

HOTEL MANAGEMENT SYSTEM

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This Report Presented in Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science in Computer Science and Engineering

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APPROVAL

This Project titled “**HOTEL MANAGEMENT SYSTEM**”, submitted by **Md. Shamsujjoha Shovo, ID: 171-15-9165** to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 09-01-2023

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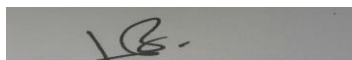
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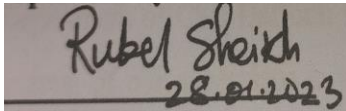
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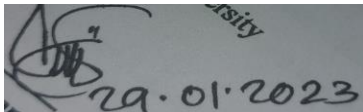
We hereby declare that, this project has been done by us under the supervision of **Rubel Sheikh, Lecturer, Department of CSE** Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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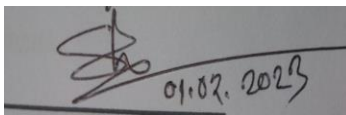
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ABSTRACT

The "Hotel Management System" is software designed to oversee various hotel operations, as the name implies. Every country in the globe has seen a significant increase in tourism over the past few years. In order to accommodate the growing number of travelers, hotels are also growing in number. A lot of pressure is placed on the hotel manager as a result, and software is not typically used in this situation. This specific project, which deals with running a hotel, steers clear of the issues that arise when doing it manually. The Django Hotel Management System was created with Python Django, HTML, CSS, and JavaScript. This Django Hotel Booking App is a completely responsive website (for both mobile and larger screens) based on Google Material Design. The Customer and the Room Manager each have their own customized dashboards for this project. A Django hotel reservation system includes a variety of features, including login and sign-up options for management and customer users. Customers can make reservations based on availability, view their booking history, and make changes to their orders from the dashboard. By identifying the shortcomings of the current system, a computerized system that is more user-friendly and GUI oriented and will work with the present system is designed. By increasing the system's effectiveness, we can get around some of its limitations.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

For the efficient management and operation of the Daxuecheng hotel, the HOTEL MANAGEMENT SYSTEM was created in accordance with system development stages. The system analyst was able to identify and define the issue with the hotel's current manual system throughout the seven months provided by the School of Intelligent Technology and Engineering.

The system analyst discovered that the hotel did definitely require a computerized management system following a process of information gathering from numerous hotels operated by manual and computerized systems. The hardware and software requirements needed for system deployment and maintenance are all readily available in the market and inexpensively attainable by the hotel, according to the analyst's examination of samples gathered during the problem description stage. To guarantee the hotel's system operates as efficiently as possible, the system was meticulously constructed. The system was expertly and meticulously coded to close any potential security gaps. Microsoft Access' visual basic for applications language was used to create the system. This system will undoubtedly assist the hotel management and the appreciated employees in overseeing and managing the hotel's operations and business dealings in order to achieve the hotel's maximum potential and level of expertise in the hotel industry.

By identifying the shortcomings of the current system, a more user-friendly and GUI-oriented computerized system that is compatible with the existing system can be designed. The system's shortcomings can be resolved by increasing the system's effectiveness.

1.2 Motivation

My project's objective is to develop a computerized "Hotel Management System" that can keep track of all the many duties that must be carried out at a hotel. It's critical to keep in mind right away that the best subject for my project is one that can be understood by a large audience and has a clear connection to our everyday lives. As a result, I decided to design a system for managing hotels.

1.3 Objective

This project on a hotel management system's main objective is to manage the specifics of a room's customer, reservation, tariffs, and food bill. It manages all data pertaining to the Room. Both the frontend and backend layers of the project have been fully built, ensuring that both users and administrators have access to the system's essential features. The project's goal is to create an application that will reduce the amount of human work necessary to handle the Room, Customer, bill, and booking . It keeps an eye on all aspects of the bill, tariffs, and book.

1. A website that was created using Google Material Design and is entirely responsive on mobile and desktop.
2. Customer and room manager login, registration, and logout capabilities.
3. A special dashboard for the client and the room manager
4. The usage of the room manager to add, remove, and edit rooms.
5. The user whose reservation was made for one of the manager's rooms has access to that user's information.
5. The consumer has the option to cancel their hotel reservation.
6. Support for all website visitors to use contact forms.
- 7.All of the aforementioned functions are available to superusers.

1.4 Expected Outcome

It has been proposed that creating a computerized hotel management system would be a useful and effective approach to oversee hotel operations, which would aid in resolving the issues raised above. The Hotel Management System Project is equipped to handle and manage the numerous responsibilities and processes related to hotels. It is primarily responsible for hotel administration within the parameters of the database's primary component. The system gives information on the numerous hotels that are available for business as well as the current availability of each hotel. By providing the relevant

information, website visitors can register with the system. Customers can instantly check the availability of rooms and make a reservation. Customers can compare a range of accommodation and facility options and check prices in real time. keep a database of all individuals, including customers, managers, and others who fit this description. This guarantees that the list of everyone is kept current.

1. A completely mobile- and desktop-responsive website built with Google Material Design.
2. Login, registration, and logout options for customers and room managers.
3. A unique dashboard for the customer and room management
4. The ability to add, remove, and edit rooms using the room manager.
5. The information of the person who made the reservation for one of the manager's rooms is accessible.
6. Customers have the choice to revoke their hotel reservations.
7. Encouragement of the usage of contact forms by all website visitors.
8. Superusers can access each of the aforementioned features.

1.5 Project Management & Finance

The order's date is appropriate because the administrator will verify if it is valid or not. Accept and then cancel the booking order as well. He also inspects the hotel rooms, provides them with the necessary instructions, negotiates the hotel's percentage of revenue, and confirms the hotel's location. If an administrator is interested, the administrator requests or receives information via phone or email. To determine if the order is legitimate or not, the administrator must review all financial transactions that occurred in SSL.

1.6 Report Layout

The following details the format for this report.

In chapter 1, I presented my project, discussed the reasons behind my decision to create the system I did, described the system's goal and my expectations for how it would work, described my intentions for the application, and described the report's final structure.

I've added a couple projects and case studies from Chapter 2 that have helped me. in the creation of this application. I also discussed my struggles and problems. encountered during the project's development.

Using a variety of use case diagrams, state diagrams, business process models, and work flow diagrams, I have described the entire process of this application in chapter 3.

I described the configuration I use for the project in chapter 4. This chapter also includes descriptions of the requirements for UI/UX, implementation, front-end design, back-end design, and other topics.

I've updated the implementation of database, implementation of front-end design, testing, and analysis reports in detail to chapter 5.

In chapter 6, I discussed the impact on society, the environment, and sustainability. The Impact on Society, Impact on Environment, Ethical Aspects, and other Sustainability Plan subjects are also covered in this chapter.

The discussion, future development scopes, and plans are described in Chapter 7.

CHAPTER 2

BACKGROUND

2.1 Preliminaries

The procedure for assembling and analyzing data, recognizing problems, and using data to propose system development is known as system analysis. System users and system developers must have extensive contact in order to solve problems involving systems. A system analysis or research should be a part of any system development process. The device is thought to be finished, the inputs are recognized, and the survey to pinpoint issue areas is thought to be closed. There are suggestions made for solutions. At the user's request, the recommendation is examined, and the necessary adjustments are made. As soon as the user is happy with the idea, this appears.

The extent of the subject and the challenges it poses will all be covered in this chapter, along with case studies and related literature. Once the concept was complete, I began looking out case studies and related pertinent applications. An overview of those subjects is provided in this chapter.

2.2 Related Works

I have looked into and made an effort to use substitute hotel management or hostel management-related software and magazines. The following lists a few of these:

- 1.Django user authentication.
- 2.Django REST API implementation.
- 3.Payment integration system develop.
- 4.Database management.
- 5.Request handling, backend & frontend connection.
- 6.Django packages handling.

7.Django chat app implementation.

8.Django blog app implementation

9.Django Saleor.

2.3 Comparative Analysis

I categorized the elements that were shared by several efforts that were relatively similar to this one and the characteristics that made each one unique after looking at the case studies those initiatives produced. The majority of them are built to perform a specific task in order to satisfy their own needs.

2.4 Scope Of The Problem

Important hotel processes including the generation of CODs, billing, and the tracking of daily transaction data can all be automated by the system of the hotel management systems. The database can be controlled by the administrator, who can also alter it. The need for computerized hotel administration is evident in light of all of these.

