A

Mini Project Report

on

Guest Vision: Hotel Management System

Submitted in partial fulfillment of the requirements for the degree

Second Year Engineering – Computer Science Engineering (Data Science)

by

Dhananjay Agarwal	**23107121**
Ronit Amberkar	**23107086**
Manomay Sawant	**23107122**
Harsh Patil	**23107090**

Under the guidance of

Mrs. Poonam Pangarkar

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING (DATA SCIENCE)

A.P. SHAH INSTITUTE OF TECHNOLOGY

G.B. Road, Kasarvadavali, Thane (W)-400615

UNIVERSITY OF MUMBAI

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CERTIFICATE

This to certify that the Mini Project report on "Guest Vision: Hotel Mangement System" has been submitted by Dhananjay Agarwal (23107121), Ronit Amberkar (23107086), Manomay Sawant (23107122) and Harsh Patil (23107090) who are bonafide students of A. P. Shah Institute of Technology, Thane as a partial fulfillment of the requirement for the degree in **Computer Science Engineering (Data Science)**, during the academic year **2024-2025** in the satisfactory manner as per the curriculum laid down by University of Mumbai.

Ms. Poonam Pangarkar
Guide

Ms. Anagha Aher
HOD, CSE(Data Science)

Dr. Uttam D. Kolekar
Principal

External Examiner:
1.

Internal Examiner:
1.

Place: A. P. Shah Institute of Technology, Thane
Date:

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Chapter 1

Introduction

Guest Vision is a complete hotel management system that simplifies the booking process and ensures smooth hotel operations. This Java-based software enables hotel staff to easily monitor room availability, ensuring that visitors are assigned appropriate lodgings depending on their needs. The user-friendly interface provides easy access to room details, allowing for real-time tracking of which rooms are booked, vacant.

In addition to controlling room availability, Guest Vision streamlines the client check-in and check-out procedure. Upon check-in, customer information is securely kept, and rooms are assigned based on preferences or availability. The technology provides a pleasant experience for hotel customers while decreasing manual errors, making it easier for hotel staff to manage busy times or sudden influxes in bookings.

Another key component of Guest Vision is its bill creation system. When a guest checks out, the program automatically calculates the total charges based on the length of their stay, and lodging prices. The bill is created promptly, providing a thorough breakdown of charges and facilitating a seamless transition from check-in to final payment, therefore improving the overall hotel experience for both staff and customers.

1.1 Purpose:

The purpose of a hotel reservation system is to streamline and enhance the process of booking accommodations, both for guests and hotel operators. Here are the key purposes and benefits of a hotel reservation system:

- Simplify Booking Process

For Guests: Allows guests to quickly search for available rooms, compare options, and make reservations with minimal effort. Enables online booking from anywhere at any time,

providing flexibility and saving time. Provides immediate booking confirmation and details, reducing uncertainty and improving user experience.

For Hotels: Simplifies the process of managing room availability and bookings, reducing manual effort and administrative tasks. Automatically updates room availability in real time, minimizing the risk of overbooking and ensuring accurate reservations.

- Enhance Operational Efficiency

For Guests: Offers features such as online check-in/check-out and the ability to view and modify bookings without needing to contact the hotel directly.

For Hotels: Centralizes reservation information, making it easier to manage bookings, track guest preferences, and handle special requests. Automates tasks such as sending confirmation emails, processing payments, and generating reports, reducing the need for manual intervention.

- Improve Guest Experience

For Guests: Allows hotels to offer personalized recommendations and tailor services based on guest preferences and booking history.Provides clear and detailed information about room rates, availability, and hotel amenities, helping guests make informed decisions.

For Hotels: Gathers data on guest preferences and booking patterns, enabling hotels to enhance their services and tailor marketing efforts to better meet guest needs.

1.2 Problem Statement:

A hotel reservation system that helps manage booking of new customers, user friendly and easy to use.

In the hospitality industry, effective management of hotel operations is crucial for ensuring customer satisfaction, maximizing revenue, and optimizing resource utilization. Current hotel management processes are often leading to inefficiencies, booking errors, and poor customer experiences.

1.3 Objectives:

- To user authentication and authorization, including roles for guests, receptionists, and administrators.
- To manage room availability, including booking, check-in, and check-out processes. This includes viewing room status, types, and prices.
- To allow guests to make, view, and cancel reservations. Include search functionality to find available rooms based on criteria like dates, room types, and amenities.
- Allow guests to make, view, and cancel reservations. Include search functionality to find available rooms based on criteria like dates, room types, and amenities.

1.4Scope:

The scope of a hotel reservation system encompasses a broad range of functionalities and features designed to manage and streamline the booking process for both guests and hotel operators. Here's an outline of the primary areas covered by the scope of such a system:

- Hospitality Industry

Hotels and Resorts: The system is designed to enhance the booking and management processes for hotels and resorts. It aims to improve guest experience by offering a seamless booking experience, managing room availability, handling reservations, and streamlining check-in/check-out procedures. Features may include real-time availability updates, automated booking confirmations, and personalized guest services.

- Travel and Tourism

Travel Agencies: The system can integrate with travel agency systems to offer hotel booking services as part of comprehensive travel packages. This integration enables travel agencies to provide a one-stop solution for customers seeking both travel and accommodation arrangements. Key functionalities include booking management, package customization, and synchronized updates on travel and accommodation details.

- Corporate Sector

Business Travel**:** Tailored tools for corporate clients to manage business travel accommodation efficiently. This includes features for booking hotel rooms for business trips, managing corporate rates, handling group bookings, and tracking travel expenses. The system can support corporate policies and preferences, offer reporting capabilities, and facilitate easy adjustments to bookings.

