A PROJECT REPORT (CAF207)

on

Hotel Management System

A report submitted in partial fulfilment of the requirement for the award of

The degree of

Bachelors in Computer Application

by

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CANDIDATES DECLARATION

I hereby certify that the work, which is being presented in the Report, entitled Hotel Management System , in partial fulfilment of the requirement for the award of the Degree of **Bachelors of Computer Application** and submitted to the DIT University is an authentic record of my work carried out during the period ***Jan 2024*** to ***May 2024*** under the guidance of Mr. Sonu Pant.

Date: 22/04/2024 **Signature of the Candidates**

ACKNOWLEDGEMENT

We have taken efforts in this Project. However, it would not have been possible without the kind support and help of every individual. We would like to extend our sincere thanks to all of them.

First of all, we are thankful to our project guide, Mr. Sonu Pant under whose guidance we are able to progress in our project. We are wholeheartedly thankful to him for giving us his valuable time and attention and for providing us a systematic way for progressing our project in time.

Thus, we are thankful to our friends and batchmates who helped us in completion of the project.

Gaurav

Sahil Kumar

Tarun Rawat

Name of Candidates

ABSTRACT

Our Hotel Management System is a comprehensive solution designed to streamline the operations of hotels and hospitality businesses. With a user-friendly interface and intuitive features, our system empowers hotel staff to efficiently manage reservations, check-ins, check-outs, room assignments, and guest services.

Users can easily add new reservations and manage existing ones with just a few clicks, reducing the time and effort required for administrative tasks. The system's advanced features allow for seamless integration with online booking platforms, enabling real-time updates and synchronization of reservation data.

With our system, hotel managers can gain insights into occupancy rates, revenue streams, and guest preferences through detailed analytics and reporting tools. This enables informed decision-making and strategic planning to optimize hotel operations and enhance guest satisfaction.

From front desk staff to management personnel, our Hotel Management System caters to users of all levels, providing a powerful yet user-friendly solution for efficient hotel operations and exceptional guest experiences.

INTRODUCTION

Our Hotel Management System is a state-of-the-art software solution designed to revolutionize the way hotels manage their operations. Tailored specifically for the hospitality industry, our system offers a range of powerful features aimed at streamlining reception, room management, and user authentication. With a user-friendly interface and robust functionality, our system empowers hotel staff to deliver exceptional guest experiences while optimizing efficiency and productivity.

FEATURES

1. Reception Management:
Efficiently handle guest check-ins, check-outs, and inquiries with our reception management module. Our system provides receptionists with a centralized platform to manage reservations, assign rooms, process payments, and address guest requests in a timely and organized manner. With intuitive tools and real-time updates, reception staff can ensure a seamless and hassle-free experience for guests from the moment they arrive.

2. Room Management:
Optimize room allocation, availability, and maintenance with our comprehensive room management features. Hotel administrators can easily view and update room statuses, assign specific room types to guests based on their preferences and requirements, and track room occupancy in real-time. Additionally, our system provides tools for managing room amenities, housekeeping schedules, and maintenance tasks, ensuring that rooms are always clean, comfortable, and ready for guests.

3. Login Form:
Secure access to the Hotel Management System with our robust login form module. Users, including hotel staff and administrators, can securely authenticate their identities and access the system's features and functionalities based on their roles and permissions. Our login form supports customizable authentication methods, password policies, and user authentication protocols to ensure data security and integrity.

