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Web Based Ticket Booking System in MERN

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ABSTRACT: Online express bus booking system is a web-based solution designed to simplify and modernize bus booking. The bus business is growing rapidly in many countries, but the booking process is time-consuming and error-prone. To solve these problems we have developed a computer that contains details of passengers, available seats, prices and pricing. The system will make it easier for passengers to book and cancel tickets, check bus schedules and get information about different routes, preventing long delays. It is built using the MERN cluster and combines modern technologies such as MongoDB, Express.js, React.js, and Node.js for better performance. Additionally, the system provides email notifications and online payments, as well as plans for future improvements. This project simplifies the bus booking process and improves the travel experience for passengers and service providers.

KEYWORDS: Bus Ticket Reservation System, Bus, MERN

I. INTRODUCTION

Online Bus Ticket Reservation System is a web-based application that facilitates the process of checking tickets, purchasing tickets and making online payments. The system, approved by Invaderzim and accessible to managers for home and office users, also provides solutions to transportation needs. It allows users to reserve seats, cancel reservations and make various inquiries for quick and efficient confirmation. This online booking system is versatile and suitable for many businesses. Users can seamlessly integrate it into their own websites without any hassle, providing a simple solution for bus booking and management.

II. MOTIVATION

Traveling by bus is a growing industry in India and other countries; Therefore, the bus reservation system is responsible for managing the information of all passengers scheduled to travel. It also contains information such as schedules and details of each bus. We also learned that many tasks had to be done manually. This takes a lot of time and makes a lot of mistakes. That is why sometimes many problems arise with customers and many disputes arise. To solve the above problems and provide information such as products, customer seats, cost per seat, production invoice etc. To continue collecting data on , we have PROVIDED SPECIAL REGULATION 24. RESEARCH ARTICLES.

III. LITERATURE SURVEY

Author	Paper Title	Contribution	Advantages/Disadvantages
Nwakanma Ifeanyi Cosmas, Etus C, Ajere I.U. & Agomuo Uchechukwu Godswill	Online Bus Ticket Reservation System	Described general architecture for ticket reservation system web application	Use email to send ticket Not provide UPI Payment Not Provide feedback and rating to system
Souvik Ghara ,Twinkle Saha, Arunima Ghosh, Diya Biswas, Mrs. Arnima Das	Online Quick Bus Ticket Reservation System	Described the ticket booking and cancellation process with payment integration	-User-Friendly and Easy Reservation, cancellation Not provide quick response to passenger’s query
Oloyede, M.O., Alaya S.M. Adewole, K.S	Development of an Online Bus Ticket Reservation System for a Transportation Service	Described the detailed structure of all modules require for ticket booking	provides driver & bus details to passengers & generate report provide seat selection not support multilanguage

IV. PROBLEM STATEMENT

The current reservation system has created many problems, including inaccurate availability of information, poor seat price management and payment of burdensome fees. Considering these problems, this article aims to propose a network-based reservation system to solve these problems. The proposed process is to solve the current inefficiency by providing accurate information, increasing the seat price and simplifying the payment process. This study will investigate the development and use of web-based applications, its impact on the reservation process and the benefits it provides to service providers and customers.

V. EXISTING SYSTEM

There are many problems in the current system such as keeping records of products, seat availability, cost per seat and adjusting the production cost of each invoice. Since the user has to go through all the books manually, it is very difficult to find the content of all the information. The main problem is the lack of security.

VI. PROPOSED SYSTEM

The design and use of the system is quite simple. The system requires very low resources and the system works in almost any environment. It has the following characteristics: It requires a large staff and careful attention to all documents. Make sure the information is correct. The data is effectively retrieved from the DBMS. You can be stable. Customers who book on their own are more likely to show up, they don't show the past. If a customer wants to cancel, the site automatically opens online, giving other users the chance to make a reservation. When you overbook, you won't be left with unused space or rental space. This will cause money to get into your pocket faster.

Advantages And Disadvantages :

Advantages:

1. You can maximize reservations. Customers who book their own reservations are more likely to show up, making no-shows a thing of the past. If a customer does need to cancel, the spot automatically opens online, giving another

customer the chance to book it. By maximizing your reservations, you won't leave unused activity spots or rentals on the table.

2. Quick Payment Methods With an online booking system, you can require customers to prepay for activities and rentals. This puts money into your pocket faster.

Disadvantages:

You need internet access: If you travel and work in remote areas without internet, online booking may not be suitable for you. You need a reliable internet connection to check and add your reservations online.

