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Android based Bus Ticketing System

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ABSTRACT: In today's world, public bus reliability is crucial. With the use of an Android application, this project offers a practical way to give tickets for collage bus transportation. Our system has one login. Through the use of an Android application, users of this system can purchase bus tickets online. Customers can purchase their bus tickets online with this technology, saving them time compared to waiting for the conductor to hand them out. This approach makes it easier and faster for users to obtain bus tickets while also cutting down on paperwork and time usage. The user can fill out their information, link a bank account, and use wallet services to make payments. This system has features that allow it to instantly provide bus tickets to users and retrieve their basic personal data for authentication. This system offers the user security options and also determines whether buses are available on the route that follows. The user would receive a notification from the application in the form of a message that included information about the location and time of the ticket's usage during a transaction.

KEYWORDS: Bus Booking, Payment Report, data fill

I. INTRODUCTION

In many places these days, buses are the most popular mode of transportation for college students. A period system that is able to track and forecast the rider flow of the buses that are operating is helpful in raising the standard of the Bus Company. Here, rider Flow refers to a bus's variable passenger count both in terms of time and house. The flow of riders on a route will reflect in part the overall quality of people on that route and, consequently, the comfort level of the bus service. Programmatically speaking, it indicates how many people travel or must traverse a certain path. The operators will use this data to help them allocate and schedule the route and timetable dynamically at a fine level of detail. Operators of the Bus Transit System now show that manual data collection methods are costly and typically only useful on a small scale. The use of automated data collection technologies is expanding quickly and has great promise. We now have the ability to estimate and forecast the rider flow of every bus in the metropolitan BTS because to the development of large knowledge systems. Many buses run in a line where we are accustomed to thinking that nothing passes between them during the course of their trips. Every stop has passengers getting on and off, which alters the bus rider flows throughout time and space. The dashed lines indicate the remaining trips the buses will make, while the solid lines and circles show the segments and stations they have already visited before the current time. The issue is how to estimate the number of riders on each bus and forecast the number for the remaining portion of the trip in the near future, using the time data from AFC transaction records and, consequently, the OBU traces of the buses. All buses are generally under conductor control. Each passenger will have a ticket issued by the conductor after they have paid. Printed documents or tokens are initially utilized as tickets. These days, tickets are printed on portable devices. This system has a lot of drawbacks. In order to verify his presence, the traveler must scan a QR code. This process takes some time, and printing the ticket requires additional paper. Conductors are being taught how to use the handheld ticket machine. For instance, if a traveler wants to take a bus. He needs to always have cash on him. The conductor will then hand out tickets after collecting the money. Every passenger needs to hear this again. This will require additional time and result in the wastage of energy and human resources. Even handheld ticket machines require training to operate and are relatively slow.

II. PROBLEM STATEMENT

To create the android application which will books tickets for user on the particular route and make print out for the ticket.

III. LITERATURE SURVEY

Paper Name: A Review on the bus ticketing system

Author: Mohini S. Shirsath, Pooja M. Chinchole, Vaishnavi R. Mahajan, Varsha G. Mogal

Mohini S. Shirsath and Pooja M [1] proposes a system that includes IOT technology where GSM module is placed on the bus that tracks the location of the bus and informs the user about the current location of the bus, it also includes web portal for admin to monitor the GSM module. This application overcomes the issue of waiting time in bus stops as the location of the bus can be known easily, as GSM module is included in the application accurate location of bus can be known. The drawbacks of this application are, it does not solve the real time problem of bus ticketing as it is the main problem faced by the passengers, the manual process of existing system is carried in the application for bus ticketing, it also does not provide an integrated interface for passenger and admin, this application also fails to provide an interface to conductor and also conductor has no role to play in the system

Paper Name: Online Bus Ticket Reservation System. Statistics and Computing

Author: Nwakanma Cosmas, Etus Chukwuemeka, AjereIkenna, Agomuo, Uchechukwu

online by providing a web portal, here passengers can login into the web portal and reserve tickets for the journey, this application provides user friendly interface for users while reserving tickets, This application only concentrates on solving the problem of ticket reservation, and also it is of no help for the passengers who travel on daily basis, this application also does not solve the problem of reducing the paper work, it also does not include an integrated application for passenger, admin and here conductor has no role to play as the manual process of existing system is carried out in the application. Also, the application does not provide a greater number of users as the number of users is restricted to 20. The application, sends emails to the passenger once the tickets are reserved hence passenger has to carry the physical ticket

Paper Name: Bus Reservation System

Author: Dhruv Mehra, Jay Gangadia, Jeevan Ghag, Aayush Gupta

Dhruv Mehra and Jay Gangadia [3] proposes a system that involves providing bus pass to passengers via email once the registration process is carried out. This application solves the problem of reducing paper work by providing the bus ticket in the form of QR code to the passengers. The application also eradicated the manual process of existing system of standing in long queues and waiting for bus pass for stipulated time, and problem of carrying physical ticket that creates more possibilities of pass getting misplaced or damaged, however this application fails to provide an integrated interface for user, admin and conductor, conductor has to use third party QR code scanner apps to scan the QR code and also the conductor does not have any interface in the application as a result admin has no control over the actions of conductor.

