



Dynamic Website of Bus Booking System

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Abstract—Normally, long queues and crowds can be seen at bus stands and stations whenever someone needs to travel from one place to another. This paper proposes a solution for eliminating the queue system and introduces the facility for booking remotely. The purpose of this system is to connect the bus service provider with the passengers to provide them with the bus service. This system is totally secure and safe. Every user is provided with a user id and password so there is no chance of unauthorized access. A role-based booking management system will be used to manage the entire functionality of both the bus owner and the customer in an efficient manner. It also handles ticket bill payments according to the bus charges. Paper waste is minimized as the customer will have the ticket in the electronic form that the customer prefers to carry in their mobile. This means no need to carry the physical paper tickets and nothing to worry about losing the physical ticket. This will reduce paper and time wastage and save customer time. It will result in a working web application that will speed up the booking process and allow for a more efficient use of resources.

Keywords—Queue system, Remote booking, Secure authentication, Role-based management system, electronic tickets, Efficient resource utilization.

I. INTRODUCTION

Normally, the long queues and crowds can be seen at the bus stand and stations whenever there is a need for traveling from one place to another place. This paper proposes a solution for eliminating the queue system and introduces the facility to remotely place your booking orders. This Project connects the Bus service provider with customers to provide the buses. This system is totally secure and safe. Every user is provided with a user id and password so there is no chance of any unauthorized access. A role-based booking management system is used efficiently to manage the entire functionality of the bus owner and customer. It also handles ticket bill payments according to the bus charges. Bus Booking System, as described above, can lead to the reliable & trusted, quick, secure services. It can assist the user to concentrate on their other activities rather than concentrate on record keeping. In the first 6 weeks, a lot of researches had been conducted to determine the systems background. During the duration of time also the system abilities and functionalities had been discussed. An e-ticket offers many advantages for commuters, including security, flexibility, cost and convenience. At the same time, it also provides the standard assurances of the traditional paper ticket, such as seating choice and other flexibilities. There's also less risk of stolen or lost tickets for the ticket buyers. The online Bus Booking System is very flexible and user can choose the bus as per their choice. A lot of researches had been conducted to determine the systems background. During the duration of time also the system abilities and functionalities had been discussed.

II. LITERATURE SURVEY

In defining the structure of a web system, website programming is used to manage the behavior of the pages while web design technique will give it a user-friendly interface. The complete programmed web pages will be presented on to client by hosting it on a web server, which will allow them to be transferred to any web browser as requested by client, via HTTP. This technology is the main key in the idea of developing an online. Ch Rajesh, K S V Krishna Srikanth, "Research on HTML5 in Web Development", is the new and elegant standard for HTML that provides web users and developers enhanced functionality. The older versions of HTML, HTML 4.01, which came in 1999, and the web development have changed notably since then. HTML 4, XHTML, CSS and the HTML DOM Level 2 are now replaced with HTML5 [1]. Himanshu Gupta, Subhash Mondal, Srayan Ray, Biswajit Giri, Rana Majumdar, Ved P Mishra, "Impact of SQL Injection in Database Security", This document is focused on the SQL injection attacks. So, in future we should try to develop a new technique which would be more capable of preventing a variety of SQL injection attacks [2]. Other countries like Canada use refillable smart cards, provide one week passes or offer electronic systems for payment. In the city of Calgary, the users would download an app in their smartphones and create an account which would allow them to purchase a fare that would activate upon boarding a bus. When required to show their ticket, mobile users would simply show the officers a virtual ticket on their smartphone [3]. By this article we got to know about the Rav Kav card system. A personal Rav Kav card has all the passenger's personal details. Also, tourists can purchase an anonymous Rav Kav card. The Rav Kav can be used to

pay for the transportation of several passengers and can be used within a region unless specifically reloaded for the desired routes [4]. A comparative study: MongoDB vs. MySQL”, In this paper it has presented a comparative study of non-relational databases and relational databases. It mainly focuses on presentation on one implementation of the NoSQL database technology, namely MongoDB, and draws a comparison with MySQL which is another database and tries to justify why MySQL is less preferable and less efficient than MongoDB. It also discusses the disadvantages of using a relational database compared to a non-relational database [5], “On Metadata Extension to Derive Data Presentations with Angular 2”, 2016 6th International Conference on IT Convergence and Security (ICITCS). In this paper discusses the issues of utilizing the Aspect-Oriented Programming concept, and demonstrates this approach through Angular 2, a JavaScript framework and compares it with the traditional development approach. This article addresses the library and makes form creation a better experience in this context. Easy library usage enables programmers to specify shape entries to a server application, when the entries are serialized into JSON and transmitted to the Angular. The rendering is carried out in the dynamic forms. Writing the code is easier, looks more comfortable and is much more durable [6].