2.5 Challenges

The development of a hotel management system requires the use of a centralized database. It's probable that many users will try to use our system when they are on vacation and seeking to reserve a hotel to enjoy their trip. Therefore, it is essential for me to verify the code's accuracy in addition to making sure that it loads quickly and is search engine optimized. I need to make sure that this project is both quick and user-friendly for search engines like Google because most hotels today get the majority of their business from search engines like Google. A centralized database must be used for the creation of a hotel management system. When on vacation and trying to book a hotel to enjoy their trip, it's likely that many users will try to use our system. Therefore, it is crucial that I check the code's accuracy as well as its speed of loading and search engine optimization. The majority of hotels today obtain the most of their business from search engines like Google, thus I need to make sure that this project is both quick and user-friendly for them.

CHAPTER 3

REQUIRMENT SPECIFICATION

3.1 Business Process Modeling

Using different workflow diagrams, business process modeling (BPM) represents business process management and system architecture. There are many graphical methods for explaining the entire process to others, including activity diagrams, state diagrams, use case diagrams, flowcharts, data-flow diagrams, and more. Here is an activity diagram that I have provided. and an application flowchart to show how the system functions.

3.2 Requirement Collection and Analysis

- Non-Functional Requirement
- Efficiency Requirement

when the online shopping cart began to use the customized shopping product effectively.

- Reliability Requirement

The system should provide a reliable environment for both the customer and the owner. All orders must reach the administrator without error.

- Usability Requirement

The Android app is designed for natural and easy use.

1. Reservation/Booking

- record reservations
- record the customer's user name
- record the customer's password
- record the customer's email
- record the customer's phone number
- record the customer's address
- record the customer's state and pin code

- take inputs for room no from the manager
- take inputs for room type from the manager
- take inputs for room price from the manager
- take inputs for room available start date from the manager
- take inputs for room image from the manager
- display the default room rate

2.Management

- record the manager's username
- record the manager's password
- record the manager's email
- record the manager's profile pic
- record the manager's phone number
- record the manager's gender
- Associated each online booking with an account
- Only allow one user per account.
- Give it a chance to consumers to search the two, discover the top reservation possibilities.
- Accept the time and date so that you can look at the rooms that are open at that time.
- The given Booking confirmations should include contact information.
- Calculate and display lodging costs and other expenses
- Canceled reservations
- Cancel reservations
- Show and update visitor records
- Switch rooms

3.3 Use Case Modeling and Description

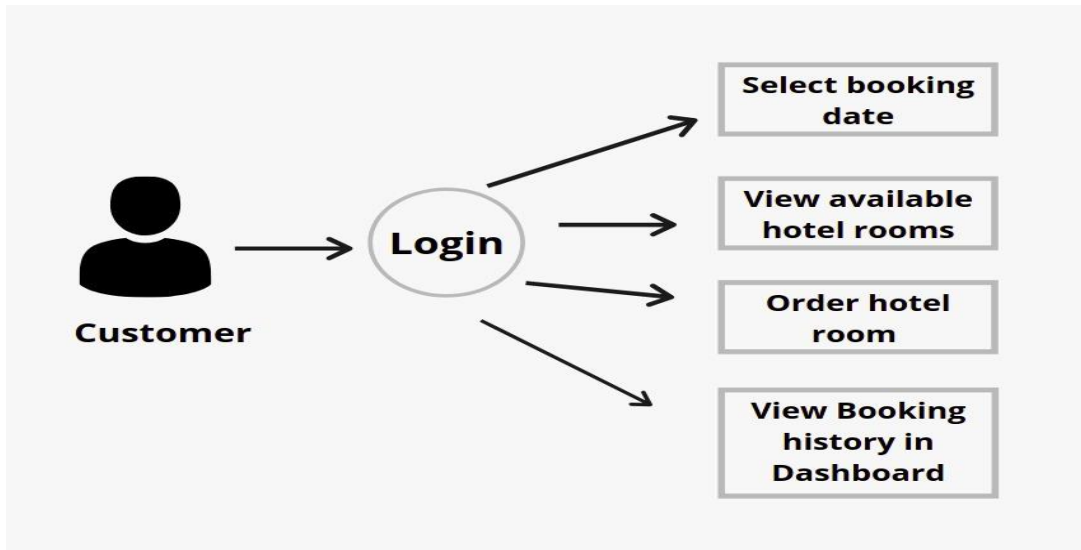


Figure 3.3.1: Use Case for Customer

The client will sign in using his own account. They can work on four things himself after logging in.

- Select booking date
- View available hotel rooms
- Order hotel room
- View Booking history in Dashboard

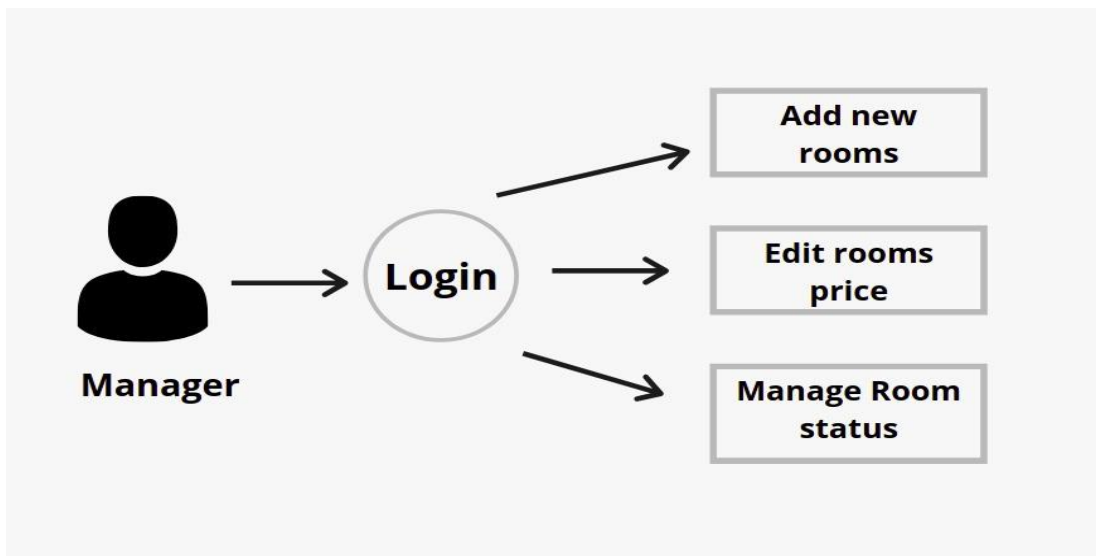


Figure 3.3.2: Use Case for Manager

The manager will use his own account to log in. They can work on 3 items himself after logging in.

- Add new rooms
- Edit rooms price
- Manage room Status

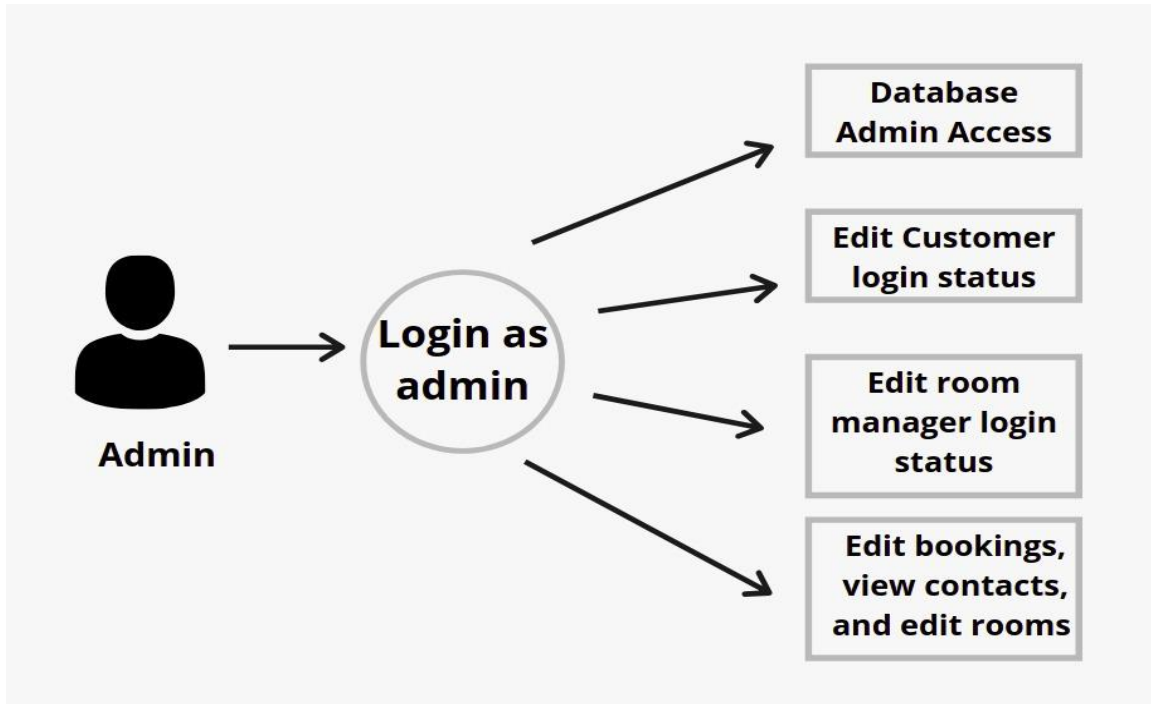


Figure 3.3.3: Use Case for Admin

But simply logging in from his own account, an admin can perform a variety of tasks. Admin will have access to a lot of resources.

