

HOTEL MANAGEMENT SYSTEM - CLOUD9:ELEVATE YOUR STAY

A PROJECT REPORT

by

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DECLARATION

I, **ADHARSH THAYYIL (MST01-0046)**, hereby undertake that, the main project work entitled "**HOTEL MANAGEMENT SYSTEM- CLOUD9:ELEVATE YOUR STAY**", is carried out by me independently under the valuable guidance of **Ms.Farzana Rashid**, Python Trainer, Meta Scifor Technologies, Bangalore, India - 560068, in partial fulfillment of the requirements during the training in the year 2024.

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Abstract

The Cloud9 Hotel Management System is an innovative platform designed to streamline and enhance the hotel booking process for users worldwide. This system provides a comprehensive suite of features including room selection, flexible date choices, and secure payment processing, all wrapped in a user-friendly interface. Users can easily browse through a wide array of hotel options, specify guest details, and complete bookings with confidence thanks to integrated secure payment gateways. With a focus on user convenience, Cloud9 offers personalized booking experiences, detailed hotel descriptions, high-resolution images, and real-time availability updates.

The Cloud9 Hotel Management System represents a significant advancement in the hospitality industry, offering a seamless, secure, and user-centric solution for hotel bookings, with a clear vision for future growth and innovation.



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Chapter 1

INTRODUCTION

The Cloud9 Hotel Management System is a cutting-edge platform designed to transform the hotel booking experience. It offers users an intuitive and seamless way to browse, select, and book accommodations from a vast array of options worldwide. With a focus on user convenience, Cloud9 provides detailed room descriptions, high-quality images, flexible date selection, and secure payment processing. Whether for business or leisure travel, Cloud9 ensures a personalized and efficient booking process, backed by robust technical infrastructure. As a forward-thinking solution, Cloud9 continuously evolves to meet the dynamic needs of travelers, integrating advanced technologies and expanding its global hotel network to deliver exceptional service and value.



Chapter 2

PROJECT OVERVIEW

The project is made using Django framework along with bootstrap for frontend, styling and responsiveness. It uses Django authentication for Login/Signup. It has Stripe integration for payment. The project uses Jazzmin for the Django admin site. It has a user dashboard page where users can see their profile, bookings, wallet, bookmarks, notifications and can change their password. Users can see the Hotel Detail and check for availability of rooms. They can make payment and can download invoice. An email will be sent to user's mail id once the payment is successful.



Chapter 3

TECHNOLOGIES

3.1 Django

Django is a high-level Python web framework that facilitates rapid development of secure and maintainable websites and web applications. It follows the model-view-template (MVT) architectural pattern.

- Key Features:
 - Fast and Efficient: Django is designed to help developers take applications from concept to completion as swiftly as possible.
 - Secure: Django takes security seriously and helps developers avoid many common security mistakes.

3.2 Bootstrap

Bootstrap 4 is a popular front-end framework for developing responsive and mobile-first websites. It provides a collection of CSS and JavaScript tools that can help you create modern, interactive web interfaces quickly and easily.

- Key Features:



- Responsive Grid System: Bootstrap 4 uses a 12-column grid system to help you create responsive layouts.
- Customizable: You can customize Bootstrap by overriding the default styles with your own custom CSS or by using the Bootstrap 4 SASS variables.

3.3 HTML

HTML (HyperText Markup Language) is the standard language for creating web pages and web applications. It describes the structure of a web page and its content using elements and tags.

- Key Features:
 - Structure: HTML provides a structured way to organize content on a web page using elements like headings (h1 to h6), paragraphs (p), lists (ul, ol, li), and more.
 - Semantic Elements: HTML offers semantic elements that describe the meaning of content, making it easier for browsers, search engines, and screen readers to understand and interpret. Examples include header, nav, main, section, article, footer, etc.
 - Forms: HTML allows developers to create interactive forms to collect user input. Form elements include form, input, textarea, select, button, label, etc.

3.4 jQuery

jQuery is a fast, small, and feature-rich JavaScript library. It makes things like HTML document traversal and manipulation, event handling, and animation much simpler with an easy-to-use API that works across a multitude of browsers.

- Key Features:



- DOM Manipulation: Simplifies HTML document traversal and manipulation.
- Event Handling: Makes event handling easier across different browsers.
- AJAX: Simplifies the process of making asynchronous HTTP requests.

3.5 JavaScript

JavaScript is a versatile, high-level programming language commonly used to create interactive effects within web browsers. It allows developers to build dynamic and interactive websites by manipulating HTML and CSS.

- Key Features:
 - Event-Driven: JavaScript can handle events such as user clicks, form submissions, and page loads.
 - Cross-Platform: Runs in any environment with a JavaScript engine, including all modern web browsers, Node.js, and more.
 - Dynamic Typing: Variable types are determined at runtime, making it flexible but requiring careful handling of data types.

3.6 SQLite

Django, a high-level Python web framework, uses SQLite as the default database engine for its projects. This makes it very easy to get started with development without needing to set up a separate database server.

- Key Features:
 - Default Configuration: SQLite is the default database in Django's settings, requiring no additional configuration for initial setup.
 - Zero Configuration: No need to install and configure a separate database server; it runs out of the box.



- Testing: SQLite's lightweight nature makes it a good choice for running tests, as it requires less configuration and resources compared to other databases.

3.7 CKEditor

CKEditor is a powerful and flexible rich text editor that you can integrate into your web applications. It provides a WYSIWYG (What You See Is What You Get) interface for editing HTML content, which can be particularly useful in web applications that require user-generated content, such as content management systems (CMS), forums, and blogs.

