Mini Project On Web Development:
Travel Quest

"Your quest for affordable and comfortable stay"

A Mini-Project Report Submitted

**in Partial Fulfilment of the Requirements
for the Degree of**

BACHELOR OF TECHNOLOGY
In

Computer Science And Engineering

Submitted By

SARVESH MISHRA [2210013135158]

SURAJ MAURYA [2210013135160]

ATUL KUMAR [2210013135152]

BHARTI ANISHA SURENDRA PRATAP [2210013135153]

Under The Guidance Of

Er. Rohit Srivastava

FACULTY OF ENGINEERING AND TECHNOLOGY ,

UNIVERSITY OF LUCKNOW, LUCKNOW

2023-24

DECLARATION

We hereby declare that this submission is our own work and that, to the best of our knowledge and belief, it contains no material previously published or written by another person or material which to a substantial extent has been accepted for the award of any other degree or diploma of the University or other institute of higher education, except were due acknowledgement has been made in the text.

Signature

SARVESH MISHRA

[2210013135158]

Date: 29/05/2024

Signature

SURAJ MAURYA

[2210013135160]

Date: 29/05/2024

Signature

ATUL KUMAR

[2210013135152]

Date: 29/05/2024

Signature

BHARTI ANISHA SURENDRA PRATAP

[2210013135153]

Date: 29/05/2024

CERTIFICATE

Certified that Sarvesh Mishra (2210013135158) has carried out in this project report entitled "Mini Project On Web Development Travel Quest" 'Your quest for affordable and comfortable stay' 'for the award of Bachelor of Technology (Computer Science and Engineering) from Faculty of Engineering and Technology, University of Lucknow, Lucknow under my guidance. The project report embodies results of original work, and studies are carried out by the students themselves and the contents of the project report do not form the basis for the award of any other degree to the candidate or to anybody else from this or any other University/Institution.

Signature

Er. Rohit Srivastava

(Assistant Professor)

CERTIFICATE

Certified that Suraj Maurya (2210013135160) , has carried out in this project report entitled "Mini Project On Web Development : Travel Quest " 'Your quest for affordable and comfortable stay ' for the award of Bachelor of Technology (Computer Science and Engineering) from Faculty of Engineering and Technology , University of Lucknow, Lucknow under my guidance. The project report embodies results of original work, and studies are carried out by the students themselves and the contents of the project report do not form the basis for the award of any other degree to the candidate or to anybody else from this or an other University/Institution.

Signature

Er. Rohit Srivastava

(Assistant Professor)

CERTIFICATE

Certified that Atul Kumar (2210013135152), has carried out in this project report entitled "Mini Project   On Web Development : Travel Quest " ' Your quest for   affordable and comfortable stay' for   the award of Bachelor of Technology (Computer Science and Engineering) from Faculty of Engineering   and Technology , University of Lucknow , Lucknow under my guidance. The project report embodies results of original work, and studies are carried out by the students themselves and the contents of the project report do not form the basis for the award of any other degree to the candidate or to anybody else from this or any other University/Institution.

Signature

Er. Rohit Srivastava

(Assistant Professor)

CERTIFICATE

Certified that Bharati Anisha Surendra Pratap (2210013135153) has carried out in this project report entitled "Mini Project On Web Development : Travel Quest" 'Your quest affordable comfortable stay' 'for the award of Bachelor of Technology (Computer Science and Engineering) from Faculty of Engineering and Technology, University of Lucknow, Lucknow under my guidance. Project report embodies results of original work, and studies are carried out the students themselves and the contents of the project report do not form the basis for then of other degree to the candidate or to anybody else from this or any other University/Institution.

Signatur

Er. Rohit Srivastava

(Assistant Professor)

ABSTRACT

It is a real-time hotel booking web application that caters to diverse users. It utilizes contemporary web technologies to offer an interactive and seamless user experience, while maintaining strong security and scalability.

The front-end, crafted with HTML5, CSS3, Bootstrap, and JavaScript, provides a dynamic and responsive user interface. It manages data storage and retrieval, ensuring efficient handling of user information and messages. The online hotel booking website's main features include real-time hotel booking, user authentication, responsive design, user status indicators, and chat history.

The project demonstrates successful front-end integration, delivering a robust, secure, and user-friendly platform, paving the way for future improvements.

The project showcases successful integration of front-end technologies, resulting in a robust, secure, and user-friendly platform. This sets a strong foundation for future enhancements, such as incorporating AI for personalized recommendations, expanding the hotel database, and integrating with other travel services.

The potential for growth and improvement is vast, making this application a valuable tool in the online hotel booking industry.

ACKNOWLEDGEMENT

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Firstly, we extend our deepest appreciation to our project supervisor **Er. ROHIT SRIVASTAVA** for his valuable guidance, continuous support, and insightful feedback throughout this project.

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Special thanks to the online communities and open-source contributors whose tools and libraries provided the foundation for our work.

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Chapter-1

Introduction

Online hotel booking is becoming a standard business practice. Increasingly, businesses are creating websites for conducting online transactions. The aim of this project is to create a universal hotel booking web application. This application will allow users to book new hotel rooms, post and read room reviews, and view room listings comfortably from anywhere via the Internet.

A hotel booking web application is an online platform where customers can explore the catalog and choose their preferred hotels and rooms. The chosen hotel can be added to a checkout cart. At checkout, the items in the cart are presented as a booking order. Additional information is required to finalize the transaction. Typically, customers are asked to provide or select a billing address, an identification ID, and payment details like a credit card number. An email confirmation is sent to the customer immediately after placing the order.

1.1 Goal

Hotel booking, often seen as a leisure activity, is increasingly being done online. This application aims to create a user-friendly web interface for hotel owners and those looking to book rooms nationwide, potentially earning revenue. The system is designed to enhance the user experience in hotel booking.

- Key features include:
- A simple web interface for users to search hotels, view detailed descriptions, and book rooms.
- A search engine that lists hotels & rooms based on user queries, with additional filters for refining results.
- An AJAX-enabled website for a visually appealing and interactive user experience, preventing unnecessary page reloads.
- A drag-and-drop feature for adding or removing rooms from the checkout cart.

- Users can view comprehensive room specifications, images, and reviews, and also write their own reviews.

- Membership allows users to register and view available hotels and rooms. Only registered members can book multiple rooms. A 'Contact Us' page is available for queries. The system recognizes three roles: Visitor, User, and Admin.

1.2 Need of the Application

The need for the online hotel booking arises from several factors:

- ➢ **Convenience:** It provides a convenient platform for users to search for hotels, view detailed descriptions, and book rooms from anywhere with internet access.
- ➢ **Efficiency:** The application streamlines the booking process, making it more efficient for both hotel owners and customers.
- ➢ **Choice:** Users have a wide range of hotels and rooms to choose from, catering to various needs and preferences.
- ➢ **Information Access:** Detailed specifications, images, and user reviews of hotel rooms are readily available, aiding users in making informed decisions.
- ➢ **Interactive User Experience**: The use of AJAX controls and a drag-and-drop feature enhances the user experience by making the web pages more interactive and visually appealing.
- ➢ **Security:** The application ensures secure transactions with user authentication and protected payment information.
- ➢ **Communication:** The 'Contact Us' page facilitates communication between users and the admin for any queries or issues.
- ➢ Overall, this application aims to make the hotel booking process more user-friendly, efficient, and secure, thereby enhancing the overall user experience.

1.2.1 Problems and Solutions:-

1. <u>User Experience:-</u>

- ➢ **<u>Problem:-</u>** The basic problems with the existing systems is to provide a seamless and intuitive user experience.

➢ **Solution:-** Optimize website navigation and search functionality to help users find items easily. Implement responsive design for mobile users and ensure fast loading times.

2.Limited Inventory:-.

➢ **Problem:-** These kind of websites rely on pre-owned hotels, which may lead to limited hotel rooms availability.

➢ **Solution:-** Encourage users to donate or sell their pre-owned hotels by offering incentives such as discounts or hotel credits.

3.Quality Control:-.