- Healthcare Facilities

Medical Tourism: The system can cater to medical tourism by managing reservations related to medical procedures and treatments. It provides options for patients traveling for medical reasons, including accommodation near healthcare facilities, extended stay options, and special requirements for patient comfort and recovery.

Chapter 2

Proposed System

Guest Vision is designed to implement a comprehensive hotel reservation system that enhances booking efficiency, manages room availability, ensures accurate reservations and improves overall operational efficiency for hotels. The proposed hotel reservation system will integrate key functionalities to address the challenges faced by both guests and hotel operators. The system will providing a seamless and user-friendly experience for all users.

2.1 Features and Functionality:

- User-Friendly Booking Interface

  Search and Booking: Allow guests to search for available rooms based on dates and preferences. Provide an intuitive booking process with real-time availability updates.

- Real-Time Availability Management

  Dynamic Availability Updates: Automatically update room availability in real-time to reflect current bookings and prevent overbooking.

- Reservation Management

  Modification and Cancellation: Allow staff to modify or cancel reservations easily, with real-time updates to room availability.

- Bill processing

  Automated Billing: Generate and send invoices and receipts for bookings.

- User Management

  Guest Profiles: Create and manage guest profiles, storing information such as contact details, booking history, and preferences.

- Forgot Password

  Change Password: To implement a secure and user-friendly "Forgot Password" feature within the hotel reservation system, ensuring that guests can easily recover or reset their passwords if they forget them, while maintaining the security of their account information.

Chapter 3

Project Outcome

Users now have a smooth and safe platform to book and manage their hotel reservations thanks to the hotel management system's successful development. A safe login process, real-time room availability based on user criteria, and simple booking viewing, modification, and cancellation are important results. A soft copy of the bill can be printed and sent outside thanks to the system's generation of comprehensive billing information. This technology increases operational efficiency, enhances client satisfaction, and expedites the hotel booking process.

- Users can securely log in to their accounts using their credentials.
- Users can book available rooms by entering criteria such as check-in/check-out dates, room type, and number of guests.
- Displays a list of available rooms with details such as room type and price.
- Users can book a room by providing information such as name, contact details.
- Allows users to view, modify, or cancel their bookings.
- Cancel Bookings: Users can cancel their bookings if needed, with the system handling cancellation policies and updating room availability accordingly.
- Bill Generation: The system creates a soft-copy of the billing details of the user with can be further printed and provided to the user by external means.

Chapter 4

Software Requirement

Software requirements define the specific needs and functionalities that a software system must meet to achieve its intended purpose. These requirements outline what the software should do (functional requirements) and the qualities it should have (non-functional requirements, like performance, security, or usability). They are critical for guiding the design, development, and testing phases of a software project, ensuring all stakeholders have a clear understanding of the system's capabilities and constraints. Well-defined software requirements help prevent misunderstandings, reduce development risks, and ensure the final product meets user expectations.

- Frontend (User Interface and Interaction):

- NetBeans IDE:

Version: NetBeans 8.2 or later (ensure compatibility with the JDK version you are using).

Purpose: Integrated Development Environment (IDE) for writing, debugging, and managing Java code. It provides the tools necessary to develop the application's user interface and interaction layer.

- iTextPdf 7.7.4:

Purpose: A library used for generating PDF documents programmatically within Java applications. It enables the generation of customer invoices, receipts, and other documents, which are part of the output seen by the user.

- Backend (Database, Logic, and Core Functionality):

- Java Development Kit (JDK):

Purpose: Provides the core Java libraries and development tools necessary for building and running the backend logic of the application.

- MySQL Database Server:

Version: MySQL 7.7 or later (consider using the latest stable version for new features and security improvements).

Purpose: Relational database management system to store and manage backend data such as customer information, room schedules, and billing details.

- MySQL Connector/J:

Version: Latest version compatible with your MySQL server and JDK.

Purpose: JDBC driver to enable Java applications to connect and interact with the MySQL database, ensuring backend data operations.

- Java Runtime Environment (JRE):

Version: Matches the JDK version you are using.

Purpose: Provides the runtime environment necessary for running Java-based backend processes.

Chapter 5

Project Design

Project design is the process of defining the structure, components, and execution plan of a project. It involves outlining the project's objectives, scope, timeline, deliverables, resources, and risks. In this phase, detailed plans for how to achieve the project goals are created, including tasks, workflows, and responsibilities. Effective project design ensures that all stakeholders have a clear understanding of the project's direction and how the final outcomes will be achieved, setting the foundation for successful implementation and delivery.