IV. PROPOSED SYSTEM

Buses are the foremost wide used public transportation in many cities nowadays. To improve the standard of Bus Company, a period system that can monitor and predict the rider Flow of the running buses is useful. Here, rider Flow denotes the number of on-board passengers of a bus that varies over time and house. The rider flow will partly mirror the collective human quality on a route and therefore the quality of bus service in term of comfort. From a programming perspective, it tells you the way many folks travel or need to travel on a route. This data will guide the operators to allot and schedule the route and timetable dynamically in fine granularity. Current follow in Bus Transit System operators demonstrates that manual data-collection efforts area unit expensive and usually applicable solely in little scale. The utilization of automatic data-collection systems grow speedily and show nice potential. With the mature of massive knowledge systems, we've got the chance to estimate and predict the rider flow of each bus in urban wide BTS.

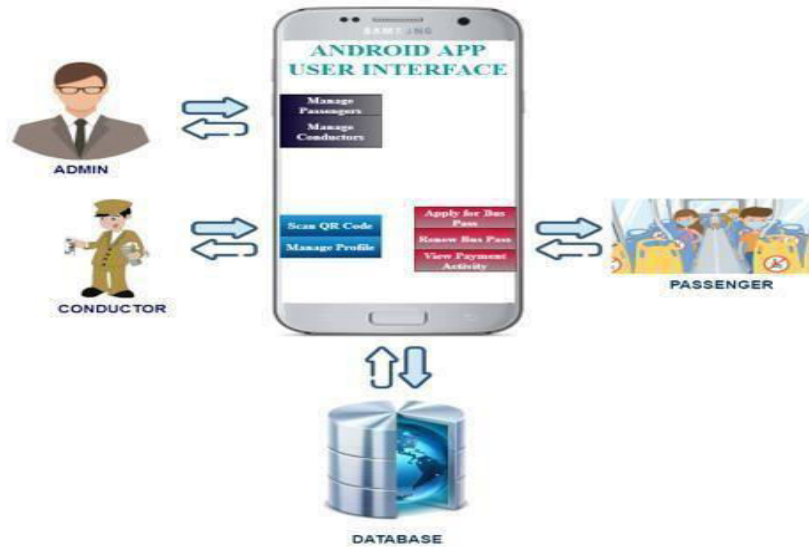


Figure1 Proposed system architecture

Input Module:

Book Ticket

Select Route ▼

0 Regular ▼

Enter No of Person

Book

Input Module:

Book Ticket

9 Baramati-Someshwarnagr ▼

0 Regular ▼

1

Book

The details are entered in the input module as shown

The details are entered in the input module as shown

Ticket Preview !

M.S.R.T.C

Route: 9 Baramati-Someshwarnagr

Concession: 0 Regular

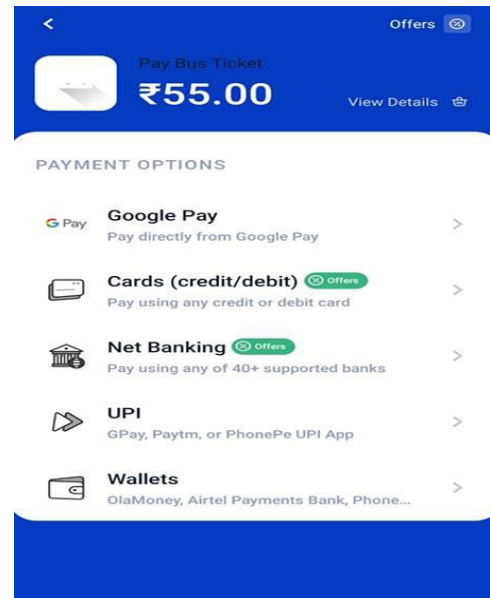
Discount: 0.0%

Original Price per Person: Rs 55.0

Discounted Price per Person: Rs 55.0

Total Discounted Price for 1 Persons: Rs 55.0

CANCEL PAY & PRINT



V. METHODOLOGY

First the bus conductor selects the route and adds the concession if any then books the ticket and prints the ticket. The data will be fetched into a centralized database.

VI. CONCLUSION

The Android-based Bus Ticket System is a modern and efficient solution that leverages mobile technology to streamline the process of purchasing, managing, and using bus tickets. This application aims to improve the overall experience of both passengers and bus operators by replacing traditional paper tickets and manual record-keeping with a user-friendly, digital platform. Passengers can browse available routes, select their desired destinations, view bus schedules, and book tickets using the Android application. This user-friendly interface allows for easy ticket reservation and payment. Instead of traditional paper tickets, passengers receive digital tickets directly on their smartphones. These e-tickets include essential trip information, such as departure times, seat numbers, and QR codes for validation. The application offers real-time bus tracking to provide passengers with accurate information on the location and estimated time of arrival of their bus. This feature enhances travel planning and reduces wait times. The system integrates with various payment methods, including credit/debit cards, mobile wallets, and digital payment platforms, ensuring secure and convenient transactions.

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