- Key Features:
 - Rich Text Formatting: Supports various text formatting options, including bold, italic, underline, font styles, and colors.
 - Spell Checker: Integrated spell-checking feature.
 - Customizable: Highly configurable with numerous plugins and themes.

3.8 Django-taggit

Django-taggit is a reusable Django application designed to make adding tags to your Django models simple and straightforward. It provides an easy way to handle tagging for your models, enabling users to add tags to objects and filter objects by tags.

- Key Features:
 - Simple Integration: Easy to integrate with existing Django models.
 - Tag Management: Allows adding, editing, and removing tags from objects.
 - Querying by Tags: Supports querying objects based on tags.



3.9 Jazzmin

Jazzmin is a Django app that provides a modern and highly customizable admin interface. It enhances the default Django admin with a sleek, responsive design and various features to improve user experience and productivity.

- Key Features:

- Modern UI: Provides a clean and contemporary design for the Django admin.
- Enhanced User Experience: Includes features like menu search, quick actions, and theme support.
- Integration with Django Admin: Works as a drop-in replacement for the default Django admin.



Chapter 4

System Architecture

The system architecture follows a typical Django MVC (Model-View-Controller) pattern. It involves models for database management, views for handling user requests and rendering templates, and templates for HTML rendering. Middleware such as 'django.middleware.security.SecurityMiddleware' and 'django.middleware.locale.LocaleMiddleware' are utilized for security and localization respectively.

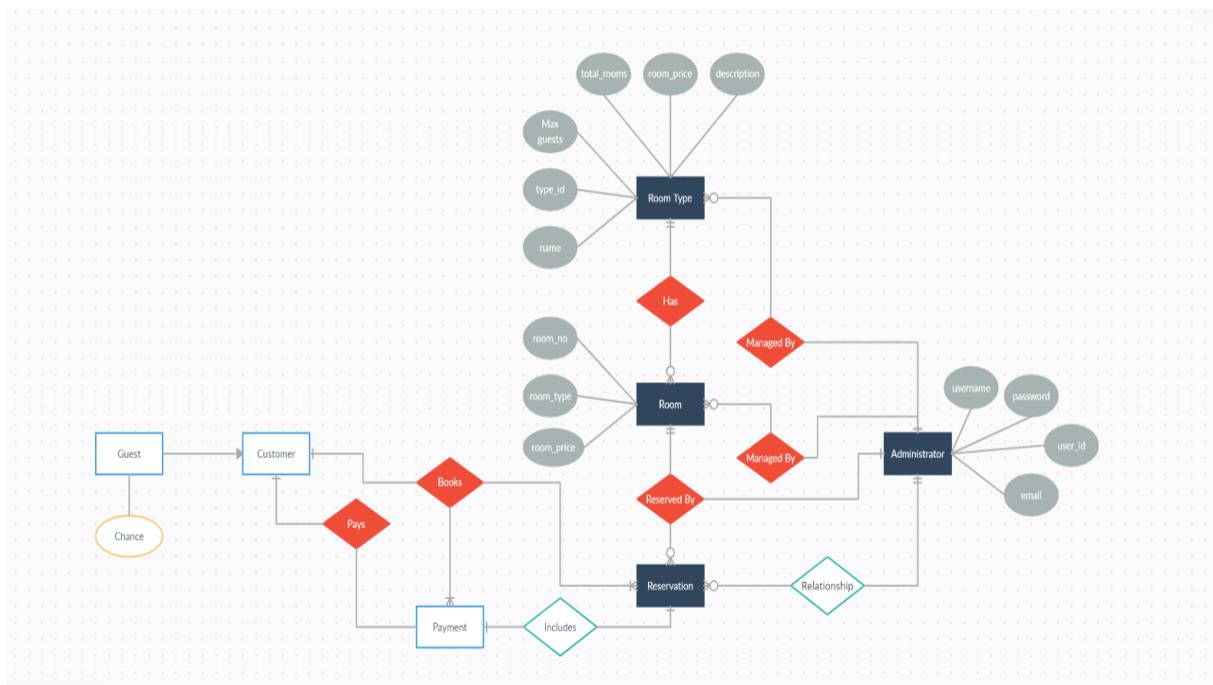


Figure 4.1: ER Diagram



Chapter 5

Results

The screenshot of the developed application is given below. The application successfully confirms hotel bookings for guests. Booking details for guests are stored in the database.

5.1 Sign Up

The screenshot shows a web browser window for the 'Cloud9 - Hotel Management S...' application at the URL '127.0.0.1:8000/user/sign-up/'. The page has a light gray header with the Cloud9 logo, 'Home', 'Hotels', and 'Dashboard' navigation items, and 'Sign In' and 'Register' buttons. The main content area features a registration form on the left and a decorative illustration on the right. The registration form contains fields for 'Full name', 'Username', 'Email', 'Phone', 'Password1', and 'Password2', each with a placeholder text input. Below the form is a large orange 'REGISTER' button. To the right of the form is a white background with a blue mobile phone icon showing a login screen, a woman sitting on a park bench using a tablet, and a street lamp under a cloudy sky.