- Database Admin Access
- Edit Customer login status
- Edit room manager login status
- Edit bookings
- View Contacts
- Edit rooms

3.4 Logical Data Model

The following figure 3.4 shows the logical data model of this Hotel Management System.

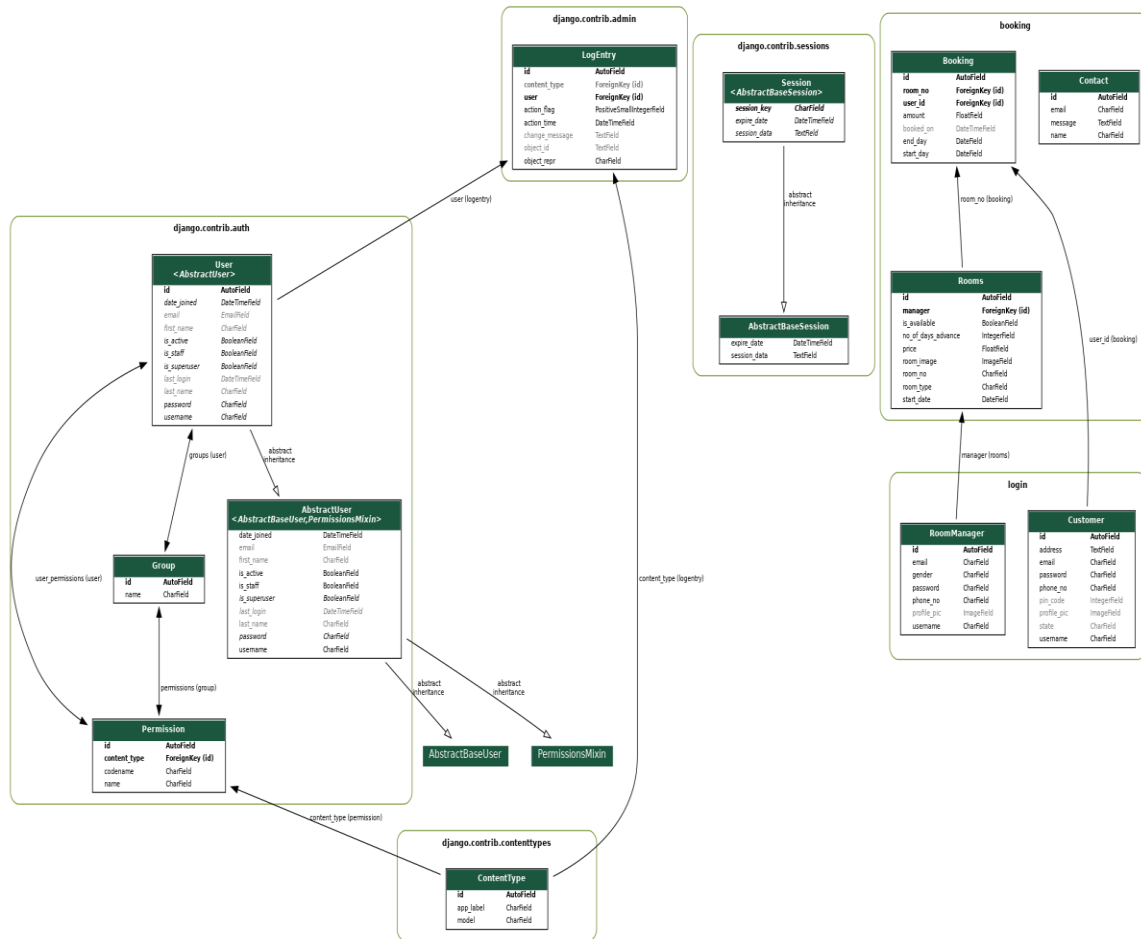


Figure 3.4: Logical Data Model

3.5 Design Requirement

- Database Design

Databases are employed as data repositories in software programs. Within the database, the data is kept in tables. Several tables are used to store system data. There are two crucial database settings: Principal Key: each individual field for every record process.

Foreign Key: The field used to set the relationship between the tables. Normalization is a technique to avoid redundancy in the tables.

