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Vehicle Record Storage and Tracking System with Easy Toll Pay

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ABSTRACT

The proposed system tries to eliminate the delay on toll roads by collecting tolls electronically. In Vehicle Record Storage and Tracking System with Easy Toll Pay, the entire citizens having a vehicle need to register. After the registration process they have to update their vehicle information. After the updating of vehicle information the user can printout their ID card. They have to keep the ID card during travel. This ID card is scanned by the Toll operator. There is no cash transaction is carried out in the toll booth. Using a virtual bank, the user account info is updated. The administrator of E-Toll with Easy Pay can monitor each tollbooth independently. He can monitor the vehicle that passed a particular toll booth at a particular time. Another important facility of our project is we can implement the system to check the vehicle by vehicle inspectors. If the inspector need to check the vehicle i.e., license, RC Book, Insurance Details, Pollution details etc., and then he can check the information using my project by entering the card id or simply scan the QR code by his mobile through our project. So a registered user need not take the hard copy of his vehicle record while driving. Using the constructs of MySQL server and all the user interfaces have been designed using the PHP technology.

Keywords: E toll, a Card Implementing QR Code, Smart City, License, RC Book

I. INTRODUCTION

The research work titled as "**Vehicle Record Storage and Tracking System with Easy Toll Pay**" is a web based application.Electronic Toll Collection (ETC) systems may be adopted by city managers to combat the problems of long vehicular queues, fuel wastage, high accident risks, and environmental pollution that come with the use of traditional/manual toll collection systems [1].In short, the introduction of ETC in smart cities is aimed at achieving efficient toll operations with minimal constraints.Research advances reported in [2] revealed that toll collection can be performed without necessarily having the vehicles to stop over at a toll booth and analyze owner's valid card. These new developments allow free flow of traffic on highways and open up another form of use case in multi-lane highways. In this paper, an intelligent system is developed to eliminate long vehicular queues, fuel wastage, high accident risks, and environmental pollution in a smart city based on a card implementation. They were considered preferable because of the low power consumption, cost effectiveness, and network security. An enhanced user interface was developed on the Android platform for vehicle owners. The Android-based mobile application also has an administrative end for system regulations. User can easily carry this card and any vehicle inspector can analyze this card to ensure the details such as license, RC book, Insurance, Pollution paper etc. are valid or not in their own android based mobile phones only after we can register our system.

Why new system?

The system at any point of time can provide the details of the vehicle users by using a QR code implementing card.

The main purpose for preparing this research work is to give a general insight into the analysis and requirements of the existing system or situation and for determining the operating characteristics of the system.

The main objective of Vehicle Record Storage and Tracking System with Easy Toll Pay isto eliminate the delay on toll roads by collecting tolls electronically. Any number of employees can connect to the server. This web based multi–user system is divided into RTO Admin, Virtual Bank, Tollbooth Staff, Vehicle Inspector and User.

II. BACKGROUND

A. PHP

PHP is a widely used open source general purpose scripting language that is especially suited for web development and can be embedded into HTML. Instead of lots of commands to output HTML, PHP pages contain HTML with embedded code that does something. The PHP code is enclosed in special start and end processing instructions <? php and ?> that allow you to jump into and out of PHP mode. What distinguishes PHP from something like client-side java script is that the code is executed on the server, generating HTML which is ten sent to the client. The client would receive the results of running that script, but would not know what the underlying code was. You can even configure your web server to process your entire HTML file with PHP, and then there is really no way that users can tell what you have up your sleeve.

The best things in using PHP are that it is extremely simple for a newcomer, but offers many advanced features for a professional programmer. PHP is mainly focused on server-side scripting, so you can do anything any other CGI program can do, such as collect form data, generate dynamic page content, or send and receive cookies.

B. MySQL

Hypertext Markup Language (HTML), the languages of the World Wide Web (WWW), allows users to produces Web pages that include text, graphics and pointer to other Web pages (Hyperlinks). HTML is not a programming language but it is an application of ISO Standard 8879, SGML (Standard Generalized Markup Language), but specialized to hypertext and adapted to the Web[3].

The idea behind Hypertext is that instead of reading text in rigid linear structure, we can easily jump from one point to another point. We can navigate through the information based on our interest and preference. A markup language is simply a series of elements, each delimited with special characters that define how text or other items enclosed within the elements should be displayed. Hyperlinks are underlined or emphasized works that load to other documents or some portions of the same document.

C. JAVASCRIPT

JavaScript is a client side language and it runs on a client browser. Netscape developed it and because of its simplicity it is one of the most known scripting languages. However JavaScript can also be used on the server side. JavaScript can be used on all most known browsers. It can be easily used to interact with HTML elements.

D. JQUERY

JQuery is a fast and concise JavaScript library created by John Resig in 2006.JQuery simplifies HTML document traversing, event handling, animating, and Ajax interactions for Rapid Web Development. JQuery is a JavaScript toolkit designed to simplify various tasks by writing less code.

III. PROPOSED METHOD

My proposed system changes the entire toll system which is done manually. Here I change the manual toll system by real time web portal. Administrator is the most powerful user in the website. Who can control all the activities of the website? He is able to create toll booths and police vehicle department. Administrator is responsible for assign toll amount and fine for road rule violations. He can check, monitor all activity of any toll booth any time.

Module Description:

The modules involved in this project are:

RTO Admin: Admin module has the following functions. Initially admin can login to the page. If the username and password is correct then only open the admin home menu. Otherwise it will not open the admin menu. This module handles the activities to add new tollbooth staff, vehicle inspector, fine, and also can view the analysis that can done based on the traffic rules violation survey and toll survey. Admin can ban the license those who violate traffic rules.

User: This module helps to user login. There will be a username and password to login into the system to use all the facilities. A new user should register with all his details and create an account before login. This registered user must contain a bank account also. This module handles the activities to add new vehicle details to prepare card for each vehicle.

Vehicle Inspector: This module helps to inspector login. There will be a username and password to login into the system to use all the facilities. This module handles the activity to accept the card that can travel in the vehicle. He/she have easy to check their documents like RC book, Insurance paper, license, Pollution paper etc., by using a card.

Tollbooth Staff: This module helps to staff login. There will be a username and password to login into the system to use all the facilities. This module handles the activity to accept user's card and deduct money those who are passed by a tollbooth.

Virtual Bank: This module helps to bank user's login. There will be a username and password to login into the system to use all the facilities. This module handles the activity to accept the user's details and create a bank account and also deposit money to that personal account.

IV. RESULTS

Figure 1

This figure 1 shows the QR code implementing card that can get only after the user can register this website. It includes the user's vehicle documents like RC book, Insurance paper, license, Pollution paper etc. So a registered user need not take the hard copy of his vehicle record while driving.

V. CONCLUSION

The research work titled as "Vehicle Record Storage and Tracking System with Easy Toll Pay" is a web based application.E-Toll is an electronic toll system in which, I can add toll in an easy way. By developing this system, I can eliminate the man power in the toll system. It helps to avoid the time wastage and increase

the accuracy and reduces the manual influence. All the activities are performed in an efficient manner. Another advantage is in the area of fine due to disobeying the traffic rules. By developing this website, all the operations are done electronically, hence no need for carry money with us for toll and fine. It uses a virtual bank, in which all the transactions are automatically performed. This system of collecting tolls is ecofriendly and also results in increased toll lane capacity. Also an anti-theft solution system module which prevents passing of any defaulter vehicle is implemented, thus assuring security on the roadways.

VI. REFERENCES

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