➢ **Problem:-** Ensuring the quality of pre-owned hotels can be challenging, leading to customer dissatisfaction if hotel rooms do not meet expectations.

➢ **Solution:-** Implement a thorough inspection process for incoming hotels to assess their condition accurately. Provide detailed descriptions and multiple images of each item to manage customer expectations.

4.Booking Cost:-.

➢ **Problem:-** Booking costs for pre-owned hotels may vary based on area, buliding, and destination, leading to complexity in pricing.

➢ **Solution:-** Offer flat-rate booking price or free car parking thresholds to incentivize long duration booking. Negotiate discounted booking rates with user services for long duration booking

5.Competition with Traditional owner:-.

➢ **Problem:-** Thrifting websites compete with traditional owner that offer new hotel rooms at competitive prices..

- ➢ **Solution:**- Highlight the unique value proposition of thrifting, such as sustainability, affordability, and unique finds. Collaborate with influencers or bloggers to promote the benefits of thrifting and reach a wider audience.

1.3 Scope

- ➢ **Hotel Search:** This is the heart of any hotel booking website. Users should be able to search for hotels based on various criteria, including location, dates, price range, room type, amenities, guest rating, and brand.

- ➢ **Hotel Information**: Detailed information about each hotel should be readily available, including photos, descriptions, room details, amenities, guest reviews, and virtual tours (if available).

- ➢ **Booking Engine**: Users should be able to seamlessly book rooms, select add-ons (like breakfast or parking), and complete secure online payments.

1.4 Platform Specifications

1.4.1 Hardware Specification

1. Processor (Intel Core i5 or higher / AMD Ryzen5 Octacore or   more)
2. RAM (8GB or more)
3. Storage (256GB SSD or higher)
4. Network connectivity requirements (Sufficient mobile data or Wi-Fi)

1.4.2 Software Specification

1. Programming languages (JavaScript)
2. Frameworks or libraries (React, Bootstrap, NodeJs, ExpressJs)
3. Database management systems (MongoDB)

1.4.3 Deployment Environment

1. Operating system (Windows 7 onwards)

Chapter-2

System Requirement Analysis

2.1 Information Gathering

2.1.1 From Users:

A. Search Criteria:

The platform records user search inputs such as destination, dates, budget, room category, facilities, and guest score. This data offers a deep understanding of user choices, travel patterns, and favored locations.

B. Booking Information:

While booking, the platform gathers user details like identity, contact data, journey dates, room choice, and any extra services opted for. This data is vital for finalizing bookings and managing user profiles.

C. User Reviews and Ratings:

Feedback provided by guests delivers important insights into their hotel experience. This data assists potential guests in making knowledgeable choices and can sway a hotel's overall standing on the platform.

2.1.2 From Hotels:

A. Hotel Inventory:
Hotels supply data on their vacant rooms, encompassing room categories, descriptions, images, facilities, rates, and cancellation rules. This data is crucial for presenting precise listings and enabling users to make knowledgeable booking choices.

B. Rates and Availability:

Hotels refresh their room prices and availability in real-time to ensure users access the most up-to-date rates and prevent double booking.

C. **Hotel Promotions and Offers:**
Hotels can disseminate exclusive offers, bundles, and last-minute bargains via the platform to boost bookings.

D.**Hotel Descriptions and Content:**
Hotels offer comprehensive descriptions of their premises, amenities, services, and nearby attractions. This information assists users in gaining a better understanding of the hotel and making informed decisions.

2.2.1 Economic Feasibility

Cost Estimation:

The project is economically feasible as the only cost involved is having a computer with the minimum requirements mentioned earlier. For the users to access the application, the only cost involved will be in getting access to the Internet. Our comprehensive cost estimation considers development, hosting, maintenance, and marketing expenses. We have ensured that the projected costs align with our budget constraints and revenue projections.

2.2.2 Technical Feasibility:

To deploy the application, the only technical aspects needed are:--

For Users:-

> **Internet Browser**

>**Internet Connection**

For Development :

Our analysis indicates that the necessary hardware, including servers and storage solutions, can be procured within our budget. Additionally, the required software components, such as web development frameworks and content management systems, are readily available and compatible with our project goals.

2.2.3 Operational Feasibility:

A. Testing:

We have developed a comprehensive plan for conducting user acceptance testing to validate the website's functionality, usability, and performance, ensuring alignment with user expectations.

B. Scalability:

Website can handle varying levels of traffic without performance issues. Scalable infrastructures are implemented.

C. Data Security:

Implement robust security measures to protect user data, including SSL certificates, encryption, and secure payment gateways.

CHAPTER-3

System Analysis

After Our project is based on online hotel booking system. It refers to a website that book hotel rooms. The action that our website can perform is creating account, booking hotels, showing listings property, customer feedback and hotel rooms reviews. It supports both banking system and cash checkout.

After carefully analysing the requirements and functionality of the web application, we had two important diagrams by the end of the analysis phase. They are the Entity Relationship (ER) Diagram and Data Flow Diagram (DFD) which were the basis for finding out entities and relationships between them, the flow of information.

3.1 ER Diagram:- Creating an Entity-Relationship (ER) diagram for a thrifting website involves identifying the main entities and their relationships. Below is a description of a possible ER diagram along with a textual representation of the entities, attributes, and relationships.

Using an ER diagram, we can resolve many problems during the planning phase of the information system rather than at the execution or testing phase. It allows us to map all the information in a graphical manner that is easy to understand and interpret.

Moreover, an ERD helps identify all the data that needs to be stored in the database. By linking entities, their attributes and their relationships, ERD helps determine all the requirements of an information system during its initial phase.

A. Entities and Attributes:

1. User

   a) User ID
   b) Username
   c) Password

d) Email

e) Name

2. Hotel
   a) Hotel ID
   b) HotelName
   c) Description
   d) Price
   e) Location.

3. User Review
   a) Review ID
   b) Review
   c) Review Date
   d) Review Rating

B. Relationship:-

a) User has a One-to-Many relationship with Hotel Listings.

b) Hotel has a One-to-Many relationship with Hotel rooms.

c) User has a Many-to-One relationship with Hotel Rooms.

d) Hotel has a One-to-Many relationship with Listings.

e) User has a One-to-Many relationship with Review.

f) User has a One-to-One relationship with rooms.

C. Visual Representation of ER Diagram:-
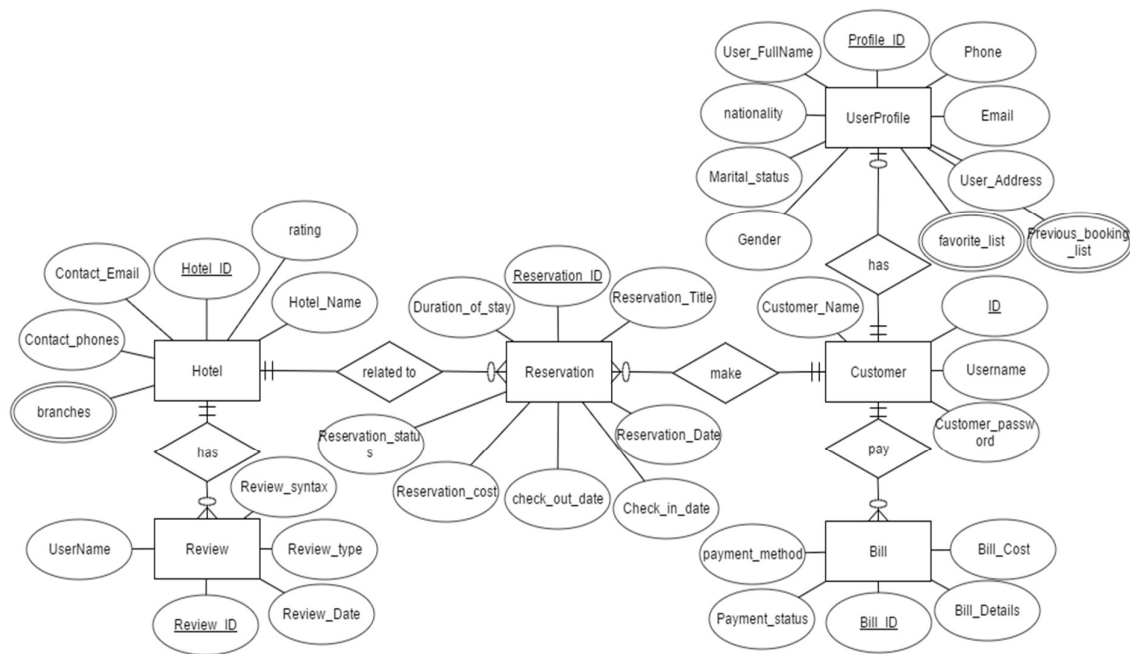
Fig3.1 ER Diagram

3.2 Data Flow Diagram:

A data flow diagram is a graphical view of how data is processed in a system in terms of input and output. A data flow diagram is a graphical view of how data is processed in a system in terms of input and output.

