**HOTEL MANAGEMENT SYSTEM**

**CODE:**

import javax.swing.\*;  
import java.awt.\*;  
import java.awt.event.\*;  
import java.util.ArrayList;  
  
// --- Guest Class ---  
class Guest {  
 String name;  
 int roomNumber;  
  
 Guest(String name, int roomNumber) {  
 this.name = name;  
 this.roomNumber = roomNumber;  
 }  
  
 public String toString() {  
 return "Name: " + name + ", Room: " + roomNumber;  
 }  
}  
  
// --- Sign-Up Frame ---  
class SignUpPage extends JFrame {  
 private JTextField nameField = new JTextField(15);  
 private JTextField emailField = new JTextField(15);  
 private JPasswordField passwordField = new JPasswordField(15);  
 private JButton signUpButton = new JButton("Sign Up");  
  
 SignUpPage() {  
 setTitle("Sign Up");  
 setSize(350, 250);  
 setDefaultCloseOperation(JFrame.*EXIT\_ON\_CLOSE*);  
 setLayout(new FlowLayout());  
  
 add(new JLabel("Name:"));  
 add(nameField);  
 add(new JLabel("Email:"));  
 add(emailField);  
 add(new JLabel("Password:"));  
 add(passwordField);  
 add(signUpButton);  
  
 signUpButton.addActionListener(e -> {  
 String name = nameField.getText();  
 String email = emailField.getText();  
 String password = new String(passwordField.getPassword());  
  
 if (!name.isEmpty() && !email.isEmpty() && !password.isEmpty()) {  
 // Sign up success  
 JOptionPane.*showMessageDialog*(this, "Sign up successful!");  
 this.dispose(); // close the sign-up window  
 new HotelManagementSystem(name).setVisible(true); // open main system  
 } else {  
 JOptionPane.*showMessageDialog*(this, "Please fill in all fields.");  
 }  
 });  
 }  
}  
  
// --- Hotel Management Frame ---  
public class HotelManagementSystem extends JFrame {  
 private ArrayList<Guest> guestList = new ArrayList<>();  
 private JTextField nameField = new JTextField(15);  
 private JTextField roomField = new JTextField(5);  
 private JTextArea outputArea = new JTextArea(10, 30);  
  
 public HotelManagementSystem(String signedInUserName) {  
 setTitle("Hotel Management System - Welcome " + signedInUserName);  
 setSize(500, 400);  
 setDefaultCloseOperation(JFrame.*EXIT\_ON\_CLOSE*);  
 setLayout(new FlowLayout());  
  
 // Input Panel  
 JPanel inputPanel = new JPanel();  
 inputPanel.add(new JLabel("Guest Name:"));  
 inputPanel.add(nameField);  
 inputPanel.add(new JLabel("Room #:"));  
 inputPanel.add(roomField);  
  
 JButton addButton = new JButton("Add Guest");  
 JButton viewButton = new JButton("View Guests");  
 JButton checkoutButton = new JButton("Check Out");  
  
 inputPanel.add(addButton);  
 inputPanel.add(viewButton);  
 inputPanel.add(checkoutButton);  
 add(inputPanel);  
  
 // Output Area  
 outputArea.setEditable(false);  
 add(new JScrollPane(outputArea));  
  
 // Add Guest Action  
 addButton.addActionListener(e -> {  
 String name = nameField.getText();  
 String roomStr = roomField.getText();  
 if (!name.isEmpty() && !roomStr.isEmpty()) {  
 try {  
 int room = Integer.*parseInt*(roomStr);  
 guestList.add(new Guest(name, room));  
 outputArea.setText("Guest added: " + name + " in room " + room);  
 nameField.setText("");  
 roomField.setText("");  
 } catch (NumberFormatException ex) {  
 outputArea.setText("Room number must be an integer.");  
 }  
 } else {  
 outputArea.setText("Please enter both name and room number.");  
 }  
 });  
  
 // View Guests Action  
 viewButton.addActionListener(e -> {  
 outputArea.setText("Guest List:\n");  
 for (Guest g : guestList) {  
 outputArea.append(g + "\n");  
 }  
 });  
  
 // Check Out Action  
 checkoutButton.addActionListener(e -> {  
 String name = nameField.getText();  
 if (!name.isEmpty()) {  
 boolean removed = guestList.removeIf(g -> g.name.equalsIgnoreCase(name));  
 if (removed) {  
 outputArea.setText("Guest checked out: " + name);  
 } else {  
 outputArea.setText("Guest not found: " + name);  
 }  
 } else {  
 outputArea.setText("Enter the guest name to check out.");  
 }  
 });  
 }  
  
 // Entry Point  
 public static void main(String[] args) {  
 SwingUtilities.*invokeLater*(() -> {  
 SignUpPage signUp = new SignUpPage();  
 signUp.setVisible(true);  
 });  
 }  
}