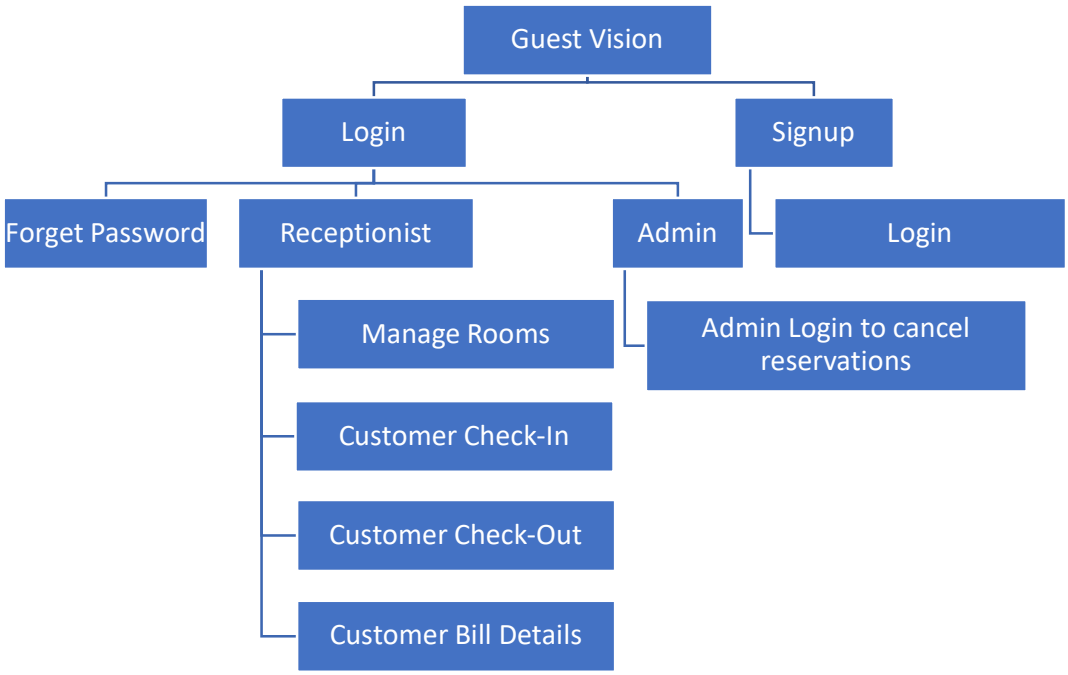


Figure 5.1: Block Diagram

- Guest Vision (Top Level): The starting point for the system where users are categorized into two main functions: Login and Signup.

- Login: Existing users can log into the system. This leads to two potential roles: Receptionist and Admin.
- Forget Password: Option for users who forget their password to recover or reset it.
- Signup: For new users to register into the system. After signup, the user can proceed to log in.
- Receptionist (Login as Receptionist): The receptionist has access to several key functionalities:
- Manage Rooms: Allows the receptionist to manage room availability, bookings, or room-related tasks.
- Customer Check-In: Handles guest check-ins when they arrive at the hotel.
- Customer Check-Out: Manages guest check-outs when they leave the hotel.
- Customer Bill Details: Provides detailed billing information for customers at the time of check-out or during their stay.
- Admin (Login as Admin):The admin user has an exclusive option:
- Admin Login to cancel reservations: This functionality allows the admin to cancel room reservations, a task typically restricted to higher authority roles like the admin.