- A Data Flow Diagram (DFD) illustrates how data flows through a system. For a thrifting website, the DFD will show how data moves between users, the website, and the database.

A. Level 0 DFD (Context Diagram):

This is the highest level of DFD, showing the system as a single process and its interactions with external entities. Below data flow diagram of online shopping site shows the two users can operate the system Admin and Member user.
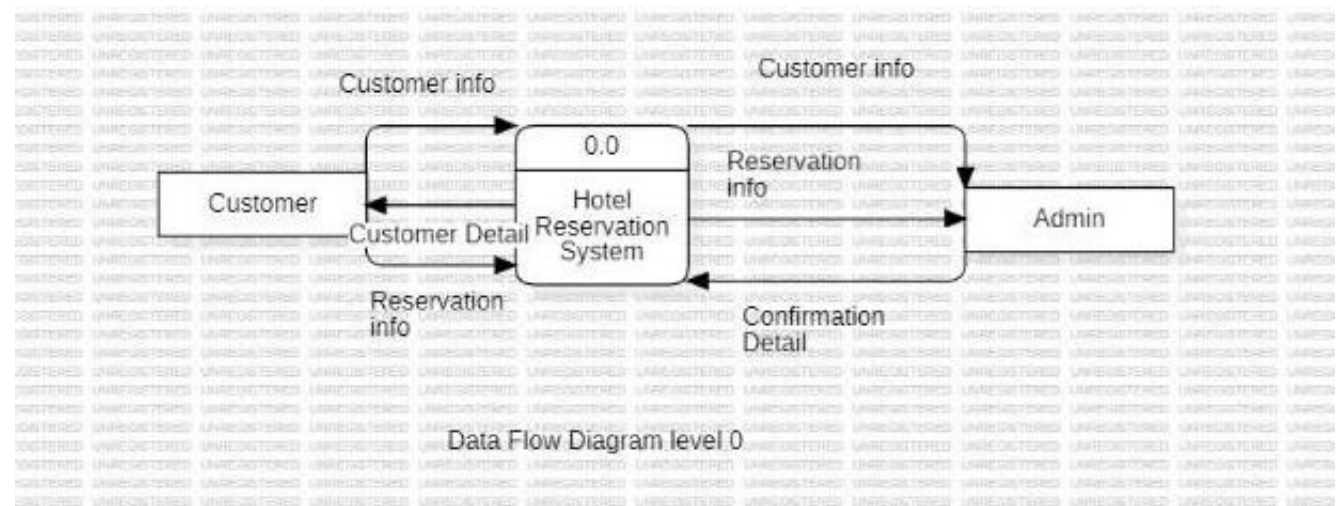
Fig3.2 Level 0 DFD

Entities:-

 a) User

 b) Hotel Booking system

Process:-

a) Thrifting Website System

Data Flows:-

 a) User Registration/Login

 b) Booking request

 c) Booking Confirmation

 d) Payment Information

B. First Level DFD:

 This level breaks down the main process into sub-processes, showing more detail.

a) **User Management:-** Handles user registration, login, and profile management. Interacts with the User Database to store and retrieve user data.

b) **Information System:-** Manages hotel listings, including adding, editing, and deleting hotel. Interacts with the listings Database to store and retrieve product data.

c) **Order Management:-** Handles order creation, processing, and tracking. Interacts with the Order Database to store and retrieve order data.

d) **Transaction System:-** Manages the booking transaction, including booking, cancelling, and removing booking.

e) **Payment Processing:-** Manages payment transactions during checkout. Interacts with the Payment Gateway for secure payment processing
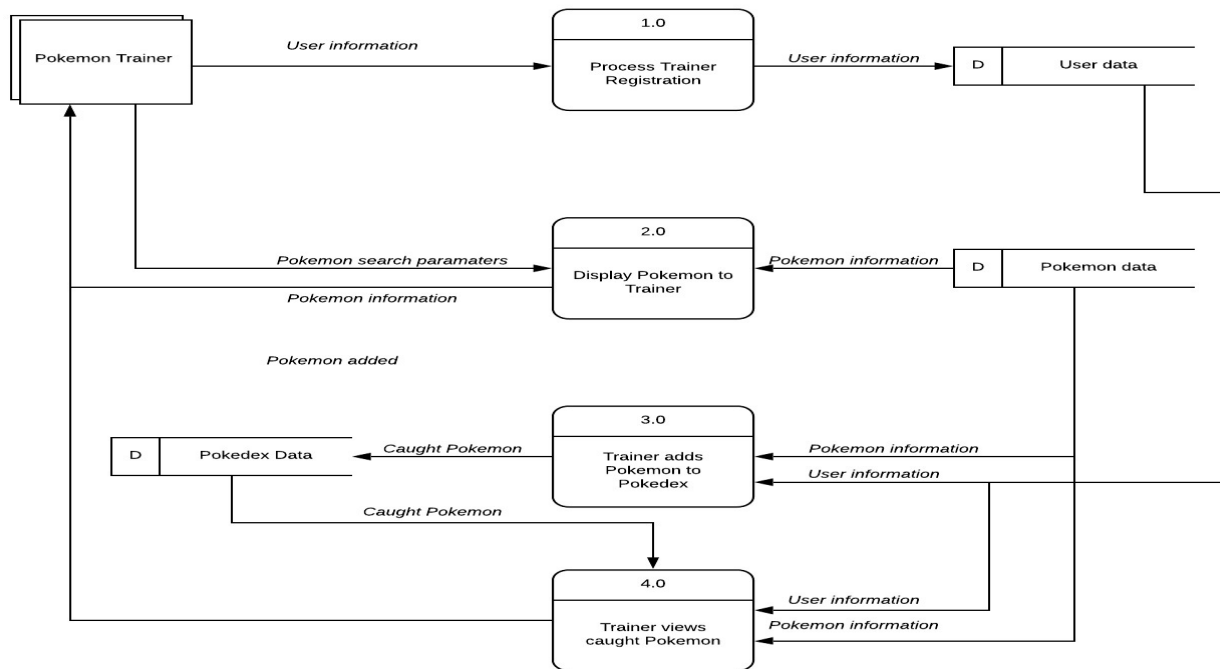

Fig3.3 Level 1 DFD

B. Second Level DFD:

To create a Level 2 Data Flow Diagram (DFD), we will break down each major process from the Level 1 DFD into more detailed subprocesses. Let's focus on detailing a few of these processes for the sake of clarity:

1. Manage Hotel Rooms Details

2. Manage Payment Details

3. Manage Customer Details

4. Manage Hotel Info Details

5. Manage Booking Details

6. Manage User Details
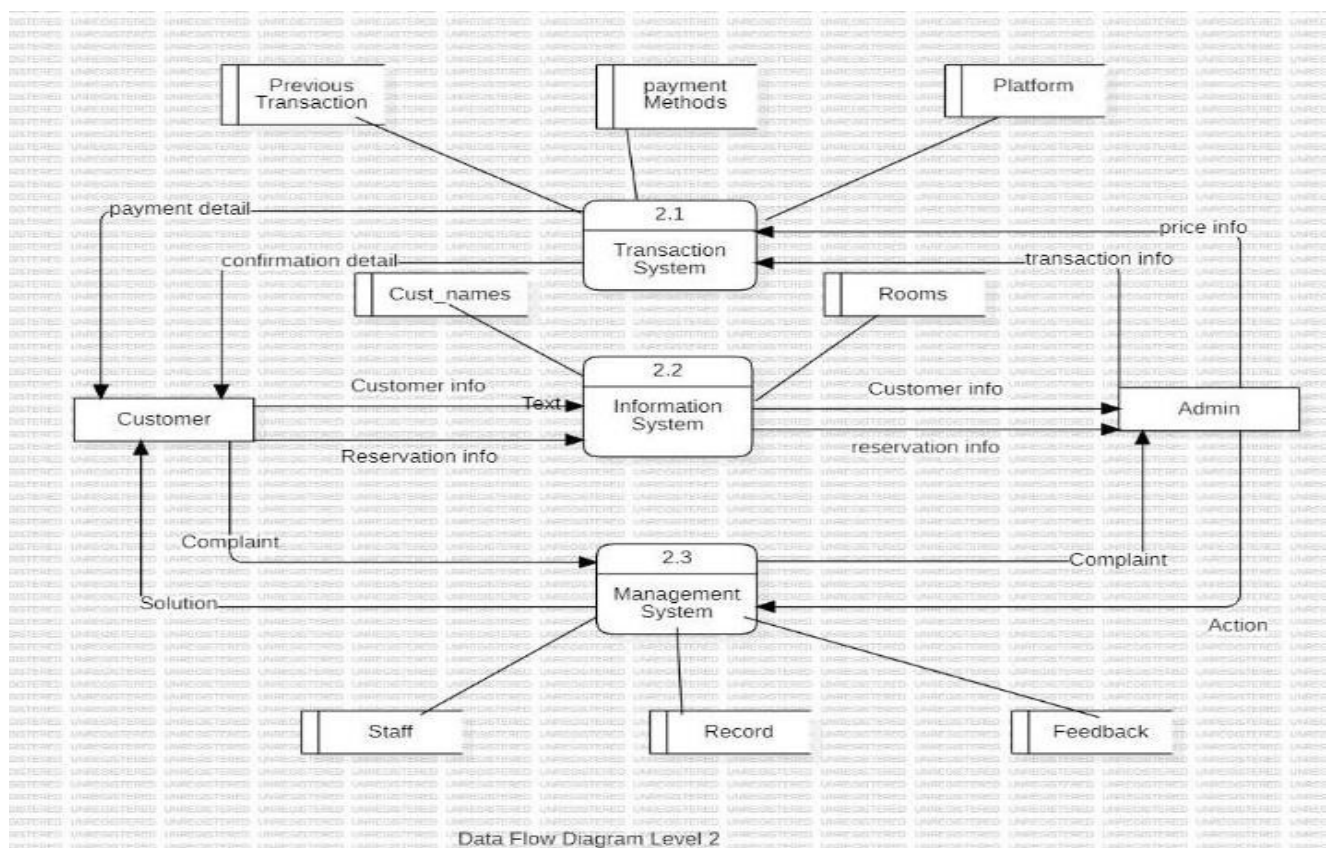
Fig3.4 Level 2 DFD

3.3 Use Case Diagram:

 A use case diagram for a thrifting website will illustrate the interactions between users (actors) and the system (use cases). It will show how different types of users interact with various functionalities of the website.

1. Actors:

    a) Customer: Regular user who can browse, search, book hotel rooms, checkout, and write reviews.

    b) Manager: Manages hotel rooms and reviews, handles user accounts.

2. Use Cases:-

    a) Register

    b) Login

    c) Browse/Search rooms

    d) Add to Cart

    e) Checkout

    f) Write Review

    g) Manage hotels (Admin)

    h) Manage Users (Admin)

    i) Manage Reviews (Admin)

3. Use-Case Diagram:-

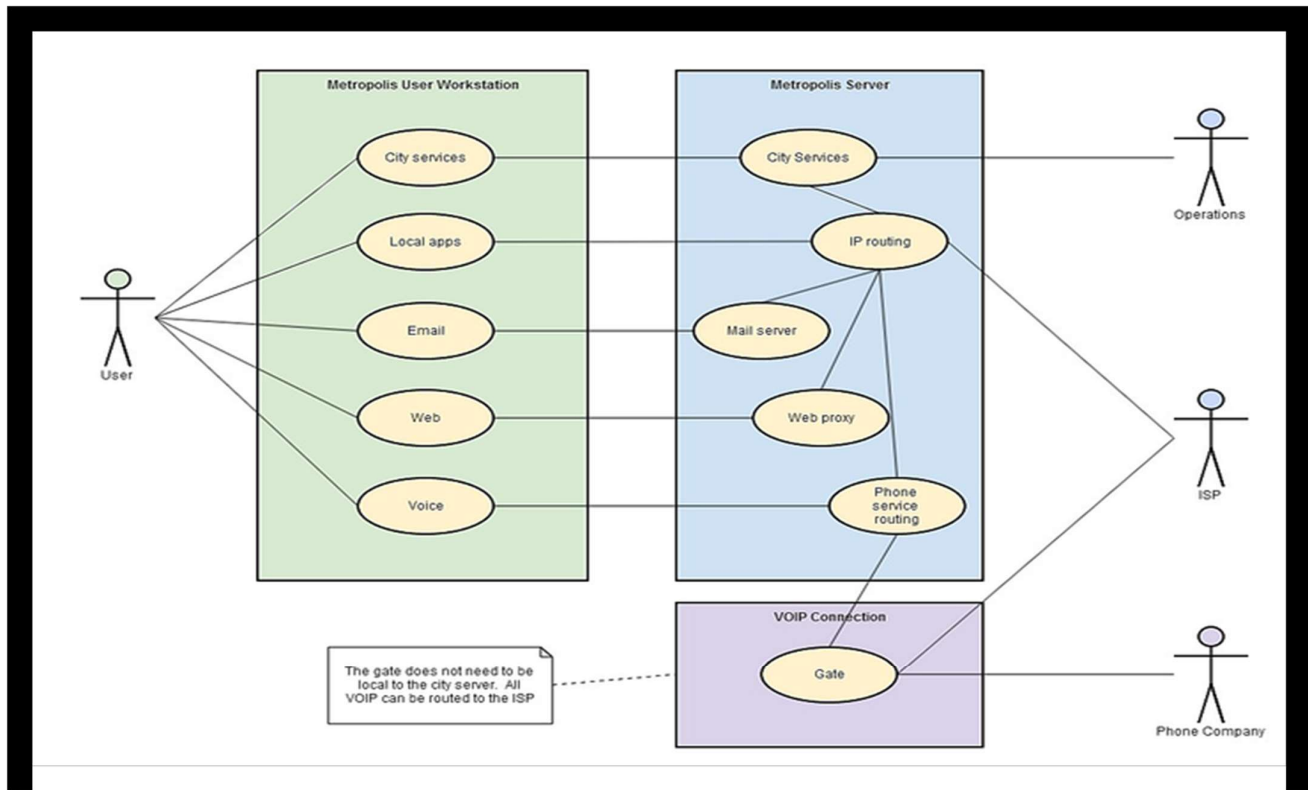User interacts with:-

    a) Register

    b) Login

    c) Browse/Search Hotel rooms

    d) Add to Cart

    e) Checkout

    f) Write Review

Admin interacts with:

    a) Manage Hotel rooms

    b) Manage Customers

c) Manage Reviews

Fig3.5 Use-Case Diagram

CHAPTER:4.

Design and Simulation/ Hardware (or Software) Implementation

4.1 Design Goals:

• Online Hotel booking application goals focus on optimizing online booking performance. These goals typically include increasing website traffic, enhancing customer engagement, boosting conversion rates, and driving sales growth.

• Online Hotel booking application goals and objectives also involve improving customer experience, leveraging digital marketing strategies, and utilizing data analytics to inform decision-making and track progress against key performance indicators.

I. **User-Friendly Interface:**
   The website will feature an intuitive and clean interface to facilitate easy navigation for all users. Clear labels, well-organized content, and straightforward actions will be prioritized to enhance usability.