Figure 5.1: Sign Up page for Users



5.2 Login

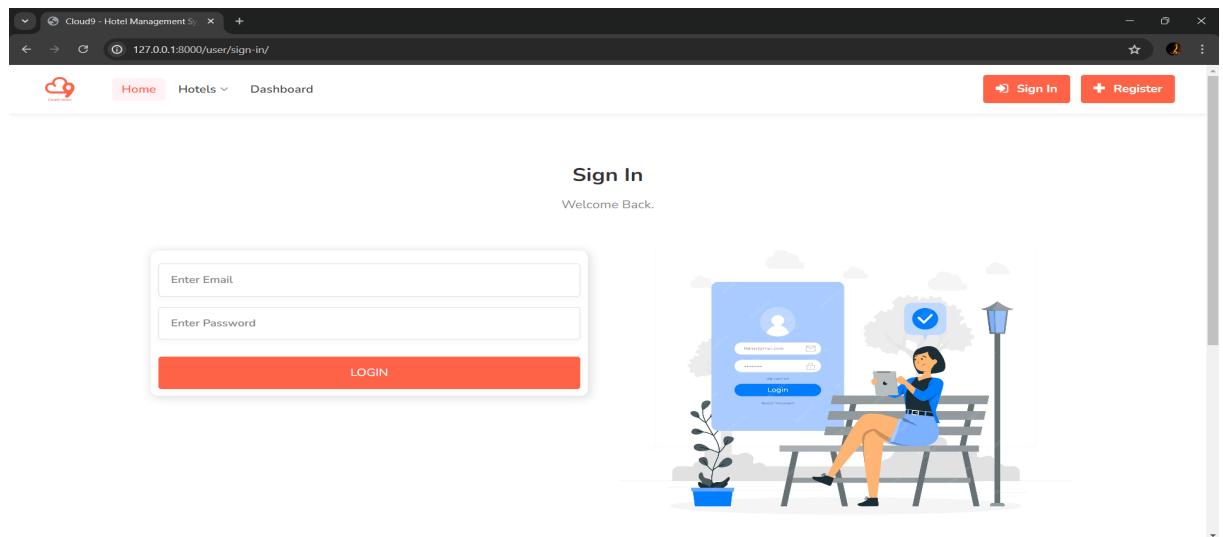


Figure 5.2: Login page for Users

5.3 Home Page

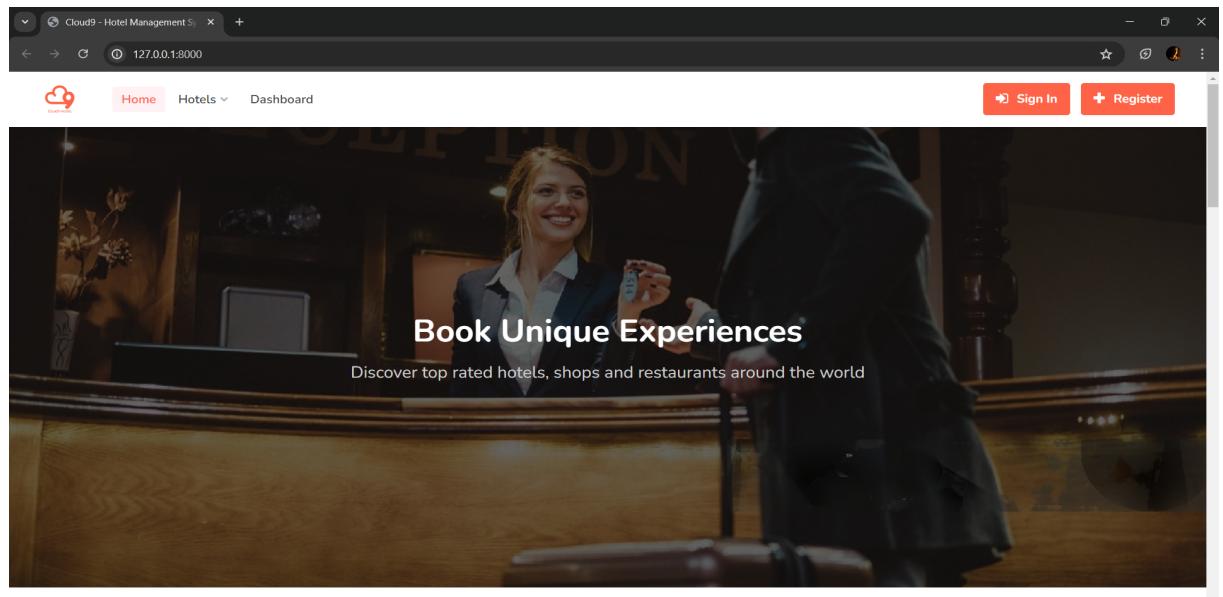


Figure 5.3: Home page for Users



5.4 Home Page - Hotels

The screenshot shows the 'Our Popular Hotels' section of the website. It features three cards, each with a green 'Open Now' banner at the top right. The first card is for 'Atlantic Hotel' located in Coral Bay, Goa, India. The second card is for 'Hotel Chloe' located in Mumbai, India. The third card is for 'HOTEL MOERANA' located in Bangalore, India. Each card displays the hotel's name, address, contact information, a star rating, and a view count.

Figure 5.4: Home page for Users

5.5 Hotel Details

The screenshot shows the 'Hotel Chloe' details page. At the top, there is a large image of the hotel's exterior, featuring a modern building with large windows and a wooden deck area with lounge chairs and umbrellas. Below the image, the hotel's name 'Hotel Chloe' is displayed, along with its address 'Hotel Chloe 456 Metropolitan Avenue Cityscape, Mumbai, INDIA', phone number '+91 879456321', and email 'chloehotel@gmail.com'. A star rating of 4.0 from 1 review is shown. On the right side, there is a 'Booking' form with fields for 'Check-in Date' and 'Check-out Date', both set to 'dd-mm-yyyy'.