Chapter 6

Project Scheduling

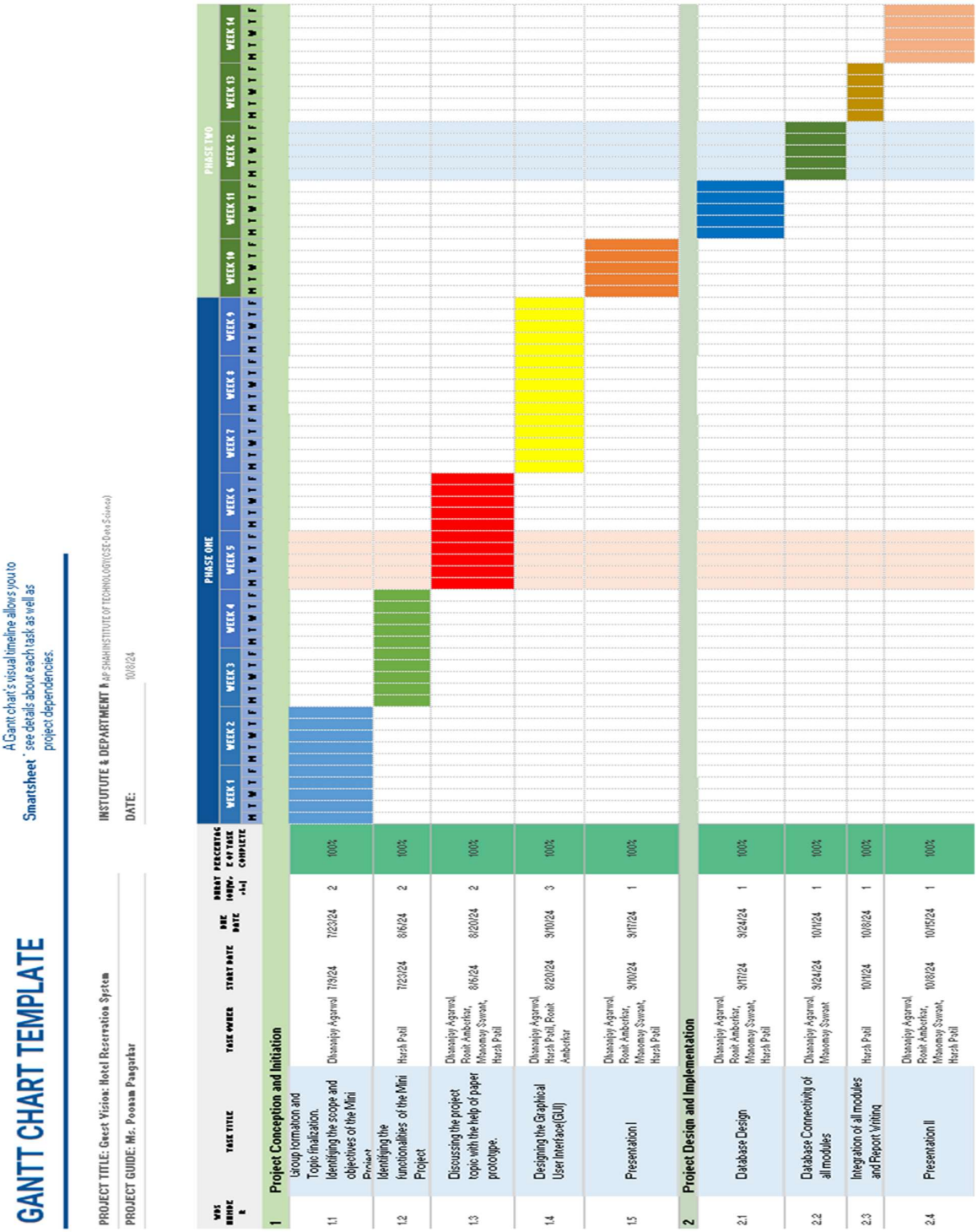


Figure 6.1

The image is a Gantt chart, which visually represents the timeline and progression of tasks for a project. It is organized by weeks (on the vertical axis) and divided into two main project phases: Project Conception and Initiation, Project Design and Implementation. Each phase includes various tasks, color-coded for distinction, and spans over specific time periods (weeks). Task descriptions, deadlines, and responsibilities are listed, showing a clear project schedule, with progress and dependencies marked visually through bars of different colors. The chart is designed to help track the milestones and deliverables over time, facilitating project management and monitoring.

Chapter 7

Results

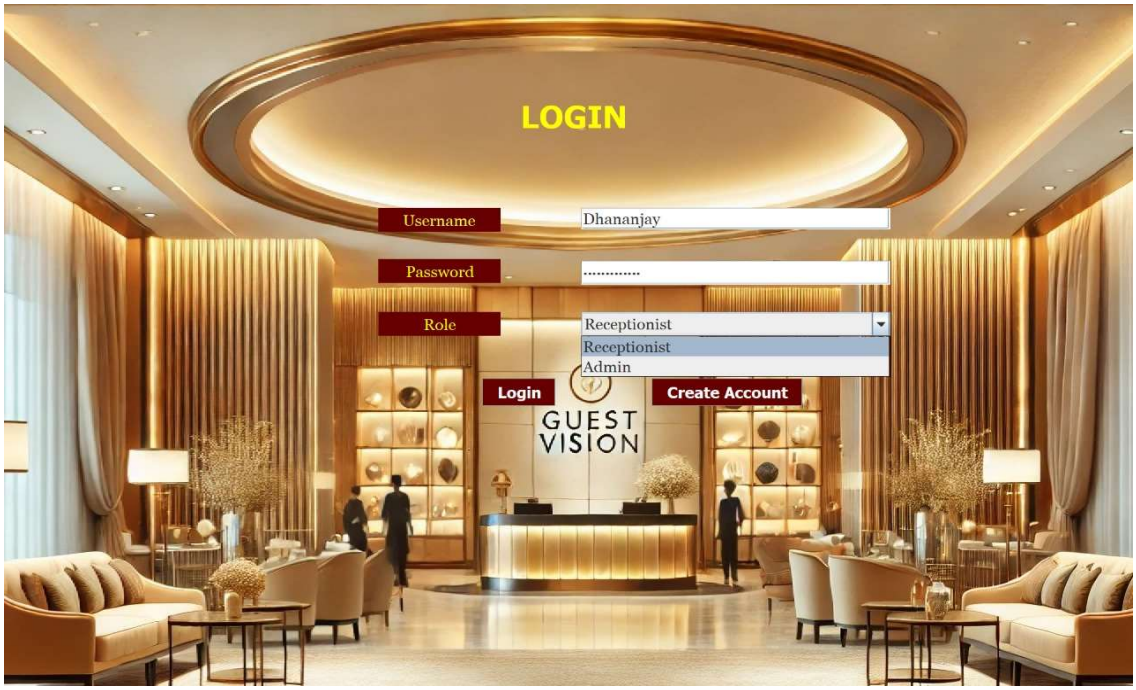


Figure 7.1 Login

A login page is a user interface that allows individuals to securely access their accounts on a website or application. Typically, it features fields for entering a username and a password.