II. **Responsive Design:**
   The website will be designed to be fully responsive, ensuring seamless functionality and a consistent user experience across various devices, including desktops, tablets, and smartphones. This will accommodate the diverse ways users access the site.

III. **Efficient Search and Filtering:**
   Robust search and filtering capabilities will be implemented to help users quickly locate items of interest. Advanced filters and search options will allow users to refine their searches based on categories, price ranges, conditions, and more.

IV. **Scalability:**
   The system will be designed to be scalable, allowing it to handle increasing amounts of traffic and a growing number of users and items. This scalability will ensure the website remains efficient and reliable as it expands.

V. Regular Updates and Maintenance:

The system will be designed for easy updates and maintenance, allowing for the seamless addition of new features, security patches, and overall improvements without disrupting the user experience.

VI. Integration Capabilities:

The system will be designed to easily integrate with third-party services, such as payment gateways and shipping providers. This will enable seamless transactions and order fullfillment processes.

4.2 Description of Architectural Design:-

In this context diagram, the information provided to and received from the 'Online hotel booking' is identified. The arrows represent the information received or generated by the application. The closed boxes represent the set of sources and sinks of information. In the system, we can observe that the user interacts with the application through a graphical user interface. The inputs to the system are the Search and Filter criteria provided by the user and a new review written by the user. Also, the output is in the form of Repeater and grid views which present the users with list of Products available. The users can view complete specification, view Images and reviews by other users.

4.3 Procedural/Modular Approach:-

4.3.1 Shop Products Module

This module starts when the user visits the home page or when a user searches for a room by entering a search term. This part of the application includes displaying all the hotels that are available or the rooms that match the search term entered by the user. The user can then filter these rooms based on various parameters like luxury, room price, operating system supported or a price range. The user browse through the products and each product

would be displayed with an image and its features like operating system supported, number of user licenses and if it is a full version or an upgrade version. A user can add a product to the cart either by dragging the product and dropping it in the cart or by clicking a button. The user would be able to see the booking cart summary.

4.3.2 Product Description Module

This module starts when a user visits the product description page. A user can view various images of the product of different sizes. The use can see an enlarged image in a popup window. The user can view the complete specification of the product like its features, operating system supported, system requirements etc. A user can also view the manufacturer information and also information about rebates, exchange policies etc. A user can also view the reviews of the product. A user can also write a review for the product.

4.3.3 Booking Cart Module

This module starts when the user views the shopping cart. All the products that have been added to the shopping cart by the user are listed along with their price and the quantity. The total price of all the products added to cart is displayed. A user can edit the quantity of each product or remove the product from the shopping cart. A user can remove the product from the cart by clicking a button or by dragging the product and dropping it outside the cart. The total price changes accordingly when a user edits the quantity of a product or when a product is removed from the cart.

4.4 Implementation:-

1. **Responsive Design:-** Ensuring that the website is visually appealing and functional across various devices and screen sizes can be challenging. Testing and refining the

layout to accommodate different resolutions and orientations may require significant effort.

2. **Cross-Browser Compatibility:-** Different web browsers interpret HTML, CSS, and JavaScript code differently. Ensuring that the website functions correctly and appears consistent across popular browsers like Chrome, Firefox, Safari, and Edge can be challenging. Testing and debugging for compatibility issues may be necessary.

3. **Performance Optimization:-** As the website grows in complexity, optimizing its performance becomes crucial. Balancing visual aesthetics with loading times can be challenging, especially when dealing with large images or complex JavaScript functionalities. Techniques like minification, compression, lazy loading, and caching may need to be implemented to enhance performance.

4. **User Experience (UX):-** Designing intuitive navigation, user-friendly interfaces, and smooth interactions are critical for a positive user experience. Ensuring that users can easily find products, add them to the cart, and complete the checkout process without confusion or frustration requires careful attention to detail.

5. **Accessibility:-** Ensuring that the website is accessible to users with disabilities, including those using screen readers or assistive technologies, is essential for inclusive design. Implementing accessibility features such as proper semantic HTML, keyboard navigation, and descriptive alt text for images can be challenging but necessary.

6. **Scalability and Maintenance:** As the website grows in terms of traffic and functionality, scaling its infrastructure and maintaining codebase become challenging. Adopting scalable architecture and coding practices, such as modularization and version control, can facilitate future updates and enhancements.

4.5 Testing:-

- Testing is a crucial phase in the development of the thrifting website. It ensures that the website operates correctly, meets user requirements, and maintains a high level of quality. Various types of testing were performed, including unit testing, integration testing, system testing, user acceptance testing (UAT), performance testing, and security testing.

- Testing and debugging are crucial phases in the implementation of a online hotel booking website using HTML, CSS, and JavaScript. Here are some challenges and difficulties you might encounter during this process:

1. **Browser Compatibility Issues:** Different web browsers may interpret HTML, CSS, and JavaScript differently, leading to layout inconsistencies, styling errors, or functional discrepancies. Testing the website across multiple browsers and versions can uncover compatibility issues that need to be addressed

2. **Responsive Design Testing:** Ensuring that the website is responsive and displays correctly on various devices and screen sizes presents challenges during testing. Emulating different device resolutions and orientations using browser developer tools or dedicated testing platforms can help identify and resolve layout issues.

3. **Cross-Device Testing:** Testing the website on a wide range of devices, including smartphones, tablets, laptops, and desktop computers, is necessary to ensure consistent performance and user experience across devices. Addressing device-specific issues and optimizing performance for mobile devices can be challenging.

4. **Data Validation and Error Handling:** Validating user input, handling form submissions, and displaying appropriate error messages are critical aspects of testing. Ensuring that the website gracefully handles errors, such as invalid inputs or server failures, and provides informative feedback to users can be challenging to implement and test thoroughly.

5. **Accessibility Testing:** Testing the website for accessibility compliance to ensure it is usable by people with disabilities presents unique challenges. Conducting manual and automated accessibility audits to identify and address accessibility barriers, such as inadequate keyboard navigation or missing alternative text for images, requires specialized knowledge and tools.

Chapter:5

5.1 Results & Challenges

The application can be used for any Online hotel booking web application. It is easy to use, since it uses the GUI provided in the user dialog. User friendly screens are provided. The application is easy to use and interactive making online hotel booking a recreational activity for users. It has been thoroughly tested and implemented.

1.   Home Page
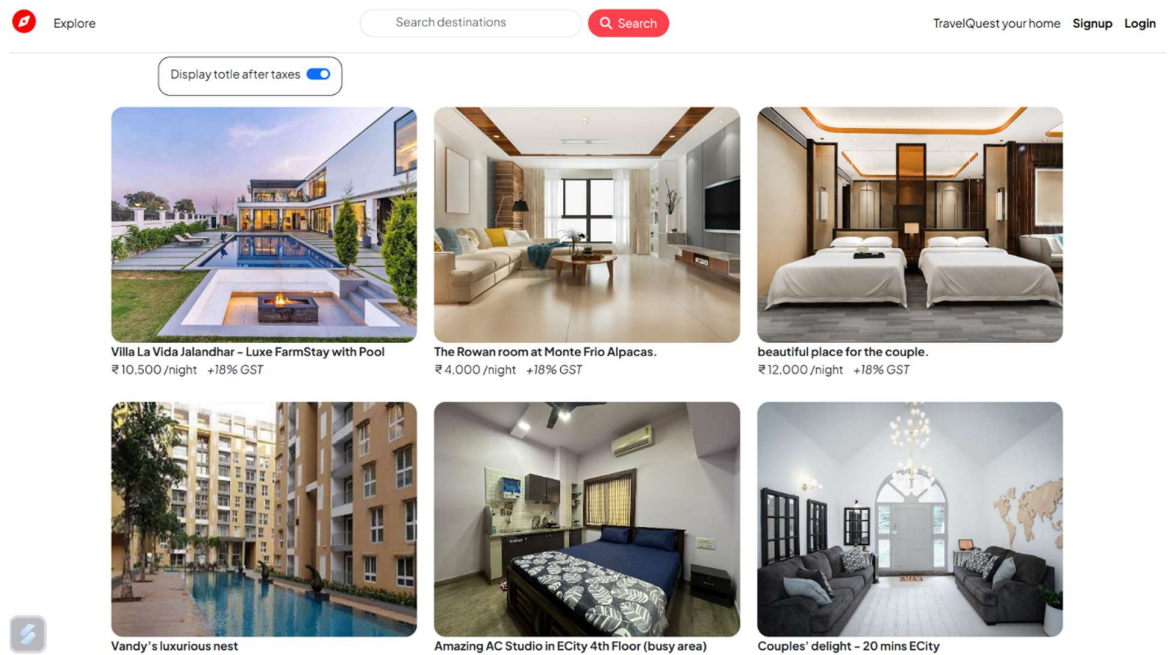
Fig 5.1 : Home Page

➢ The home page's primary goal is to make the visitor feel welcome, and then provide information and navigation about what can be found on the site. The best homepage is the one that serves this primary purpose the best.