- Database Query:
- ❖ **SELECT * FROM login_roommanager**

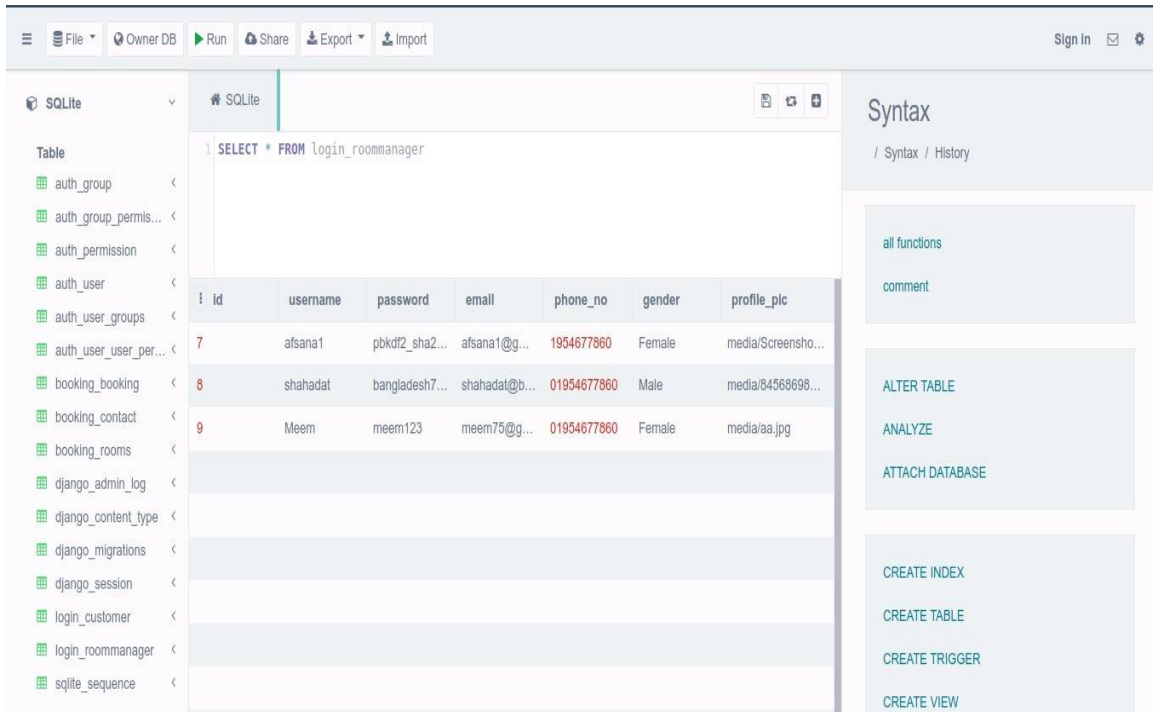


Figure 3.5.1: Database Table 1, login_roommanager

- Database Query:
- ❖ **SELECT * FROM login_customer**

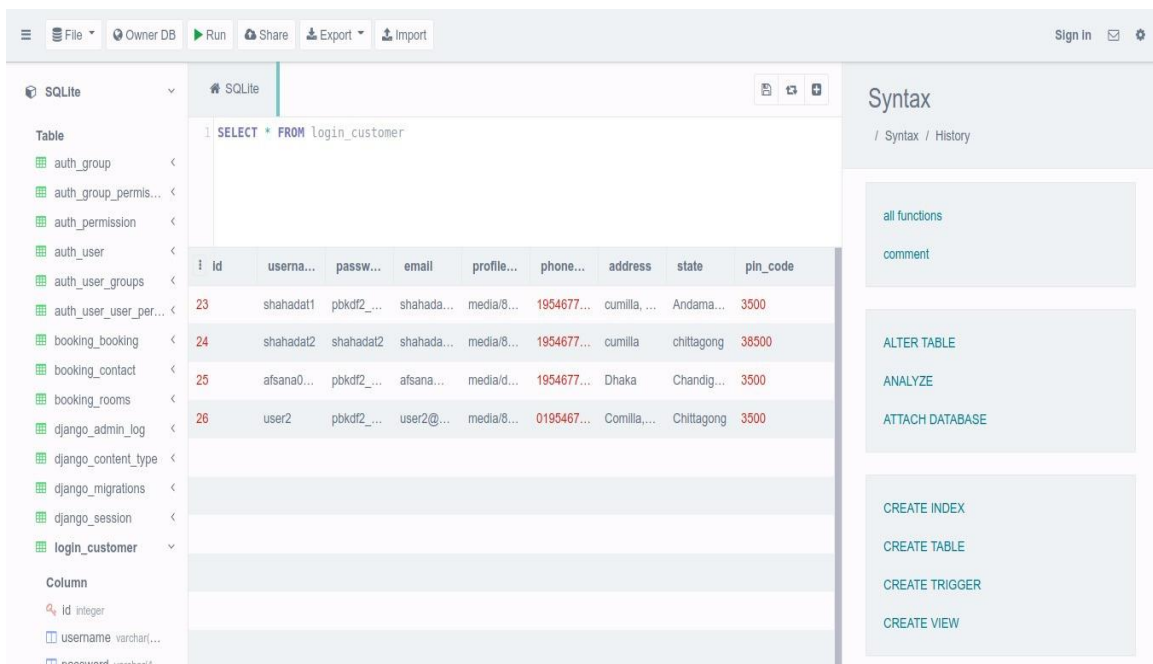


Figure 3.5.2: Database Table 2, login_customer

- Database Query:
 - ❖ `SELECT * FROM booking_rooms`

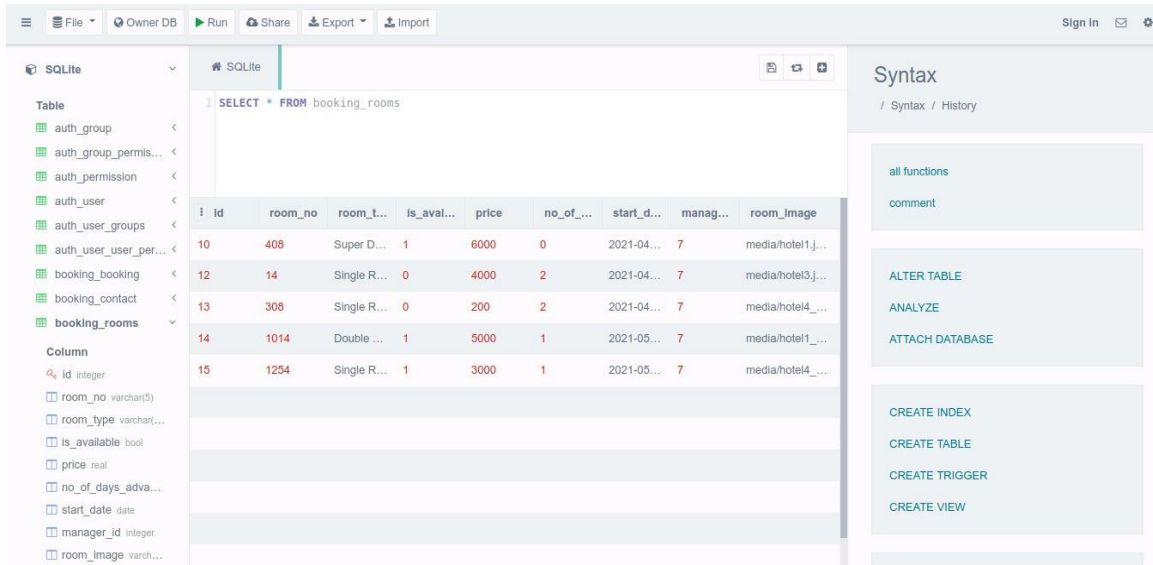


Figure 3.5.3: Database Table 3, booking_rooms

- Database Query:
 - ❖ `SELECT * FROM booking_contact`

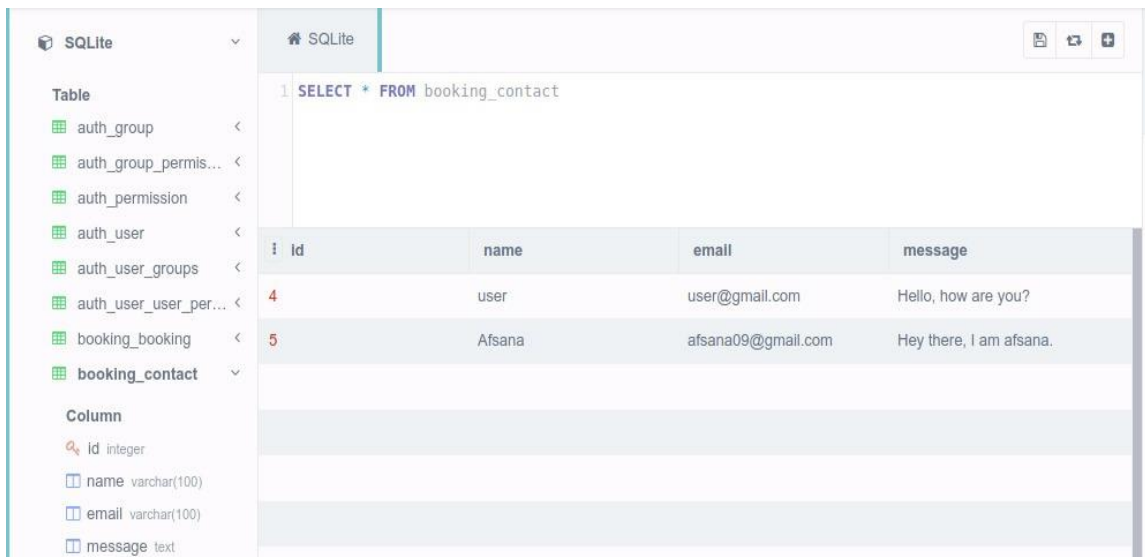


Figure 3.5.4: Database Table 4, booking_contact

CHAPTER 4

DESIGN SPECIFICATION

4.1: Front-end Design

The frontend is created using HTML, CSS, and JavaScript.

Hypertext Markup Language HTML (HTML) is the standard language for marking texts designed to be displayed in a web browser.

- **CSS:** A style language called Cascading Style Sheets (CSS) is used to describe how a document written in HTML or XML is presented.
- **JAVASCRIPT:** A structured language that is portable, updated with first-class tasks, and lightweight is called JavaScript (JS). Numerous non-browser websites, like Node.js, Apache Couch DB, and Adobe Acrobat, use it as well, despite the fact that it is best known as the writing language for Web pages.
- **Bootstrap:** Bootstrap is a large collection of usable, usable codes written in HTML, CSS, and JavaScript. There are also prior developments framework that enables developers & designers to quickly build fully responsive websites.

4.2 Back-end Design

- **Python:** The highest level of the universe has been turned into the computer language called Python. The Python architecture philosophy, with its impressive use of critical direction, emphasizes the readability of the code. Its object-oriented approach and organized language are intended to help editors create understandable, logical code for both small and large projects.
- **Django:** Django is a state-of-the-art Python web framework that enables the rapid development of secure and secure websites. Built by experienced engineers, Django takes great care of the web development hassles, so you can focus on writing your app without having to refresh the wheel.

4.3 Interaction Design and User Experience (UX)

The most important element for any system to function successfully is user consent. By regularly consulting users as it is being developed and making the required modifications, the system under consideration is assessed for user acceptance.

In software development, increasing user pleasure is essential. Desirability, usability, and accessibility are the three key factors in boosting user pleasure. I tried to make this program as user-friendly as I could by looking at other projects that were comparable and doing a lot of research. As many functions as I could fit in, I focused on a straightforward user interface, a clear design, and minimal complexity.

