



QR Based E-ticket System

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Abstract: In cities like Nagpur, Pune and Mumbai the busses are the nerves of the city. But they are behaving as an open invitation for evil minds to do mishaps as there is no maintenance of data of passenger. The tickets cost being of odd amounts and many other different problems while buying tickets. Also in this advance world we are dependent on the paper tickets and we even cannot book the ticket in advance doesn't seem fare so here is a solution. In this proposed system ticket can be bought with just a smart phone application and, where users or passengers can issue ticket pass and carry pass tickets in his smart phone as a QR (Quick Response) code. The bus passes generating system using QR code can be brought easily any time anywhere and the ticket will be present in the passenger phone in the form of QR. Also the ticket checker is provided with a checker application to search and check for the user's ticket for checking purposes

Keywords: Login, Apply, Payment, Generation

I. INTRODUCTION

In the past few years there were more advancement in the field of technology. Considering bus department, e-ticket facility was introduced where users browse through a governmental website and book their long journey bus tickets which can be printed out after confirmation to show it to the checker when needed. Also in foreign countries the use of Oyster cards & Octopus card has become mandatory during travel. Even the MSRTC buses system have the facility of monthly passes. But the passengers suffer if they forget our travel cards and they have to stand in the Queue for the local bus stand tickets, which is a place where e-ticketing and m-ticketing were able to lay their foot prints. QR e-ticket System is mainly to buy the bus pass tickets which are the most challenging. This bus pass ticket can be bought with just a smart phone application, where they can carry bus pass tickets in their smart phone as a QR (Quick Response) code. Customer can register for a pass by specifying the source and destination. The application will generate the QR code according to the information fill by users and which will be used by the conductor or an authorized person to scan the ticket. The information of each user is stored in a SQLite database for security purpose. Also the ticket checker is provided with a checker application to search and check for the user's ticket for checking purposes. SQLite implements most of the SQL standard, that uses a dynamically and weak typed SQL syntax that does not guarantee the domain integrity. SQLite operations can be multitasked, though writes can only be performed sequentially. The source code for SQLite is in the public domain. SQLite has many bindings to programming languages. It is the most widely used database, the most widely deployed database engine.

II. LITERATURE SURVEY

1. Proposed a smart ticketing system using RFID which is a user friendly system for public. RFID consists of a RFID Tag and RFID reader. Each user will be provided with a smart card which is rechargeable. It may be a prepaid or postpaid one. The RFID reader reads the information of the user such as name, address and mobile number. IR sensor helps to count the number of persons entering into the bus. After taking the tickets the count in the IR sensor will be deducted. If a count is not deducted within five minutes, then it is taken into account as fraud information. We can obtain the tickets from our Android mobile phones. Nowadays, Android mobile phones play a major role in the society. The consumer's application and usage of mobile phones have expanded tremendously. After reading the information from the RFID Tag, a notification will arrive at the user's mobile phone. An application which has been developed in the Android mobile helps the user to take the tickets according to their desire. The source will be set in the mobile application through GPS information. The user must enter the destination point and the travelling charge will be deducted from the user's rechargeable card. If any passenger fails to take the ticket, a message will be sent to the nearby station checker's mobile number through GSM. So, this system is much more useful to avoid the misuses. In addition to this, a vibration sensor is connected to the system which is useful for detecting the accidents. In case of any accidents, the accident spot is detected by the GPS and