➢ A home page is actually a webpage that can serve as the starting point. It's the default web page that loads if you enter a site's domain only.

- The home page is actually utilized to facilitate navigation to various other web pages on the website by providing links to all the areas available on the site.

- This is homepage of our website which consist of Login, Register and Listings. If the user is new he/she can signup/login themselves and can get started with browsing hotel rooms.

- On the other hand, if user already registered he/she can login using their username and password and can get started with hotel listings, viewing their listed hotels, payment etc.

- The Add new listings section here shows the user can add new hotel listings at our website .

- There will also be all listings where you can see all the hotels which is listed on our website which will contain hotel rooms that user want to book later.

2. Add New Listings

Fig 5.2 : Add new listings

- An online hotel booking web app is a software that lets customers select, book, and manage rooms before booking them.

- Here Add new listings function allows user to list their hotel rooms which can be booked by customer later.

- In add new listings that's provide user to add hotel rooms where a room have title, description, link of image, price , location and country.
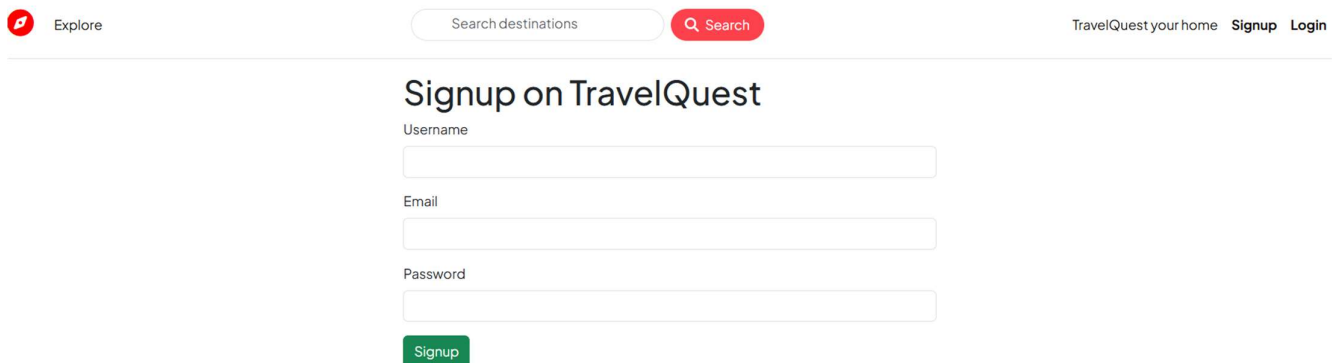
3. Login Page

Fig 5.3 : Login page

- The login page lets user create an account of their own on the website which includes adding name, Username, password etc.

- If user already registered he/she can login using their mobile/email and password and can get started Using all the function of our website.

➢ Without login on our website user only browse our web application can't access any other functions.

4. Signup Page

Fig 5.4 : Signup page

➢ Here on this page user can register themselves on our website using username, email, password etc
➢ When user complete signup phase, user login on our website using username and password.

After Successful Sign Up and Login User can see this type of message….
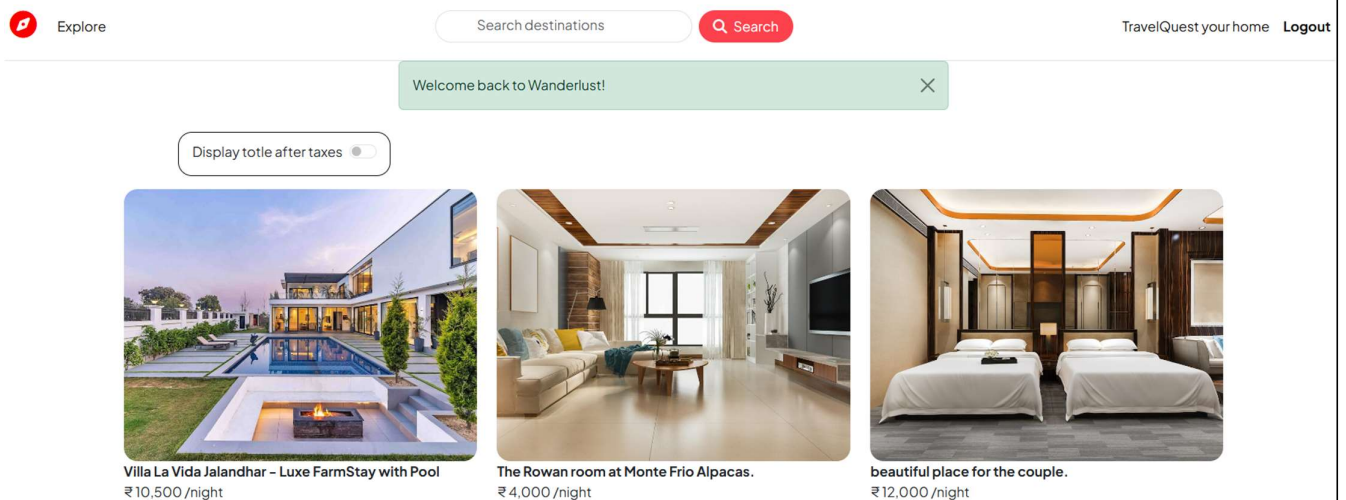
Fig 5.5 : Login Page

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5. Review Page

Fig 5.6 : All review page

➢ Here All review are listed which is given by all user about that specific hotel and hotel rooms.

➢ User can only delete their review not others on our review page.

6. Create Review

Here user can create a review and give ratings to specific hotel.

Fig 5.7 :Create Review Page

7. Show listings page

Here in our web application user can access selected specific hotels details where user use their Functions and create review about hotel also see the other user review.
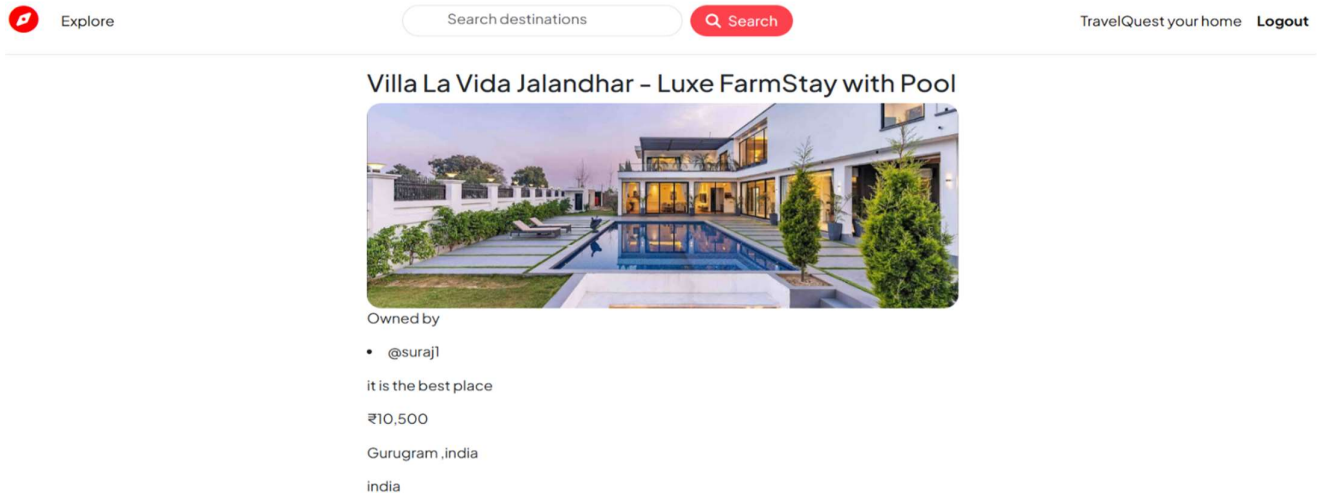

Fig 5.8 : Show listings Page

8. Demo listing page

➢ If user Create a listings then he/she can delete and edit that listings not anyone else user.