VII. PROPOSED SYSTEM

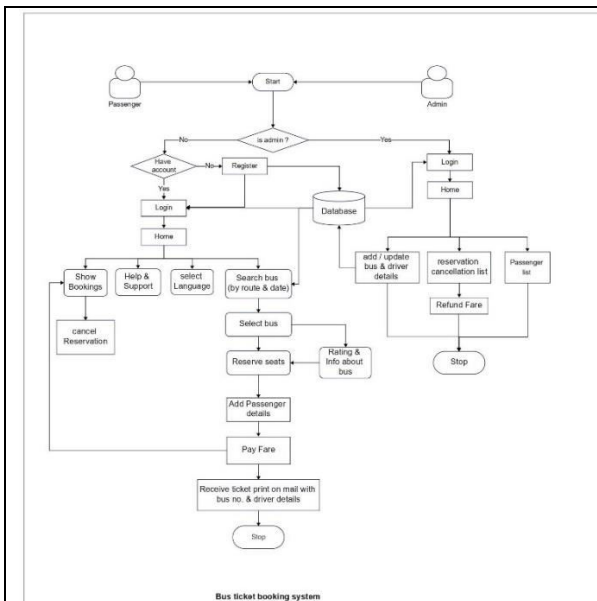


Fig.1. Architecture of Bus Ticket Booking System

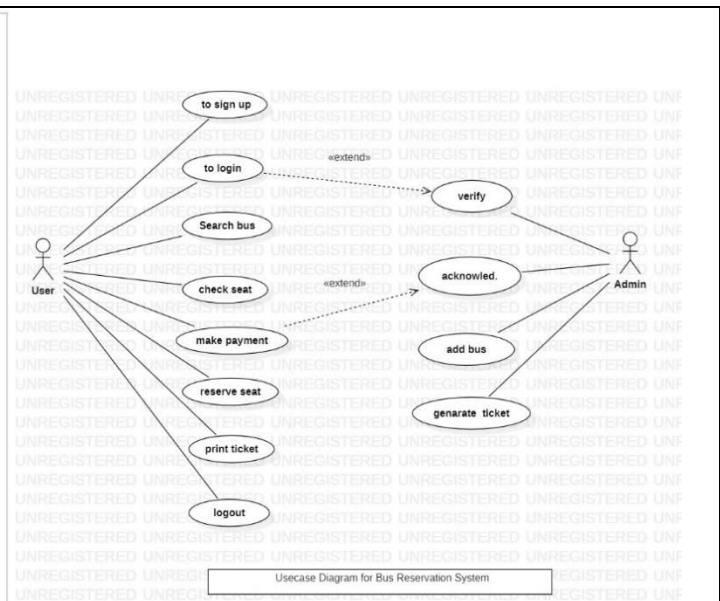


Fig.2. Usecase Diagram for Bus Reservation System

VIII. RESULT

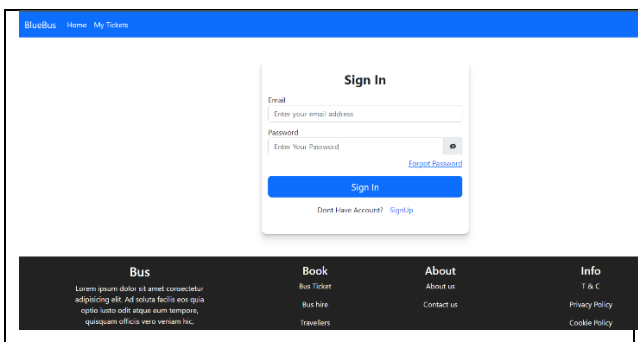


Fig. 3. Sign in and signup page

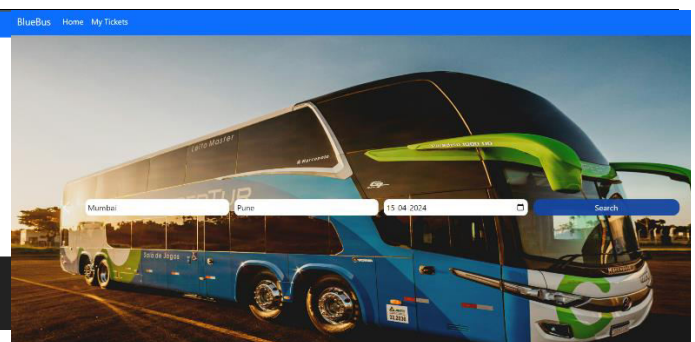


Fig 4. Search Bus Page



Fig. 5. Search Bus Page

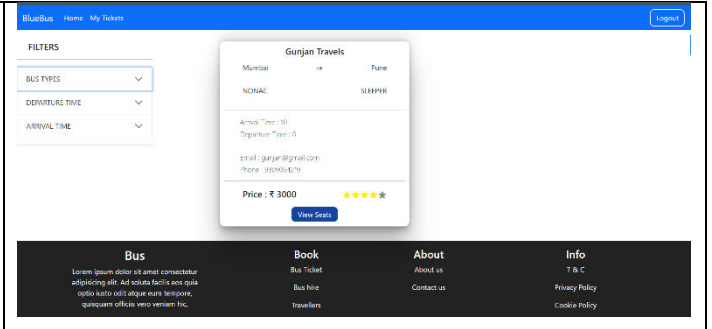


Fig 6. Bus Information page

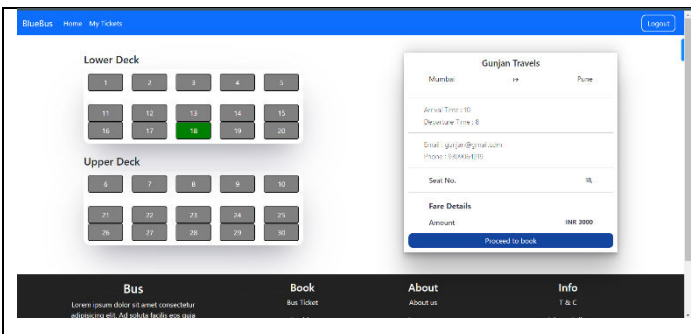


Fig. 7. Selection of seat

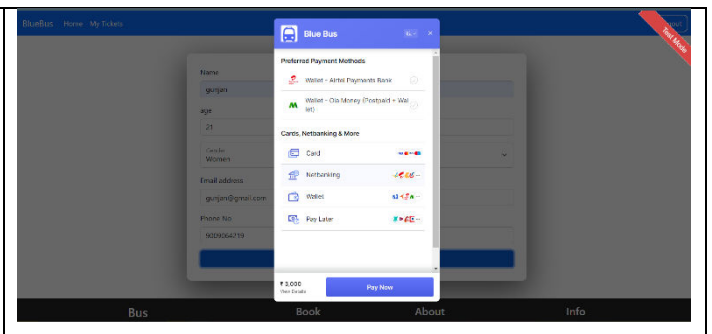


Fig 8. Payment option

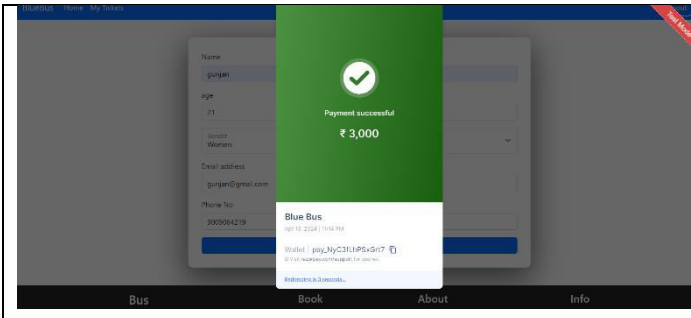


Fig.9.Payment success

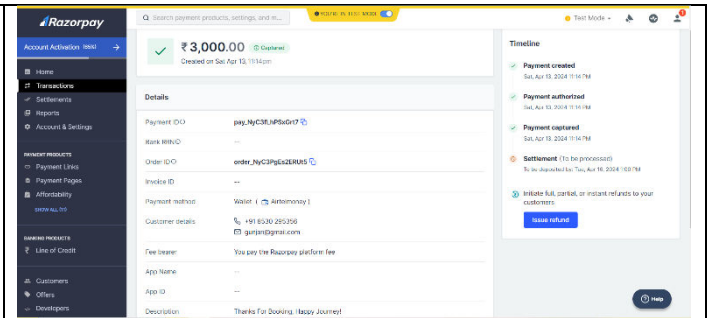


Fig 10. Entry of payment