- the location's name will send to the nearby stations.
2. It is actually a cloud based application. In which data will be saved in cloud database using web services. The work here starts during the first time installation of our application where the user has to sign up. During sign up the basic customer information like first name, last name, date of birth, mobile no, city, state etc., will be gathered and it will be stored into MySQL database. So every time when the user buys the ticket this customer information is sent to the database for security purpose and also the ticket is generated accordingly. During sign up the username will be set as the user's mobile number and the password will be as per the choice of the user. On the other hand if the It is actually a cloud based application. In which data will be saved in cloud database using web services. The work here starts during the first time installation of our application where the user has to sign up. During sign up the basic customer information like first name, last name, date of birth, mobile no, city, state etc., will be gathered and it will be stored into MySQL database. So every time when the user buys the ticket this customer information is sent to the database for security purpose and also the ticket is generated accordingly. During sign up the username will be set as the user's mobile number and the password will be as per the choice of the user. On the other hand if the
 3. The Aztec code is a 2D barcode invented by Andrew Longacre Jr. and Robert Hussey in 1995. It was published as ISO/IEC 24778:2008 standard named after the resemblance of the central finder pattern to an Aztec pyramid, and it has the capability to use less space than other matrix barcodes because it does not make use of the "quiet zone" that surrounds it. The Aztec code has the following structural features: It is built on a square grid with a bulls-eye pattern at its center for locating the code. Data is encoded in concentric square rings around the bulls-eye pattern. Data is added in layers, with each layer containing two rings of pixels. Decoding begins at the corner with three black pixels, and proceeds clockwise to the corners with two one and zero black pixels. The proposed system is intended to overcome the major drawbacks of the currently existing manual system. This system is easy to design and implement. It requires very low system resources. It will work in all the configurations. It has got the following features: This system will make sure that data is accurate. Records will be efficiently and accurately stored and maintained in a DBMS. Renewal can also be done online with the reference identification that is provided after the registration is done by the user. Supposing if the student or any other type of commuter does not require the pass service anymore, he/she can cancel their registration. Minimum time would be required for processing the details submitted and to generate the bus pass.
 4. The Android Suburban Railway System thus carries a Quick Response Code (QR) in the form of a SMS. GPS is used to validate the ticket when the user reaches the station and deletes the ticket automatically after the destination is reached. For security reasons the information about every user is stored in CLOUD which is to be accessed for each ticket booking for validation purpose. As pointed out by Agostinho Baia et al. "This change of paradigm benefits from the fact that cloud ticketing services can be accessed through the Internet and they can be elastically grown or shrunk, providing easier scalability and high availability". There are two modes of ticket payment. Firstly a customer can pay by cash and secondly he can pay by token, an inbuilt account in the cloud itself. In the paper by Surya Michrandi Nasution, in 2011, Google Wallet launched by Google combines credit cards and the requirements of detecting radio signals on the phones.
 5. Mobile Ticketing application is developed to help people to buy ticket through their Mobile via Wi-Fi hotspot provided at every station. This application uses the station "WI-FI" facility to book your railway tickets based on location. Here user have to create his account at the service provider website and install the application on their mobile. It allows us to book our tickets only in ticket-counter area. In this application ticketing information of the user is stored in the smart-phone Application launches with display page asking for ID and Password. ticket. All the client systems (in a Wi-Fi range) are connected to the central server placed in the zonal headquarters for data transfer.

III. PROPOSED SYSTEM

QR e-ticket System is mainly to buy the bus pass tickets which are the most challenging. This bus pass ticket can be bought with just a smart phone application, where they can carry bus pass tickets in their smart phone as a QR (Quick Respond). Customer can register for a pass by specifying the source and destination. The application will generate the QR code according to the information fill by users and which will be used by the conductor or a authorized person to scan the ticket. The information of each user is stored in a SQLite database For security purpose. Also the ticket checker is provided with a checker application to search and check for the user's ticket for checking purposes. SQLite implements most of the SQL standard, that uses a dynamically and weak typed SQL syntax that does not guarantee the domain integrity. SQLite operations can be multitasked, though writes can only be performed sequentially. The source code for SQLite is in the public domain. SQLite has many buildings to programming languages. It is the most widely used database, the most widely deployed database engine.



IV. METHODOLOGY

QR CODE:

- QR stand for Quick Responses. It's basically capable of being 360 degrees from any direction. It consist of square dots arranged in a square grid on a white background which can read by imaging device. QR Code can hold up to thousands of alphanumeric characters.
- In QR based E-Ticketing System there are two main module first module for passenger and another module is for ticket checker .QR codes are made up of black squares and white squares. Each of these squares is called a module. In every QR code, there are certain modules that must not be covered or edited, else the code won't scan. Here, they are all highlighted in different colors:



Fig.1. QR CODE

- The three large squares highlighted in red are the position markers. These tell the scanner where the edges of the code are.
- The smaller red square is an alignment marker. This acts as a reference point for the scanner, making sure everything lines up properly. In bigger codes, there are several of these squares
- The red strips of alternating black and white modules are called timing patterns. They define the positioning of the rows and columns.
- The green sections determine the format. This tells the scanner whether it's a website, text message, Chinese symbols, numbers, or any combination of these.
- The modules highlighted in blue represent the version number. Basically, the more modules in the code, the higher the version (up to v40, which is 177×177 modules). If the code is version 6 or smaller, the version does not need to be defined here because the scanner can literally count the modules and determine the version on its own.

V. ADVANTAGES

1. Easy registration process with only mobile.
2. It enables customer to buy tickets online, anywhere and anytime.
3. In this system Due to encryption by QR code for security maintained.
4. E-ticket need not be printed.
5. Requires only scanning of tickets by ticket checkers. Easy payment process.
6. This system can reduce the trouble of the customer to stand in queue and book the tickets.

VI. CONCLUSION

The proposed system would enable the people to register for the bus pass. It also enable the user to renew the pass by updating the details. This system use the mobile android application for bus passes . The passenger and ticket checker will have the android application. The passenger want to sign in the basic information like name, address, banking details, source and destination etc that stored into the database and generated in the form of QR code. The ticket checker scan the QR code through the android application and accordingly validation will be check through it.

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