➢ In this fig you can see there edit and delete button are shown. This button can't access or visible to any other user on our web application.
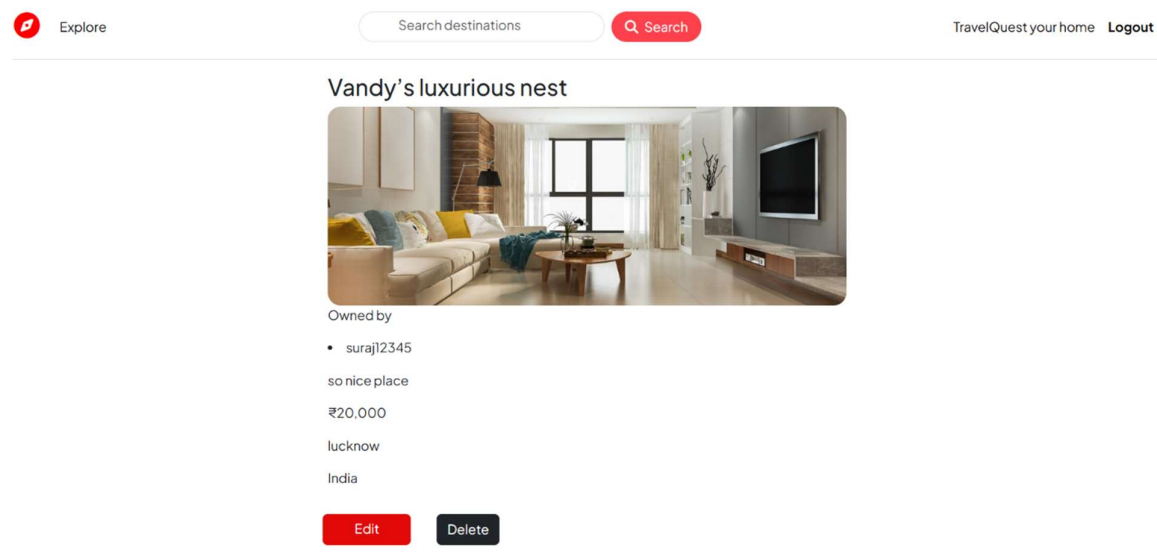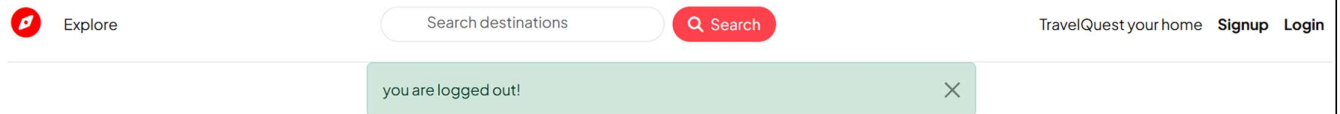

Fig 5.9 : Demo Listing Page

9. Warning Message alerts

This warning occurs when user logged want to access some functions on our websites.

| 🧭 Explore | Search destinations | 🔍 Search | TravelQuest your home **Signup Login** |

you are logged out! ✕

Fig 5.10 : Success full Logged Out

This warning occurs when user updated listings successfully.

| 🧭 Explore | Search destinations | 🔍 Search | TravelQuest your home **Logout** |
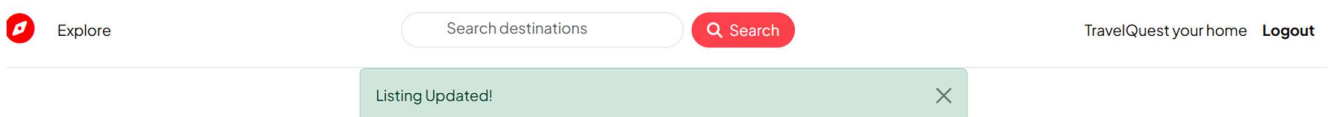
Listing Updated! ✕

Fig 5.11 : Updated successfully

This warning occurs when user create new listings successfully.

| 🧭 Explore | Search destinations | 🔍 Search | TravelQuest your home **Logout** |

New Listing Created! ✕
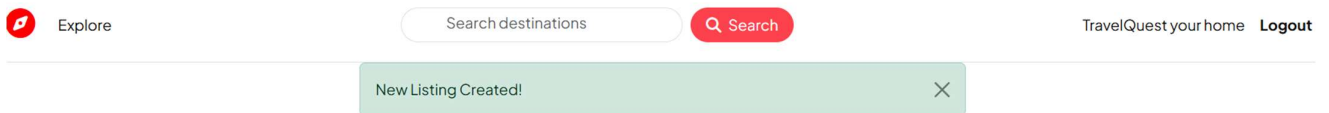
Fig 5.12 : Create New Listings

This warning occurs when user login on our website.

Welcome to Wandelust ✕

Display totle after taxes ⚪

Villa La Vida Jalandhar – Luxe FarmStay with Pool
₹10,500 /night

The Rowan room at Monte Frio Alpacas.
₹4,000 /night

beautiful place for the couple.
₹12,000 /night
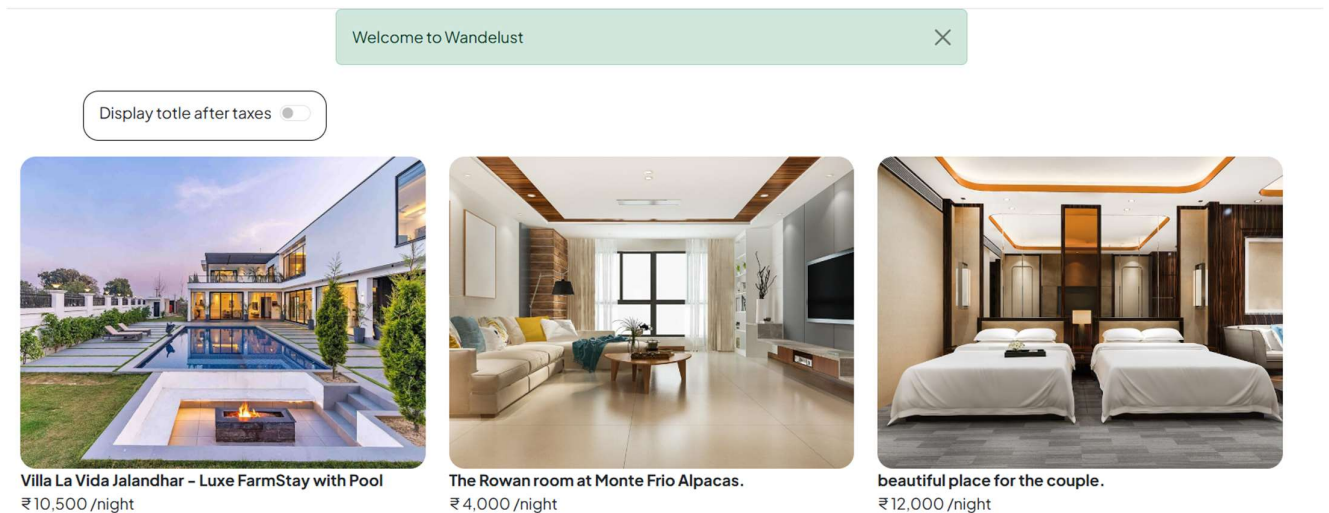
Fig 5.13 :Login Successfull

5.2 Challenges

1. User Experience:-

Challenge: Providing a seamless and enjoyable user experience is essential to attract and retain users but can be complicated by the diverse nature of second-hand items.