4.3.1 CUSTOMER TEST CASES

We put some test data for Customer username, email, pin_code and phone_number. There are three functions, setUp(), test_customer_username() and test_customer_email(). The setUp() creates two customer objects initially. Next the other two functions works for the testing of the customer username and email.

```
(venv) shahadat@HP-Pavilion-Notebook:~/PycharmProjects/HMS$ python manage.py test Login.tests.CustomerTestCase
Creating test database for alias 'default'...
System check identified no issues (0 silenced).
..
-----
Ran 2 tests in 0.006s

OK
Destroying test database for alias 'default'...
```

Figure 4.3.1: customer test case output

4.3.2 ROOM MANAGER TEST CASES

We put some test data for Customer username, email, and phone_number. There are four functions, setUp(), test_roomManager_username(), test_roomManager_email(), and test_roomManager_phone(). The setUp() creates two RoomManager objects initially. Next, the other three functions work for the testing of the room manager username, email and phone number

```
Terminal: Local x +
(venv) shahadat@HP-Pavilion-Notebook:~/PycharmProjects/HMS$ python manage.py test login.tests.RoomManagerTestCase
Creating test database for alias 'default'...
System check identified no issues (0 silenced).
...
-----
Ran 3 tests in 0.008s

OK
Destroying test database for alias 'default'...
```

Figure 4.3.2: room manager test case output

4.3.3 ROOMS TEST CASES

We put some test data for Rooms Manager object, room number, room type, price room available status, number of days advanced and start date.. There are four functions, setUp(), test_room_no(), test_room_type(), and test_price(). The setUp() creates two objects for Rooms initially. Next, the other three functions work for the testing cases.

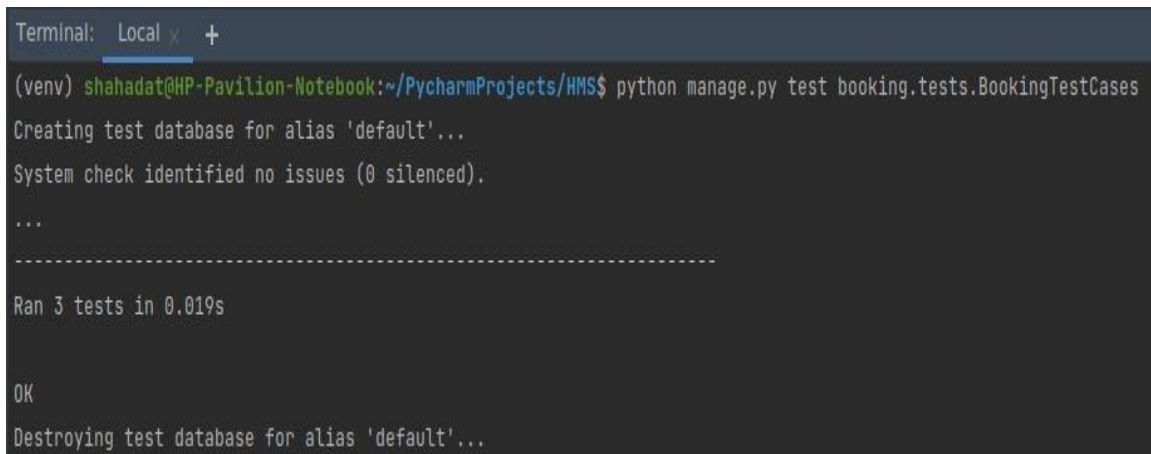
```
Terminal: Local x +
(venv) shahadat@HP-Pavilion-Notebook:~/PycharmProjects/HMS$ python manage.py test booking.tests.RoomsTestCases
Creating test database for alias 'default'...
System check identified no issues (0 silenced).
...
-----
Ran 3 tests in 0.011s

OK
Destroying test database for alias 'default'...
```

Figure 4.3.3: rooms test case output

4.3.4 BOOKING TEST CASES

We put some test data for Rooms booking. For setUp() we have created several objects for testing booking. The objects are RoomManager, Customer, Rooms, User, rooms, and Booking. There are four functions, setUp(), test_booking_username(), test_booking_amount(), and test_booking_roomManager(). The setUp() creates several objects for Room booking initially. Next, the other three functions work for the testing cases.



```
Terminal: Local x +
(venv) shahadat@HP-Pavilion-Notebook:~/PycharmProjects/HMS$ python manage.py test booking.tests.BookingTestCases
Creating test database for alias 'default'...
System check identified no issues (0 silenced).
...
-----
Ran 3 tests in 0.019s

OK
Destroying test database for alias 'default'...
```

Figure 4.3.4: booking test case output

4.4 Implementation Requirements

The purpose of the study feature is to gauge the degree of user acceptability of the system. This comprises the procedure for teaching the user how to correctly operate the system. The system shouldn't make the user feel threatened; instead, they should accept it as a necessary evil. The methods used to inform and acquaint the user with the program are the sole factors that affect the degree of user adoption. He has to have more self-assurance so that he can handle constructive criticism, which is welcome because he is the one who utilizes the system to its fullest.

CHAPTER 5

IMPLEMENTATION AND TESTING

5.1 Implementation of Database

➤ SQLite:

SQLite is a software library that provides a database management system. Lite in SQLite means survival in terms of setup, data management, and required resources. SQLite has the following visual features: self- contained content, sub-server, zero-configuration, functionality.

5.2 Implementation of Front-end Design

Below are examples of various admin and end-user front-end pages:

5.2.1 Home Page (for Front-end user)

The home page for typeface end users is shown in Figure 5.1. From this page, users can check the availability of a room.

The screenshot shows the home page of Hotel Sea Star. At the top, there is a navigation bar with the hotel name and links for Home, Contact Us, and Login/Register. The main heading reads "LOOKING FOR A ROOM! WE HAVE IT READY FOR YOU...". Below this, there are input fields for "Start Date" and "End Date", followed by a red "Show Me Rooms" button. A section titled "Services at your Doorstep" features six icons representing amenities: Airport Pick and Drop, Free Breakfast, Free High speed wifi, LED TV with Tata Sky, 24x7 Local Restaurant, and Free Gymnasium. The next section, "Room for Every Size & Need", displays six room options with images and prices: Single Bed Room (₹ 1000), Double Bed Room (₹ 1700), King-sized Bed Room (₹ 1500), Room with View (₹ 2500), Double room with working tables (₹ 2000), and Sea facing rooms (₹ 5000). The footer contains "Room Slots" with a booking message, "Important Links" (Home, Contact Us, Customer, Room Manager), and a copyright notice: "© 2022 All right reserved. Developed by: Md. Shamsujjoha Shovo".

Figure 5.2.1: Home Page

5.2.2 Customer Signup (for Front-end user)

Figure 5.2.2 This signup displays the format and variety of customer available in the hotel management system.

Figure 5.2.2: Customer Signup

5.2.3 Customer Login (for Front-end user)

This is the login page for customers figure 5.2.3

Figure5.2.3: Customer Login

5.2.4 Manager Signup (for manager)

Figure 5.2.4 this is the manager signup page.

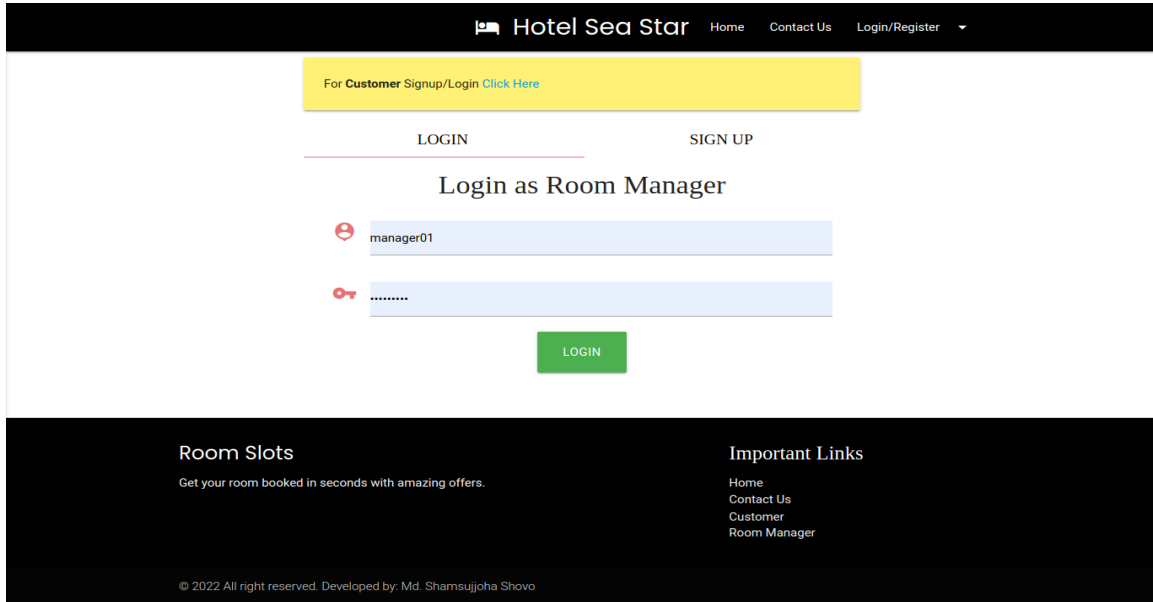


Figure 5.2.4: Manager Signup

5.2.5 Manager Login (for manager)

Figure 5.2.5 this is the manager login page.

