

A
PROJECT
REPORT ON

Hotel Reservation System

SUBMITTED IN PARTIAL FULFILLMENT OF
DIPLOMA IN ADVANCED COMPUTING (PG-DAC)



UNDER THE GUIDANCE OF Mr. Swaraj Chaudhari

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CENTER FOR DEVELOPMENT OF ADVANCED COMPUTING

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TABLE OF CONTENTS

1.	INTRODUCTION	1
2.	PRODUCT OVERVIEW & SUMMARY	2
	2.1. Purpose	2
	2.2 Scope	2
	2.3 OverView	2
	2.4 Feasibility Study	4
3.	REQUIREMENTS FULLFILED	5
	3.1. Functional Requirements	5
	3.2. Non-Functional Requirements	5
4.	PROJECT DESIGN	7
	4.1. Data Model	7
	4.2. User Case Diagram	12
	4.3. Project Architecture	13
	4.4. Admin Login	14
	4.5. User Login	15
5.	PROJECT SCREENSHOT	16
	5.1. Customer	16
	5.2. Admin	19
6.	JWT SECURITY	24
7.	TESTING	26
8.	CONCLUSION	28
9.	FUTURE SCOPE	29
10.	REFERENCES	30

ABSTRACT

The Hotel Reservation System is a comprehensive and user-centric web service designed to streamline and enhance the process of hotel reservations. This approach is a game changer in an age where convenience is everything. Customers may quickly explore a wide range of hotels, each with complete information on location, amenities, and cost. A customizable profile creation and login mechanism increases user engagement by assuring a customized experience. The feasibility assessment reveals the project's alignment with technical capabilities, operational requirements, economic viability, and scheduling constraints. The result is a solution that not only meets the needs of modern customers but also enhances the competitive advantage of hotels in a highly dynamic industry

This project addresses the growing demand for efficient and convenient accommodation booking methods. The system offers a user-friendly interface that allows customers to browse and select hotels based on their preferences and requirements. Users can create profiles, log in, search for hotels, view room availability, make reservations, and even cancel bookings. Hotel administrators benefit from real-time updates on room availability and the ability to manage reservations and generate reports. This project aims to modernize the hospitality industry by providing an intuitive, secure, and efficient platform that benefits both customers and hotel owners.

1. INTRODUCTION

The Hotel Reservation System project seeks to develop a comprehensive and user-friendly web service for managing hotel reservations. With the growing demand for quick and convenient hotel booking processes, this system is meant to streamline the reservation process, improve customer experience, and increase hotel operational efficiency. This section provides a summary of the project's objective and the importance of hotel reservation systems.

Hotel reservation systems play an important role in the hospitality business by automating and streamlining the booking process. Traditionally, tourists had to make bookings over the phone or in person, which might be time-consuming and error prone. With the introduction of internet reservation systems, the hospitality industry has undergone a shift, providing benefits to both Users and Admin.

For hotel administrators, the benefits are equally noteworthy. The system empowers them with a comprehensive dashboard that unveils real-time occupancy rates, revenue insights, and reservation tracking. Hotel owners can now make data-driven decisions, fine-tuning their operations to optimize revenue generation.

In conclusion, the Hotel Reservation System project recognizes the importance of offering a seamless, user-centric platform for booking accommodation. By automating the reservation process and providing essential information to users, the system aims to enhance customer satisfaction, operational efficiency, and revenue generation for hotels. This project's significance lies in its contribution to the modernization of the hospitality industry and its commitment to delivering a hassle-free booking experience to customers.

2. Product Overview and Summary

2.1 Purpose:

The main objective of the Hotel Reservation System is to provide a comprehensive and efficient platform for managing hotel reservations. The system aims to simplify the process of booking accommodations for users while streamlining the operations for hotel owners and staff. By offering an intuitive and user-friendly interface, the system intends to enhance the overall experience of customers and optimize the occupancy rates and revenue generation for hotels.

2.2 Scope:

The scope of the Hotel Reservation System project encompasses a range of functionalities and features that cater to both users and hotel administrators. This includes:

- User Registration and Profile Management
- Hotel Listing and Information Display
- Room Availability and Booking Management
- Reservation Cancellation
- User Authentication and Security
- User-friendly Interface for Seamless Navigation
- An Admin Panel for Hotel Administrator to manage Hotels and Rooms

2.3 Overview:

- TECHNOLOGIES USED
 1. FRONT END
 - a. Bootstrap
 - b. Router-Dom
 - c. React
 - d. Axios
 2. BACK END
Spring Boot
 3. DATABASE MANAGEMENT SYSTEM
MySQL

- **Features Provided**

For User:

1. **Effortless User Login and Authentication:** Leave your worries behind with our hassle-free login process. Allowing you to access your account with peace of mind.
2. **Discover Exceptional Hotels:** Explore a curated selection of hotels that suit your preferences. From luxurious resorts to cozy boutique stays, finding your perfect accommodation is just a click away.
3. **Browse Through Room Options:** Dive into the details of various room offerings at your chosen Hotel. Whether it's a spacious suite or a charming single room, we provide comprehensive information to help you make the right choice.
4. **Keep Hotel & Room Info Up to Date:** Stay informed with real-time updates on hotel and room details.
5. **Effortless Booking Process:** Reserve your desired room seamlessly using our intuitive booking process. We streamline the steps, making your booking experience quick and enjoyable.
6. **Accessible Booking Details:** Retrieve your booking details whenever you need them. We provide a clear overview of your reservations, putting you in control of your booking plans.
7. **Payment:** Experience peace of mind while making payments.
8. **Cancelling with Ease:** Life can be unpredictable, and we understand that. If your plans change, our simple cancellation process allows you to adjust your bookings without stress.

For Admin:

1. **Secure Admin Login and Authentication:** We prioritize the security of your administrator account. Our authentication process ensures authorized access, safeguarding management functionalities.
2. **Comprehensive Hotel List:** Access a complete list of registered hotels under your administration. Get a quick overview or dive deep into each hotel's details for effective management.
3. **Effortless Hotel Information Updates:** Keep hotel details up to date with ease. Our platform allows you to edit and modify information seamlessly, ensuring accuracy and relevance.
4. **Seamless Hotel Addition:** Expand your portfolio effortlessly by adding new hotels through our user-friendly interface. We've simplified the process to help you onboard new properties efficiently.
5. **Streamlined Room Addition:** Enhance your hotels' offerings by adding new rooms. Our intuitive system lets you input room details, amenities, and images to attract potential guests.

6. **Efficient Room Deletion:** Managing room inventory is simple with our platform. Remove rooms from hotels when needed, ensuring accurate availability information for customers.

2.4 Feasibility Study:

The feasibility assessment of the project covers several aspects:

- **Technical Feasibility:** The project requires expertise in web development, database management, and user interface design. The technologies chosen must be capable of supporting real-time updates, secure authentication, and efficient data handling. This project makes use of cross-platform software and solutions like Java, and hence can run on any operating system. React, used in front-end, is swift and versatile technology when it comes to delivering the requested page. The combination of Spring Boot, Spring Data JPA and Spring Security for backend makes for a fast, easy to set-up and reliable system to interact with the database, as they are secure and transactional in nature. Since the sensitive data of customers and admins need to be stored in a robust and secure database, MySQL database management system was chosen as it is an industry standard
- **Operational Feasibility:** The system aims to streamline the reservation process, making it more efficient for both users and hotel administrators. It should integrate seamlessly into the existing operations of hotels. In the design of this project, we always kept user experience in mind. We tried to have a good user interface with a consistent theme and alluring design to keep the users interested and engaged. In our project, the use of universally known icons and instructions that are easy to understand makes sure that the user will not need any special technical know-how to use the application. We made sure that the information available throughout the application is arranged in a logically coherent and consistent manner, guaranteeing that the users will have a smooth and effortless experience and even enjoy using the application.
- **Economic Feasibility:** In this type of feasibility study, the benefits of the system to the organization are considered by taking into consideration the cost-benefit analysis. All the software and technologies used in our project are free, open-source, and widely available, with each of the technologies having extensive community support.
- **Scheduling Feasibility:** The project timeline must be realistic, considering the development stages, testing, and potential iterations.