Figure 5.5: Hotel details page



5.6 Hotel Details -Room Types

Room Type	Price
Superior Room	₹2599.00/Night
Deluxe Room	₹2399.00/Night
Junior Suite	₹1599.00/Night
One-Bedroom Suite	₹1199.00/Night

Rating Average
4.0 /5 (1 Reviews)

Figure 5.6: Hotel details room types section

5.7 Hotel Details -Ameneties & FAQs

Amenities

- Free Wi-Fi
- Car Parking
- Pets Allowed

FAQ's

- (1) Does the hotel have a pool?
- (2) Does the hotel offer dining options?
- (3) Does the hotel offer airport shuttle service?
- (4) What is the cancellation policy?

Reviews (1)

Figure 5.7: Hotel details - amenities and FAQs section



5.8 Hotel Details -Add Review

The screenshot shows a web browser window for 'Cloud9 - Hotel Management System'. The URL is 127.0.0.1:8000/detail/hotel-chloe/. The main content area displays 'Hotel Chloe' with a brief description, contact information, and a 4.0 star rating from 1 review. A central modal window titled 'Write a review' is open, containing a text area for the review, a star rating selector set to 4 stars, and a 'Submit Review' button. To the right of the modal, there is a 'Booking' section with fields for check-in and check-out dates, guest counts (1 adult, 1 child), and room selection. At the bottom right of the booking section is a 'Check Availability' button.

Figure 5.8: Hotel details - add review section

5.9 Hotel Details -Reviews

The screenshot shows the same web browser window for 'Cloud9 - Hotel Management System'. The main content area now displays the 'Reviews (1)' section. It shows a summary rating of '4.0/5' in a large red box. Below this, a single review is listed: it features a profile picture of a user named Sanjay Thayyil, a 4-star rating, the date July 4, 2024, and the comment 'Wonderful Ambience'. At the bottom of the page, there is a navigation bar with links for 'About Us', 'Useful Links', 'My Account', 'Pages', and 'Help', along with social media icons and a sign-in link.

Figure 5.9: Hotel details - added review section



5.10 Hotel Details - Check Availability of Rooms

The screenshot shows the 'Hotel Details - Check Availability of Rooms' section. On the left, there's a sidebar with a cloud icon, 'Home', 'Hotels', and 'Dashboard'. On the right, there's a 'Booking' form with fields for 'Check-in Date' (dd-mm-yyyy), 'Check-out Date' (dd-mm-yyyy), 'Guests' (Adults: 1, Children: 1), and a dropdown for 'Select Room Type' (Superior Room). Below the form is a red 'Check Availability' button. In the center, there's a 'Hotel Chloe' card with details like address, phone number, email, and a 4.0 rating from 1 review. Below the card is a 'Description' section with a welcome message and room amenities.

Figure 5.10: Hotel details - check room availability section

5.11 All Available Rooms

The screenshot shows the 'All Available Rooms' section. The browser title is 'Cloud9 - Hotel Management S...'. The page header includes a cloud icon, 'Home', 'Hotels', and 'Dashboard'. The main content area is titled 'All Available Rooms' and displays three room options: 'ROOM NO. 1', 'ROOM NO. 2', and 'ROOM NO. 3', each priced at ₹2599.00 per night. Each room card shows 'Beds: 4' and 'Room Capacity: 6', and features a red 'Add To Selection' button. Above the room cards, a message states 'The Superior Room room has 3 available room(s)'.

Figure 5.11: All available rooms



5.12 Selected Rooms

The screenshot shows the 'Selected Rooms' page of a hotel management system. At the top, there's a header with a Cloud9 logo, a search bar, and navigation links for 'Home', 'Hotels', and 'Dashboard'. On the right, there are buttons for 'Logout' and a user icon showing '3' notifications.

The main content area is divided into two sections:

- Selected Rooms:** This section lists three room selections:
 - Room: Superior Room (₹2599.00)
 - Room: Superior Room (₹2599.00)
 - Room: Superior Room (₹2599.00)
 Each entry includes the room type, price, and bed count (Beds : 4).
- Booking Summary:** This section provides a summary of the booking details:

Check-in	2024-07-07
Check-out	2024-07-08
Total Days	1 Days
Adults	3 Adult
Children	2 Children
V.A.T	₹0.00
Total Cost	₹7797.00

Figure 5.12: Selected rooms page

5.13 Selected Rooms - Update Selection

The screenshot shows the 'Selected Rooms - Update Selection' page. The interface is similar to the previous one, with a header and navigation links.

The main content area consists of two main sections:

- Update Selection:** This section contains fields for updating the booking:
 - Check-in Date: 07-07-2024
 - Check-out Date: 08-07-2024
 - Guests:
 - Adults: 3
 - Children: 2
 - Select Room Type (*required):
 - Select Room
- Summary:** This section displays the updated total cost based on the new guest counts:

Children	2 Children
V.A.T	₹0.00
Total Cost	₹7797.00

Figure 5.13: Selected rooms - update selecton section



5.14 Selected Rooms - Billing Information

Billing Information

Full Name
Adharsh Thayyil

Email
thayyiladharsh@gmail.com

Phone
9876543210

[Continue to checkout](#)

Figure 5.14: Selected rooms - billing information section

5.15 Checkout

NOTE! Review your order before payment.