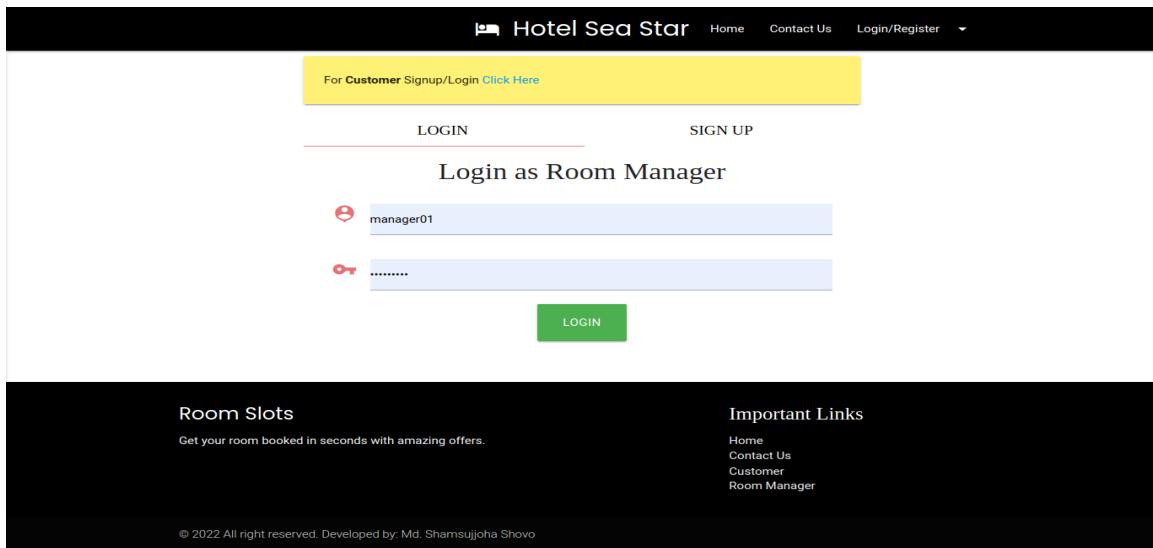


Figure 5.2.5: Manager Login

5.2.6 Customer Dashboard (for Front-end user)

This is the Customer Dashboard page in Figure 5.2.6.

Hotel Sea Star | Home | Contact Us | Account

BOOK MORE ROOMS

No of active room booking: **1**

Rooms booked in past: **0**

Booking History

Booking ID	Booked On	Start Date	End Date	Billing	Room Manager	Action
32	Aug. 17, 2022, 5:18 p.m.	Aug. 19, 2022	Aug. 20, 2022	8752.0	manager01	CANCEL BOOKING

Room Slots: Get your room booked in seconds with amazing offers.

Important Links: [Home](#), [Contact Us](#), [Logout](#)

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Figure 5.2.6: Customer Dashboard

5.2.7 Manager Dashboard (for manager)

Room status is depicted in Figure 5.2.7 The number of available rooms and those that are ready to be booked can be seen by the administrator.

Hotel Sea Star | Home | Contact Us | Account

Occupied Rooms Status: **1**

Total Rooms to manage: **6**

ADD ROOMS

Room Status

Room No	Room Type	Price	Customer Name	Booked On	Booking Data	Edit	Delete
101	Single Room	2000.0			Available	EDIT	DELETE
666	Deluxe Room	1000.0			Available	EDIT	DELETE
366	Super Deluxe Room	8752.0	shahadat01	Aug. 17, 2022, 5:18 p.m.	Aug. 19, 2022 to Aug. 20, 2022	EDIT	DELETE
777	Double Room	6555.0			Available	EDIT	DELETE
852	Super Deluxe Room	7888.0			Available	EDIT	DELETE
756	Super Deluxe Room	4500.0			Available	EDIT	DELETE

Room Slots: Get your room booked in seconds with amazing offers.

Important Links: [Home](#), [Contact Us](#), [Logout](#)

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Figure 5.2.7: Manager Dashboard

5.2.8 Customer Room View (for Front-end user)

The available space is depicted in Figure 5.2.8 depending on user search. It displays room rates and services that are offered.

The screenshot shows the Hotel Sea Star website's room view interface. At the top, a black navigation bar contains the hotel name "Hotel Sea Star" and links for "Home", "Contact Us", and "Account". Below the navigation bar, the text "One more step to go..." is displayed in a cursive font. The main content area features four room cards, each with a photograph of the room, a price tag in a red circle, the room name, and a "BOOK NOW" button. The cards are arranged in a grid: a Deluxe Room (₹ 1000.0) on the left, and a Double Room (₹ 6555.0) and a Super Deluxe Room (₹ 7888.0) on the right. Below these is another Super Deluxe Room card (₹ 4500.0). At the bottom, a black footer contains two sections: "Room Slots" with the text "Get your room booked in seconds with amazing offers." and "Important Links" with links for "Home", "Contact Us", and "Logout". A copyright notice at the very bottom reads "© 2022 All right reserved. Developed by: Md. Shamsujjoaha Shovo".

Room Type	Price (₹)	Book Now Button
Deluxe Room	1000.0	BOOK NOW
Double Room	6555.0	BOOK NOW
Super Deluxe Room	7888.0	BOOK NOW
Super Deluxe Room	4500.0	BOOK NOW

Figure 5.2.8: Customer Room view

5.2.9 Booking Page View (for Front-end user)

Figure 5.2.9 displays the user's room booking page. It displays booking details and a form for entering customer information.

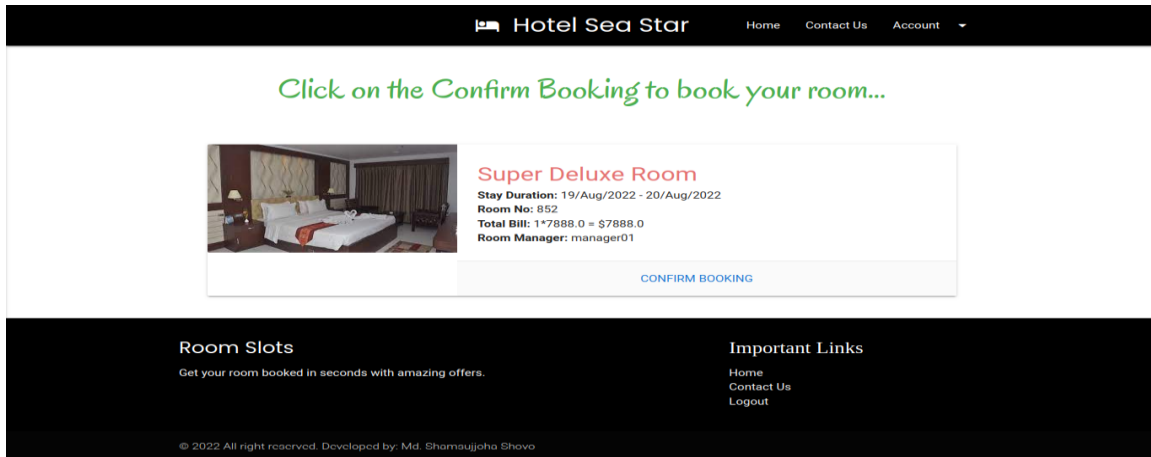


Figure 5.2.9: Booking Page View

5.2.10 Admin Panel (for admin)

Admin Login page is displayed in Figure 5.2.10 Admin will access the admin portal from anywhere.