The feasibility study confirms that the project aligns with technical capabilities, operational requirements, economic viability, and scheduling constraints, making it a viable and valuable solution for both users and the hospitality industry.

3. REQUIREMENTS FULFILLED

3.1 Functional Requirements

The Hotel Reservation System should fulfill the following specific functionalities:

- **User Registration and Profile Management:** Users should be able to create accounts with unique usernames and passwords. Users should be able to update their profiles with personal information.
- **Hotel Listing and Information Display:** The system should display a list of hotels with relevant details, such as location, amenities, and prices. Users should be able to filter and sort hotels based on preferences.
- **Room Availability:** Users should be able to view available rooms for a selected hotel and chosen dates. Users should be able to book available rooms by specifying check-in and check-out dates.
- **Reservation Management:** Users should be able to view and manage their reservations, including city-wise search, check-in/out dates, canceling reservations. The system should display confirmation messages to users after successful reservations.
- **Effortless Booking Process:** Reserve your desired room seamlessly using our intuitive booking process. We streamline the steps, making your booking experience quick and enjoyable.
- **Reservation Cancellation:** Users should be able to cancel their reservations with ease.
- **User Authentication and Security:** The system should securely manage user authentication and store hashed passwords. Users should be required to log in before booking or managing reservations.
- **Room Availability Updates:** The system should update room availability to prevent overbooking.

3.2 Non-Functional Requirements

The non-functional aspects of the Hotel Reservation System include:

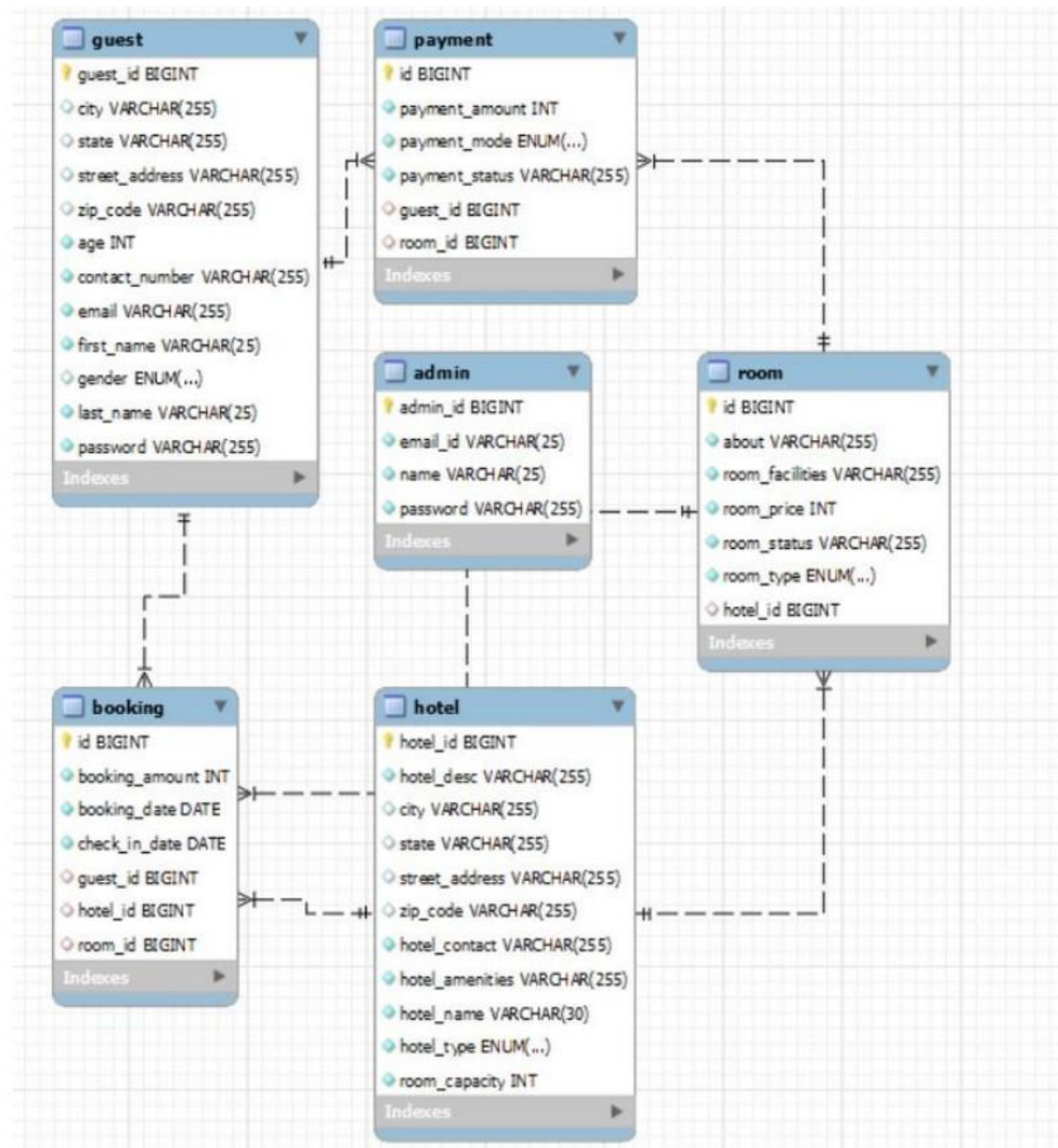
- **Performance:**
The system should be responsive and provide quick responses to user interactions.
It should handle a reasonable number of concurrent users without significant performance degradation.
- **User Experience (UX):**
The user interface should be intuitive, easy to navigate, and visually appealing.
Users should receive clear feedback on their actions, such as successful bookings or cancellations.
- **Scalability:**
The system should be designed to handle increased user load and hotel listings without major modifications.
- **Reliability:**
The system should minimize downtime and ensure that reservations are accurately recorded.
- **Accessibility:**
The user interface should be accessible to individuals with disabilities, following relevant accessibility guidelines.

By adhering to these non-functional requirements, the Hotel Reservation System will ensure a secure, efficient, and user-friendly experience for both customers and hotel administrators.