The first literature content we went through was "Online Bus Reservation System", International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT). It was published in 2021. By this article we got the overview about the Capture of customer information such as name, address, phone number and e-mail address, price list, bus operators ranking, seating chart, loyalty points/redemption systems.

III. Methodology

A. Block Diagram

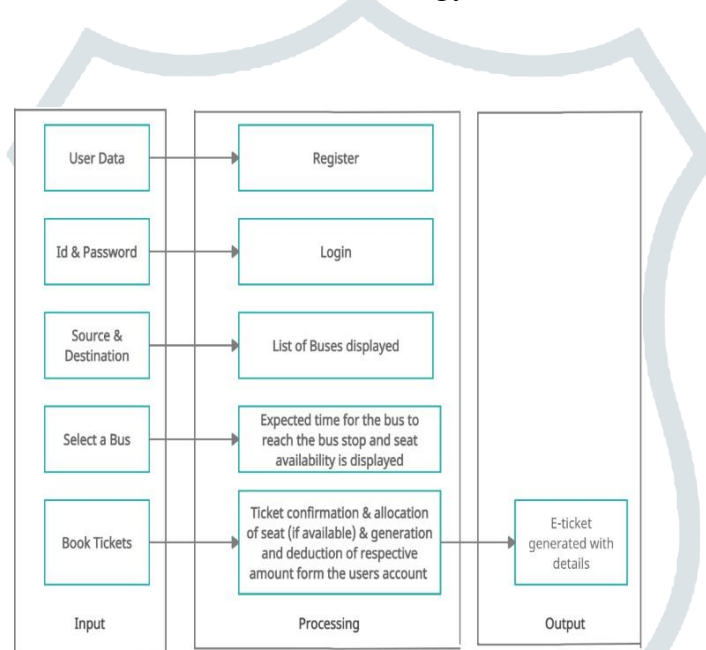


Fig. 1 Block Diagram of online bus reservation system

B. Methodology

1- **Admin Side** – Admin side will be operated by bus providers. First the admin will log in with credentials and then it will process towards the admin dashboard. There will be the following attributes that the admin can manage. List Management – With list management the admin can update the list on a daily basis. Payment Management - With this admin can manage payments such as online transactions. User Management - With this admin can manage user information. That means the user is registered or not. **User Side** – Users need to login into the user interface via a unique id and password which are encrypted and stored in the database. If credentials are not matched, the user can try again or proceed to reset the password. If credentials are matched, the user is presented with a homepage. The homepage allows the user to navigate through the list of buses and the amount of traveling cost. Where users can place the order and cancel the order. Once done, the user can move to a payment gateway where the user can make payment via UPI/Card. As soon as the payment has been completed, the booking has been confirmed. Sometimes, a client wants to cancel a ticket for some personal reason. It is also possible for them to cancel their tickets on this website.

Figure 2 - The client is the end-user of the system. Before doing anything, the user needs to register with the system. Upon logging in, clients can fill in details like pickup and drop off locations, travel dates, etc. After the availability check the customer is required to fill in the required details, such as the passenger's name, age, mobile number, email ID. When the customer clicks on the pay now button, user will be redirected to the payment gateway. The ticket amount can be paid through UPI/credit card.