Selected Rooms

Room: Superior Room	₹2599.00
Beds : 4	
Room Number : 1	
Room: Superior Room	₹2599.00
Beds : 4	
Room Number : 2	
Room: Superior Room	₹2599.00
Beds : 4	
Room Number : 3	

Hotel Chloe
Hotel Chloe 456 Metropolitan Avenue
Cityscape, Mumbai, INDIA
+91 8794563211
★★★★★ (4.0)-(1) Reviews

Booking Summary

Check-in	July 7, 2024
Check-out	July 8, 2024
Total Days	1Days
Adults	3 Adults
Children	2 Children
Discount	₹0.00

Have a coupon enter here... [Apply](#)

Figure 5.15: Checkout page



5.16 Stripe Payment Gateway

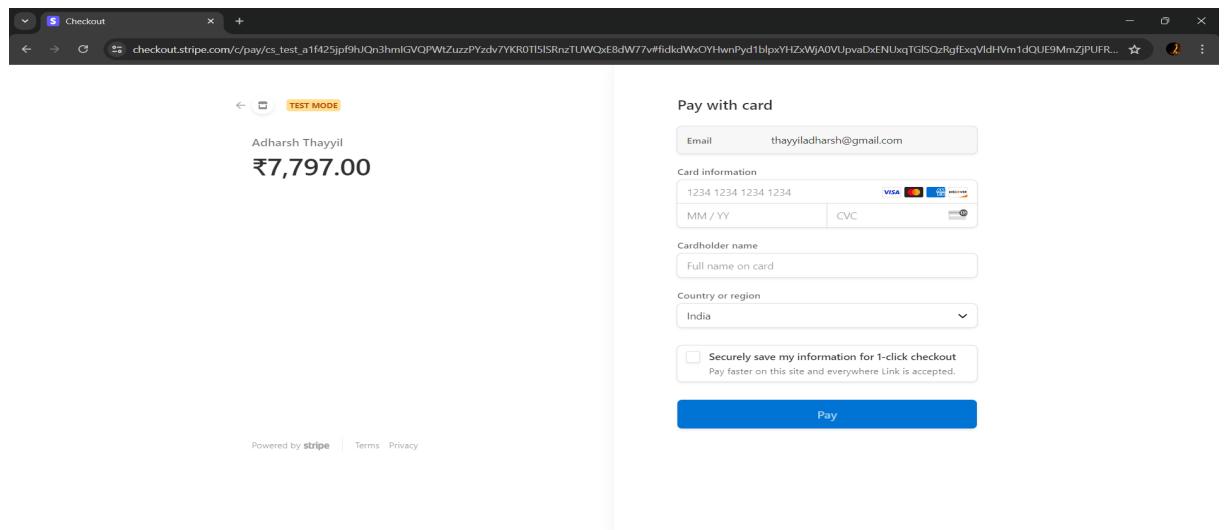