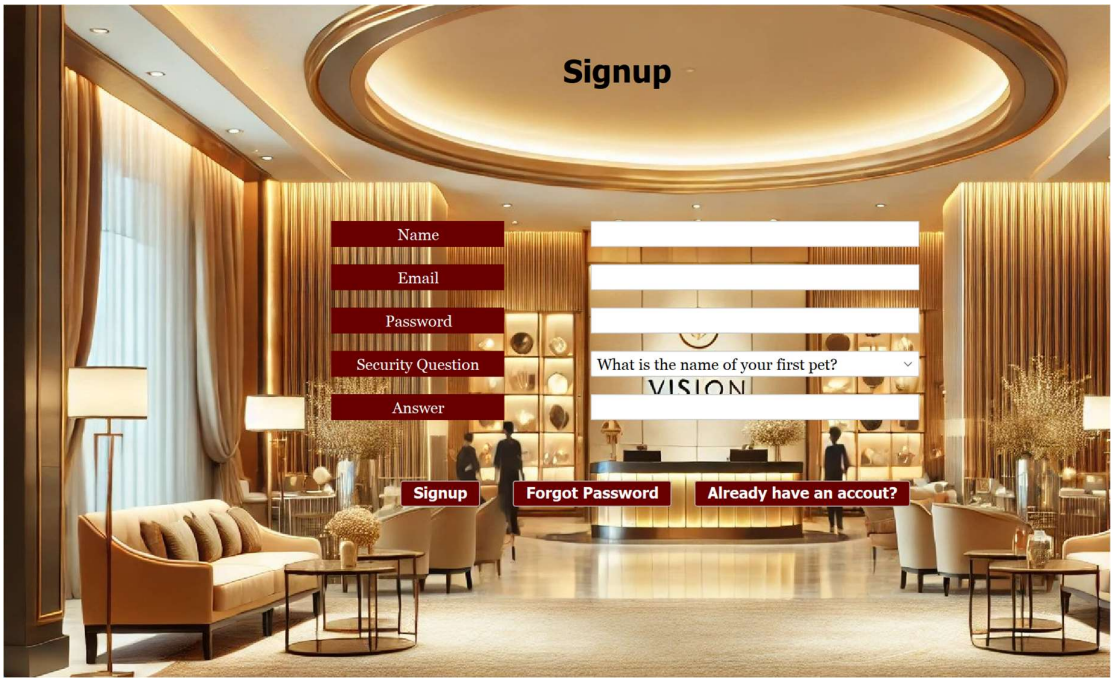


Figure 7.2 Sign-Up

A Signup page is a user interface that allows individuals to securely create an account on a website or an application. Typically, it features fields for entering a username, email, password, security question and answer to the security question. There is also an option to reset the password by clicking on forgot password incase the user forgot their password.

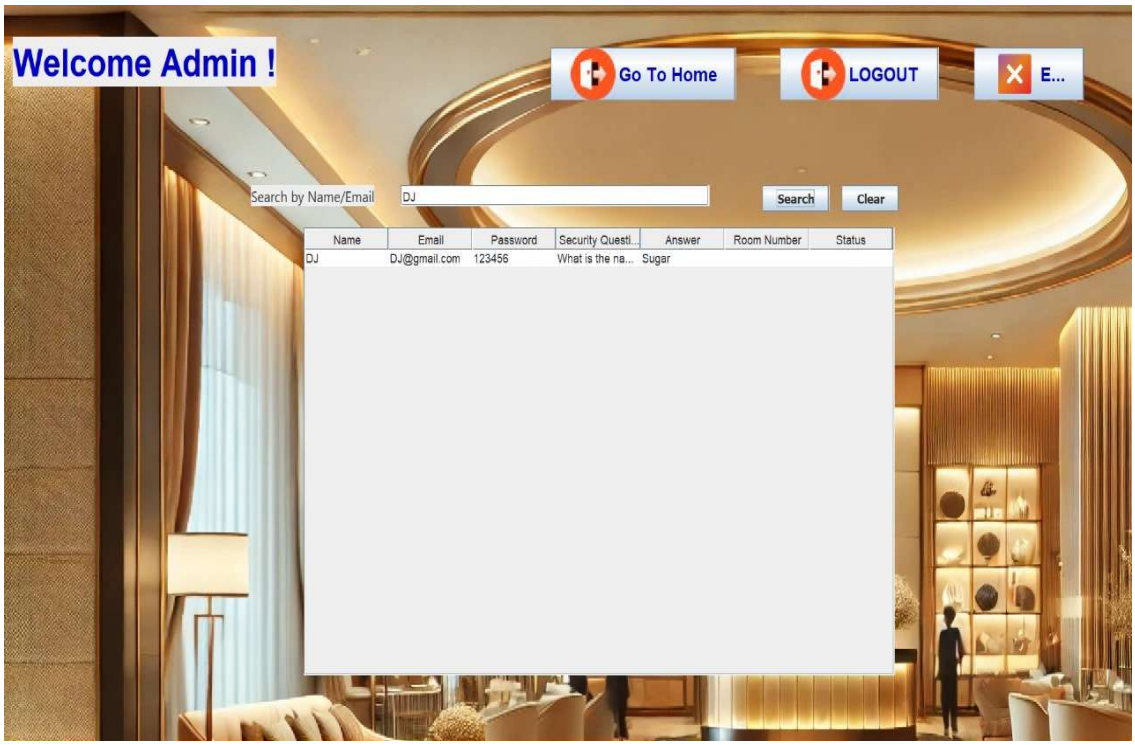
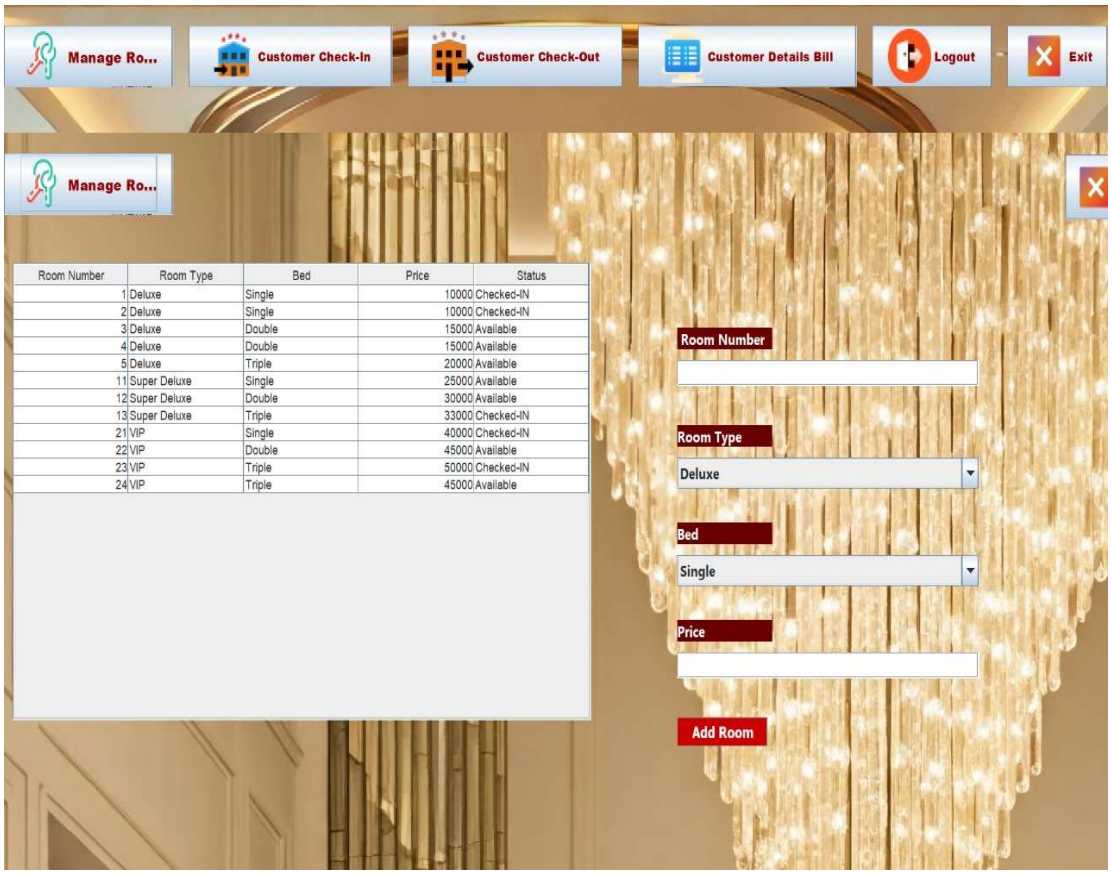