System Requirement – HTML, CSS, JavaScript, SQL,
Django Visual Studio Code
MySQL

Figma (Designing)

Flow Diagram -

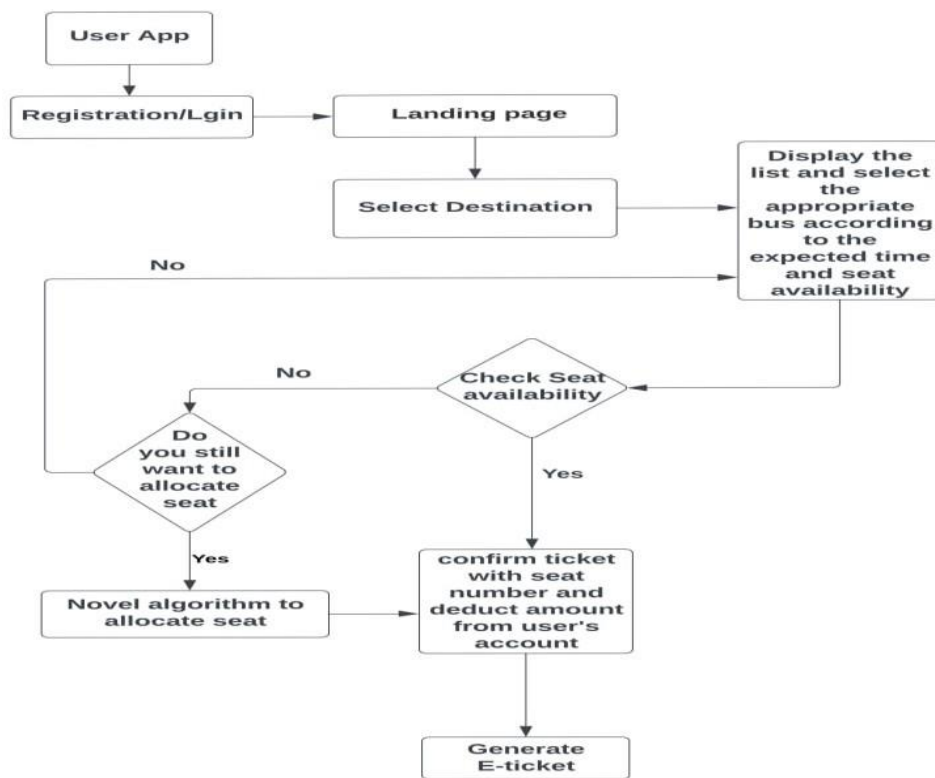


