

iROOM

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Abstract: *iRoom is a web application built on the MERN (MongoDB, Express, React, Node.js) stack that enables users to search, compare and book hotel accommodations online. A website for booking hotels is a platform that allows travelers to search and book accommodations at hotels around the world. These websites typically allow users to search for hotels based on various criteria, such as price, star rating, and amenities. They may also include features such as customer reviews to help users make informed decisions about their bookings. The main goal of a hotel booking website is to provide a convenient and user-friendly platform for travelers to find and book accommodations. The website should allow users to easily search and filter for hotels based on their preferences, and should provide detailed information about each hotel, including amenities and customer reviews.*

Keywords: Searching hotels, Comparing hotels, book hotels, user friendly platform, MERN.

I. INTRODUCTION

iRoom is a web application that enables users to search, compare and book hotel accommodations online. The project usually involves building a user-friendly platform that allows travelers to easily browse through a wide range of hotels and their amenities, filter their search results according to their preferences and budget, and make online reservations with just a few clicks. The website typically integrates with various third-party systems, such as hotel property management systems, payment gateways, and booking engines, to provide real-time availability, pricing, and inventory information to users. It also includes features such as user registration, user authentication, user profiles, reviews, ratings, and customer support. In the proposed idea, a new module for taxi booking is being added to the existing application. With this module, customers will have the ability to book taxis directly through the application. When a customer makes a taxi booking request, the system will notify the corresponding taxi drivers. These taxi drivers will then have the option to accept or decline the booking proposal. This way, customers who are booking external transportation can easily access various taxi options and choose the one that suits their needs.

II. METHODOLOGY

The hotel booking project methodology encompasses several key phases. In the initiation and planning stages, project objectives are defined, requirements are gathered from stakeholders, and a comprehensive project plan is formulated, including technology choices and architectural design. The development phase involves creating the frontend user interface with features like room search and booking forms, as well as establishing the backend logic for handling user requests, managing bookings, and integrating third-party services[1]. Thorough testing, including unit, integration, and user acceptance testing, ensures system reliability, and a staged deployment process leads to a successful launch. Post-launch, ongoing monitoring and maintenance address any issues, while comprehensive documentation guides users and future developers, resulting in a well-structured and efficient hotel booking solution.

III. EXISTING AND PROPOSED SYSTEMS

3.1 Existing Systems

The existing hotel booking website provides a user-friendly platform for effortless hotel searches, real-time room availability checks, direct online booking with diverse payment options, and a ratings/reviews feature[3], enhancing the overall booking experience and facilitating informed decision-making for travelers.

3.2 Limitations of Existing Systems

A potential disadvantage of this website could be the reliance on technology and potential technical glitches. If the website experiences downtime or technical issues, users might face difficulties in searching for accommodations, booking rooms, or making payments. Furthermore, [4] the reliance on user-generated ratings and reviews might lead to biased or inaccurate information, potentially impacting the decision-making process for prospective travelers. It's important for the website to have robust technical support and content moderation to address these potential challenges and ensure a reliable and trustworthy user experience

3.3 Proposed System: iROOM

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3.4 Advantages of iROOM

The integration of taxi booking within the same application used for hotel reservations offers enhanced convenience, a seamless user experience, and significant time savings for customers. This integrated approach streamlines the booking process, eliminates the need for multiple platforms, and increases the availability of taxis, particularly in high-demand situations. The system's emphasis on reliability, direct communication between customers and licensed drivers, and the creation of an all-encompassing solution contribute to improved customer satisfaction, providing a simplified and efficient travel experience.

IV. BACKGROUND

A hotel booking website serves as a digital platform that enables users to search, browse, and reserve accommodations at hotels, resorts, lodges, or other lodging establishments. Emerging in tandem with the rise of online travel services and e-commerce, hotel booking websites have fundamentally transformed the way people plan and book their travel accommodations.

The background of hotel booking websites can be traced back to the late 1990s and early 2000s when the internet became increasingly accessible to a global audience. Initially, online travel agencies (OTAs) like Expedia, Travelocity, and Booking.com emerged, offering travelers the convenience of comparing prices, reading reviews, and making reservations for a wide range of hotels in various destinations. These platforms played a pivotal role in digitizing the hotel booking process, allowing users to bypass traditional methods of booking through travel agents or directly contacting hotels.

The background of hotel booking websites is characterized by a continual drive to enhance user experience, increase transparency, and provide travelers with a convenient, efficient, and informed way to plan their trips and secure accommodations. This digital transformation has not only benefited travelers but has also had a profound impact on the hospitality industry, prompting hotels to adapt their marketing and distribution strategies to stay competitive in the online landscape.

