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ANDROID SUBURBAN RAILWAY TICKETING

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Abstract - *Android suburban railway ticketing is the implementation of a smart phone application. A ticket can be purchased with the help of this application and can be stored in "Quick response code form" (QR code).A ticket has validity and is deleted automatically once the user reach the destination. The information about purchased ticket is stored in database.*

Key Words: **Android, Suburban Railway Ticketing, Quick response code, SQLite, GPS.**

1. INTRODUCTION

In the current ticketing facility there is a "QUEUE" for buying the suburban railway tickets. In this fast growing world of technology people has to still stand in the queue for buying tickets.

The Android Suburban Railway Ticketing implements an application to buy suburban tickets which is little challenging as compared to booking long journey tickets through "Mobile Application" ticket which fails with the local travel tickets. We can buy Android suburban ticket with the help of smart phone application so that we can carry the ticket in phone with us in the form of QR code. GPS Facility is used to provide validity and delete the ticket automatically when user reaches the destination. The user's ticket is stored in a cloud database for the security purpose. A ticket Checker application is provided to search for ticket number and checking the ticket in the database.

The ticket checker can validate the ticket with a checker application provided to check if the ticket is valid or not by scanning the ticket which is in the form of Quick Response code. This application contains all details of train such as routes of train with its source and destination places. It also stores the cost or expenditure which is required to reach the destination. The payment gateways are also provided in the application.

Different Models:

Personal Information

The application requires basic information of the customer like first name, last name, DOB, city, state, etc. which is stored in the users mobile, SQLite database.

So, whenever customer purchase the ticket then information of customer is stored to database for security and same also stored in QR.

Purchasing Ticket

User must select the source and destination, the type of ticket like single or return, etc. Then the user has to choose the credit option to buy the ticket and once it is done application will move on for pin code validation.

If the details are valid it saves the journey details and the customer's information in the database.

QR Code Generation

Once the journey details are stored in the database they are sent to the Google API chart engine to generate the QR code. So all the ticket information is converted into the QR code and is sent back to the user mobile as HTTP response and saved in the memory of the application.

Ticket Validation and Checking QR Code

When the user buys the ticket, the source geo points, destination geo points, ticket type, expiry time and date is stored in the SQLite database. GPS service checks the users current location with destination geo points after which type of ticket is checked.

Checking of QR code module will have QR reader which will scan the QR code with the application to validate and verify the journey details.

Checking with database

It may happen users mobile is being damaged or may be battery failure and QR code does not scan in that case option is to check the ticket by searching the details in the database with user's ticket number for validation.

2. NECESSITY OF THE APPLICATION:

Android suburban Railway ticketing system uses GPS as ticket checker system in this application which is the most important thing.

The necessity of this application is it uses QR code for storing the ticket which has the validation and we can scan that code and check the details about the journey. It provides transparency in checking the ticket.

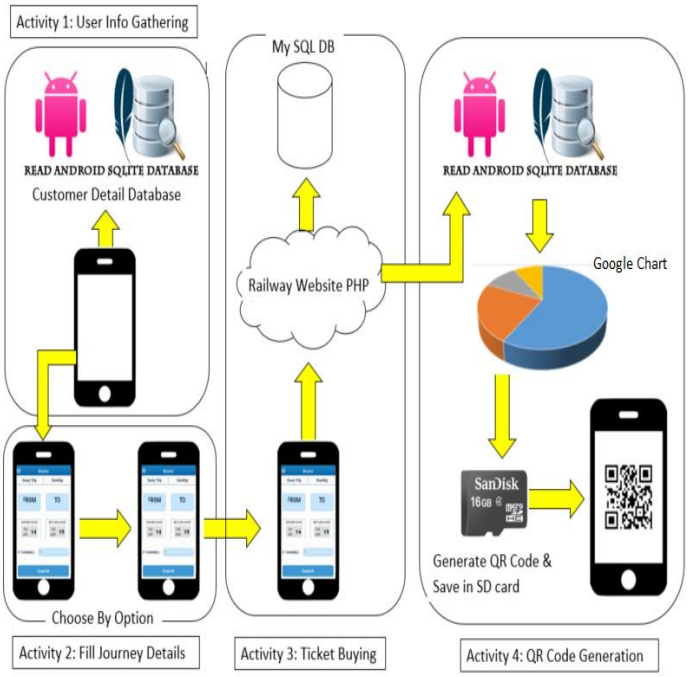
It helps in Reduction in the corruption because of transparency system. The ticket cannot be reused as the application will delete the ticket automatically after customer reaches the destination.

It will help in Users location Identification in an emergency situation.

3 .SOFTWARE AND HARDWARE REQUIREMENTS:

1. Android Handset
2. A system with 2GB RAM
3. Hard disk
4. Android Studio
5. Database (MYSQL)

4. ARCHITECTURE:



5. CONCLUSIONS

The application can be applied to any kind of the transport system. This android application serves to be huge one to buy suburban railway tickets using android mobile. This application saves a huge work of the ticket checkers also using GPS validation of tickets.

Knowing at what time the trains will be available will also ease the user to allot their time to reach the station.

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