4. PROJECT DESIGN

4.1. Data Model

1. E-R Diagram:



2. Hotel Schema:

1 • desc hotel.hotel;

Result Grid | Filter Rows: | Export: | Wrap Cell Content: [A](#)

	Field	Type	Null	Key	Default	Extra
▶	hotel_id	bigint	NO	PRI	NULL	auto_increment
	hotel_desc	varchar(255)	NO		NULL	
	city	varchar(255)	YES		NULL	
	state	varchar(255)	YES		NULL	
	street_address	varchar(255)	YES		NULL	
	zip_code	varchar(255)	YES		NULL	
	hotel_contact	varchar(255)	NO	UNI	NULL	
	hotel_amenities	varchar(255)	NO		NULL	
	hotel_name	varchar(30)	NO		NULL	
	hotel_type	enum('FIVESTAR','FOURSTAR','THREESTAR','T...	NO		NULL	
	room_capacity	int	NO		NULL	

3. Hotel Details:

1 • SELECT * FROM hotel.hotel;

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: [A](#)

	hotel_id	hotel_desc	city	state	street_address	zip_code	hotel_contact	hotel_amenities	hotel_name	hotel_type	room_capacity
▶	215	Cozy motel by the beach	Miami	FL	789 Beach Blvd	331001	7861234567	Swimming Pool	Beachside Motel	TWOSTAR	20
	216	Charming bed and breakfast in the countryside	Chicago	IL	101 Oak Lane	606001	3125551234	Breakfast Included	Countryside B&B	THREESTAR	15
	217	Another hotel description	Los Angeles	CA	789 Elm St	900001	2137894560	Gym Sauna	Downtown Suites	FIVESTAR	100
	218	Elegant hotel with a view	San Francisco	CA	567 Hill Rd	941001	4159876542	Restaurant Bar	Bayview Hotel	FOURSTAR	75
	219	Quaint lodge in the mountains	Denver	CO	123 Mountain Way	802001	3035557890	Hiking Trails	Mountain Lodge	THREESTAR	30
	220	Historic hotel in the heart of the city	Boston	MA	456 Main St	021001	6177891234	Free Wi-Fi	Cityview Hotel	FOURSTAR	80
	221	Rustic cabin by the lake	Seattle	WA	789 Lakefront Dr	981001	2061234567	Fishing Fireplace	Lakeview Cabin	TWOSTAR	12
	222	Contemporary hotel in downtown	Dallas	TX	101 Downtown Ave	752001	2145557890	Pool Fitness Center	Metro Hotel	THREESTAR	40
	223	Seaside resort with ocean views	Miami	FL	123 Ocean Blvd	331002	7869876543	Beach Access Spa	Oceanfront Resort	FOURSTAR	150
	224	Mountain retreat with stunning views	Denver	CO	456 Mountain Rd	802002	3035551234	Hiking Fireplace	Mountainview Retreat	THREESTAR	25
	225	Chic boutique hotel in the arts district	Los Angeles	CA	789 Gallery St	900002	2137894561	Art Gallery Rooftop...	Artistic Hotel	FOURSTAR	60
	226	Quirky hostel for backpackers	San Francisco	CA	101 Backpacker Lane	941002	4159876543	Shared Dorms Kitch...	Backpacker Hostel	TWOSTAR	30
	227	Historic inn in a charming village	Boston	MA	123 Village Rd	021002	6177891235	Antique Decor	Village Inn	THREESTAR	18
	228	Family-friendly hotel near Disneyland	Los Angeles	CA	456 Magic Way	900003	2135557891	Pool Kids Club	Magic Hotel	FOURSTAR	90
	229	Secluded cabin in the woods	Seattle	WA	789 Forest Rd	981002	2061234561	Nature Trails Firepl...	Forest Cabin	TWOSTAR	10
	230	Modern hotel in the tech district	San Jose	CA	101 Tech Blvd	951001	4089876541	Tech Hub Fitness ...	Tech Hotel	THREESTAR	35
	231	Beachfront resort with all-inclusive amenities	Miami	FL	123 Beachfront Blvd	331003	7865557891	Beach Access Spa ...	Beach Paradise Resort	FIVESTAR	300
	232	Ski lodge with slopeside access	Denver	CO	456 Ski Trail	802003	3035551231	Sking Hot Tub	Slopeside Lodge	THREESTAR	42
	233	Luxury hotel in the financial district	New York	NY	101 Wall St	100003	2127894562	Business Center Fl...	Financial Towers	FIVESTAR	250
	234	Riverside cabin with fishing dock	Seattle	WA	789 Riverfront Dr	981003	2069876542	Fishing Dock	Riverfront Cabin	TWOSTAR	14
	235	Urban boutique hotel with rooftop bar	Los Angeles	CA	123 Rooftop Ave	900004	2135557892	Rooftop Bar Art G...	Urban Oasis Hotel	THREESTAR	45
	236	Quaint inn in a historic district	Boston	MA	456 Historic St	021003	6177891238	Antique Decor	Historic Inn	TWOSTAR	16
	237	Eco-friendly resort in a tropical paradise	Hawaii	HI	101 Palm Tree Rd	967001	8089876549	Beachfront Sustai...	Tropical Eco Resort	FOURSTAR	120

4. Rooms Schema:

1 • desc hotel.room;

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	auto_increment
about	varchar(255)	NO		NULL	
room_facilities	varchar(255)	NO		NULL	
room_price	int	NO		NULL	
room_status	varchar(255)	NO		NULL	
room_type	enum('DELUXE','DOUBLE_ROOM','SUITE')	NO		NULL	
hotel_id	bigint	YES	MUL	NULL	

5. Rooms Details:

Query 1 hotel.admin Administration - Data Export hotel hotel

1 • select *from hotel.room;

id	about	room_facilities	room_price	room_status	room_type	hotel_id
124	Elegant deluxe room with river view	River View King Bed Mini-bar	6500	Available	DELUXE	216
125	Spacious double room with mountain view	Mountain View Double Bed TV	5500	Available	DOUBLE_ROOM	217
126	Grand suite with panoramic city view	Panoramic View King Bed Dining Area	8500	Available	SUITE	218
127	Comfortable deluxe room with garden view	Garden View King Bed Mini-bar	6200	Available	DELUXE	219
128	Charming double room with courtyard view	Courtyard View Double Bed TV	5300	Available	DOUBLE_ROOM	220
129	Executive suite with private balcony	Private Balcony King Bed Lounge Area	8800	Available	SUITE	221
130	Tranquil deluxe room with forest view	Forest View King Bed Mini-bar	6300	Available	DELUXE	222
131	Cozy double room with garden view	Garden View Double Bed TV	5100	Available	DOUBLE_ROOM	223
132	Spacious suite with oceanfront view	Oceanfront View King Bed Lounge Area	8200	Available	SUITE	224
133	Stylish deluxe room with mountain view	Mountain View King Bed Mini-bar	6700	Available	DELUXE	225
134	Classic double room with city view	City View Double Bed TV	5400	Available	DOUBLE_ROOM	226
135	Royal suite with private Jacuzzi	Private Jacuzzi King Bed Dining Area	8900	Available	SUITE	227
136	Scenic deluxe room with lakeside view	Lakeside View King Bed Mini-bar	6100	Available	DELUXE	228
137	Quaint double room with river view	River View Double Bed TV	5300	Available	DOUBLE_ROOM	229
138	Luxury suite with rooftop terrace	Rooftop Terrace King Bed Lounge Area	9200	Available	SUITE	230
139	Rustic deluxe room with vineyard view	Vineyard View King Bed Mini-bar	6400	Available	DELUXE	231
140	Modern double room with city skyline view	City View Double Bed TV	5600	Available	DOUBLE_ROOM	232
141	Penthouse suite with panoramic city view	Panoramic View King Bed Dining Area	9500	Available	SUITE	233
142	Spacious deluxe room with garden view	Garden View King Bed Mini-bar	6600	Available	DELUXE	234
143	Charming double room with courtyard view	Courtyard View Double Bed TV	5200	Available	DOUBLE_ROOM	235
144	Executive suite with private balcony	Private Balcony King Bed Lounge Area	9700	Available	SUITE	236
145	Tranquil deluxe room with forest view	Forest View King Bed Mini-bar	6800	Available	DELUXE	237
146	Cozy double room with garden view	Garden View Double Bed TV	5400	Available	DOUBLE_ROOM	238

6. Admin:

Limit to 1000 rows

1 • desc hotel.admin;

Field	Type	Null	Key	Default	Extra
admin_id	bigint	NO	PRI	NULL	auto_increment
email_id	varchar(25)	NO	UNI	NULL	
name	varchar(25)	NO		NULL	
password	varchar(255)	NO		NULL	

