring efficient coordination between different departments. It enables staff to share information, update reservation statuses, and manage guest requests, leading to improved teamwork and enhanced operational efficiency.

Overall, the objective of the Hotel Reservation Management System is to optimize the reservation process, enhance guest experiences, improve resource utilization, and enable data-driven decision-making for hotel managers. It aims to provide a comprehensive solution that simplifies operations, improves efficiency, and ultimately contributes to the success of the hotel.

CHAPTER-2

SYSTEM SPECIFIC REQUIREMENTS SPECIFICATION

2.1 HARDWARE REQUIREMENTS

Hard Disk Drive	**500GB**
Processor	**1.8GHz**
RAM	**4GB**

2.2 SOFTWARE REQUIREMENTS

Operating System	**Windows 10/11**
IDE	**DEV C++, VS CODE, TURBO C**
Database	**Text Document**
Technology	**C++ Programming Language**

CHAPTER 3

SYSTEM DESIGN AND IMPLEMENTATION

3.1 IMPLEMENTATION DETAILS

The Customer class represents a customer and provides methods for reading, writing, searching, updating, and deleting customer bookings.

The room class represents a hotel room and provides methods for writing, reading, searching, and updating room details.

Here's a breakdown of the member functions in the Customer class:

- readCustomer: Reads customer bookings from a file called "customer.txt" and displays them on the console.
- writeCustomer: Allows the user to add new customer bookings and saves them to the "customer.txt" file.
- searchCustomer: Allows the user to search for a customer booking by their ID.
- updateCustomer: Allows the user to update a customer booking by their ID.
- deleteRecordCustomer: Allows the user to delete a customer booking by their ID.

And here's a breakdown of the member functions in the room class:

- writeRoom: Allows the user to add new room details and saves them to the "rooms.txt" file.
- readRoom: Reads room details from the "rooms.txt" file and displays them on the console.
- searchRoom: Allows the user to search for room details by the room number.
- updateRoom: Allows the user to update room details by the room number.

Overall, this code provides basic functionality for managing customer bookings and room details in a hotel.

3.2 IMPLEMENTATION CODE

```
void manageHotel()

{

    room r;

    Customer c;

    cout << "\t\t\t\t\t_____\n\n";

    cout << "\t\t\t\t\tRESERVATION MANAGEMENT SYSTEM\n";

    cout << "\t\t\t\t\t_____\n\n";

    cout << "************\nRESERVARION MANAGEMENT\n************\n";

    cout << "1. Customer Class\n2. Room Class\n3. Exit\n";

    char ch;

    cout << "*****************\nYour Choice: ";

    cin >> ch;

    if(ch == '1')

    {

        while(true)

        {

                int x;

                cout << "*****************************\nMANAGE CUSTOMER
BOOKING \n*****************************";

                cout << "\n1. Add a New Booking \n2. Search about Booking by Id \n3. Update
Booking \n4. Delete Booking \n5. Show all Hotel Booking \n6. Back to Main Menu\n";

                cout << "*****************************";

                cout << "\nYour choise: ";

                cin >> x;

                        if(x == 1)
```

```
                    c.writeCustomer();
            else if(x == 2)
                    c.searchCustomer();
            else if(x == 3)
                    c.updateCustomer();
            else if(x == 4)
                    c.deleteRecordCustomer();
            else if(x == 5)
                    c.readCustomer();
            else if(x == 6)
                    manageHotel();
            else
            {
                    cout << "Please, Enter a Correct Number.";
                    cout << "\n\nPress any key to continue....!! ";
            }
        }
}
else if(ch == '2')
{
        while(true)
        {
                cout << "***********\nMANAGE ROOMS\n***********\n1. Write Room\n2.
Search Room\n3. Update Room\n4. Delete Room\n5. Show all Rooms\n6. Back to Main
Menu\n*******************\n";
                char x;
```

```
                cout << "Your Choice: ";
                cin >> x;
                cout << "*************\n";
                if(x == '1')
                        r.writeRoom();
                else if(x == '2')
                        r.searchRoom();
                else if(x == '3')
                        r.updateRoom();
                else if(x == '4')
                        r.deleteRoom();
                else if(x == '5')
                        r.readRoom();
                else if(x == '6')
                        manageHotel();
                else
                {
                        cout << "Please, Enter a Correct Number.";
                        cout << "\n\nPress any key to continue....!! ";
                }
        }
}
else if(ch == '3')
{
cout << "\n\n\t\t\t***************THANK YOU FOR YOUR
RESERVATION**************\n\n";
```

```
exit(0);
}
else
{
cout << "Please, Enter a Correct Number.";
cout << "\n\nPress any key to continue....!! ";
manageHotel();
}
}
int main()
{
    manageHotel();
    return 0;
}
```

