

Smart Government Transportation with Cloud Security

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Abstract - This project aims to provide an effective solution for maintaining transport information using a cloud. The system has two logins, one for user and other for admin. Get passenger monthly pass generation system is an android application for people to get passenger passes online. This system was intended to develop an application to perform functionalities like accessing the basic information for authentication and provide passenger pass to a particular person without placing him/her in a queue for a long time. Online passenger pass generation system is helpful as it reduces the paper work, time consumption and makes the process of getting passenger pass in simple and faster way. User can refill their account and extend the validity every time when the pass expires. Admin can view all users' details and balance through its login. These systems is under secure as well as maintain the cloud security. A recent survey on cloud security states that the security of user's data has the highest priority as well as concern. We have use a framework known as Cloud Computing Adoption Framework (CCAF) which has been customized for securing cloud data. CCAF multi-layered security can protect data in real-time and it has three layers of security. In this system we used GPS to track down the government transport vehicle and alert notification to passenger of vehicle location and its schedule. Also maintaining employee attendance and maintenance of government transport vehicle.

Key Words: Login, register, renew, Payment, Pass Generation, Notification

1. INTRODUCTION

This project was created to provide "safe, reliable, time-saving, efficient, comfortable and affordable" services for people is seen as having accomplished this objective. Because of the drawbacks that are present in the existing system, we got this idea that would help people in a better way. As per the previous system people had to do each and every process manually, but this system helps people to make the work a bit faster. Customer can buy the bus pass over the Internet, 24 hours a day throughout the week, this solves the issue of bus pass being misplaced or stolen. Furthermore, customers no need to pay cash to buy bus ticket because they can pay the bus pass by using Credit Card

(e.g. Master Card, Visa Card). A bus pass project is an android application system that helps passengers to get their bus pass related information in an android phone. Using the system users can apply for bus pass renewal option or cancellation option and make payment online. This excludes the need for going to bus station for utilizing pass services. Also the app provides a brief description of all the routes along with bus numbers. It also shows appropriate schemes for various routes for quarterly, monthly and yearly passes. Admin can view users details and all the transactions being made online.

Thus the system is user-friendly and flexible to be used.

1.1 Related Work

Online Bus pass Generation system is already implemented in Andhra Pradesh as Andhra Pradesh State Road Transport Corporation. The only drawback is the pass application form is to be downloaded, get a print, and then it is to be filled and submitted by hand. Online transaction facility is not available. Online Bus pass Generation system is helpful as it reduces the paper work, time consumption and makes the process of getting Bus pass simple and fast. This system also implemented in Karnataka State [5][6].

1.2 Existing System

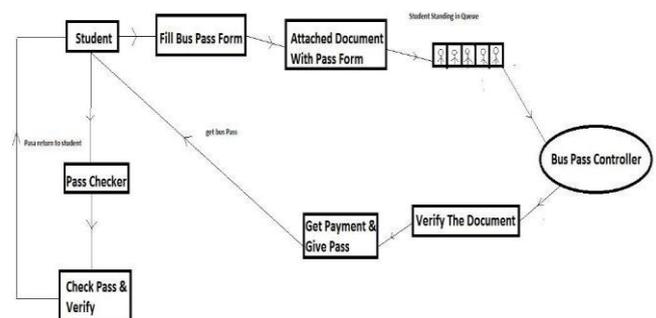


Fig -1.2.1: Existing System

In Existing system, First student should fill the Bus registration form then attached necessary documents. And then if there are lot students arriving at same time then student must stand in queue, which is very time consuming. Bus controller checks documents, verify it then take payment from student and give him bus pass. Controller should

handle the students documents carefully. It is very difficult for him because there are lot of documents and also handle carefully the record of money.

1.3 Literature Survey

Intelligent Transportation Systems are gaining recognition in developing countries like India. To describes the various components of our prototype implementation of a Real-time Passenger Information System for a public transport system like a fleet of buses. The vehicle unit reports the current position of the vehicle to a central server periodically via General Packet Radio Service .An Estimated Time of Arrival algorithm running on the server predicts the arrival times of buses at their stops based on real-time observations of the buses' current Global Positioning System (GPS). RTPIS that tracks the current location of all the buses and estimates their arrival time at different stops in their respective routes.