CODE

Dasboard.java

```
import java.awt.event.*;
import java.awt.*;

public class Dashboard extends JFrame implements ActionListener {

    JMenuBar mb;
    JMenu m1, m2, m3;
    JMenuItem i1, i2, i3, i4;

    Dashboard() {
        setBounds(0, 0, 1920, 1080);

        mb = new JMenuBar();
        add(mb);
        mb.setForeground(Color.cyan);

        m1 = new JMenu("HOTEL MANAGEMENT");
        mb.add(m1);
        m1.setForeground(Color.red);

        m2 = new JMenu("ADMIN");
        mb.add(m2);
        m2.setForeground(Color.blue);

        m3 = new JMenu("ABOUT US");
        mb.add(m3);
        m3.setForeground(Color.red);

        i1 = new JMenuItem("RECEPTION");
        m1.add(i1);
        i1.addActionListener(this);

        i2 = new JMenuItem("ADD EMPLOYEES");
        m2.add(i2);
        i2.addActionListener(this);

        i3 = new JMenuItem("ADD ROOMS");
        m2.add(i3);
        i3.addActionListener(this);

        i4 = new JMenuItem("about");
        m3.add(i4);
        i4.addActionListener(this);

        mb.setBounds(0, 0, 1920, 40);

        ImageIcon i1 = new
ImageIcon(ClassLoader.getSystemResource("icons/rec2.jpg"));
```

```
        Image i2 = i1.getImage().getScaledInstance(1550, 1000,
Image.SCALE_DEFAULT);
        ImageIcon i3 = new ImageIcon(i2);
        JLabel l1 = new JLabel(i3);
        l1.setBounds(-200, 0, 1950, 700);
        add(l1);

        JLabel l2 = new JLabel("WELCOME");
        l2.setBounds(815, 100, 320, 75);
        l2.setFont(new Font("Tahoma", Font.BOLD, 60));
        l2.setBackground(Color.red);
        l2.setOpaque(true);
        l2.setForeground(Color.black);
        l1.add(l2);

        setTitle("Home page");
        setLayout(null);
        setVisible(true);

    }

    public void actionPerformed(ActionEvent ae) {

        if (ae.getActionCommand().equals("RECEPTION")) {
            new Reception().setVisible(true);
        } else if (ae.getActionCommand().equals("ADD ROOMS")) {
            new AddRooms().setVisible(true);
        } else if (ae.getActionCommand().equals("ADD EMPLOYEES")) {
            new AddEmployee().setVisible(true);
        } else if (ae.getActionCommand().equals("about")) {
            new about().setVisible(true);
        }

    }

    public static void main(String[] args) {

        new Dashboard().setVisible(true);

    }
}
```

HotelManagement.java

```
import java.awt.*;
import javax.swing.*;

import java.awt.event.*;

public class HotelManagementSystem extends JFrame implements ActionListener {

    HotelManagementSystem() {
        setBounds(300, 130, 900, 600);

        ImageIcon i1 = new
ImageIcon(ClassLoader.getSystemResource("icons/first.jpg"));
        JLabel l1 = new JLabel(i1);
        l1.setBounds(0, 0, 900, 600);
        add(l1);

        JLabel l2 = new JLabel("Hotel Management System");
        l2.setBounds(10, 20, 1000, 70);
        l2.setFont(new Font("serif", Font.PLAIN, 60));
        l2.setForeground(Color.red);
        l1.add(l2);

        JButton b1 = new JButton("Enter");
        b1.setBackground(Color.white);
        b1.setForeground(Color.black);
        b1.setBounds(360, 250, 180, 50);
        b1.addActionListener(this);
        l1.add(b1);

        setLayout(null);
        setLocation(220, 100);
        setVisible(true);

        while (true) {
            l2.setVisible(false);
            try {
                Thread.sleep(500);
            } catch (Exception e) {

            }
            l2.setVisible(true);
            try {
                Thread.sleep(500);
            } catch (Exception e) {

            }

        }
```

```
    }

    public void actionPerformed(ActionEvent ae) {
        new Login().setVisible(true);
        this.setVisible(false);
    }

    public static void main(String[] args) {

        new HotelManagementSystem();

    }

}
```