CHAPTER 4

RESULTS

4.1 SNAPSHOTS

Fig 4.1 Snapshot 1

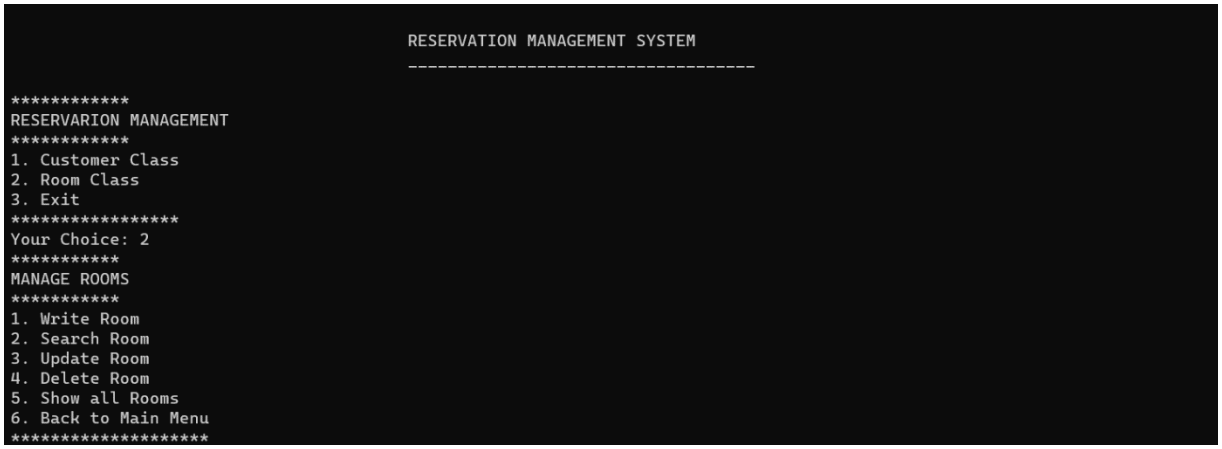

Fig 4.2 Snapshot 2

```
***********
MANAGE ROOMS
***********
1. Write Room
2. Search Room
3. Update Room
4. Delete Room
5. Show all Rooms
6. Back to Main Menu
********************
Your Choice: 1
*************

-------------------------
Add a New Room:
-------------------------

Room Number: 103
Room Type Single or Double (Single/Double): Double
Room View 'Sea' for Sea view
 and 'Pool' for Pool view
 and 'Garden'for Garden view:
Garden
Room Price in one day: 900
*****************************************
Do you want add more rooms (y/press any character such (n))? n
**********************Room added Successfuly**********************
```

Fig 4.3 Snapshot 3

```
                                  ---------------------------------
                                  RESERVATION MANAGEMENT SYSTEM
                                  ---------------------------------

************
RESERVARION MANAGEMENT
************
1. Customer Class
2. Room Class
3. Exit
*****************
Your Choice: 1
*****************************
MANAGE CUSTOMER BOOKING
*****************************
1. Add a New Booking
2. Search about Booking by Id
3. Update Booking
4. Delete Booking
5. Show all Hotel Booking
6. Back to Main Menu
*****************************
```

Fig 4.4 Snapshot 4

```
MANAGE CUSTOMER BOOKING
*******************************
1. Add a New Booking
2. Search about Booking by Id
3. Update Booking
4. Delete Booking
5. Show all Hotel Booking
6. Back to Main Menu
*****************************
Your choise: 1

-----------------

Add a New Booking:
-----------------

Enter Your Name: Sujan
Enter your Id: 002
Do you want single room or double ? (Single/Double): single
Enter the number of days you will book: 5
************************************************
Add Another Booking ? (y/press any character such (n)): n
**********************Customer added Successfuly**********************
```

Fig 4.5 Snapshot 5

- **Snapshot 1:** It describes the Front Page of the Program/Application. It mainly consists of Customer class and Room class.
- **Snapshot 2:** It describes the situation when the user enters option 2 i.e Room class. He gets into the menu driven options such as write, search, update, delete, show all etc.
- **Snapshot 3:** It describe the situation when the user enters the option to write, the program asks for the room number, room type, room view and room price.
- **Snapshot 4:** It describe the situation when the user enters option 1 i.e Customer class the program will display the menu-driven list such as add a new booking, search, update, delete, show all booking etc.
- **Snapshot 5:** It describe the situations where the user has entered option 1 i.e adding a new booking, the program will then ask for the name, id, room type and no. of days in the room.

CHAPTER 5

CONCLUSION

In conclusion, the Hotel Reservation Management System (HRMS) is a valuable tool for hotels and hospitality businesses to efficiently manage their reservation processes. It provides a comprehensive platform for handling room bookings, guest information, and other essential functions.

By implementing an HRMS, hotels can streamline their reservation process, enabling guests to make bookings online or through various channels easily. The system allows for real-time availability updates, ensuring accurate information and minimizing double bookings or conflicts. This improves overall customer satisfaction and helps optimize room occupancy rates.

Additionally, an HRMS simplifies guest management by centralizing guest information, including preferences, special requests, and payment details. This enables hotel staff to provide personalized services, anticipate guest needs, and deliver a superior customer experience. It also facilitates smooth check-in and check-out procedures, reducing waiting times and enhancing operational efficiency.

Furthermore, HRMS systems often integrate with other hotel systems, such as point-of-sale (POS) and housekeeping, enabling seamless data exchange and synchronization. This promotes better coordination between departments, improves communication, and ensures accurate billing and inventory management.

Moreover, an HRMS offers valuable reporting and analytics capabilities, allowing hotel managers to track key performance indicators, such as occupancy rates, revenue, and guest satisfaction scores. These insights enable data-driven decision-making, allowing hotels to identify trends, optimize pricing strategies, and make operational improvements.

Overall, the Hotel Reservation Management System brings significant benefits to hotels, including streamlined reservation processes, enhanced guest experiences, improved operational efficiency, and better decision-making. It plays a vital role in the hospitality industry, helping hotels deliver exceptional services and maintain a competitive edge in the market.

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