7. User:

Field	Type	Null	Key	Default	Extra
guest_id	bigint	NO	PRI	NULL	auto_increment
city	varchar(255)	YES		NULL	
state	varchar(255)	YES		NULL	
street_address	varchar(255)	YES		NULL	
zip_code	varchar(255)	YES		NULL	
age	int	NO		NULL	
contact_number	varchar(255)	NO	UNI	NULL	
email	varchar(255)	NO	UNI	NULL	
first_name	varchar(25)	NO		NULL	
gender	enum('FEMALE','MALE')	YES		NULL	
last_name	varchar(25)	NO		NULL	
password	varchar(255)	NO		NULL	

8. Bookings:

	Field	Type	Null	Key	Default	Extra
►	id	bigint	NO	PRI	NULL	auto_increment
	booking_amount	int	NO		NULL	
	booking_date	date	NO		NULL	
	check_in_date	date	NO		NULL	
	guest_id	bigint	YES	MUL	NULL	
	hotel_id	bigint	YES	MUL	NULL	
	room_id	bigint	YES	MUL	NULL	

9. Booking Details:

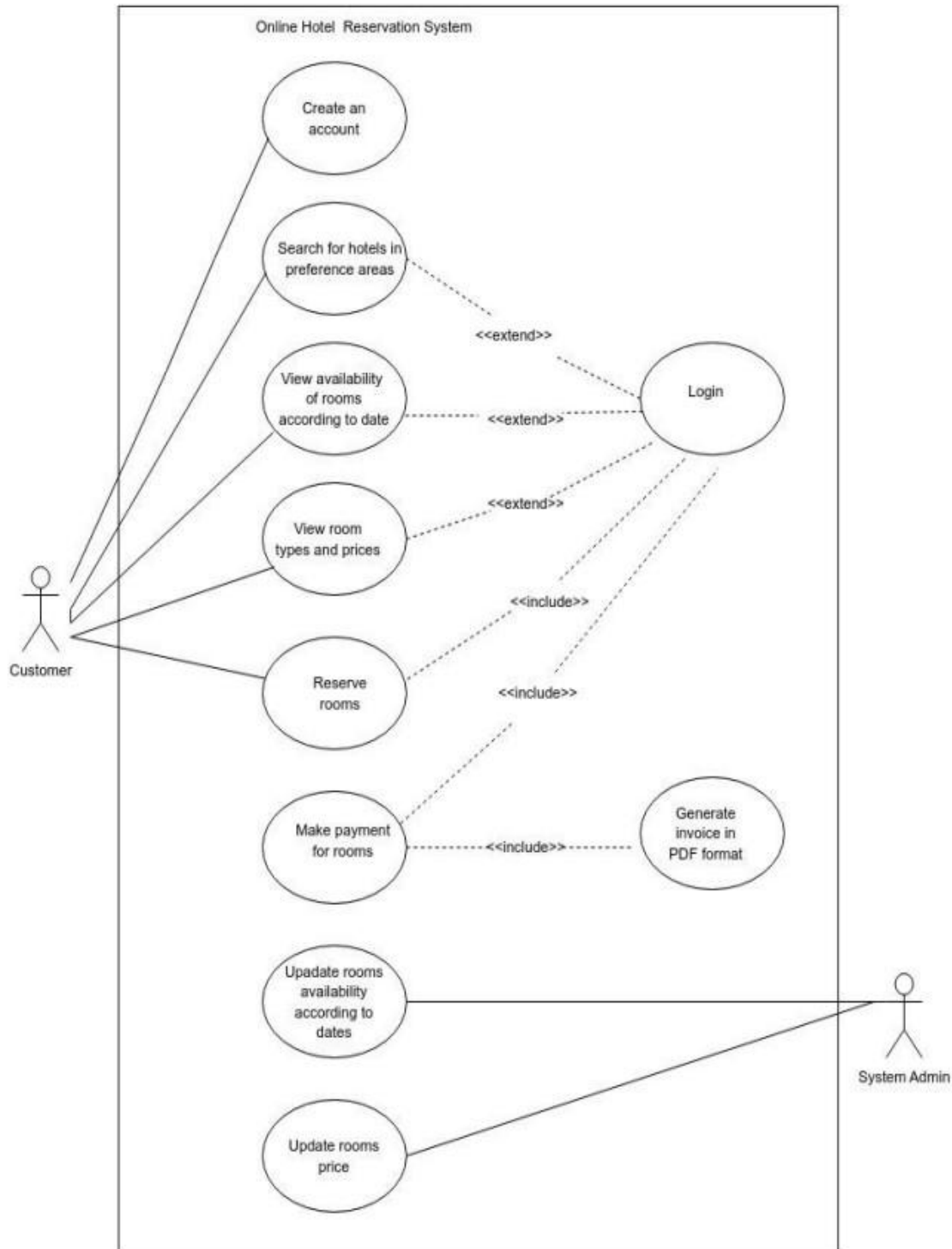
	id	booking_amount	booking_date	check_in_date	guest_id	hotel_id	room_id
►	1	10000	2023-08-31	2023-09-01	4	24	87
	2	5000	2023-08-31	2023-09-07	4	34	116
	3	10000	2023-08-31	2023-09-09	5	28	100
	4	10000	2023-08-30	2023-09-02	5	24	127
	5	10000	2023-08-30	2023-09-01	6	33	113
	6	10000	2023-09-01	2023-09-07	6	34	115
•	NULL	NULL	NULL	NULL	NULL	NULL	NULL

10. Payment:

	Field	Type	Null	Key	Default	Extra
►	id	bigint	NO	PRI	NULL	auto_increment
	payment_amount	int	NO		NULL	
	payment_mode	enum('CREDIT_CARD','DEBIT_CARD','NET_BAN...)	NO		NULL	
	payment_status	varchar(255)	NO		NULL	
	guest_id	bigint	YES	MUL	NULL	
	room_id	bigint	YES	MUL	NULL	

