



Smart Railway Ticketing System

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Abstract— *This system deals with the development and implementation of a smart-phone system to buy the urban tickets which is simple and easy to use. Our ticket can be bought with the help of a smart phone system as well as with help of web server, where your urban railway tickets can be carried in your phone in the form of a Quick Response code. The ticketing information of the user is stored in the database. It uses the smart phones facility to validate the ticket and delete it automatically after a specific interval of time once the user has reached the destination. The ticket checker can scan the user's ticket with the help of a scanner in the checker system and check in the database if the ticket is valid. The customer system consists of personal information gathering, buying ticket, pin-code validation, generating QR code and storing it into cloud database. Payment can be done through prepaid services, i.e. if the user agrees to proceed then the equivalent 'amount' of the ticket will be deducted from the balance of the mobile no. Other payment gateway will be using credit cards to pay for the ticket. After payment, QR code is generated on server side, saved in the database and also sent back to the user mobile and saved in the system's memory which serves as a ticket for the user. The checker system is to validate the ticket by scanning the QR code obtained by the user and searching in the railway database to check whether the user has bought the ticket.*

Keywords— “QR code”, “SQLite”, “Web Server”

I. INTRODUCTION

The challenges which are faced currently in the ticketing system mainly comprises of the formation of "Queues" for buying the tickets for metros. Even though, as there has been a tremendous expansion in the field of technology, we still buy the tickets with oyster & octopus cards for transportation through metros, stand in queues which is a long, cumbersome and inconvenient process as time requirement is more and also losing or theft of cards proves to be uneconomical. This project deals with the development and implementation of a smart-phone system to buy the urban tickets which is simple and easy to use. Our ticket can be bought with the help of a smart phone system, where your urban railway tickets can be carried in your phone in the form of a Quick Response code. The ticketing information of the user is stored in the database. It uses the smart phones facility to validate the ticket and delete it automatically after a specific interval of time once the user has reached the destination. The ticket checker can scan the user's ticket with the help of a scanner in the checker system and check in the database if the ticket is valid. The customer system consists of personal information gathering, buying ticket, pin-code validation, generating QR code and storing it into cloud database. Payment can be done through prepaid services, i.e. if the user agrees to proceed then the equivalent 'amount' of the ticket will be deducted from the balance of the mobile no. Other payment gateway will be using credit cards to pay for the ticket. After payment, QR code is generated on server side, saved in the database and also sent back to the user mobile and saved in the system's

memory which serves as a ticket for the user. The checker system is to validate the ticket by scanning the QR code obtained by the user and searching in the railway database to check whether the user has bought the ticket.

II. EXISTING SYSTEM

In the past few years there were more advancement in the field of technology. Considering department of railway, e-ticket facility was introduced where users browse through a governmental website and book their long journey railway tickets which can be printed out after confirmation to show it to the checker when needed. After few months a new technology called M-ticketing (Mobile Ticketing) was introduced where customers messaged to the web portal through mobile phones after which a complete web page was downloaded to the users mobile phone where users can do the same booking process as it was in the e-ticketing facility. In the foreign countries, the use of Oyster cards & Octopus card has become mandatory during travel. But we face inconvenience and suffer if we forget our travel cards and we stand in the Queue for our local suburban tickets, which is where m-ticketing; e-ticketing was unable lay their foot marks

III. PROPOSED SYSTEM

As a solution to these issues an system can be made which will comprise of all the functionalities where one can buy the urban tickets and carry your urban railway tickets in your smart phone as a Quick response code. Mobile devices like smart phones are emerging in the field of transportation services where technology is being used for data collection, location based transportation services and decision making when it comes to travelling. Comparatively study with QR code which gives the idea about how QR code is more efficient than RFID and barcode systems. Which will be compared in parameter such usability cost, executions, requirement, appearance etc. For example, it will decrease the cost of scanner and decoder to verification. QR code is visible on any surface Feature of QR codes which will contain more information than barcode QR code stores several dozen to hundred times more information. QR code will handle all type of data. It contain up to 7089 character can encode. Survey of how increasing number of people who are using QR codes in many system.27% of peoples are using QR codes who are in 18-34 years. From the survey we got approximately US [19%], UK [15%], Germany [14%], France [12%] which will be surveyed in 2011-2012.How to encoding and decoding the QR code. Steps involved in encoding the QR code 1.input data will be encoded in efficient mode and forms bit stream.2.bit streams divides in code words.3.codewords divided in blocks.

Our ticket can be bought with the help of a smart phone application, where your urban railway tickets can be carried in your phone in the form of a Quick Response code. The ticketing information of the user is stored in the database. It uses the smart phones facility to validate the ticket and delete it automatically after a specific interval of time once the user has reached the destination. The ticket checker can scan the user's ticket with the help of a scanner in the checker application and check in the database if the ticket is valid. The customer application consists of personal information gathering, buying ticket, pin-code validation, generating QR code and storing it into cloud database. Payment can be done through prepaid services, i.e. if the user agrees to proceed then the equivalent 'amount' of the ticket will be deducted from the balance of the mobile no. Other payment gateway will be using credit cards to pay for the ticket. After payment, QR code is generated on server side, saved in the database and also sent back to the user mobile and saved in the application's memory which serves as a ticket for the user. The checker application is to validate the ticket by scanning the QR code obtained by the user and searching in the railway database to check whether the user has bought the ticket.

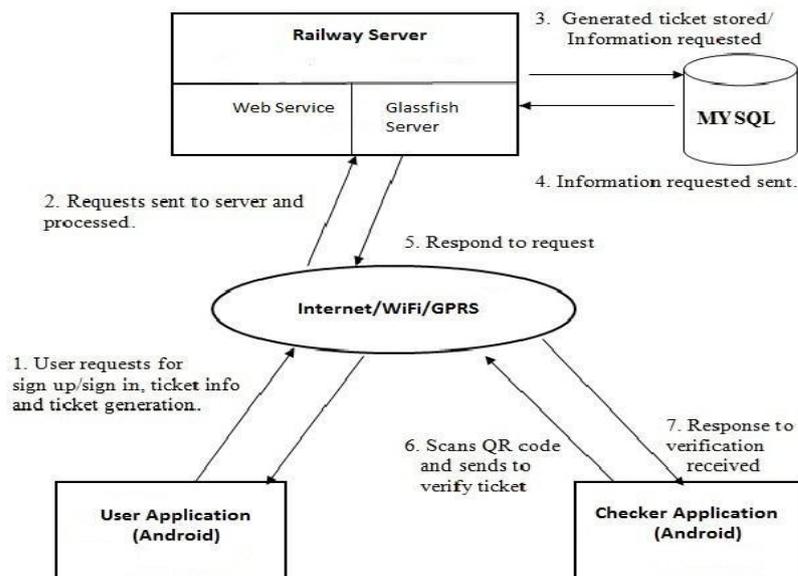


Fig. 1 System Architecture

IV. CONCLUSIONS

In this paper we have presented a smart railway ticketing system developed for web server using Java, SQLite, MySQL, and PHP on the server side which can change the way people buy their tickets in future. This kind of ticketing system can be applied to any kind of transport system. Our system is one of its kinds and finds huge system to buy sub-urban railway tickets through android mobile.

Our android system is one of its kinds and finds huge system to buy sub-urban railway tickets through android mobile. Also our system saves a huge work for our ticket checkers by GPS validation of tickets and also moving from manual ticket checking process to digital ticket checking process by just scanning with his own android mobile to validate the ticket. Station level security we can have Hardware devices to validate the QR codes before the user enters or leaves the station, where the user can have access towards platform after being validated by the hardware device.

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