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CLOUD BASED E-TICKETING SYSTEM FOR MTC-BUSES

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Abstract: The project entitled "Cloud based E-Ticketing for MTC buses" is aimed at developing bus e-ticket account to register and purchase e-ticket to avoid direct contact with people. The people who are in need of bus e-ticket can apply through online system. They must provide the basic information necessary for creating an account to get register in the site. The admin approves the application of the person. When they required to purchase an e-ticket they need to select the bus using unique ID(TN 14 XXXX). The public is also allowed to block or deactivate their account if necessary. Thus the project saves time for the public need not wait to get the bus ticket. Steps involved in maintaining the user /client information in the database. After registering, the user can login by entering the username and password. If the password doesn't match with the password in the database an error message is displayed. If the user wants to change their password they have to provide the current password and new password to confirm his/her password. The password is in the encrypted form in. After login, user has to apply for the form by providing necessary details to get the e-ticket. The admin can check the received applications, verify and then issue the pass. Depending upon the criteria specified, the fixed amount will be deducted from users account when the submit button is clicked. There is a need of reformation of the existing bus ticketing system in this pandemic period we need a contactless e-ticket system with more advantages and flexibility. The main objective of this project is making the entire bus e-ticket process in cloud based system.. The core objective is to integrate the process in the cloud.

Keywords—E-Ticket

1. INTRODUCTION

Buses are the most popular and convenient mode of transportation in India. More than 1.6 million buses are registered in India, and the public bus sector operates 170,000 buses carrying roughly 70 million people per day. As per the details of expenditure on transport, buses are the most preferred mode of public transport in both rural and urban India, followed by auto rickshaws. In order to serve these many commuters daily, the ticketing facilities available in the existing system of public bus transport is manual i.e. purchasing the ticket from the conductor. However, bus transportation has not been able to meet the needs of the growing travel demand. The problem with bus services is that they are not reliable. Several problems exist in the public bus transport sector which includes wastage of too much paper, use of cash for purchasing tickets, etc. Passengers are unaware about bus stops and its time that's why passengers wait for the bus on bus stop which become reason for time wastage. If passenger is new in that city and not well known about bus stops then there may be chances for reach at wrong place. Although he reach at correct destination he will not get nearby places. There are different types of buses available for eg. Kelambakkam to Navallur (17 buses). Some other common problems faced by commuters in bus transport are undue waiting time, inadequate time for getting tickets, non-refund of balances, etc. To overcome all the above-mentioned problems, we have proposed a more advanced system for smart cities which provides e-ticketing for the civilians. The problem of paper wastage can be overcome by the use of E-tickets whereas the use of cash can be reduced by using Digital wallet.

2. EXISTING SYSTEM

- In the existing system, the conductor in the bus has to visit each passenger one by one
- The conductor then has to enquire each passenger about their destination and develop a ticket manually on a paper roll.
- The conductor has to issue the ticket to the passenger to collect the bus fare.
- The Passenger has to carry change for bus fare or the conductor has to return the change, which often leads to conflict
- If the given ticket is lost by the passenger, when checked again by the conductor, the passenger has to buy the ticket again paying the full bus fare.

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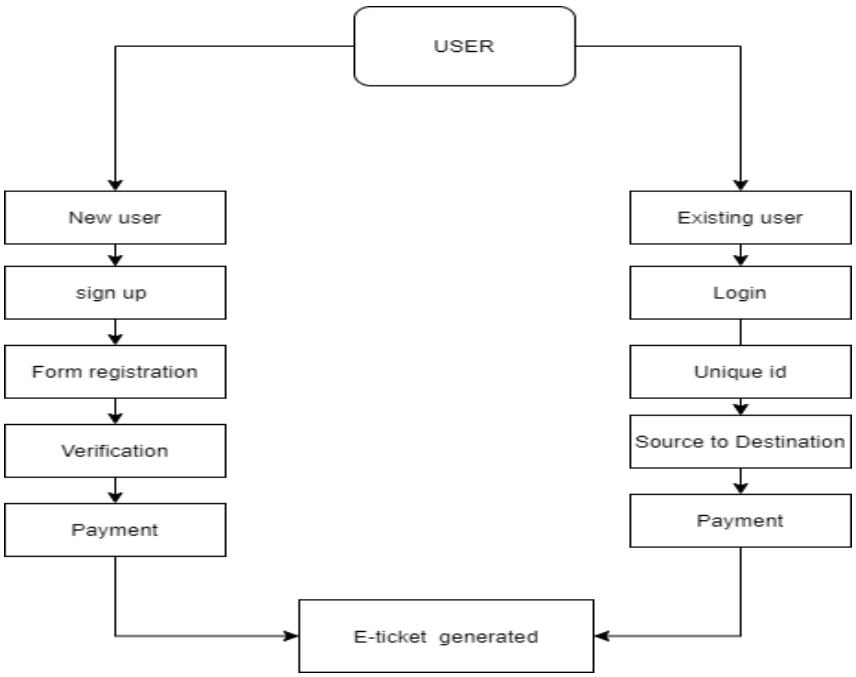
3. OVERALL DESIGN



4. MODULES

A module is a separate unit of software or hardware. Typically characteristics of modular component include portability, which allows them to be used in a variety of system and interoperability that allows them to function with the components of other system.