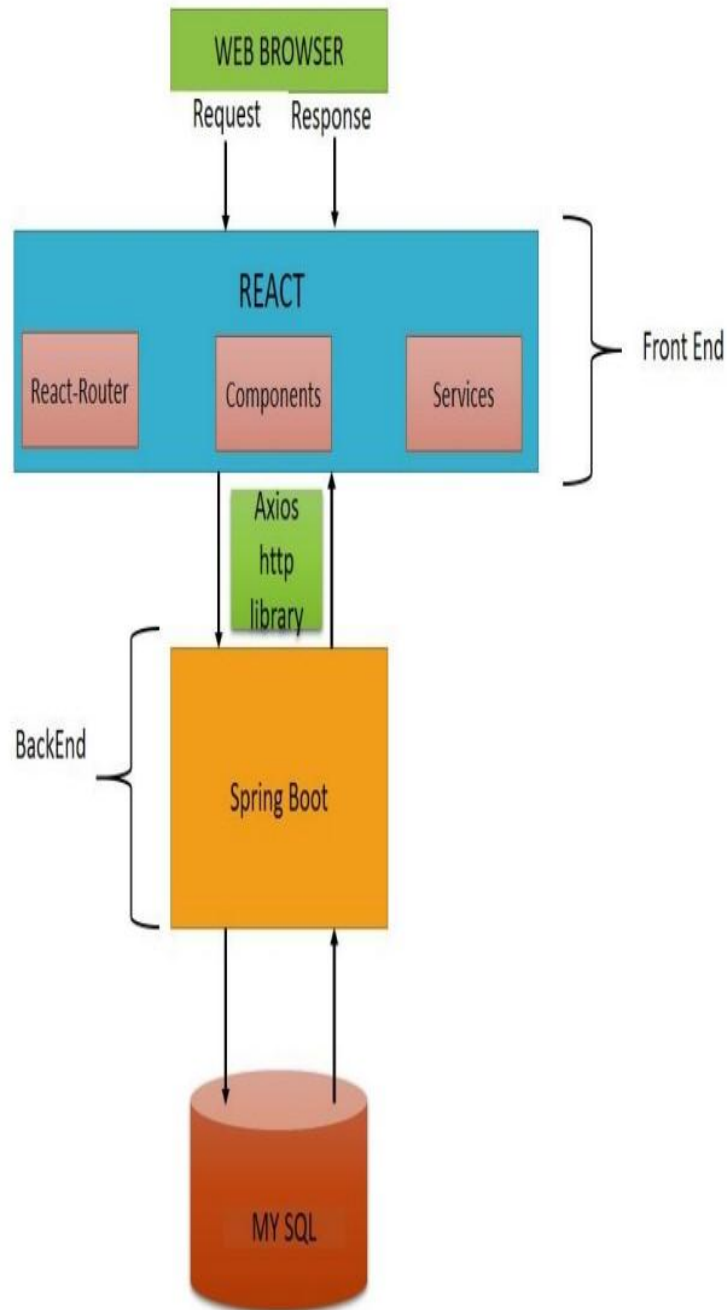
4.2. Use Case Diagram

The Use Case diagram illustrates the interaction scenarios between users and the system. It highlights actions such as browsing hotels, making reservations, and managing bookings

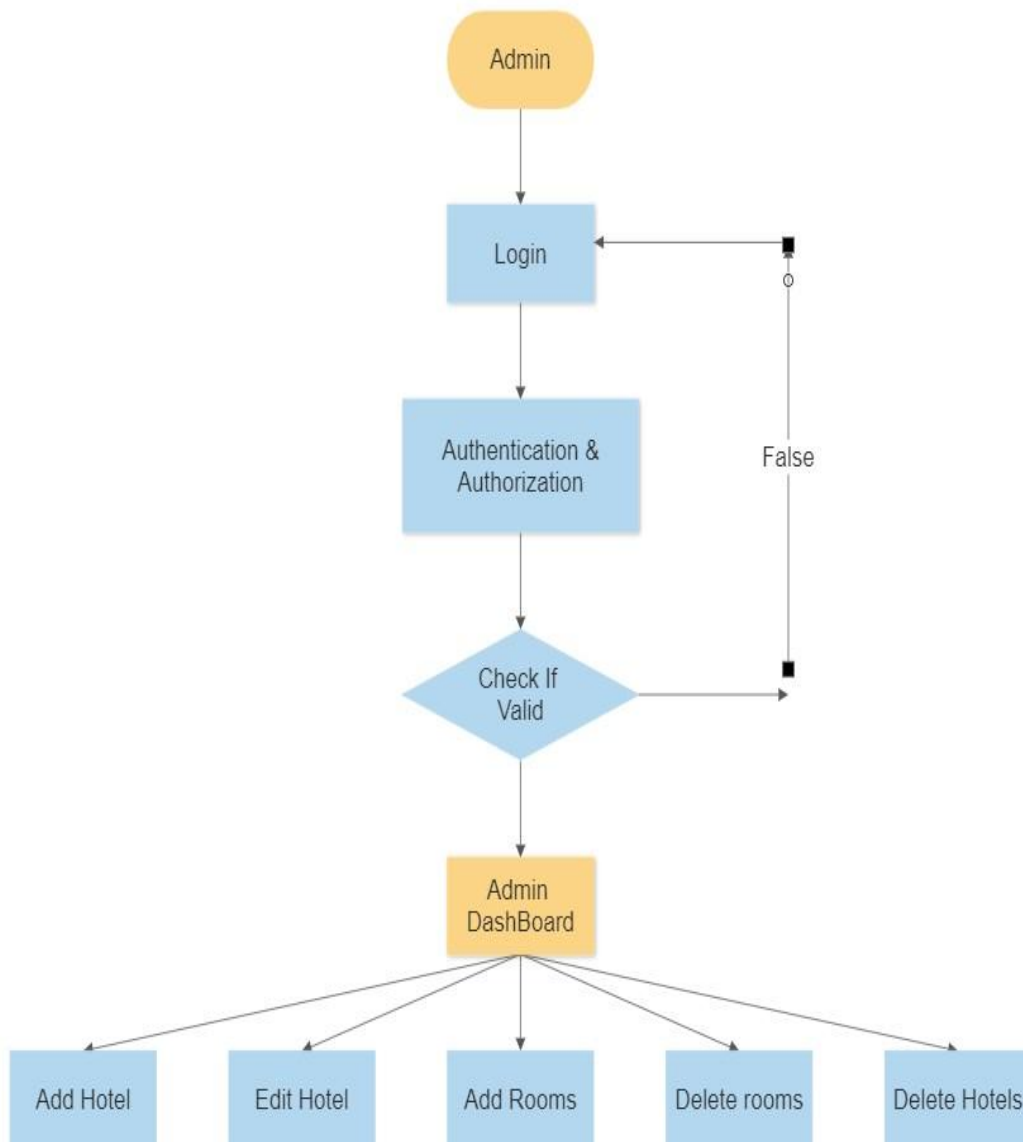


4.3. Project Architecture Diagram

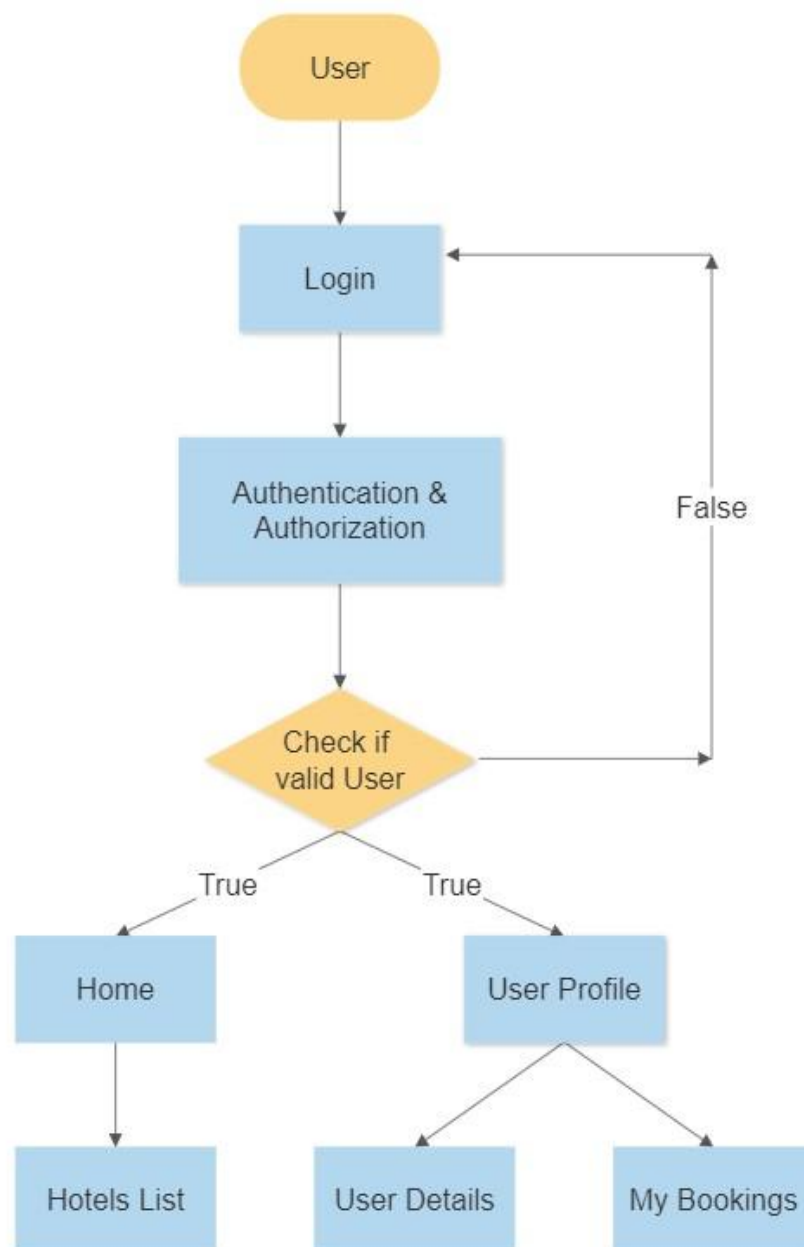
The System Architecture diagram presents a high-level view of the application's architecture, outlining components like the front-end, back-end, database, and any external integrations.