V. FUTURE ENHANCEMENT

Enhancing the hotel booking website can be achieved through various strategic initiatives. Integrating 360-degree virtual tours of hotel rooms and facilities offers users immersive insights, [5] aiding informed decisions. Leveraging machine learning for personalized recommendations based on users' preferences improves engagement and loyalty. Social media integration amplifies sharing and marketing potential, while a dedicated mobile app ensures seamless accessibility. Furthermore, introducing a loyalty program incentivizes repeated bookings and referrals, fostering user retention and satisfaction.

VI. RESULTS AND DISCUSSIONS

The implementation of iRoom platform offers a user-friendly interface that allows travelers to easily browse through a wide range of hotels and their amenities, filter their search results according to their preferences and budget, and make online reservations with just a few clicks. During the analysis of the existing system, it became evident that there was a need for external transportation. The proposed system addresses these shortcomings by introducing features such as Taxi service. By having the option to book taxis directly through the same application they use for hotel bookings, customers experience increased convenience. They don't need to switch between different apps or platforms to arrange transportation, streamlining the booking process.

In summary, the iRoom project has successfully developed for the enables users to search, compare and book hotel accommodations online. The project has addressed the limitations of the existing system, incorporated advanced features, and utilized modern technologies. The software and hardware specifications, along with the system design, have been carefully considered to ensure optimal performance and scalability. Overall, the project has achieved its objectives of creating a user-friendly platform that allows travelers to easily browse through a wide range of hotels.

