LOCAL TRAIN E-TICKETING

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ABSTRACT

The local train ticketing system project for Mumbai local trains, which allows users to book local train tickets using their cell phones. This local train application provides login rights for normal users. A user may login, get a ticket online, save it, and travel by train. The ticketing process consists of a ticket booking form. The form allows the user to choose his source and destination. The source is the station from where the user will be boarding the train. Destination is the station where user needs to get down. The project databases are already filled with stations on Mumbai Western, Central Trans-harbour and Harbour line with ticket fares. It can be modified for any other city as needed. The system also consists of an option to select wether ticket is a single journey or a return ticket and the journey will be commenced on first class or a second class.

Keywords: Android, Cloud Database, MySQL and Quick Responsive Code.

I. INTRODUCTION

Local train E ticketing is an android application through which users can book tickets online by using their cell phones. To book tickets through our application, a user first registers in our application. User needs to provide their basic details like name, email-id, password and date of birth whenever user registers on the app for the first time. Whenever a user logs-in it checks whether he is a registered customer in the customer database. Then user selects source and destination, select whether ticket is a single journey or a return ticket and first class or a second class. Depending on all these constraints, the application calculates the ticket fare and finally generates a ticket. Local Train ticketing application's main aim is to provide a secure and easy way to book train tickets.

Mumbai has some of the most spectacular and unforgettable rail journeys in the world. Here you experience a simple way to get a train ticket without any queue. There is no better way to enjoy Mumbai outback, cities, coastal towns and regional areas in comfort.

Users have to stand in long queues for buying tickets. User cannot get it online anytime he wants using the system. The existing system cannot handle large number of users at a time. Users do not know the cost of travelling from and to different stations on their own.

The passenger needs to carry the exact change for the ticket. Due to printing of tickets, large amount of paper is wasted. It is difficult for new passengers to know about the local train routes, stations and travelling cost. The system needs more resources and work force. The system always needs one person at the ticket counter for printing tickets, another one to make daily report of printed tickets and tally of amount, and another one at the station for checking the valid tickets of customers

The whole railway ticketing system needs to be online where all of the drawbacks related to the customers overcome. There are lot of advantages with the online railway reservation. Passengers can book tickets online with credit card payment. Online application not only offers the facility for online reservation of tickets but also, provides the plethora of information regarding the railways for the passengers. Passengers can now enquire about ticket, enquire about the details of trains like its route, originating and destination stations, its class, its fare in various classes, etc. Train timetable live at that particular moment. Online reservation via this app is one of the easiest and trustworthy modes of reserving tickets. All one require is, access to an android device with internet connection and should have an online mode of making payment like a debit or a credit card. There is a list of banks cited on this application. Online reservation application registers at

least a million hits every day. It provides many user-friendly features.

The application responds based on the inputs given by the users on the application interface. For example, if user enters the source and destination then application calculates the ticket fares based on first class or second class and single or return journey as per entered by the user. User do not have carry exact change for ticket rates as the fare will be automatically get deducted from the wallet present in the application.
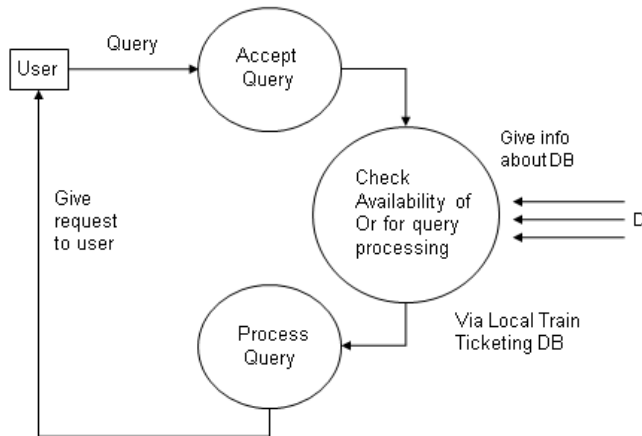

Figure 1. User Query request and response.

II. METHODS AND MATERIAL

Payment Gateway:

For installing this application user needs android smart phone with internet connection so that user can load this application on their phones. Once the fare is calculated, there will be a payment gateway display on the app. User needs to pay the ticket fare using the wallet available in the app. User can recharge their account by using the debit/credit card option available in the app.

MySQL Database:

Since a vast number of users travel daily using local train in Mumbai, there is a requirement of large database to handle all the details regarding to these huge number of users. A database is a structured collection of data. Since computers are very good at handling large amounts of data, database management systems play a central role in computing, as standalone utilities, or as parts of other applications.

A relational database stores data in separate tables rather than putting all the data in one big storeroom. The MySQL Database Software is a client/server system that consists of a multi-threaded SQL server that supports different back ends, several different client programs and libraries, administrative tools, and a wide range of application programming interfaces (APIs).

Thus using MySQL Database Software, we can handle large number of users and can perform various operations using a single database.

Location Tracking:

Figure 2. GPS Tracking.

The Global Positioning System (GPS) is mandatory for this application, which tracks the user's location and displays it on the QR code. The current location of the user is track by calculating the latitude and the longitude where the user is standing. User's current location is send to the GPS System, which in return gives the name of that place where the user is currently located.

III. RESULTS AND DISCUSSION

Quick Responsive(QR) Code:

After the entire process of ticket booking gets over one QR code is generated which contains all the details regarding to the ticket which is generated. The main motto behind generating the QR code is to save environment by saving the paper which is wasted because of the traditional ticketing system.

Another advantage of having QR code is that user do not need to carry or safely handle the card ticket.

User now should not be worried what to do if the card ticket is misplaced somewhere.

Figure 3. Quick Response (QR) code.

A QR code consists of black squares arranged in a square grid on a white background, which can read by an imaging device such as a camera, and processed using Reed–Solomon error correction until the image interprets. The required data get extract from patterns that are present in both horizontal and vertical components of the image. User can store this QR code on their phone memory so that they can access it offline whenever they want.

In this application, the QR code contains all the information such as:

1. User Name
2. Ticket ID
3. Source station
4. Destination station
5. No. of tickets
6. Date
7. Location

Whenever the Ticket Checker asks for the ticket, user can show the ticket available on the app and can show the ticket, which is stored on the phone memory without using internet connection. The details stored on the QR code can be viewed by using any simple QR code scanner.

IV. CONCLUSION

This application is concerned with the booking and generating of railway tickets to the passengers. The need of this application arose because as is the known fact that India has the largest railway network in the whole world and to handle it manually is quite a tough job. By computerizing it, we will be able to overcome many of its limitations and will be able to make it more efficient. The handling of data and records for such a vast application is a very complex task if done manually but it can be much easier if the application is computerized.

V. REFERENCES

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