4.4 Admin Login Diagram:



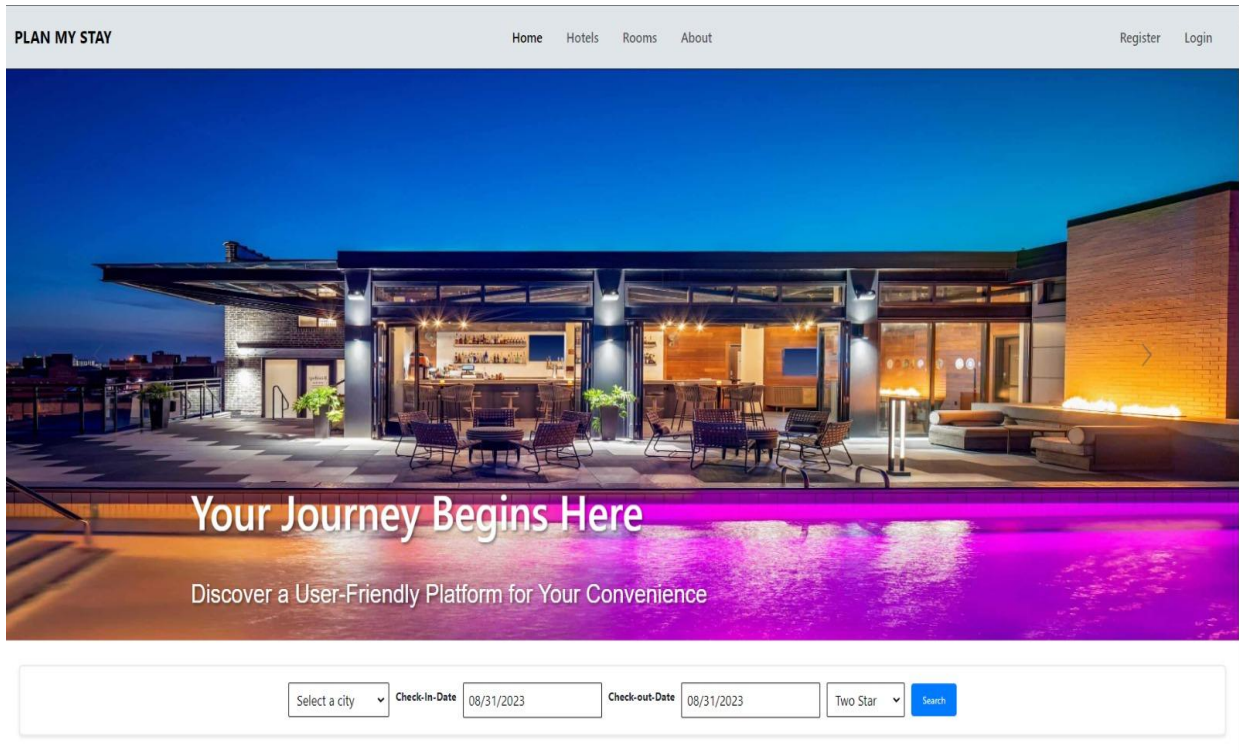
4.4 User Login Diagram:



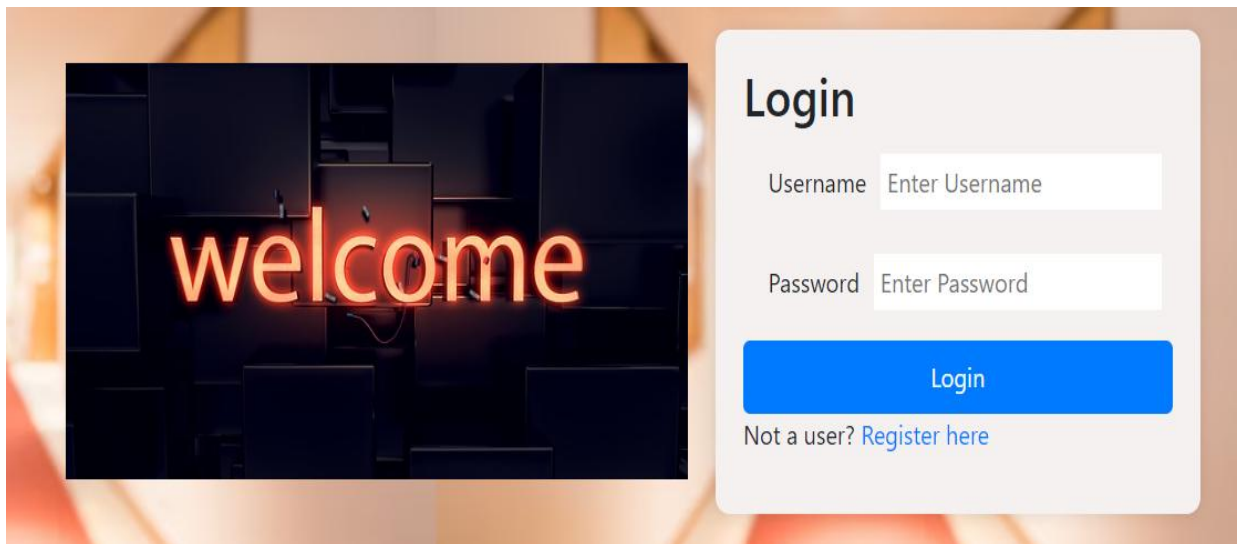
5. Project Screenshots

5.1 Customer

5.1.1 Main Page:



5.1.2 User Login:



5.1.3. Customer Registration:



Customer Registration

First Name

Last Name

Gender ☒ Male ☐ Female

Age

streetAddress

city

state

zipCode

Contact
Number

Email

Password

[Register](#)

Already registered? [Login here](#)

5.1.4. User Bookings:

Current Booking List

Booking Id	Room Type	Hotel Name	Hotel Address	Check-In-Date	Check-Out-Date	Amount:	
11	DELUXE	Hilltop Lodge	789 Hilltop Rd City Hilltop State Hilltop 67890	2023-09-01	2023-09-02	5000	Cancel Booking
12	DOUBLE_ROOM	Country Lodge	789 Countryside Rd City Country Lodge State Country Lodge 67890	2023-08-31	2023-09-09	2000	Cancel Booking

5.2. Admin

5.2.1 Admin Login:

Admin Login

Email:*

adesh@gmail.com

Password:*

.....