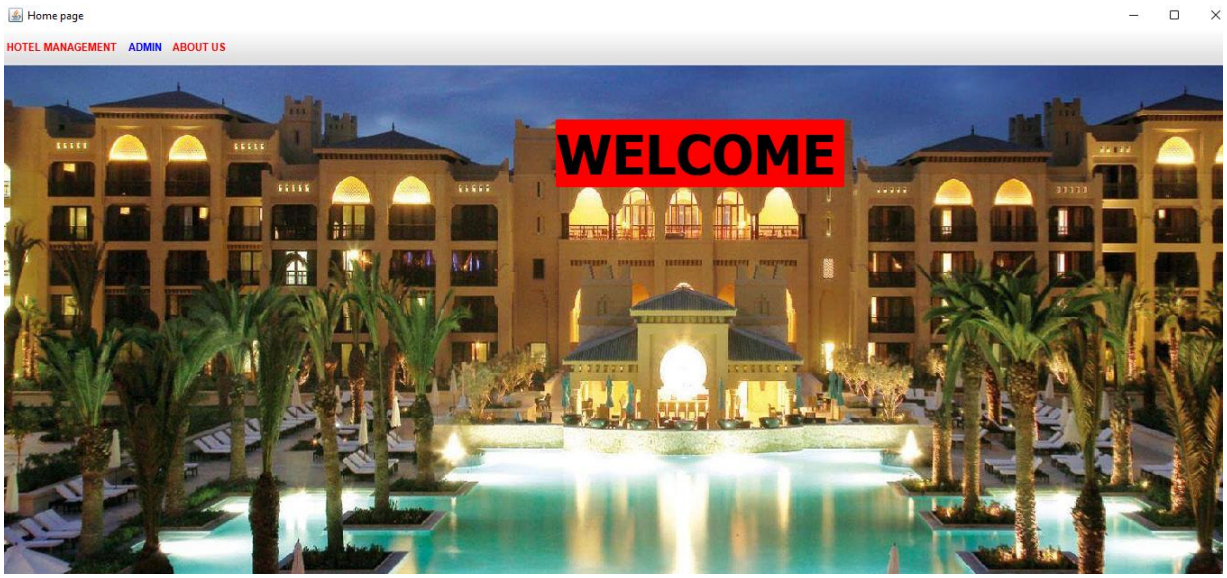
About.java

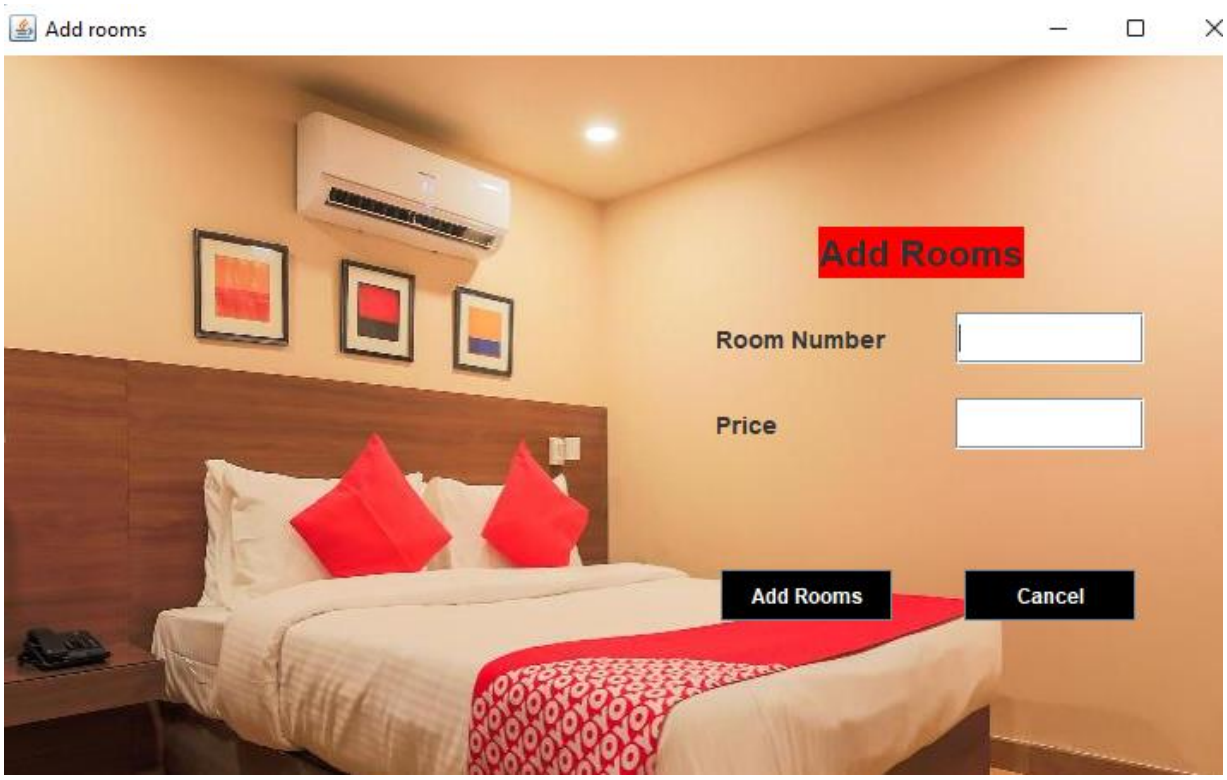
```
import java.awt.*;
import javax.swing.*;

public class about extends JFrame {
    about() {
        ImageIcon i = new
ImageIcon(ClassLoader.getSystemResource("icons/b2.png")); // ADD IMG
        Image i2 = i.getImage().getScaledInstance(300, 200,
Image.SCALE_DEFAULT); // image scalle
        ImageIcon i3 = new ImageIcon(i2);
        JLabel image = new JLabel(i3); // set image in jalbel
        image.setBounds(400, 20, 400, 200);
        add(image);

        JLabel heading = new JLabel("<html>Hotel <br/>Management
System</html>");
        heading.setBounds(70, 20, 400, 130);
        heading.setFont(new Font("Tahoma", Font.BOLD, 30));
        add(heading);

        JLabel sub = new JLabel("Developed by:");
        sub.setBounds(70, 200, 400, 50);
        sub.setFont(new Font("Tahoma", Font.BOLD, 30));
        add(sub);

        JLabel name = new JLabel("<html>Tarun Rawat-1000019128 <br/>Sahil Kumar
-1000019173<br/>Gaurav -1000019035</html>");
        name.setBounds(100, 250, 400, 100);
        name.setFont(new Font("Tahoma", Font.BOLD, 20));
        add(name);
```

```
        setSize(900, 500);
        setLocation(200, 100);
        getContentPane().setBackground(Color.white);
        setLayout(null);
        setTitle("About");
        setVisible(true);

    }

    public static void main(String[] args) {
        new about();
    }

}
```