V. SCREENSHOTS

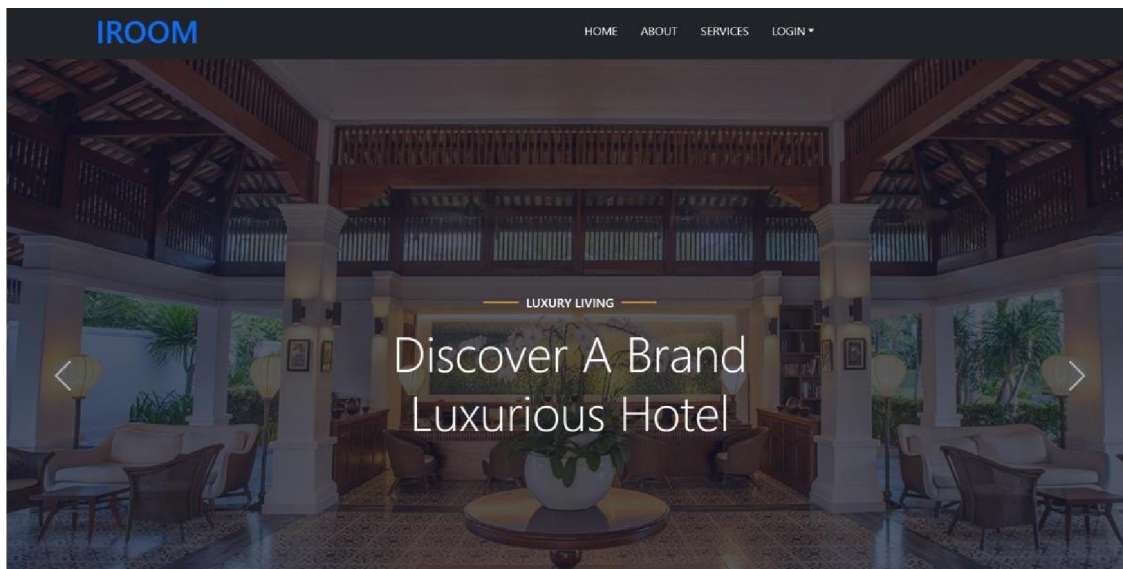


Figure 1: Home Page

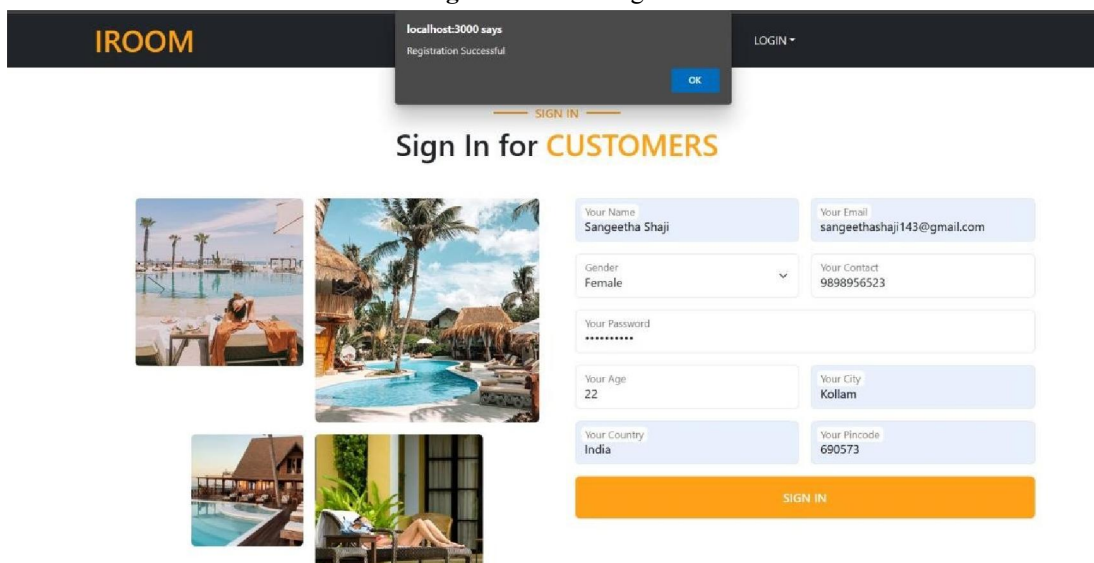


Figure 2: Registration Page

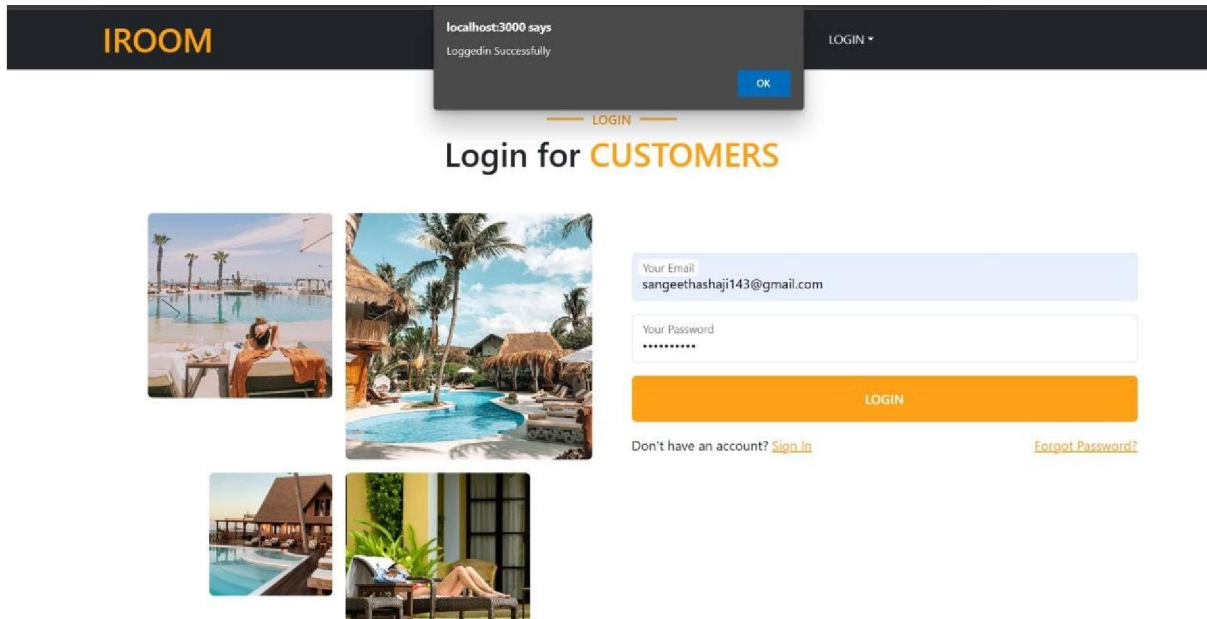


Figure 3: Login Page

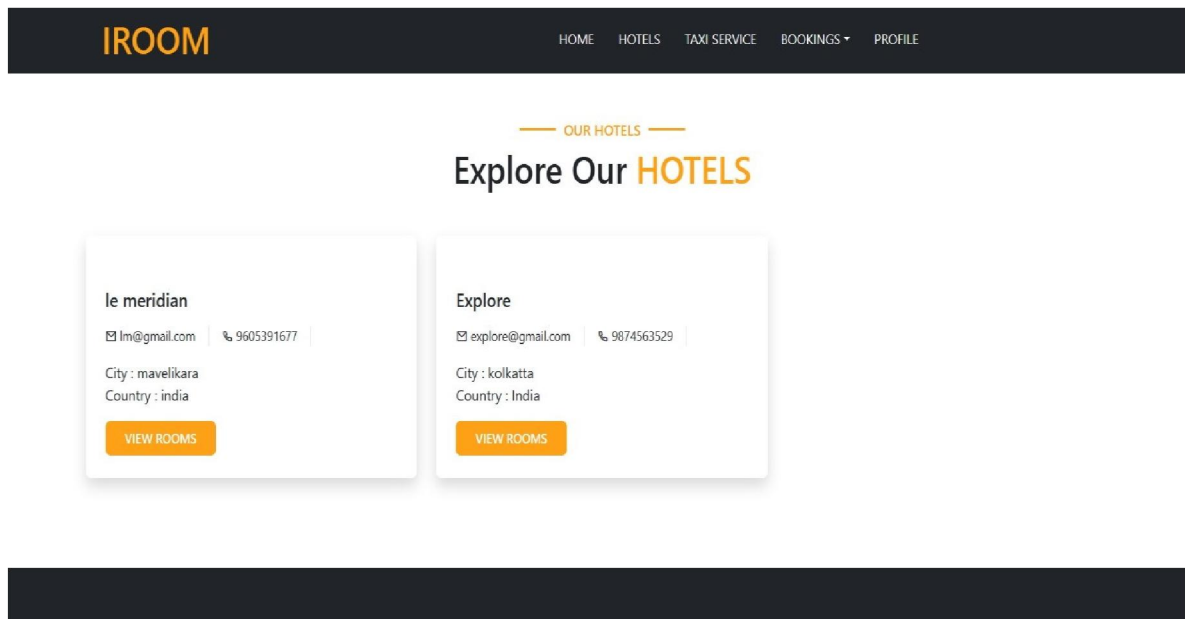
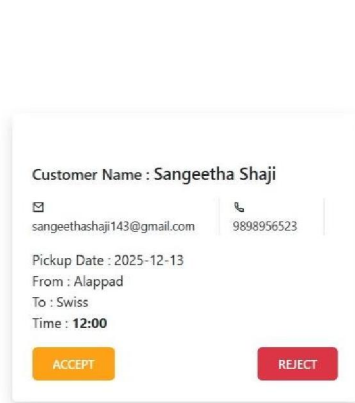


Figure 4: View Hotels



TAXI SERVICES
Booking REQUESTS

Figure 5: Booking Request

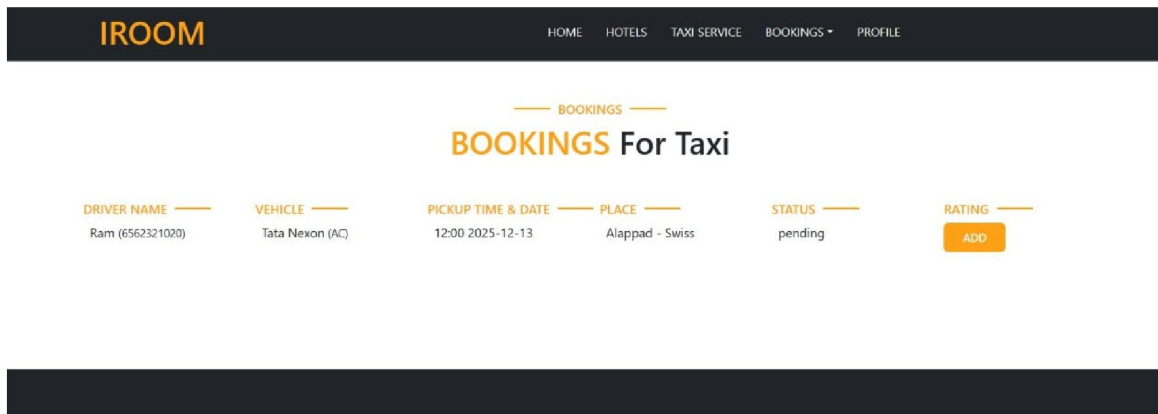


Figure 6: Bookings

VI. CONCLUSION

In conclusion, the iRoom project aims to create a web application that enables users to search, compare and book hotel accommodations online. Throughout the project, I have designed and implemented a comprehensive hotel booking platform built on the MERN (MongoDB, Express.js, React.js, Node.js) stack. The platform offers a user-friendly interface that allows travelers to easily browse through a wide range of hotels and their amenities, filter their search results according to their preferences and budget, and make online reservations with just a few clicks. During the analysis of the existing system, it became evident that there was a need for external transportation. The proposed system addresses these shortcomings by introducing features such as Taxi service. By having the option to book taxis directly through the same application they use for hotel bookings, customers experience increased convenience. They don't need to switch between different apps or platforms to arrange transportation, streamlining the booking process.

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