Login

5.2.2. Admin Page:

Add A New Hotel

Logout

Existing Hotels List

Hotel ID	Hotel Name	Hotel Type	Actions
20	Miami Beach Resort	FIVESTAR	<div>Edit Hotel</div> <div>Add Room</div> <div>Delete Hotel</div> <div>Delete Room</div>
21	Big Apple Hotel	FOURSTAR	<div>Edit Hotel</div> <div>Add Room</div> <div>Delete Hotel</div> <div>Delete Room</div>
22	Mountain Lodge	THREESTAR	<div>Edit Hotel</div> <div>Add Room</div> <div>Delete Hotel</div> <div>Delete Room</div>
23	Windy City Inn	TWOSTAR	<div>Edit Hotel</div> <div>Add Room</div> <div>Delete Hotel</div> <div>Delete Room</div>
24	Palm Springs Resort	FIVESTAR	<div>Edit Hotel</div> <div>Add Room</div> <div>Delete Hotel</div> <div>Delete Room</div>
25	Savannah Boutique Inn	FOURSTAR	<div>Edit Hotel</div> <div>Add Room</div> <div>Delete Hotel</div> <div>Delete Room</div>
26	Lake Tahoe Lodge	THREESTAR	<div>Edit Hotel</div> <div>Add Room</div> <div>Delete Hotel</div> <div>Delete Room</div>
28	Cancun Paradise Resort	FIVESTAR	<div>Edit Hotel</div> <div>Add Room</div> <div>Delete Hotel</div> <div>Delete Room</div>
29	Boston Inn	FOURSTAR	<div>Edit Hotel</div> <div>Add Room</div> <div>Delete Hotel</div> <div>Delete Room</div>
30	Banff Mountain Lodge	THREESTAR	<div>Edit Hotel</div> <div>Add Room</div> <div>Delete Hotel</div> <div>Delete Room</div>
31	San Francisco Boutique	TWOSTAR	<div>Edit Hotel</div> <div>Add Room</div> <div>Delete Hotel</div> <div>Delete Room</div>
32	Hawaii Island Resort	FIVESTAR	<div>Edit Hotel</div> <div>Add Room</div> <div>Delete Hotel</div> <div>Delete Room</div>
33	Portland Riverside Inn	FOURSTAR	<div>Edit Hotel</div> <div>Add Room</div> <div>Delete Hotel</div> <div>Delete Room</div>

5.2.3. Add Hotel:

Add New Hotel

(Fields marked with * are mandatory)

Hotel Name* (Minimum 3 characters, Numeric not allowed)

Hotel Description* (Minimum 25 characters)

City*

State*

Street Address*

Zip Code * (Must be 6 digit numeric)

Hotel Contact * (Must be 10 digit numeric)

Hotel Amenities(Numeric values are not allowed)

Hotel Type*

Five Star

Room Capacity* (Minimum 10)

Submit

5.2.4 Edit Hotel:

Edit Hotel

(Fields marked with * are mandatory)

Hotel Id

2

Hotel Name *

Raj Himalay hotel

Hotel Description

asdfa; sdffadsfsadfsadfsadf

City*

fafasfasfasdf

State*

maharastra

Street Address*

fasdf;fjkjsafkajkfj;sdajf

Zip Code * (Must be 6-digit)

875498

Hotel Contact * (Must be 10 digit)

8978457856

Hotel Amenities

asdfasfasfd fasff sdfewtrfv csdfgerewe fd vdssdc re

Hotel Type*

Two Star

Room Capacity

50

Update Hotel

Back

5.2.5 Add Room:

Add New Room For Raj Himalay hotel

Hotel Address: fasf;jflkjsafkajkfj;sdajf, fafasfasfasdf

maharastra

Contact Number: 8978457856

(Fields marked with * are mandatory)

Room Type

DELUXE

Room Description*

Room Facilities*

Submit

5.2.6. Delete Hotel:

Add A New Hotel

Logout

Existing Hotels List

Hotel ID	Hotel Name	Hotel Type	Actions
214	Times Inn	FOURSTAR	<div>Edit Hotel</div> <div>Add Room</div> <div>Delete Hotel</div> <div>Delete Room</div>
215	Beachside Motel	T	<div>localhost:3000</div> <div>Hotel deleted successfully!</div> <div><input type="checkbox"/> Don't allow localhost:3000 to prompt you again</div> <div>OK</div> <div>Delete Hotel</div> <div>Delete Room</div>
216	Countryside B&B	T	<div>Delete Hotel</div> <div>Delete Room</div>
217	Downtown Suites	F	<div>Delete Hotel</div> <div>Delete Room</div>
218	Bayview Hotel	FOURSTAR	<div>Edit Hotel</div> <div>Add Room</div> <div>Delete Hotel</div> <div>Delete Room</div>

5.2.7 Update-Hotel:

Edit Hotel

(Fields marked with * are mandatory)

Hotel Id
213

Hotel Name *
Grand Hotel

Hotel Description
Luxury hotel in downtown New York

City*
New York

State*
NY

Street Address*
123 Main St

Zip Code * (Must be 6-digit)
10001

Hotel Contact * (Must be 10 digit)
1234567890

Hotel Amenities
Pool Gym Spa

Hotel Type*
Five Star

Room Capacity
200

Update Hotel

localhost:3000
Hotel updated successfully!
OK

5.2.8. Room Add:

Add New Room For Grand Hotel

Hotel Address: 123 Main St, New York

NY

Contact Number: 1234567890

(Fields marked with * are mandatory)

Room Type
DELUXE

Room Description*
Luxurious hotel with ocean-view and other amenities

Room Facilities*
wifi allows pet

Submit

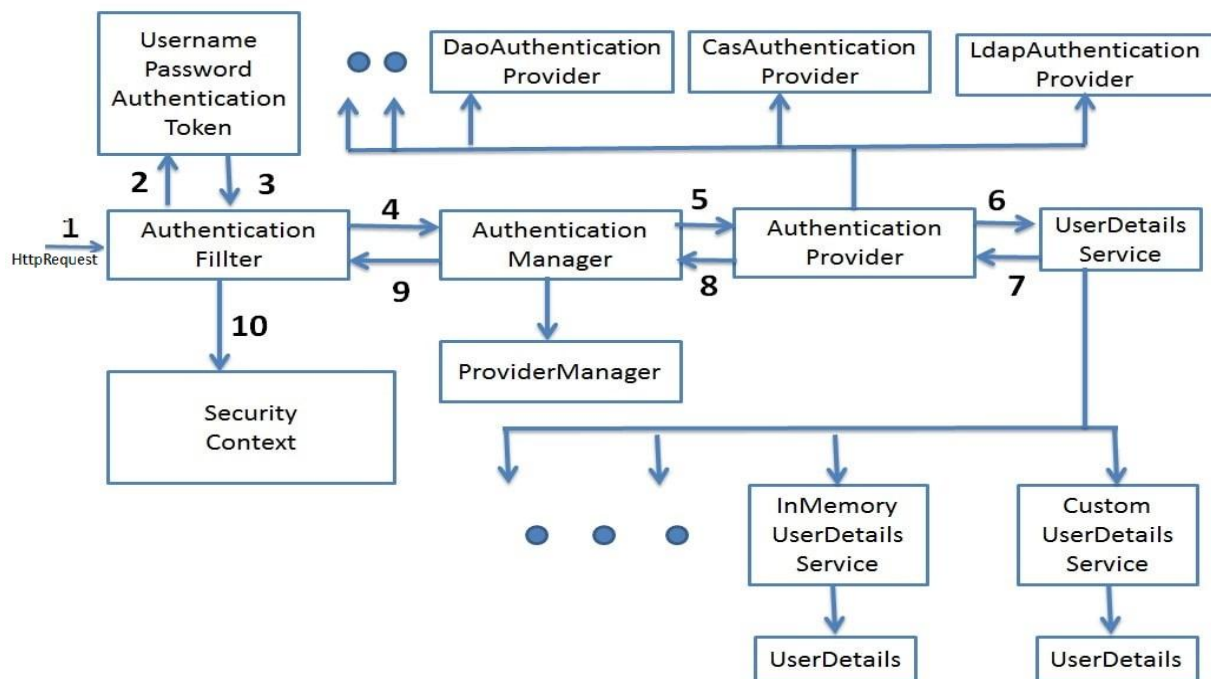
localhost:3000
Room added successfully!
OK

6. JWT SECURITY

The system's architecture is designed to prioritize security and protect user data. One notable aspect of the security implementation is the utilization of JSON Web Tokens (JWT) for user authentication and authorization.