Output


Hotel Management System
FLORIDA HOTEL
Enter


Home page
HOTEL MANAGEMENT
ADMIN
ABOUT US
WELCOME


Add rooms
Add Rooms
Room Number
Price
Add Rooms
Cancel


ADD EMPLOYEE DETAILS
NAME
AGE
SALARY
Submit

Add new customer form

NEW CUSTOMER FORM

Number

Name

Country

Add Customer

Cancel

About

Hotel Management System

Developed by:

Tarun Rawat-1000019128
Sahil Kumar -1000019173
Gaurav -1000019035

Purpose:

The primary purpose of our Hotel Management System is to revolutionize the way hotels operate by providing a comprehensive software solution tailored specifically to the unique needs and challenges of the hospitality industry. Through innovative technology and intuitive design, our system aims to achieve the following objectives:

1. Enhance Guest Experience: Our system is designed to prioritize guest satisfaction by enabling hotel staff to deliver personalized and seamless experiences. By streamlining check-in and check-out processes, promptly addressing guest inquiries and requests, and ensuring accurate room assignments, hotels can create memorable experiences that foster guest loyalty and positive reviews.

2. Optimize Operational Efficiency: Manual and outdated processes can lead to inefficiencies and errors in managing hotel operations. Our system automates routine tasks such as room allocation, housekeeping schedules, and maintenance tracking, freeing up staff time and resources to focus on delivering exceptional service and addressing guest needs promptly.

3. Improve Revenue Management: Effective management of room inventory, pricing strategies, and guest preferences is essential for maximizing revenue in the hospitality industry. Our system provides hotel administrators with real-time insights into room availability, occupancy rates, and booking trends, enabling informed decision-making and the implementation of dynamic pricing strategies to optimize revenue.