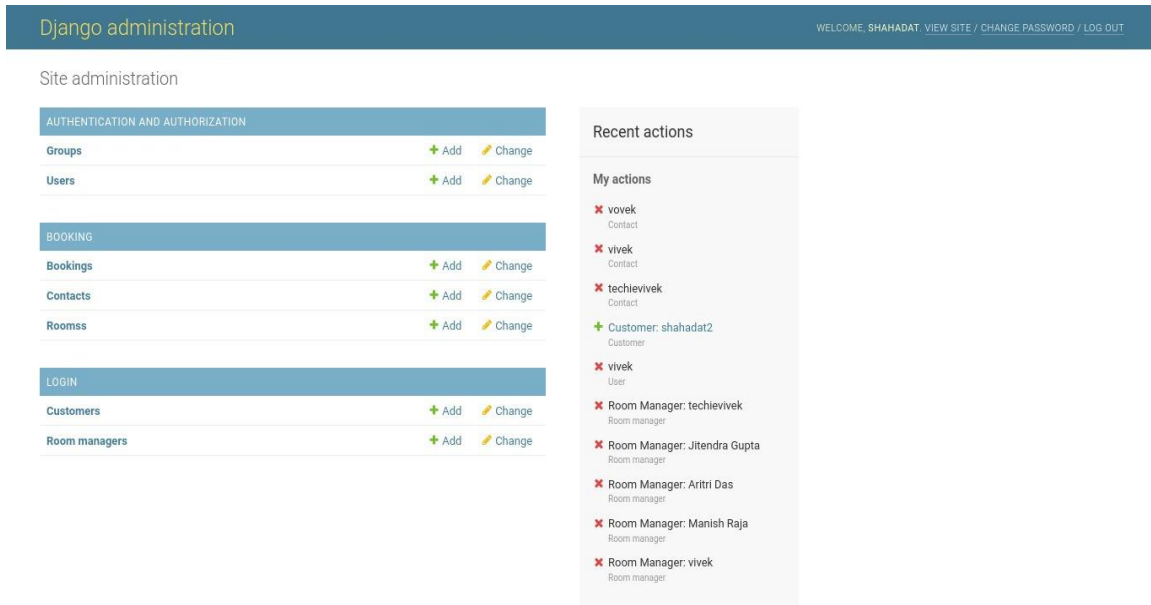


Figure 5.2.10: Admin Panel

5.3 Testing Implementation

Let's look at the project's basic structure before we begin construction. The Hotel management system's data flow and transformations are shown in the Data Flow Diagram (DFD). These changes take place data is entered, and leaves a structure. When compared to the DFD, the total system is represented and defined by input, processing, and output.

The hotel management system has the ability to produce the following flows:

- Managing customers
- Assigning rooms
- Managing staff
- Managing enables reservations
- Manages Transaction

Here is a step-by-step guide on how to design a hotel management system's data flow diagram at various levels 0–1, level–1, and level–2, respectively.

5.3.1 DFD FOR HOTEL MANAGEMENT SYSTEM LEVEL 0

Let's familiarize ourselves with level 0 of the hotel management system first. The context diagram is another name for the hotel management system level 0 interface. The view is meant to be abstract, with the mechanism being portrayed as a single process involving outside parties. The system's DFD shows the entire structure as a single bubble. It has indicators for receiving and outgoing data that display input and output information.

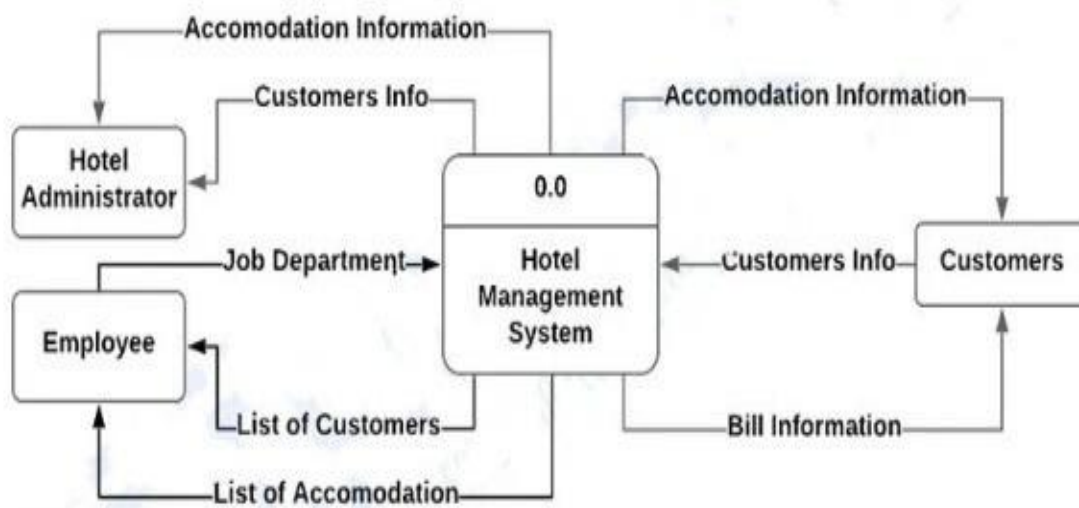


Figure 5.3.1: DFD Level 0

5.3.2 DFD FOR HOTEL MANAGEMENT SYSTEM LEVEL 1

The level 1 data flow diagram is located next to the context diagram. One process node from the context diagram representing the content of the hotel management system DFD level 1 must be broken down into sub-processes. The system must now show or divulge information about additional processing. Customers, hotel management, and hotel staff were the actors who would use this system.

The following information must be accommodated:

- Consumer details
- Information about Employees
- Rooms
- Reserving

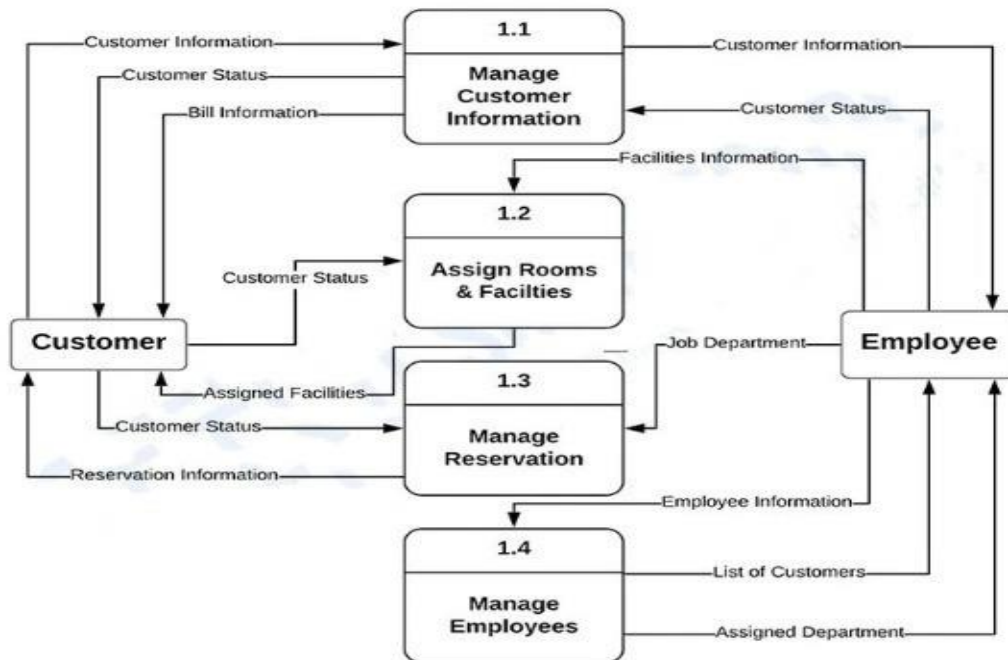


Figure 5.3.2: DFD Level 1

These procedures call for data like a list of guests, rooms, staff, and facilities, which acted as the admin's starting point for managing the business. Such data is stored in a data storage. If you are familiar with the hotel management system's DFD level 1, you will be able to comprehend its general context words. As a reference for how inputs or data are delivered into the system, you may also use this. The outputs that the system produces will then be

disclosed to you as well. All of the procedures depicted in the DFD were built around the idea of a hotel management system.

5.3.3 DFD FOR HOTEL MANAGEMENT SYSTEM LEVEL 2

Level 2 follows the presentation of Hotel Management System DFD Levels 0 and 1.

Here are some things to think about when drawing a level 2 data flow diagram for the hotel management system.