Modules are:

- Verification of user details
- Process of purchasing E ticket
- Generation of E-ticket
- Enforcing the Security

4.1 VERIFICATION OF USER DETAILS

In this module, the user have to register themselves by providing the required information using the national ID which is Aadhar card, License, Pan card, Voter ID, Passport, etc.., to verify the user. The new register has to enter their Name, User name, Email id, Gender, Age, Phone no and these information will be stored in the Cloud in the safe manner. These user account details will be verified and approved by the cloud administrator. The status is updated automatically if the administrator accepts or rejects the application. After the approval of account we can login to the site. The registered users after successful login can check their application status in this module. The users can also view payment status along with the other bus e-ticket information. The bus e-ticket expiration time and date is also displayed in this module.

4.2 PROCESS OF PURCHASING E TICKET

Once the user login to the website he/she have to enter the source and destination of their travel place. It will list down all the available buses with their respective timings and with the destined time. After entering the bus he/she will be ask to enter the bus unique ID (TN 14 XXXX) to select the bus that they are going to travel. After this process they should enter the No of passenger who are all travelling with them and it automatically calculate the price of the tickets according to the source and destination of the passenger. After that they need to purchase the E-ticket using the MTC E-ticketing wallet.

4.3 GENERATION OF E-TICKET

In this module, we generate the e-ticket by using the SOTA algorithm to secure the transaction without any compromising the security. After conforming the ticket it leads to the payment page where he/she enter the One Time Password (OTP) to confirm transaction and it will generate the e ticket using the details from the previous pages. This e-ticket will be intimated to the respective bus conductor through a notification in his login and it will be uploaded to the user profile using the cloud.

4.4 ENFORCING THE SECURITY

For security reasons, it is not safe for a customer to provide his payment information directly to an online merchant over

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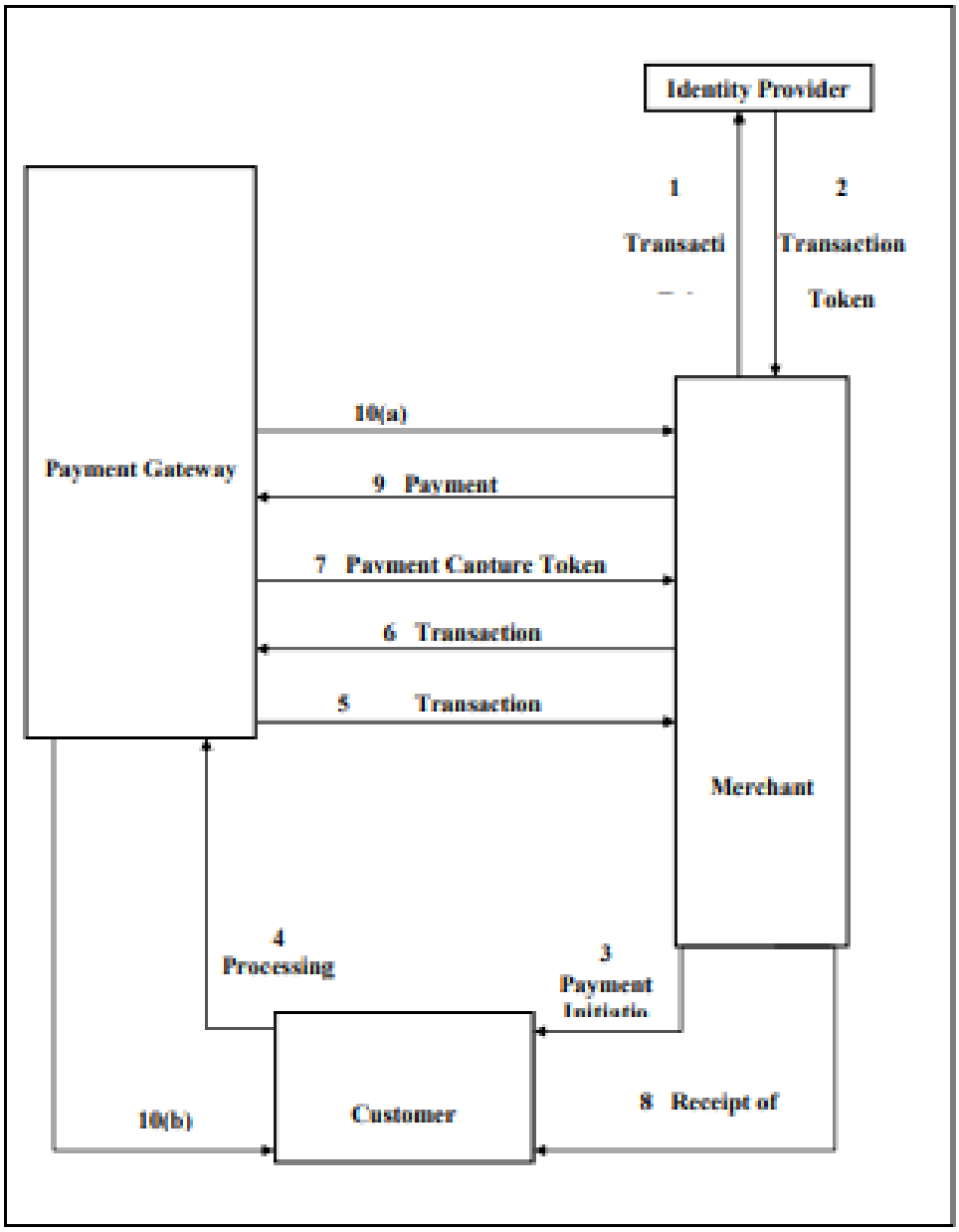
the World Wide Web (WWW), even in encrypted or hashed form. Providing sensitive financial information to an online merchant, even in an encrypted form, makes it vulnerable to risks of financial exploitation/fiduciary abuse. When an online user purchase his ticket, he is only concerned with receiving his payment from a user for the items sold. So, if the user provides his payment information directly to the payment gateway, and the payment gateway sends the payment to the conductor, the conductor does not require the user's payment. In this, we propose a secure online payment system in which a customer need not provide his payment information to the conductor for the user to get paid for the online purchase made by the user.