4. Ensure Data Security and Compliance: With the increasing prevalence of data breaches and privacy regulations, safeguarding guest information and maintaining compliance with industry standards is paramount. Our system incorporates robust security measures, including encryption protocols, access controls, and regular audits, to protect sensitive data and ensure compliance with regulations such as GDPR and PCI DSS.

5. Empower Staff with Technology: Hotel staff play a crucial role in delivering exceptional guest experiences, and providing them with intuitive tools and technology can enhance their productivity and job satisfaction. Our system features a user-friendly interface, comprehensive training resources, and ongoing support to empower staff with the knowledge and tools they need to excel in their roles.

6. Facilitate Growth and Scalability: As hotels expand and evolve, they require flexible and scalable technology solutions that can adapt to their changing needs. Our system is designed to scale seamlessly with the growth of the hotel, whether it's a single boutique property or a large international chain, enabling consistent management of operations across multiple locations.

Overall, our Hotel Management System is more than just a software solution; it's a strategic investment for hotels looking to stay competitive in a rapidly evolving industry. By leveraging technology to enhance guest experiences, optimize operations, and drive revenue growth, our system empowers hotels to thrive in an increasingly competitive market landscape.

Technology Requirements:

1. Our Hotel Management System requires a robust technological infrastructure to support its functionality and ensure seamless operation. Key technology requirements include:
2. **Database Management System (DBMS):** A reliable DBMS is essential for storing and managing hotel data, including guest information, room availability, reservations, and transaction records. Popular options include MySQL, PostgreSQL, or MongoDB.
3. **Programming Languages:** The system may be developed using programming languages such as Java, Python, or C# for backend development, and HTML/CSS, JavaScript, or React for frontend development.
4. **Web Development Frameworks:** Utilizing web development frameworks like Spring Boot (for Java), Django (for Python), or ASP.NET (for C#) can accelerate development and ensure scalability and maintainability.
5. **User Authentication and Security:** Implementation of secure authentication protocols such as OAuth, OpenID Connect, or LDAP, along with robust encryption mechanisms, is crucial to safeguard user credentials and sensitive hotel data.
6. **Real-time Communication:** Integration of real-time communication technologies such as WebSockets or WebRTC can enable instant updates and notifications for reception staff and administrators.
7. **Mobile Compatibility:** Ensuring compatibility with mobile devices through responsive design or native mobile applications allows staff to access the system on the go, enhancing flexibility and accessibility.
8. **Cloud Infrastructure (Optional):** Leveraging cloud computing services such as Amazon Web Services (AWS), Microsoft Azure, or Google Cloud Platform can provide scalability, reliability, and accessibility, especially for multi-location hotel chains.
9. By meeting these technology requirements, our Hotel Management System can deliver a robust and scalable solution that meets the evolving needs of the hospitality industry while ensuring data security and enhancing operational efficiency.

Problem Statement:

The hospitality industry faces numerous challenges in managing hotel operations effectively, including manual and time-consuming processes, difficulty in coordinating room allocations and maintenance, and concerns regarding data security. Traditional methods of managing guest check-ins, room assignments, and user authentication can be inefficient and prone to errors, leading to subpar guest experiences and decreased staff productivity.

Furthermore, the increasing expectations of guests for seamless and personalized services necessitate the adoption of modern technology solutions that can enhance operational efficiency while maintaining data security and integrity. There is a clear need for a comprehensive Hotel Management System that addresses these challenges by providing a user-friendly interface, robust features for reception and room management, and secure user authentication protocols.

System Requirements:

- **Hardware requirements:**

1. Memory
2. Processor
3. Disk space

- **Software requirement**:

1. Operating system
2. Text editor
3. JDK

Conclusion:

Our Hotel Management System offers a sophisticated yet user-friendly solution for optimizing hotel operations, enhancing guest experiences, and maximizing efficiency. With streamlined reception management, comprehensive room allocation features, and robust user authentication, our system empowers hotel staff to deliver exceptional service while maintaining security and integrity. By leveraging cutting-edge technology and intuitive design, our system equips hotels of all sizes to stay ahead in today's dynamic hospitality industry, ensuring seamless operations and memorable guest stays.

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