- The system's Level 2 DFD should depict the fundamental modules and the data flow that occurs between them.
- Since the DFD level 2 is the highest abstraction level, the procedures of the hotel management system, which is based on the DFD level 1, must be specifically described.
- The user's request will finally be handled after finding out the system's provided processes.

The following processes should be given priority by the system:

- Facilitates Reservation
- Manages Transactions
- Manages Clients
- Assigns Rooms
- Manages Employees

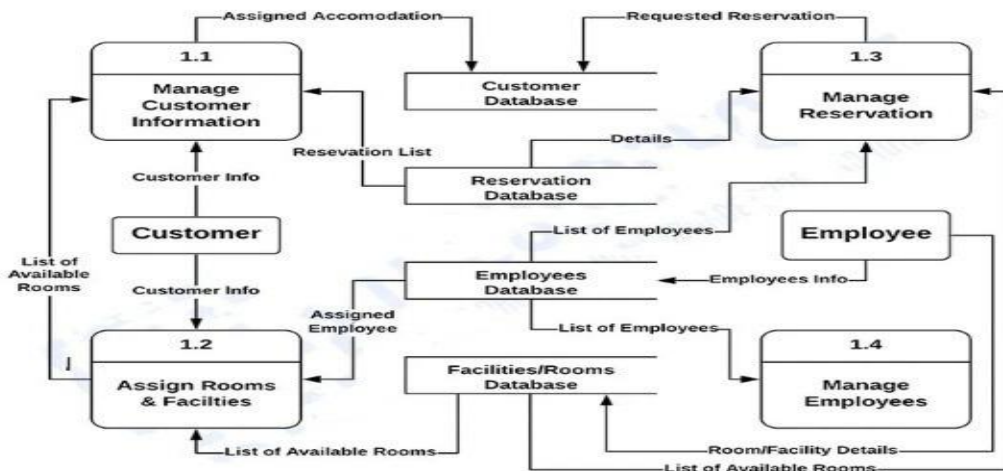


Figure 5.3.3: DFD Level 2

We can get a notion of where data inputs go and arrive from within the hotel management system thanks to DFD level 2. When you take into consideration the data flow levels mentioned above, it is easy to see the value of segmenting the operations in more specific ways. The level that is being shown details each system's detailed operations as well as the precise path that each system's data takes as it moves through it.

As you create your own management system DFD levels 0, 1, and 2, you can use this DFD as a guide.

5.4 Test Results and Reports

Let's review each of the five models that make up this project.

1. USER - Constructed using the Django user model, a sample is produced for each subscriber.
2. CUSTOMER – In addition to the user model, every customer will also have a Customer model that manages the user-to-user connection. (Field one to one).
3. ROOM MANAGER - Each room manager will include a model that controls the user-to-user relationship in addition to the user model. (Field one to one).
4. BOOKING - The booking model depicts the hotel reservations made by the customers.
5. ROOMS - The hotel's current rooms that the room manager has added are represented by the rooms model.
6. CONTACT – The contact model reflects the email that customers or website visitors submit to their inbox.

CHAPTER 6

IMPACT ON SOCIETY, ENVIRONMENT AND SUSTAINABILITY

6.1 Impact on Society

The purpose of the study feature is to gauge the degree of user acceptability of the system. This comprises the procedure for teaching the user how to correctly operate the system. The system shouldn't make the user feel threatened; instead, they should accept it as a necessary evil. The methods used to inform and acquaint the user with the program are the sole factors that affect the degree of user adoption. He has to have more self-assurance so that he can handle constructive criticism, which is welcome because he is the one who utilizes the system to its fullest.

Technology is continuing to advance swiftly in all facets of society, and the hospitality industry is beginning to benefit. There is little disagreement over how far hotel management software has advanced in helping hoteliers improve the way their business operates. With the aid of a state-of-the-art property management system, we may strengthen business operations generally and streamline administrative processes. It makes sense that the vast majority of hotel owners believe their business requires a first-rate management system.

6.2 Impact on Environment Figure

This research was done to examine the technical specifications of the system and the viability of the technology. Any created plan shouldn't place a significant strain on the available resources. The consumer will face higher demands as a result of this. A minimal set of adjustments, such as none at all, should be necessary to use the improved system.

Typically, we can find a thorough description of every product offered, and shops have a finite amount of shelf space. Clarity on each item we adore might sometimes be simple to come through. We can also read other people's internet reviews. A dependable hotel management software system has a wide range of advantages. Each element of a system for providing hospitality should strive to improve efficiency and improve the visitor experience, whether that means reducing the time spent on manual operations or increasing direct bookings. The pleasure of your visitors will rise if the check-in and check-out

procedures are more effective. The supply of new services and improved communication are just the beginning of the changes that will make customers more loyal. The most effective property management software will definitely lead to better rates of employee and visitor retention.

In-Store:

We demonstrate to you how we physically locate, take, and provide it to you. What we purchase has a big impact. Online iPod purchases are simple since we know we'll receive them.

The trouble with doing so is that we can't try the fabrics or shoes on first.

6.3 Ethical Aspects

- HMS: Some online deals are currently considerably more affordable at the mall because they do not have to pay rent or hire sales people. The product selection is likewise extensive.
- In-Store: If we get it from the store, we can end up spending more unless there is a sale. However, if there is a disagreement, we can at least discuss anything we can do on our computer with the management, unless we purchase something from the hotel. This indicates that there is a growing market for internet buying. Due to the prevalence of mobile and laptop devices, online transactions have surpassed in-store purchases.

6.4 Sustainability Plan

Before the system goes into live operation, accuracy and efficiency are checked by system testing, which is a stage of implementation. Testing is the process of putting the software through its paces in order to find errors and actions that are missing, as well as to do a complete verification to determine whether the objectives are reached and the needs of the users are satisfied. The major goal is to guarantee quality. Testing is carried out, and the results are evaluated against the desired document. When results are unreliable, debugging is conducted. Each module is tested according to a strategy utilizing particular testing

methods. There are several distinct types of tests run on "Network Backup System," including unit testing, integration testing, and user acceptability testing. I'll start working on this project to update it and try to add other features as well. Here are a few Sustainability plans:

- Assistance with multiple hotels.
- A consolidated database for all the hotels owned by a firm.
- Receive SMS alerts on the user's smartphone.
- The choice to cancel an order.
- Improving system security, among other things.

CHAPTER 7

CONCLUSION AND FUTURE SCOPE

7.1 CONCLUSION

We may observe a significant shift in people's behavior after learning about the online hotel booking system, including numerous habits including their mood and purchasing patterns. People used to buy things with their hands in the past, but as time changed and people became busier, technology brought about a new revolution in online shopping. When we originally conducted the poll, we found that young people, ages 15 to 30, preferred to purchase online because it saved them time and effort. However, due of the false belief that one can purchase high-quality items simply by looking at the product, the middle class is not very picky. And some people decide not to use credit cards or plastic money. Online shopping does, however, have a promising future, but in order to be successful, you must raise awareness of your profits. The project's outcome is A computerized management system is referred to as a hotel management system. In addition to the organization's software, this system also maintains records of its hardware assets. Workers, Residents, Accounts, and the creation of reports outlining the current state will all be tracked by the proposed system. In this project, software with a graphical user interface (GUI) will help with information retrieval, updating, and saving using a variety of user-friendly menu-driven modules. The "Hotel Management System" project aims to construct in order to keep the daily status of resident admission/vacation, the list of employees, payment data, etc. The main goal of this project is to give hotels a way to handle the majority of their operations through a computerized procedure. This program will assist the administrator in managing client information, including information on booking accommodations, making payments, and billing. The modules and design are fully explained in the project documentation. The current system requires manual maintenance. Each guest's information, payment details, room assignment, attendance, etc., must be maintained up to date in all hotel records. The fact that all of these specifics are manually entered and retrieved has a variety of disadvantages, including a time-consuming updating process and erroneous data. To avoid this, we created a new system in the proposed system that is a computerized version of the present system. allows for quick and easy data access.

7.2 Future Scope

I Would like to see this project's facilities expanded.

- You should include a print option.
- Wish to enhance the visual appeal.
- Want to make this website available online.
- Desire to eliminate all limitations.

APPENDIX

API: Application Programming Interface

HMS: Hotel Management System

CSS: Cascading Style Sheets

HTML: Hyper Text Markup Language

UML: Unified Modeling Language

XML: Extensible Markup Language

JS: Java Script

DB: Deci Bel

DFD: Data Flow Diagram

URL: Uniform Resource Locator

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