Fig.2 end-user system

IV. Experimentation-

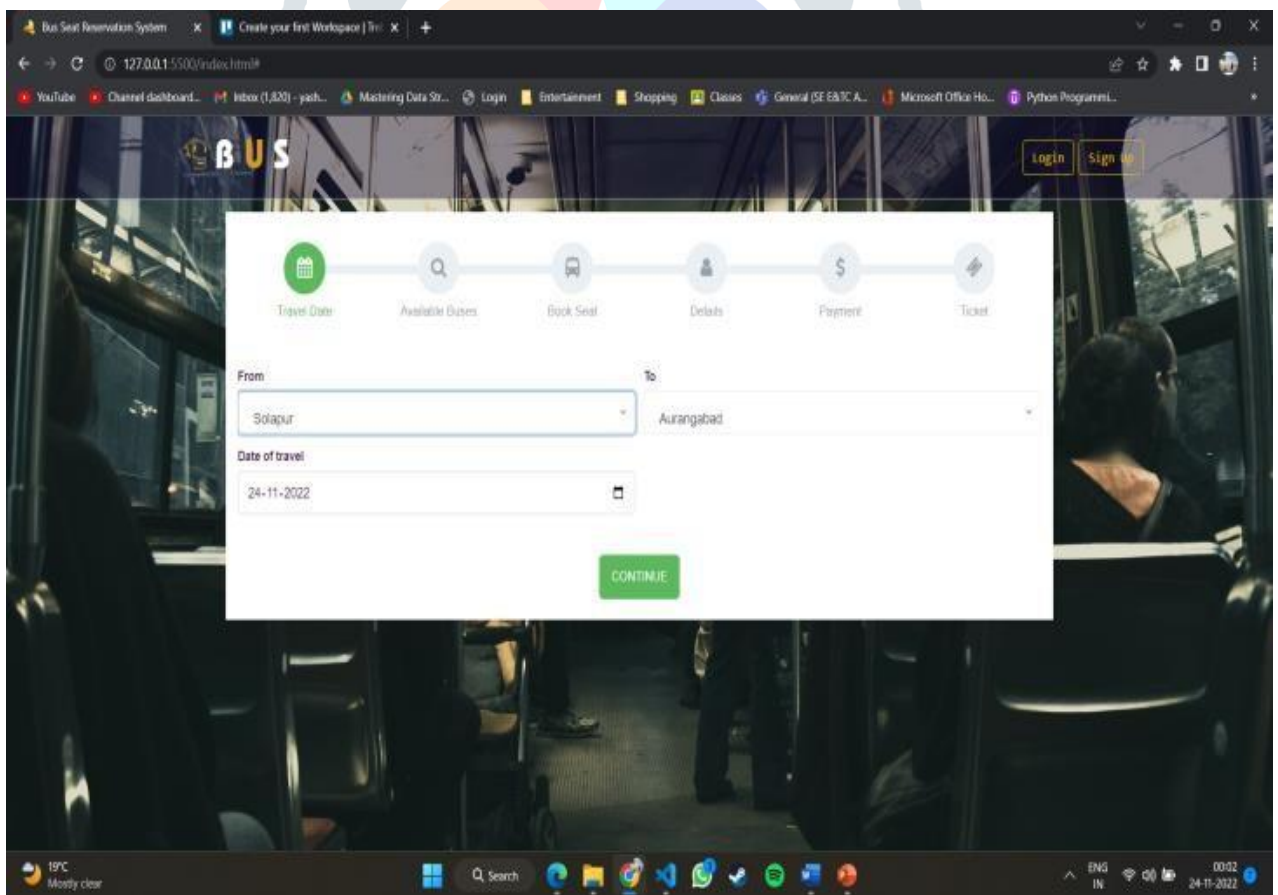


Fig 3 Home Page

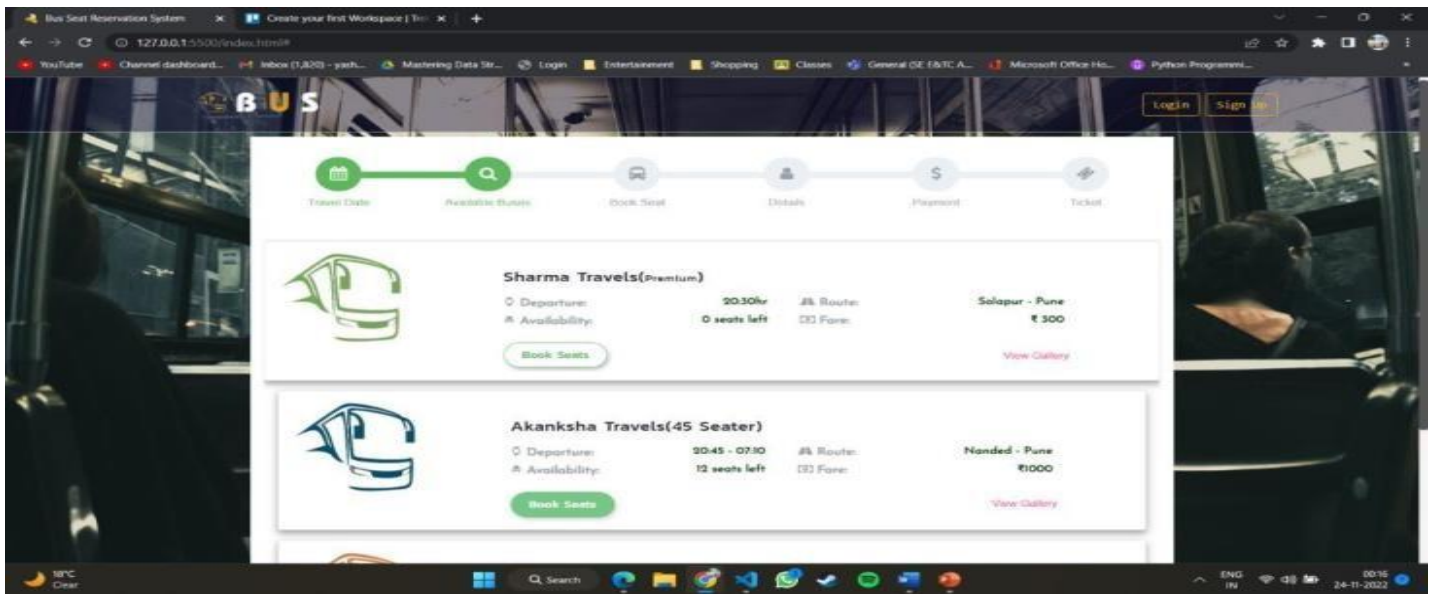