- Authentication refers to the process of verifying the identity of a user, based on provided credentials. A common example is entering a username and a password when you log in to a website. You can think of it as an answer to the question Who are you?.
- Authorization refers to the process of determining if a user has proper permission to perform a particular action or read particular data, assuming that the user is successfully authenticated. You can think of it as an answer to the question Can a user do/read this?.
- Principle refers to the currently authenticated user.
- Granted authority refers to the permission of the authenticated user.
- Role refers to a group of permissions of the authenticated use

Authentication Using JWT Architecture :



1. Spring Security Filters Chain

When you add the Spring Security framework to your application, it automatically registers a filters chain that intercepts all incoming requests. This chain consists of various filters, and each of them handles a particular use case.

For example:

- Check if the requested URL is publicly accessible, based on configuration.
- In case of session-based authentication, check if the user is already authenticated in the current session.
- Check if the user is authorized to perform the requested action, and so on.

- Spring Security Filters:

Authentication-manager:

You can think of Authentication-manager as a coordinator where you can register multiple providers, and based on the request type, it will deliver an authentication request to the correct provider.

Authentication Provider:

Authentication-provider processes specific types of authentication. Its interface exposes only two functions:

1. Authenticate performs authentication with the request.
2. Supports checks if this provider supports the indicated authentication type.

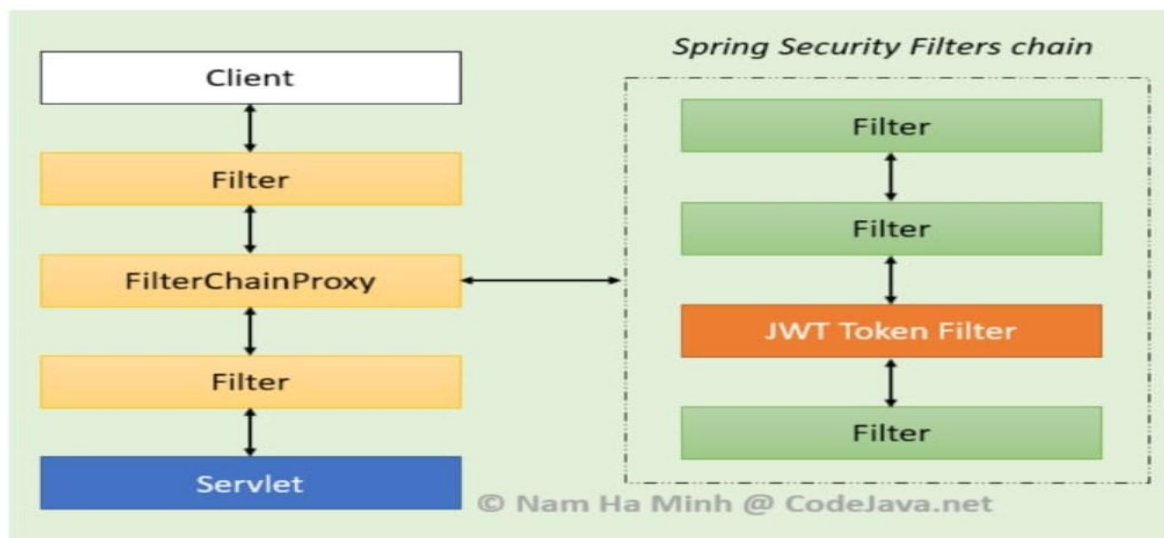
UserDetailsService:

UserDetails Service is described as a core interface that loads user-specific data in the Spring documentation.

In most use cases, authentication providers extract user identity information based on credentials from a database and then perform validation. Because this use case is so common, Spring developers decided to extract it as a separate interface, which exposes the single function:

1. loadUserByUsername accepts username as a parameter and returns the user identity object.

Security Filter Chains



7. TESTING

The Hotel Reservation System was rigorously tested to verify its performance, dependability, and usability.

A. User Test Cases:

#	Description	Outcome	Results
1.	User Login	User is redirected to the user page	Passed
2.	User Login with Invalid Credentials	Error message displayed; user stays on the login page.	Passed
3.	User Logout	Users are redirected to the login page.	Passed
4.	User Registration	User can Register and is redirected to login form	Passed
5.	Display Hotel Listings	List of hotels is displayed with correct details	Passed
6.	Display Rooms Listings	List of rooms is displayed with correct details	Passed
7.	Room Booking Process	Select a room and enter booking details. Booking is successful, user receives a confirmation message.	Passed
8.	Payment	User can make payment	Passed
9.	Room Booking Cancellation	Select a room to cancel details. Cancellation is successful	Passed
10.	My Bookings	User can see his bookings in the list format	Passed

B. Admin Test Cases:

#	Description	Outcome	Result
1.	Login as Admin and authentication.	Fetches authenticated Admin details saved in database.	Passed
2.	Get Hotel List.	Getting list of hotels from database.	Passed
3.	Updating hotel information from database.	Updating hotel details from database.	Passed
4.	Adding a new hotel.	Adding a new hotel to the database.	Passed
5.	Adding room to an existing hotel.	Adding room to existing hotel in database.	Passed
6.	Deleting rooms from hotel.	Deleting rooms from hotel in the database.	Passed

7. CONCLUSION

In conclusion, the development of the Hotel Reservation System has resulted in the creation of a robust and user-centric web service that aims to revolutionize the hotel booking experience. Throughout the project's development process, several key achievements have been realized, contributing to the system's overall success and potential impact on the hospitality industry.

The project commenced with a clear understanding of the challenges faced by customers and hotel owners in the existing reservation process. By meticulously analyzing the requirements and conducting feasibility assessments, the team ensured that the system would address the specific needs of both user groups.

The development process involved designing a user-friendly interface that allows customers to effortlessly search for hotels, view room availability, and make reservations with just a few clicks.

The project's timeline was carefully managed to ensure a balance between development, testing, and refinement. Rigorous testing procedures were conducted to identify and rectify any potential issues, resulting in a stable and reliable system.

Overall, the Hotel Reservation System offers a streamlined and efficient solution for both customers and hotel owners. By creating an accessible platform that improves user experience, optimizes occupancy rates, and provides valuable insights, the project has demonstrated its potential to modernize the hospitality industry's reservation processes.

8. FUTURE SCOPE

The Hotel Reservation System has immense potential for growth and enhancement. The Hotel Reservation System has laid a strong foundation for enhancing the hotel booking experience. Looking forward, several potential enhancements and features could be considered to further improve the system's functionality, user engagement, and value to both Customer and the administrator. Some potential future features and improvements include:

- Integration with online payment gateways for seamless booking transactions.
- Real-time room availability updates using advanced algorithms.
- Collaborations with external booking platforms to expand the system's reach.
- Implementation of machine learning techniques to offer personalized recommendations based on user preferences.

9. REFERENCES

Following is the list of websites we referred to during our project:

1. <https://getbootstrap.com/docs/5.1/getting-started/introduction/>
2. <https://reactjs.org/docs/getting-started.html>
3. <https://stackoverflow.com/>
4. [https://reactjs.org /](https://reactjs.org/)
5. <https://docs.oracle.com/en/java/javase/11/docs/api/>
6. <https://www.npmjs.com/>
7. <https://www.w3schools.com/>
8. <https://www.mysql.com/>