Figure 5.16: Stripe payment gateway page

5.17 Payment Successful

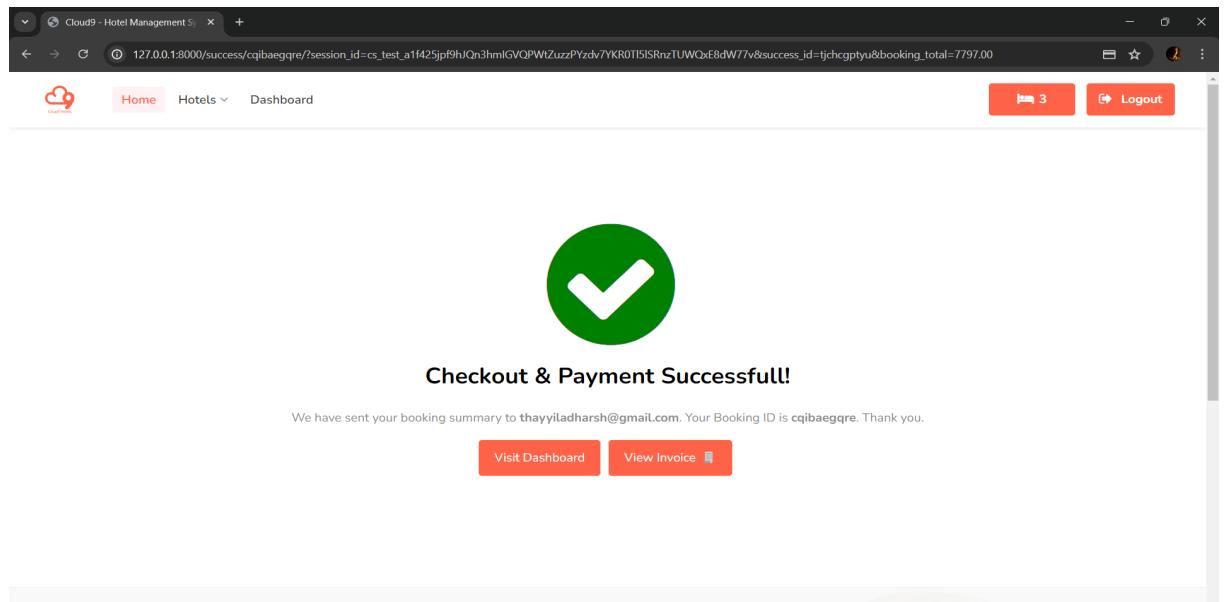


Figure 5.17: Payment successful page



5.18 Payment Failed

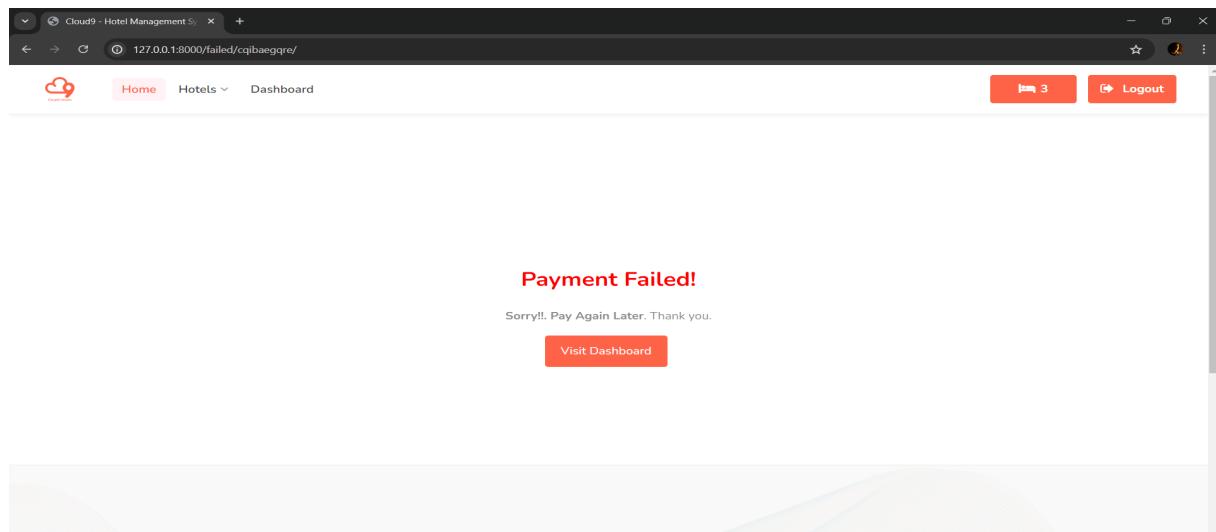


Figure 5.18: Payment failed page

5.19 Invoice

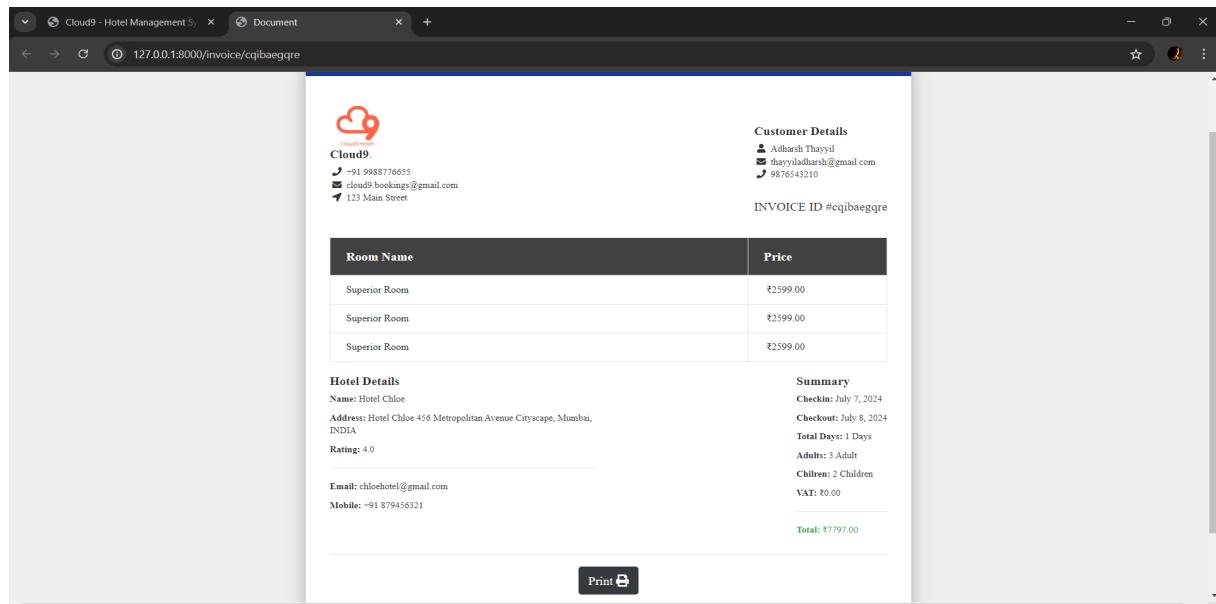


Figure 5.19: Invoice page



5.20 Dashboard

S/N	Hotel Name	Total Rooms	Booking Date	Payment Status	Action
1	Atlantic Hotel	1	July 3, 2024, 1:45 p.m.	PAID	View
2	Atlantic Hotel	2	July 6, 2024, 10:31 a.m.	PAID	View
3	Hotel Chloe	3	July 6, 2024, 11:43 a.m.	PAID	View