Fig 4. Available buses for the given route

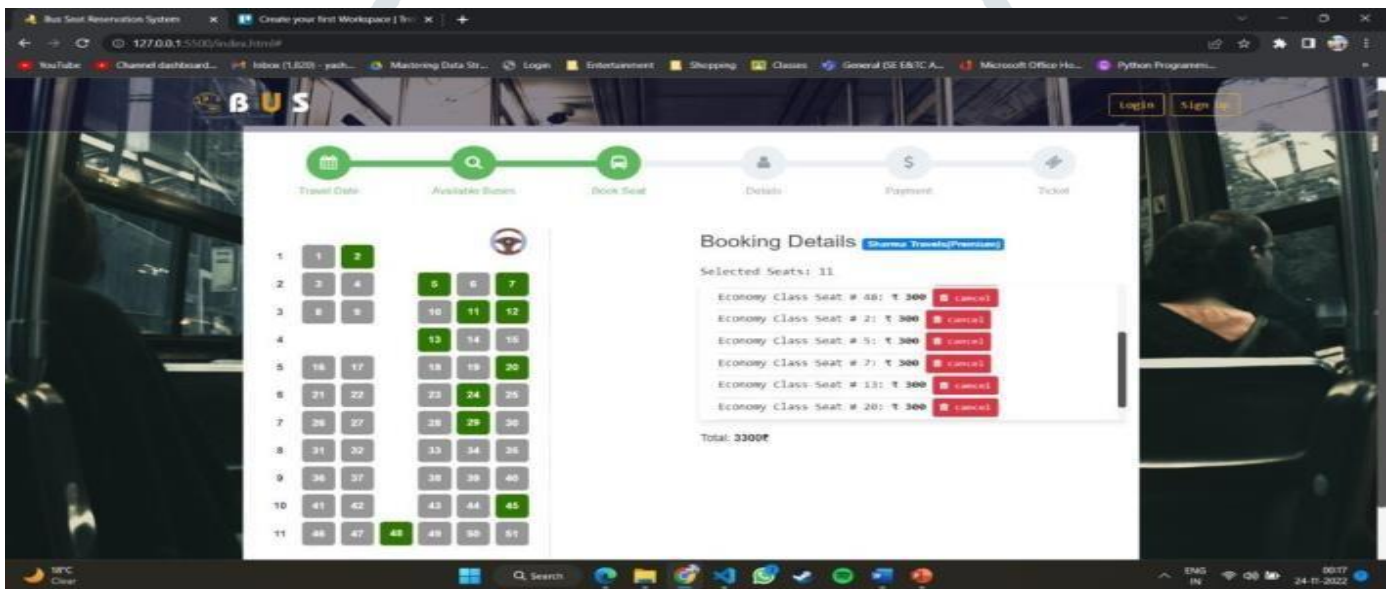


Fig 5. Available seats and Allocation of the seats.

