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Online Bus Ticketing and Tracking System

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Abstract

Public transportation systems play a major role in every aspect of life. It has a greater impact on the economic development of the country. In Sri Lanka there are two main roles in transportation system in day-to-day life. One is Train and Other is Bus. In Srilanka there are many options for train tickets booking system and tracking system options for customers. In Srilanka there are no tickets booking options for bus users. Implementing an Online Bus Booking and Tracking system for srilankan bus users is the solution.

Tracking, monitoring, scheduling, booking, and alert services are the major challenges faced by this system. This project aims in automating the services of the system that can provide the real time tracking experience of the public transport buses and online bus tickets reservation for all bus users.

According to this scenario, the objective is to implement a mobile responsive web application for customers and a web application for the administration. React is the technology stack for the web application, and Node Js is used as the backend language.

This is a user-friendly online bus ticket booking system for both clients and service provider. This type of program helps people to book tickets at home through online payments in a very easy way via the internet. People don't need to go out to book tickets, they can easily use this mobile application at home or any other place. People don't face any struggle and they get their desired one. If the customer decides to cancel the booking, the customer must pay half the price of the ticket unless the bus owner loses money. Bus tracking may help people to know where the bus is in real time, and they can arrive at the bus station on time.

Also, in this app there is an option for lost and found things. If someone lost their luggage or something on the bus, they could add a note in this option. If someone sees this in this bus, he can return it to the conductor and conductor will return it back to the customer who lost their luggage.

The other option is the bus timetable. In this option the customer can search any bus where he wants to go. As a result, it shows the bus number, route number, arrival time, departure time. Customers can manage their time according to this timetable.

Keywords: GPS, GSM, Mobile Responsive Web Application, Dynamic Route, Real-Time, Sri Lanka, Bus Tracking, Bus Tickets Booking, Online Transactions.