Figure 7.3 Admin

An admin page, often referred to as an admin dashboard or control panel, is a user interface designed for system administrators or authorized personnel to manage bookings and cancellations.

Figure 7.4 Forgot Password

A Forgot Password page is a user interface designed to help users recover access to their accounts when they forget their password. This page typically guides users through the process of resetting their password securely.



Room Number	Room Type	Bed	Price	Status
1	Deluxe	Single	10000	Checked-IN
2	Deluxe	Single	10000	Checked-IN
3	Deluxe	Double	15000	Available
4	Deluxe	Double	15000	Available
5	Deluxe	Triple	20000	Available
11	Super Deluxe	Single	25000	Available
12	Super Deluxe	Double	30000	Available
13	Super Deluxe	Triple	33000	Checked-IN
21	VIP	Single	40000	Checked-IN
22	VIP	Double	45000	Available
23	VIP	Triple	50000	Checked-IN
24	VIP	Triple	45000	Available

Figure 7.5 Manage Rooms

The Manage Rooms interface is designed for receptionists to oversee and organize room allocations, bookings, and configurations within a facility such as a hotel.

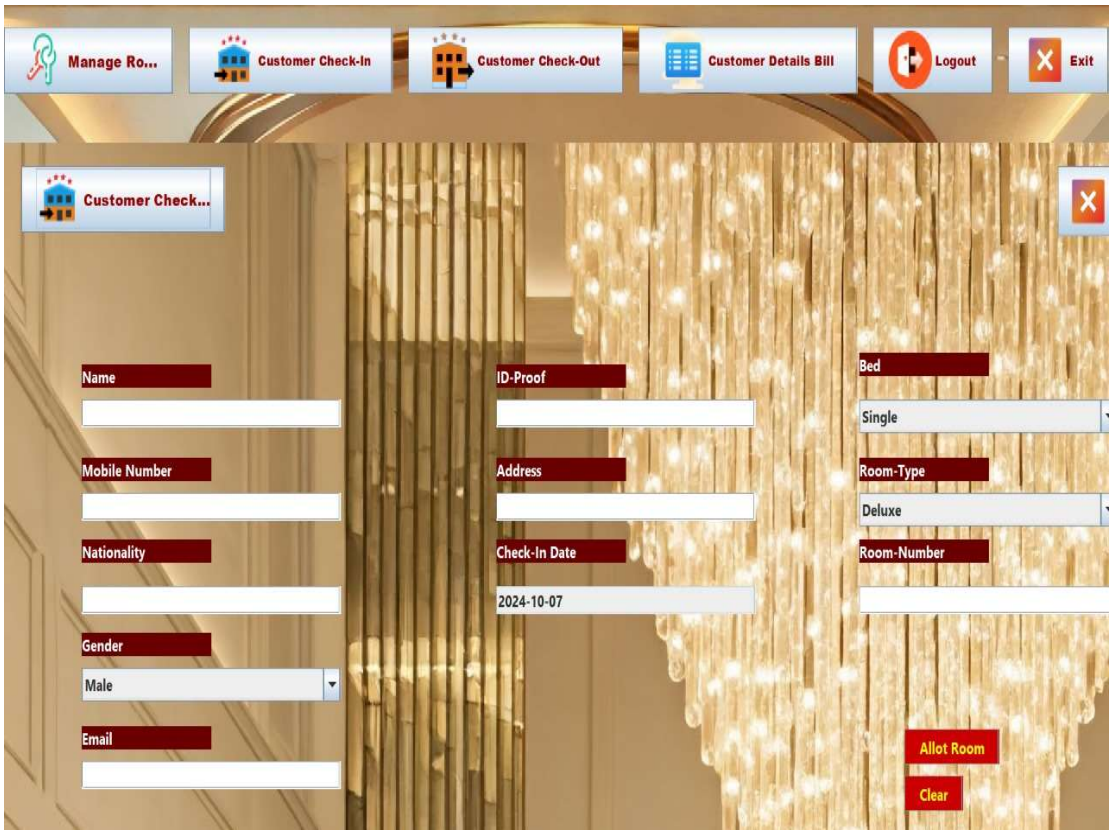


Figure 7.6 Customer Check-in

The Customer Check-In interface is designed to streamline the process of welcoming guests into a facility, such as a hotel. This system ensures a smooth and efficient check-in experience while collecting necessary information from guests.