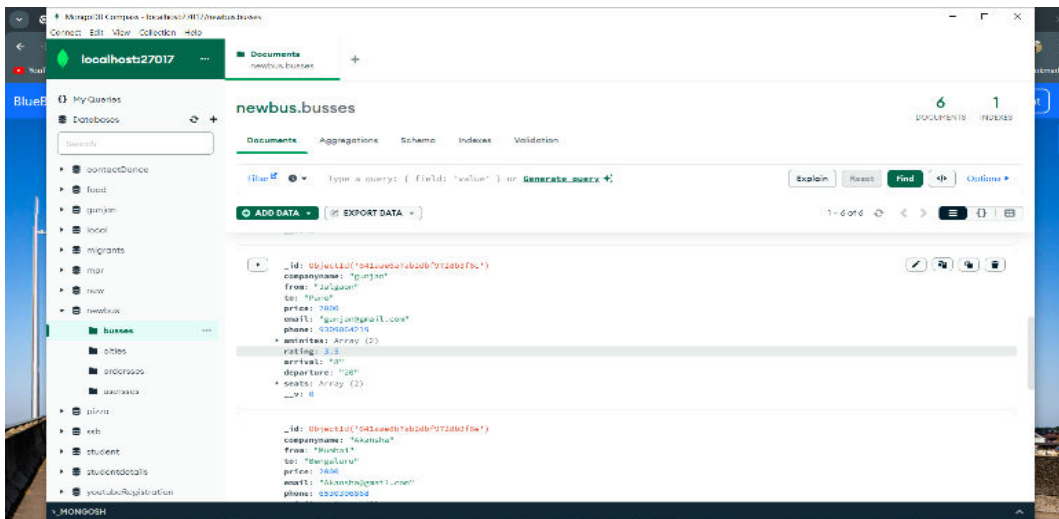


Fig. 11. Mongodb Database



IX. CONCLUSION

The conclusion is that buses now play an important role in transport and to make booking reliable they need a strong system that makes booking easy, faster and safer again. This study is aimed at fulfilling the requirements of the bus ticket. It is built using React Js, Express js, Node Js and the database is built using MongoDB. Using this app, professionals can provide booking services and information to their clients without limiting working hours or staff. Not only does it allow users to travel 24/7 from anywhere with an internet connection, it can also be used to manage companies' own internal business processes.

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