5. RESULTS AND DISCUSSION

The most common language of PHP is used for its implementation. Along with that MYSQL Database is used as databases for user and ticket information respectively. This web application can be modified according to any kind of transport system. But this is defined exclusively for Metropolitan City Buses. This web application reduces the manual work of both ticket bookers and ticket checkers. It is basically the transition from a manual to a digital system for ticket booking of as well as ticket checking of City Buses Unique code used for user validation ensures the security of the system. Automatically available Bus time allows the user to book tickets according to his convenience.

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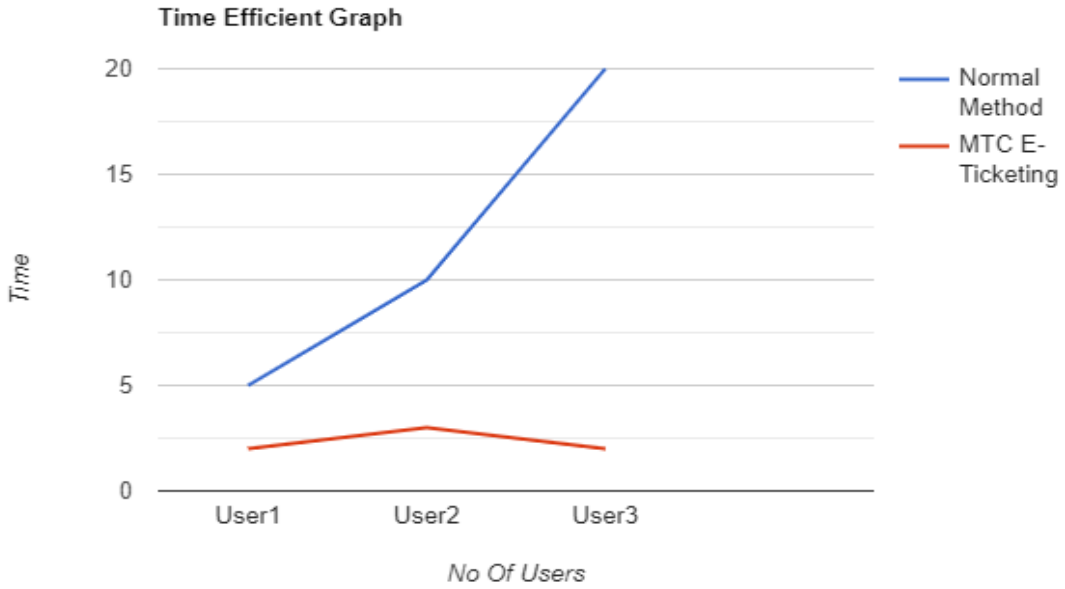

The user can thus register for new bus E-ticket by providing the necessary information. The administrator views and verifies the provided information and approves if the required conditions are satisfied. The information stored in the cloud is highly secured. The major advantage of the user can access the information whenever required.

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