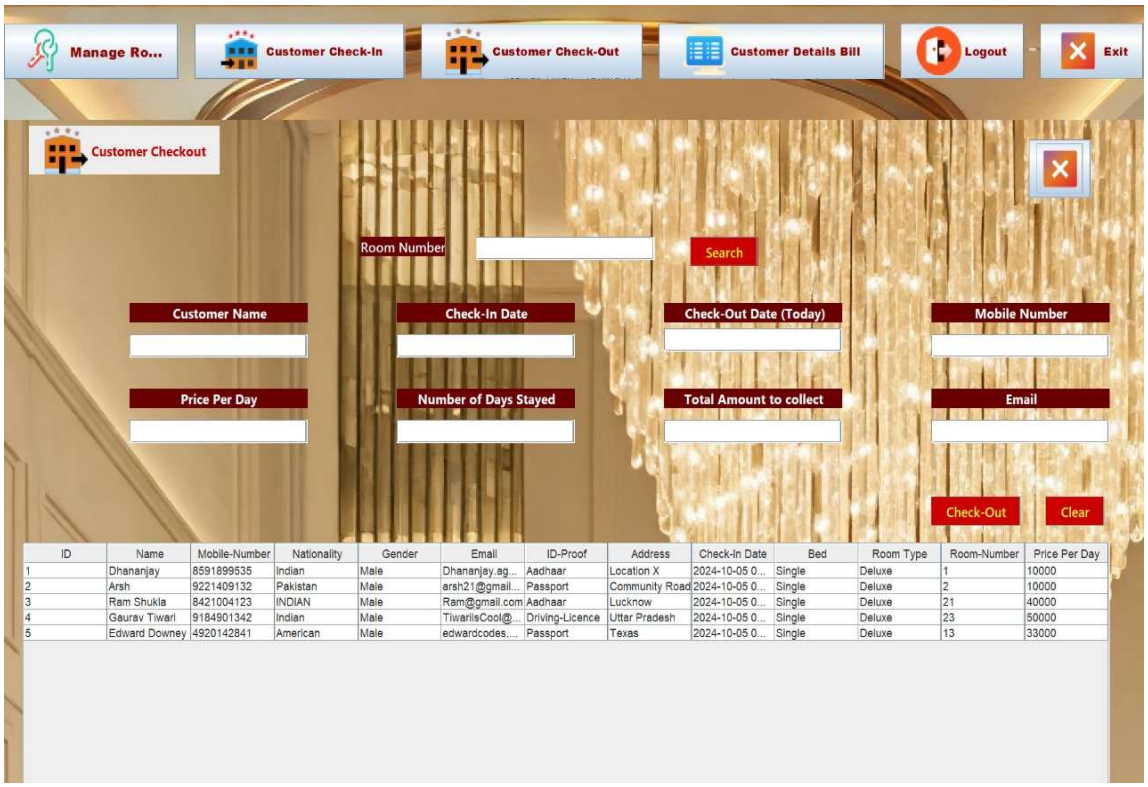


Figure 7.7 Customer Check out

The Customer Checkout interface is designed to facilitate a seamless and efficient process for guests leaving a facility, such as a hotel. This system ensures that all final transactions are handled smoothly, providing a positive end to the customer experience.