2. Logistics and Shipping:-

Challenge: Coordinating shipping for a diverse range of products, each with different sizes, weights, and conditions, can be challenging.

3. Quality Control:-

Challenge: Ensuring the quality and condition of second-hand items can be difficult since the items are not new and can vary significantly in wear and tear.

4. Trust and Safety:-

Challenge: Building trust between buyers and sellers is crucial, as the anonymity of online transactions can lead to concerns about fraud, misrepresentation, and safety.

5. Inventory Management:-

Challenge: Managing a constantly changing inventory of unique, second-hand items
.   is complex   compared to handling new products.

6. Market Competition:-
Challenge: Standing out in a crowded market with many established competitors can .
.   difficult for new thrifting websites .

CHAPTER 6
Conclusion

This project has been a valuable learning experience in building a complex web application. We've successfully implemented core functionalities like user authentication, listings management. There's room for further development, such as integrating a payment gateway, adding a messaging system, or implementing advanced search filters. Overall, this project serves as a strong foundation for understanding the technical challenges and opportunities involved in building a marketplace platform.

Key Achievements

1. **Full-Stack Development**: The project successfully integrated both front-end and back-end technologies, leveraging tools such as React for the user interface, Node.js for the server-side logic, and a database like MongoDB for data management. This integration is pivotal in delivering a smooth and responsive user experience

2. **Responsive Design**: Ensuring the application is fully responsive across various devices and screen sizes was a critical achievement. This ensures that users can access the platform conveniently whether they are using a desktop, tablet, or smartphone.

3. **Scalability and Performance**: By focusing on scalable architecture and optimizing performance, the project ensures that the application can handle an increasing number of users and transactions without compromising on speed or reliability.

Limitations

1. **Missing Advanced Features**:
   o The clone doesn't have all the sophisticated features of the original , like smart recommendations and dynamic pricing.
2. **Scalability**: It hasn't been fully tested to handle lots of users at once, so it might slow under heavy traffic.

3. **Security**:
   - While basic security measures are in place, the app might still have vulnerabilities that haven't been discovered yet.
4. **User Experience**:
   - The interface might not be as polished or user-friendly as Airbnb's, and it might not fully support users with disabilities.
5. **Integration and Testing**:
   - Some integrations with other services (like payment systems) might not be as reliable, and more testing is needed to catch all potential issues.
6. **Maintenance and Support**:
   - There could be some hidden technical problems that might make future updates difficult, and there isn't a system for user support.
7. **Legal and Regulatory Compliance**:
   - The clone doesn't fully address all the legal rules and privacy regulations that vary by region.

Scope for Future Work

1. **New Features**:
   - **Smart Recommendations**: Add features that suggest places based on user preferences. o **Dynamic Pricing**: Adjust prices automatically based on demand and other   factors.
2. **Mobile App**:
   - **Native Apps**: Create dedicated apps for iOS and Android for a smoother experience.
   - **Notifications**: Add push notifications for bookings and important updates.

3. **Performance and Scalability**:
   - **Load Testing**: Test how the app performs under heavy use and make necessary improvements.
   - **Better Architecture**: Improve the app's design to handle more users efficiently.
4. **Security:**
   - **Advanced Security**: Add features like two-factor authentication to enhance   security.
5. **Integrations**:

- o **More Services**: Integrate with other services like travel insurance and transportation.
  - o **API Development**: Create APIs so other developers can add features to the platform.
6. **Customer Support**:
   - o **Support System**: Develop a comprehensive support system with live chat and help centers.
   - o **Regular Updates**: Keep the app updated and fix bugs regularly.
7. **Global Expansion**:
   - o **Multi-language and Currency Support**: Make the app accessible to users worldwide. o **Localization**: Customize the app for different regions with local content and   features.

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PROFILE

Computer science and Engineering Student.
I would like to be punctual and contribute to society as per my ability.

CONTACT

PHONE:
6387032699

EMAIL:
sarveshmishraoffi@gmail.com
Gorakhpur ,UP

SARVESH MISHRA

S T U D E N T

EDUCATION

UNIVERSITY OF LUCKNOW
BACHELOR OF TECHNOLOGY
2022-2025
GOVERNMENT POLYTECHNIC DEORIA
DIPLOMA IN ELECTRONIC ENGINEERING (2018-2021)
NETAJEE DEFENCE ACADEMY SAINIK VIHAR GORAKHPUR
HIGH SCHOOL (2016-2018)

➢ **LANGUAGE**
English
Hindi

➢ **Computer Skills**
C ,Java, Front end

TRAINING

Certificate Course In Electronic CAD

Suraj Maurya

Gmail -mauryasuraj364@gmail.com   Contact -(+91)7617884304

In - https://www.linkedin.com/in/suraj-maurya-bb4130256/   Loc.- Ghazipur, Uttar pradesh ,275204 ,India

Github-github.com/suraj3641

Profile :-

Third-year engineering student with a keen interest in full stack Web development. Strong understanding of programming . Strong collaborator with a rapid learning curve and a passion for innovation. Interprets Instruction well and work collaboratively To support team objectives.

SKILLS

C , C++ , CSS , HTML, Javascript ,React.js ,SQL, Node.js, REST API, MongoDB, EJS, Bootstrap, DSA, Oops concepts, programing solving,

ACHIEVEMENTS

- Completion of Web-development course from delta batch.
- 300+ coins on GFG and coding ninjas.
- Attendance of webinar on Gillette conducted by Gillette company.

PROJECT

Travel Quest Application

- This online platform for rental accommodations.
- We have implemented full stack project using MVC framework.
- MERN is used in this application.
- December 2023- January 2024

EDUCATION

B.Tech in computer science(Appearing)   (2022-2025)

- Lucknow University ,Lucknow.
- CGPA-7.31(Till 4th semester)

Diploma   in civil enginerring   (June 2022)

- GOV. Polytechnic chairiyon . Deoria   71.1%

Class XII   (April 2018)

- CBI College Tarawa . Azamgarh   67.00%

Class X (may 2016)

- B F S U M V Mokalpur . Azamgarh   81.16%

LANGUAGE

- Hindi
- English

ATUL KUMAR

S T U D E N T

PROFILE

Computer science and Engineering Student.
I would like to be punctual and contribute to society as per my ability.

CONTACT

PHONE:
7905783576

EMAIL:
KATUL774972@GMAIL.COM
Gorakhpur ,UP

EDUCATION

UNIVERSITY OF LUCKNOW
BACHELOR OF TECHNOLOGY
2022-2025
GOVERNMENT POLYTECHNIC DEORIA
DIPLOMA IN ELECTRICAL ENGINEERING (2017-2020)
CENTRAL HINDU SCHOOL
HIGH SCHOOL (2013-2015)
CENTRAL HINDU SCHOOL
SENIOR SECONDARY (2015-2017)

➢ LANGUAGE
English
Hindi

➢ Computer Skills
C ,Java, Front end, HTML CSS

TRAINING

Certificate Course In Electronic CAD

BHARTI ANISHA

S T U D E N T

PROFILE

Computer science and Engineering Student.
I would like to be punctual and contribute to society as per my ability.

CONTACT

PHONE:
9913290501

EMAIL:
Bhartianisha659@gmail.com
jaunpur ,UP

EDUCATION

UNIVERSITY OF LUCKNOW
BACHELOR OF TECHNOLOGY
2022-2025
GOVERNMENT POLYTECHNIC AZAMGARH
DIPLOMA IN CIVIL ENGINEERING (2019-2022)
MODERN ENGLISH SCHOOL
HIGH SCHOOL (2014-2016)
MODERN ENGLISH SCHOOL
SENIOR SECONDARY (2016-2018)

➢ **LANGUAGE**
English
Hindi

➢ **Computer Skills**
C ,Java, Front end, HTML CSS

TRAINING

Certificate Course In civil pwd