Figure 5.20: Dashboard page

5.21 Dashboard - All Bookings

Figure 5.21: Dashboard page - all bookings page



5.22 Dashboard - Notification

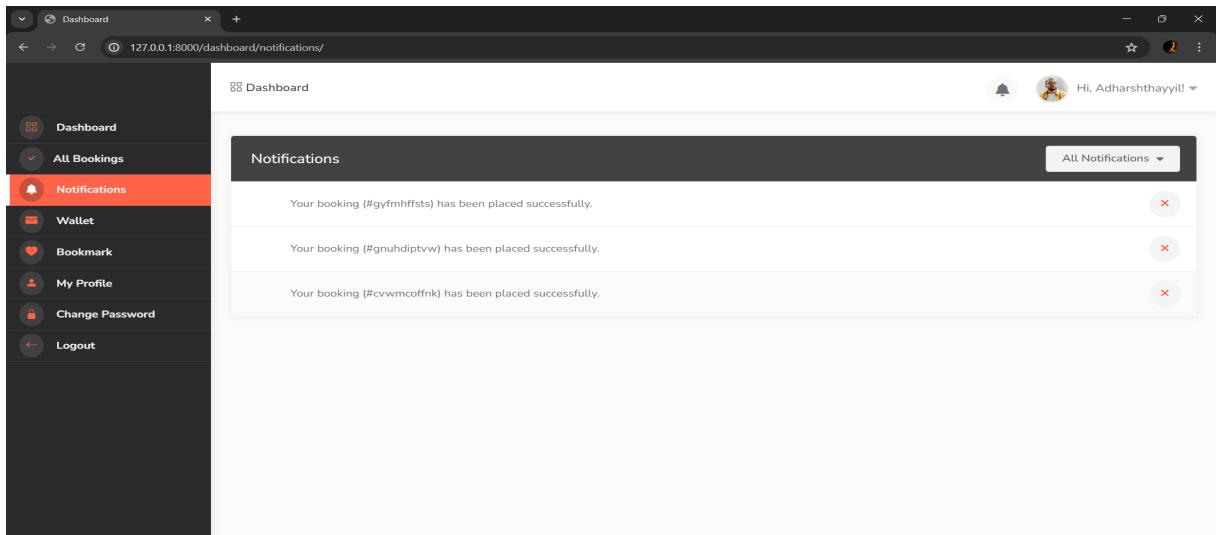


Figure 5.22: Dashboard page - notification page

5.23 Dashboard - Wallet

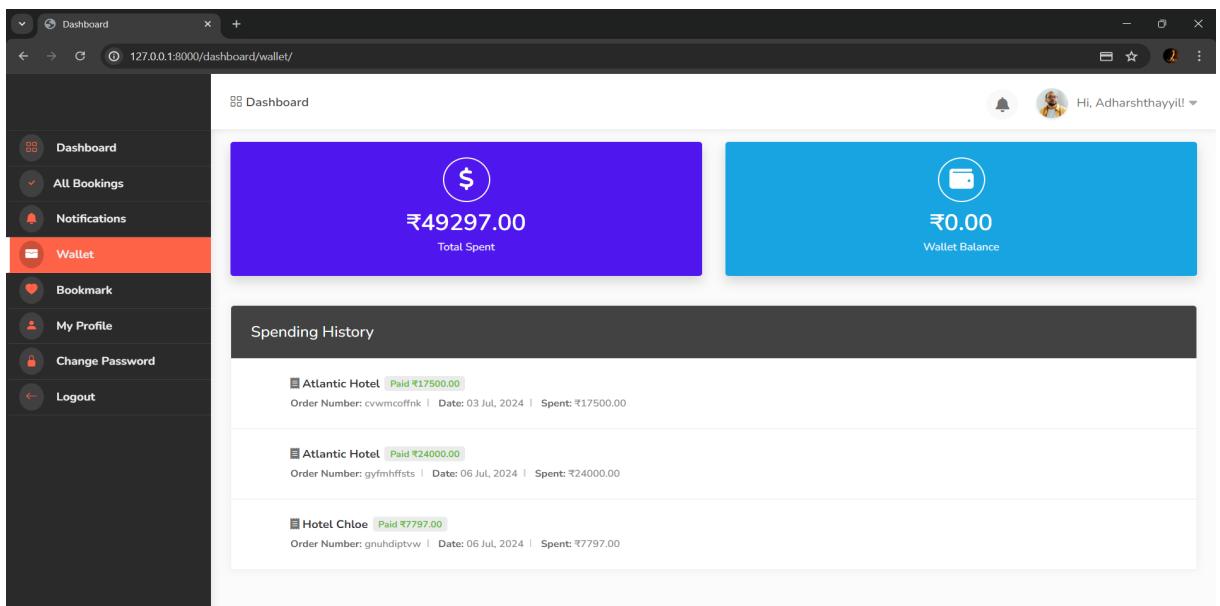


Figure 5.23: Dashboard page - wallet page



5.24 Dashboard - Bookmark

The screenshot shows a web browser window with the URL `127.0.0.1:8000/dashboard/bookmark/`. The left sidebar has a dark theme with orange highlights on the 'Bookmark' and 'Logout' buttons. The main content area is titled 'All Bookmarked Hotels' and lists one hotel: 'Atlantic Hotel'. It includes a thumbnail image of the hotel, its name, address, email, and phone number, along with a 'Delete' button.

Figure 5.24: Dashboard page - bookmark page

5.25 Dashboard - Profile Details

The screenshot shows a web browser window with the URL `127.0.0.1:8000/dashboard/profile/`. The left sidebar has a dark theme with orange highlights on the 'My Profile' and 'Logout' buttons. The main content area is titled 'Profile Details' and displays a circular profile picture of a man, an 'Upload Photo' button, and form fields for 'Full Name' (Adharsh Thayil), 'Email' (thayil.adharsh@gmail.com), 'Mobile' (9876543210), 'Gender' (Male), 'Country' (India), 'State' (empty), 'City' (empty), and 'Address' (empty).