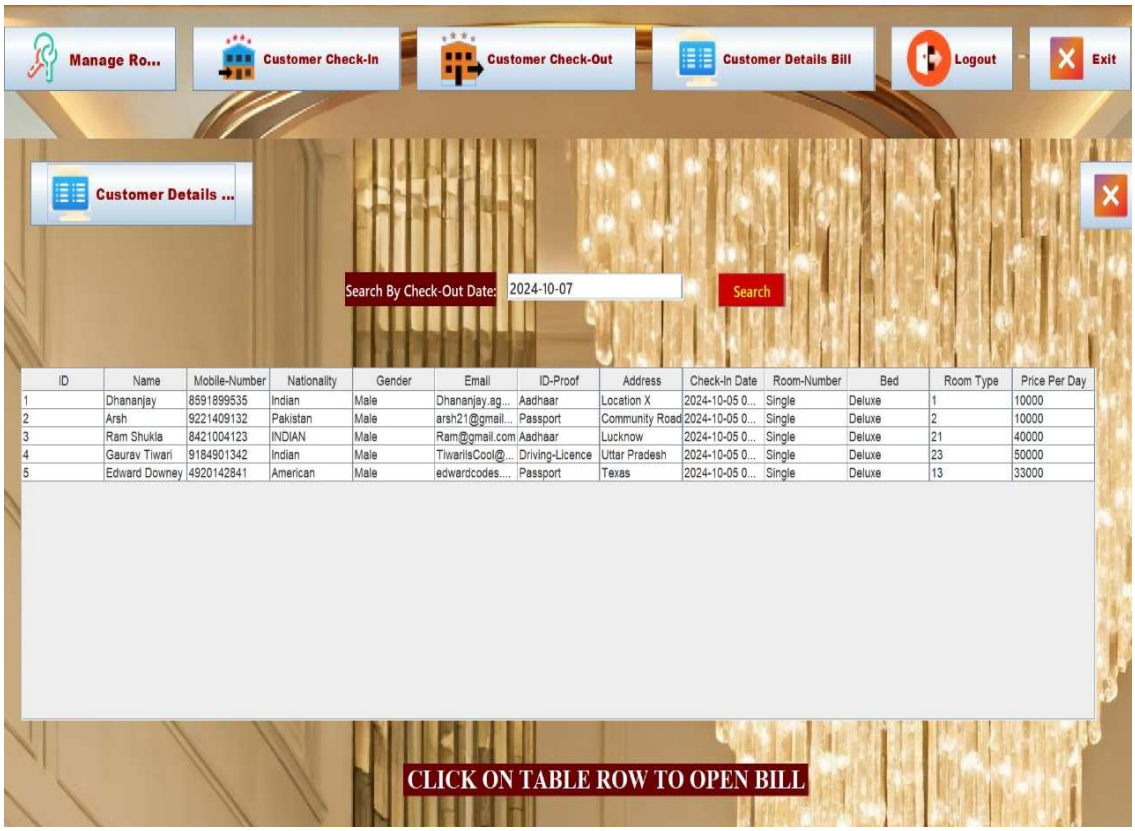


Figure 7.8 Customer Details

The Customer Details interface is designed to manage and display essential information about guests or customers within a system, such as a hotel, or event. This feature enables receptionist to access and display customer profiles efficiently.

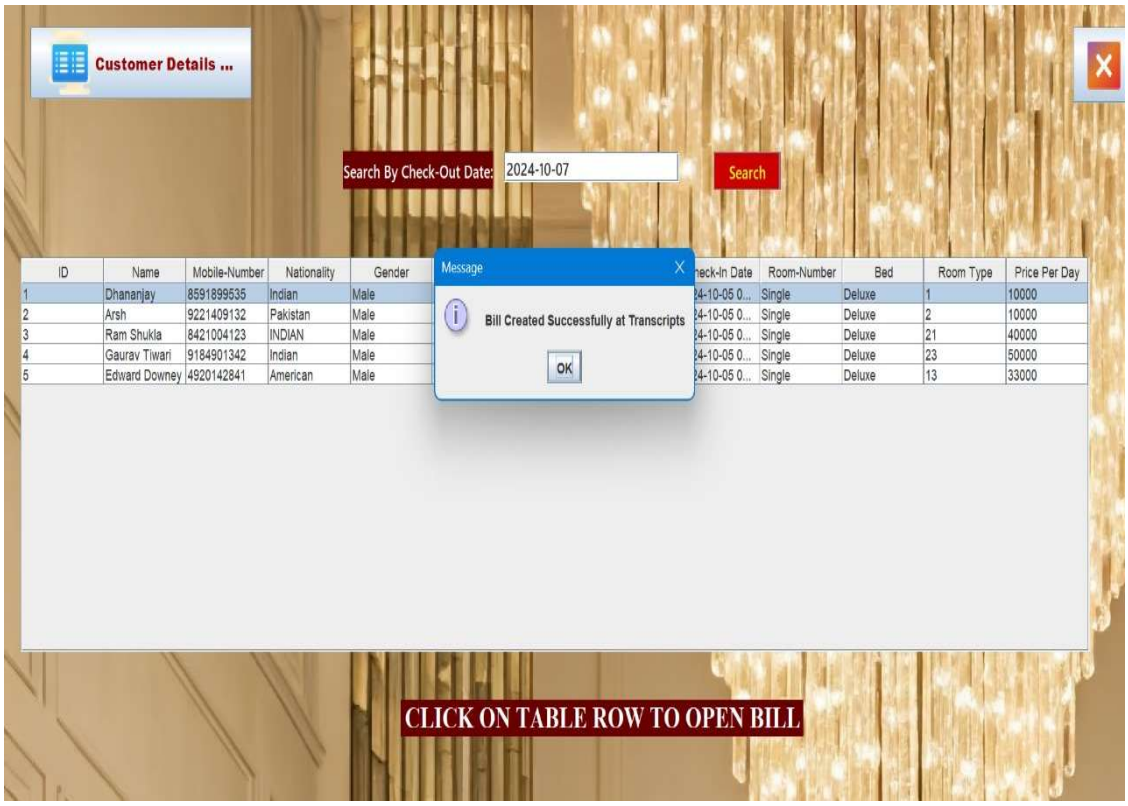


Figure 7.9 Bill Generation

The Details interface is a versatile section of a system that provides in-depth information about customer details and creates bill on clicking the row with the records of the particular user.

GuestVision Bill Receipt

Date: 2024/10/23

Customer Information

Name: Arsh

Mobile: 9221409132

Email: arsh21@gmail.com

Room No: 2

Check-Out Date: 2024-10-23

Bill Details

Description	Quantity	Amount (Rs)
Room Charge per day	1	Rs.21600.0
Room Charge	18	Rs.388800.0
Tax (12%)	1	Rs.46656.00
Total Amount After Tax		**Rs.435456.00**

Thank you for choosing our hotel!

For any inquiries, please contact: support@guestvision.com

Terms and Conditions:

1. All payments are final and non-refundable.
2. Checkout time is 11:00 AM.

Figure 7.10 Bill Receipt

The Bill Details interface provides a comprehensive overview of charges associated with a customer's stay facilitating transparency and ease of payment. This section is crucial for guests in hotels that requires billing.

Chapter 8

Conclusion

The successful implementation of the Guest Vision Hotel Management System demonstrates how technology can enhance the operational efficiency of hotel management while improving guest experiences. By automating room bookings, check-ins, check-outs, and billing processes, the system reduces manual errors and streamlines daily hotel operations. The system's intuitive design and real-time data handling enable staff to manage tasks with ease, leading to better customer service and increased satisfaction. Overall, this project underscores the potential of software solutions to optimize the hospitality industry.

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