The Real Time Bus Monitoring and Passenger Information system is a standalone system designed to display the real-time location(s) of the buses in city. The tracking devices to obtain GPS data of the bus locations, which it will then transfer it to centralized control unit and depict it by activating symbolic representation of buses in the approximate geographic positions on the route map. Specific software's will be used to interface the data received to the map. RTPIS rolling display on bus stops expected time of arrival in real time. Web based interface for control room to monitor buses in real time. Mobile application for end user to find out bus schedules and RTPIS. To implementation details of Real Time Bus Monitoring and Passenger Information System are stated. The RTPIS tracks the current location of all the buses and estimates their arrival time at different stops in their respective routes. Estimates are updated every time the bus sends an update. It distributes this information to passengers using display terminals at bus stops, web based GUI and smart phone application which is android based [1].

Vendors offer a pool of shared resources to their users through the cloud network. Nowadays, shifting to cloud is a very optimal decision as it provides pay-as-you-go services to users. Cloud has boomed high in business and other industries for its advantages like multi-tenancy, resource pooling, storage capacity etc. In spite of its vitality, it exhibits various security flaws including loss of sensitive data, data leakage and few others related to cloning, resource pooling and so on. As far as security issues are concerned, a very wide study has been reviewed which signifies threats with service and deployment models of cloud. In order to comprehend these threats, Presented so as to effectively refine the crude security issues under various areas of cloud. Revealing different security threats under the cloud models as well as network concerns to stagnate the threats within cloud, facilitating researchers, cloud providers and end users for noteworthy analysis of threats. They are excited by

various opportunities provided by the cloud and are anxious as well on the questions related to the security it offers. As users migrate their data on cloud they would be alarmed with the security flaws inherent to the cloud environment. Thus security threats with cloud computing has emerged as one of the very plausible topics[5].

The present an extensive survey of object tracking methods and also give a brief review of related topics. Divide the tracking methods into three categories based on the use of object representations, namely, methods establishing point correspondence, methods using primitive geometric models, and methods using contour evolution. Note that all these classes require object detection at some point. For instance, the point trackers require detection in every frame, whereas geometric region or contours-based trackers require detection only when the object first appears in the scene. Recognizing the importance of object detection for tracking systems, The include a short discussion on popular object detection methods provide detailed summaries of object trackers, including discussion on the object representations, motion models, and the parameter estimation schemes employed by the tracking algorithms. Moreover describe the context of use, degree of applicability, evaluation criteria, and qualitative comparisons of the tracking algorithms. Tracking is usually performed in the context of higher-level applications that require the location[6].

2. PROPOSED SYSTEM

The Existing System has too much time consuming and also Lot of paper work. So for minimize time and lot of paper work, we need this new updated system.

2.1. Modules Description

In this system, The main modules are Student, Admin and Conductor. Following modules are sub modules which describes the entire flow of proposed system.

2.1.1: Registration Module

Firstly user has to register to create his/her account. To create a new account user has to fill in all his/her details and also has to upload the necessary documents as per given in the form. Once the user account is created the user will be able to perform his/her further transactions by provided user id and creation for bus pass.

2.1.2: Authentication Module

In this module the registered user details and documents are verified by the admin. Only the registered users are allowed for renewal of their bus pass. This module checks whether the authenticated user is accessing. It does not allow users which are not registered.

2.1.3: Payment Module

In this system the mode of payment is online. There are various online payment methods such as credit cards, debit cards, etc. This module keeps the track of all online payment, makes it secure and makes sure that all the payments are committed properly. In case of some problem the payment made is cancelled.

2.1.4: Generation of Bus Pass Module

After going through various steps the user's details and documents will be verified and authenticated by the admin. If the admin approves the user details and documents the generation of bus pass will take place automatically and pdf with QR code of bus pass will be mailed to the registered user.



Fig -2.1.4.1: QR Code

2.1.5: Bus Pass Renewal Module

For renewal of bus pass the user has to login by the provided user id. After login the user has to again fill in the required details and make the online payment once again. Once this process is completed the bus pass will be renewed automatically.

2.1.6: Notification Module

In this module the users will be notified about their expiry of their bus pass. They will be notified through the registered mail id. Users will be notified 2-3 days before the expiry of bus pass. If the user fails to renew their bus pass on time the user account will be blocked.

3. CONCLUSION

We concluded that, It is a very efficient and real time project. It is very useful for people who are facing problems with the existing system. By this project, we can easily buy a bus pass and also can easily renewal. We can also get a notification about various services easily. Bus pass registration and renewal can be done using credit and debit cards.

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