Figure 5.25: Dashboard page - profile page



5.26 Dashboard - Change Password

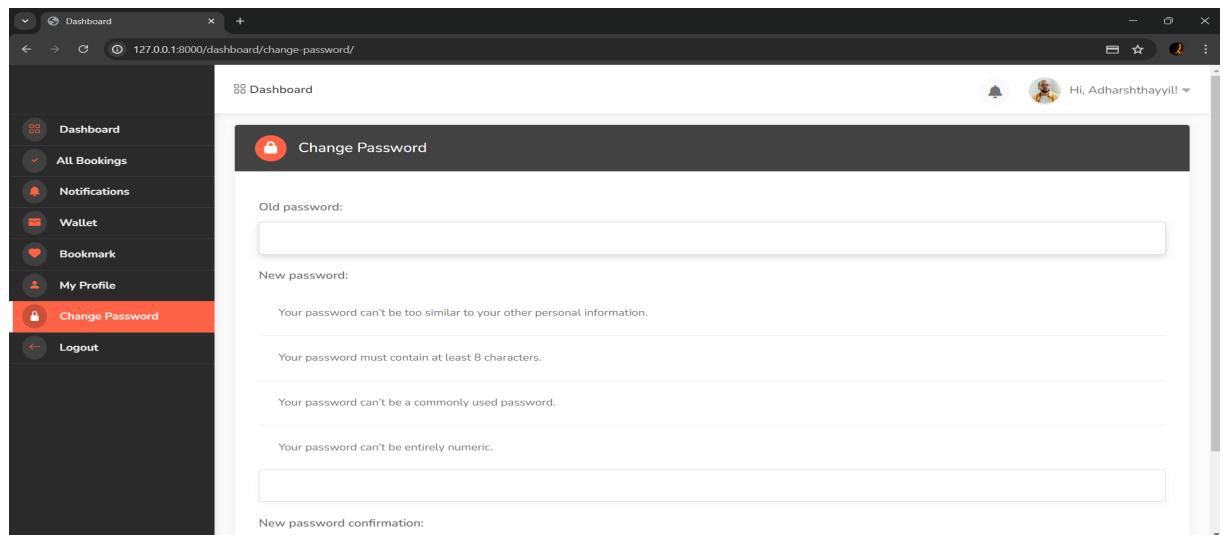


Figure 5.26: Dashboard page - change password page

5.27 Admin Login

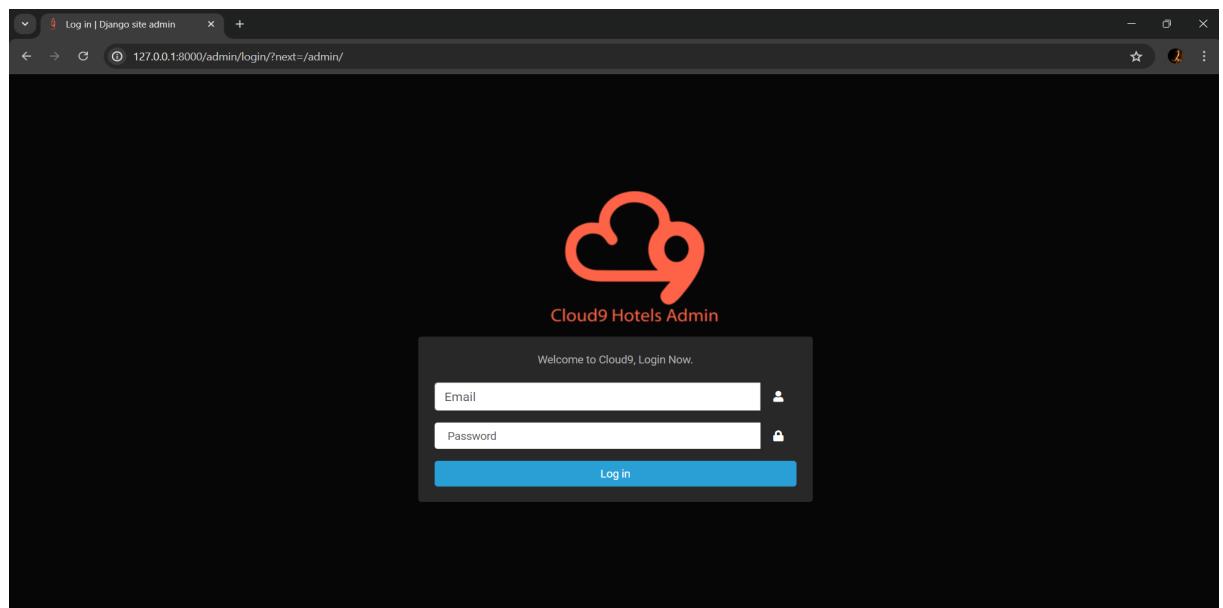


Figure 5.27: Admin login page



5.28 Admin Page

The screenshot shows the Django Admin interface for a Hotel Management System. The top navigation bar includes links for Home, Hotels, and Users. The main dashboard is divided into several sections:

- Hotel**: Contains links for Hotels, Rooms, Bookings, Room services, Bookmarks, Coupons, Notifications, and Reviews & Ratings, each with Add and Change buttons.
- Taggit**: Contains a Tags section with Add and Change buttons.
- Userauths**: Contains Profiles and Users sections, each with Add and Change buttons.
- Recent actions**: A log of recent activity, showing entries for shikha (2), adharshtha, yyil (3), admin (3), and sanjay (4), all updated 1 day, 22 hours ago.

Figure 5.28: Admin page



Chapter 6

CONCLUSION

The Cloud9 Hotel Management System is a pioneering platform that transforms the hotel booking process with its user-friendly interface, robust technical infrastructure, and comprehensive features. By leveraging the Django framework for the back-end and Bootstrap for responsive front-end design, Cloud9 ensures a seamless and secure experience for users. The system's advanced functionalities, such as detailed room descriptions, flexible date selection, secure payment processing, and enhanced admin interface, cater to the diverse needs of travelers and hotel administrators alike.

As Cloud9 continues to evolve, the integration of AI and machine learning, expanded hotel partnerships, enhanced security measures, and additional payment methods will further enhance its value and convenience. With a commitment to innovation and customer satisfaction, Cloud9 is poised to become a leading solution in the hospitality industry, providing a superior and personalized booking experience for users worldwide.



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