

CLOUD BASED BUS TICKET GENERATION SYSTEM

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ABSTRACT

Now a day's public local transportation system is still using the traditional ways for ticket booking. People need to stand in queues for long hours. Some people travel via public local transport without purchasing the ticket. Hence, our proposed system will give the solution. Our android-based system helps to resolve the disadvantages of the current public local transport ticket booking system. Our application will handle the live location of the bus, generate the E-ticket with QR code, Online ticket booking by scanning the QR-code, Validation of the ticket. The real-time bus tracking can be done by our system and the relative information will be given to the user. Technologies like QR-Code, Cloud, GPS are used for the development process.

Keyword : - Android , Bus tracking , Global Positioning System , Quick Response Code.

1. INTRODUCTION:

The public local transportation system is still using the old-fashion ways for ticketing, the conductor issues the ticket to the user which is inconvenient and time-consuming. People stand in queues for a long amount of time waiting for the conductor to issue the ticket. Therefore, it is tiresome and wastage of energy. Some people travel via public local transport without purchasing the ticket and due to this, there is growth in the crowd, exceeding the capacity of the bus. Therefore, our proposed system will be able fix the above disadvantages mentioned. Our android-based system will fix the disadvantages of the current public local transport ticket booking system. Our proposed application will be able to handle the generation of E-ticket having QR code, the user will have to select the source and destination and then the buses will be displayed according to the route which is quick and efficient. On-time ticket payment by scanning of QR-code which is digitalized and we are going one step towards the green environment by avoiding the use of paper. Validation and authentication of the ticket is done by the conductor due to which the people traveling without purchasing the ticket will not be allowed to travel. The current position of the bus can be tracked by the user after purchasing the ticket.

2. SYSTEM ARCHITECTURE

This Project System will be useful for the Local People as well as Bus Organization. The user will be able to save his time as well as he will be able to get the live position of the bus for his required destination. Also, our proposed system will provide a cashless transaction, Also all the data will be stored on a cloud it will be helpful for the Bus Organization. Our application provides many facilities that will help to increase the public means of transportation.

1. Users need to login/signup for application.
2. Users need to fill ticket details.
3. Confirm tickets and generate tickets by scanning QR code for payment.
4. Show available buses and track user-selected buses using GPS.
5. Validate tickets by the conductor.

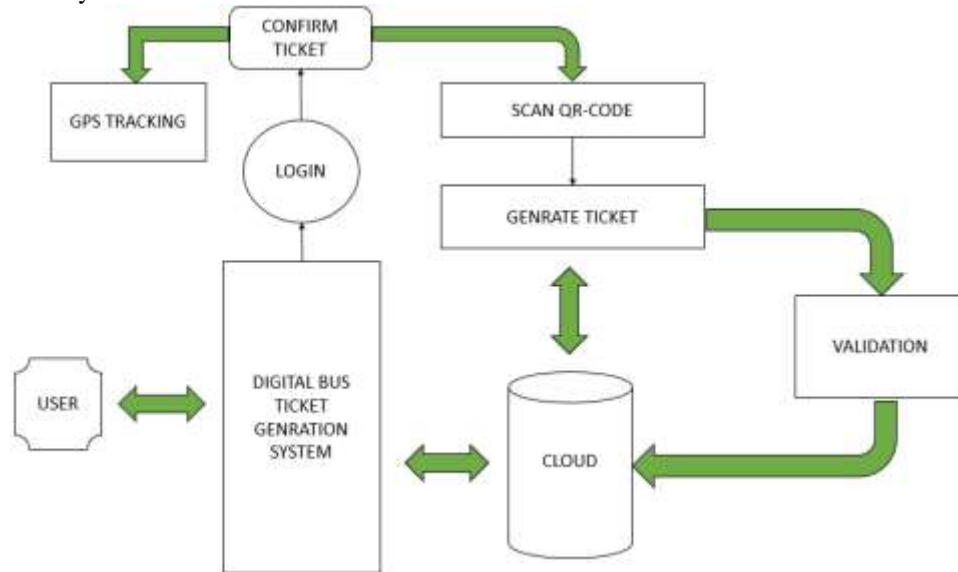


Fig -1 System architecture

3. METHODOLOGY

3.1 Google API

- The Transport Tracker contains the following components:
 - Store Data- A AWS that stores the vehicle locations, snapped to the road with the Roads API. AWS is able provide the real-time data synchronization at the backend and map.
 - Vehicle Locator- It is an Android application that uses the Google-Play-services location APIs to report its real-time location to the AWS.
 - Backend- The backend is built-in Node.js, that processes locations from the AWS and predicts time requirement using the Directions API.
 - Map- An android application that uses the Maps JavaScript API to display a styled map showing the bus locations and routes
 - Administrators overview- A web interface for administrators, giving an overview of the assets being tracked. It displays a map using the Maps Static API, with vehicle and location data from the AWS.
- Step 1. Get the code
- Step 2. Set up an AWS
- Step 3. Change the AWS default rules
- Step 4. Get a Google Maps API key
- Step 5. Set up the backend
- Step 6. Create the map
- Step 7. Set up the android application of vehicle locator.
- Step 8. Set up the administrator's general overview

3.2 QR-Code

The QR code stands for 'quick response' code. The QR code is same as of the barcode used in supermarkets. QR code is an image which can be scanned using machine or smartphone camera. It contains of numbers of black squares and dots consist of certain information. A QR code can contain information such as phone number, name , SMS or e-mail message or just plain alphanumeric text. The most commonly used QR code can encode upto 4,296 characters, which is equivalent to 3 pages of text.

4. CONCLUSIONS

Local Bus transport ticket generation application is very helpful and important mainly in cities for local transportation. This application has many benefits like easy to use, wide area range, easy to implement in vehicles, more effective. This system is made of a tracking module containing GPS model to access dynamic vehicle location and send it to server. Then people can access this information from their android mobile phones. The ticketing process using QR code for bus ticket will make a more convenient way for the users as well as the bus transportation management system.

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