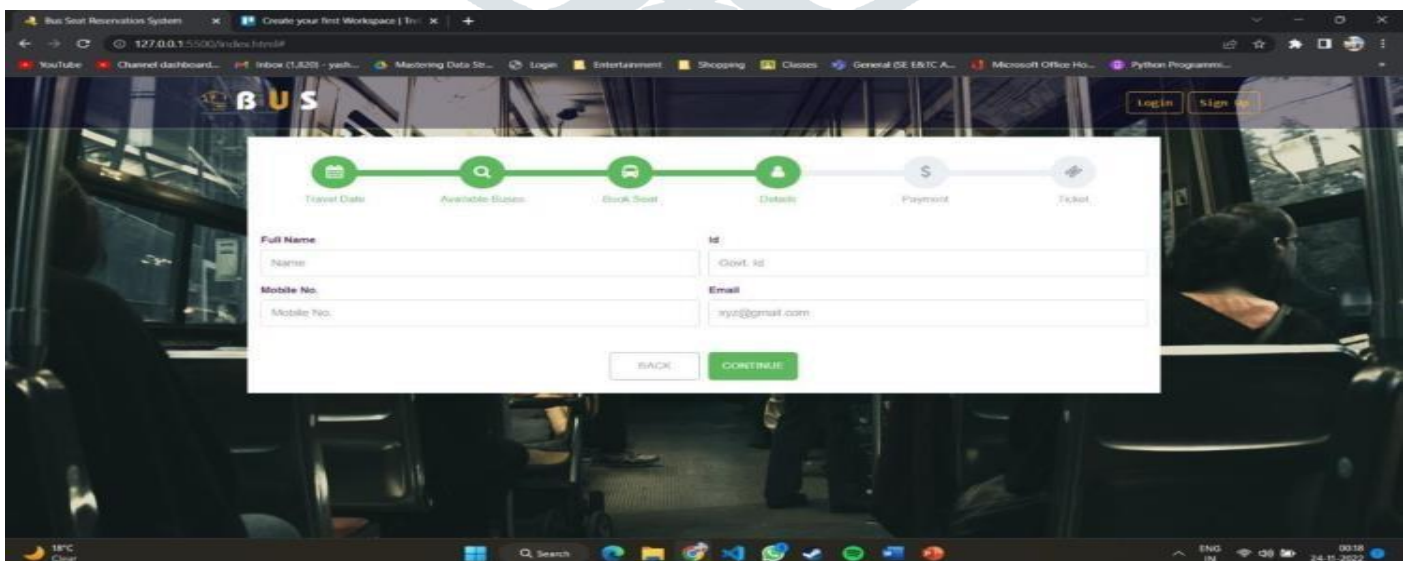


Figure 6 Passengers details form in which user can fill the details

V. CONCLUSION

An optimized web application built on Django will be in order to automate the daily travel functionalities in the proposed system. With this technology, the end-user will have an option of registering online, choosing their vacation vehicle from a list of vehicles, and then planning their trip online by selecting the vehicle that is most suitable for their trip, thereby reducing hectic travel issues. In our daily lives, the entire process of planning a trip and serving the bus is completely automated in this case. It will also reduce the workload of the staff, reduce the time used for making reservations at the bus terminal and will increase efficiency.

VI. REFERENCES

- [1] “*Smart E-Ticketing System for Public Transport Bus*” Institute of Electrical and Electronics Engineers (IEEE) published in 2020.
- [2] Himanshu Gupta, Subhash Mondal, Srayan Ray, Biswajit Giri, Rana Majumdar, Ved P Mishra, “*Impact of SQL Injection in Database Security*”, 2019. Computational Intelligence and Knowledge Economy (ICCIKE) December 11–12,2019, Amity University Dubai, UAE.
- [3] Online Bus Ticket Reservation System IIARD International Journal Of Computer Science And Statistics Vol. 1 No.2,2015 www.iiardonline.org
- [4] Ch Rajesh, K S V Krishna Srikanth, “*Research on HTML5 in Web Development*”, (IJCSIT) International Journal of Computer Science and Information Technologies, Vol. 5 (2), 2014, 2408-2412, 2014.
- [5] Maiké, J.P. (2014). “*Train, bus and museum - Interrelations of diverse actors within integrated E - ticketing schemes.*” Available at: http://www.mobil-tum.vt.bgu.tum.de/fileadmin/w00bqi/www/Session_Poster/Puhe.pdf Accessed 16th October 2014
- [6] Gayathry, S. (2013). Online Bus Ticketing System: Tactful Management Research Journal Through Case Studies.RedBus.in
- [7] Kevin O. C., (2012): Web-Based Bus Reservation and Ticketing System: College of Computer Studies, Ateneo de Naga University, Naga City, Philippines February 26, 2012.
- [8] The first literature content we went through was “*Online Bus Reservation System*”, International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT).
- [9] ‘Online Bus Booking System’ Department of Computer Science, Ganpat University, Ganpat Vidyanagar – 384012. Ali Bazghandi, “*Web Database Connectivity Methods (using Mysql) in Windows Platform*”, College of Technical & Engineering /Shahrood University Shahrood Iran, 2006.
- [10] City of Calgary gets on board with mobile transit payments. <https://www.cbc.ca/amp/1.4025953>
- [11] Go Israel- <https://new.goisrael.com/article/218>.