

EFFICIENT TOLLGATE TRACK PAYMENT IN ADVANCE

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Abstract : Toll Gate Payment system is one among the uncomplicated ways in which to manage the nice run of traffic. The travelers passing through this mode of transport, carried by their transport that allows them to bear in mind of the account cash that has been paid and therefore the money left within the tag. It relieves the person of the burden of waiting within the queue to pay the toll payment, which decreases the fuel-consumption and also taking cash. Our system avoid this type of problems. user get gate pass from online so user don't need to wait in tollgate. The Tollgate management is designed from a user point of view.

This application emerges as a solution to the manual toll collection method. Time and efficiency are major factors of present situation. In order to overcome the major issues of vehicle congestion and time consumption, this application is very much necessary. Here the user will get toll plaza details using Map in order to get payment details and other information such that toll plaza information within 1km. The administrator verifies the payment details of users who are in nearby distance (within 1km). It reduces the fuel utilization by reducing the waiting time. This application makes toll plaza payment more convenient for the public use.

IndexTerms - Energy efficient , Stochastic Optimization, Dynamic Data, toll payment , Mapping

I. INTRODUCTION

In fact, the status of a nation has been closely associated with economical ways that of transportation. Increasing variety of vehicles on the road, result into number of problems such as congestion, accident rate, air pollution and many other. All economic activities totally different for various tasks use different strategies of transportation. For this reason, increasing transportation is an immediate impact on productivity of nation and the economy. Reducing the value of transporting resource at production sites and transport completed product to markets is one amongst the necessary key factors in economic competition. toll assortment could be a technology permits the machine-controlled electronic assortment of toll prices. As it is studied by researchers and also applied in various expressways, bridges, and tunnels require such a process of electronic toll collection. This system is capable of deciding if the vehicle is registered or not, and then informing the management center about to process violations, debits, and participating accounts. The most excellent advantage of this this technique is that it's capable of eliminate congestion in toll plaza, especially during those seasons when traffic seems to be higher than normal.

Advantages of this system : In order to reduce the queues in toll plaza. Fast efficient service. One of best features of this system is need not to stay a min in toll plaza area (waiting time < 1 min) and other benefits are reaching destination early and save the fuels, time, acceleration

Merits for toll operators : One of best features of this application is for toll plaza operator is that toll plaza system itself showing completed payment details before user enter location (within 1Km). So this is reduced overhead of queues problem and Better management by centralized user account.

II. LITERATURES SURVEY

According to that [1], Wei-Hsun Lee et al stated that the electronic toll collection technology is preplan of payment for toll with intelligent transportation system and also reduce traffic congestion and waiting time. But not refer efficient way of payment method and F. Don et al [2] stated that toll payment for monitoring and surveillance purposes and road condition information. But appropriate payment method was not referred to toll plaza. In the same way [3] S. Lauren et al stated that make efficient way to avoid traffic problem, creating account and pay through system. Same methods are followed by C. M. Roberts [4]. But some technically methods and implementation was changed for payment options. L. Jerry et al [5] states how to use GUI for collection of toll, the real time management and monitoring is done that as expanded capacity for vehicle without building the big infrastructures. [6] R. B. babu et al states that with the elimination of human interaction in the entire toll collection process and implemented in other countries.

III. EXISTING SYSTEM

In the existing system the process is done manually it is very complex to the user and it is very time consuming process. To avoid that drawbacks, we are proposing new method of toll plaza payment. Some disadvantages and drawbacks are identified by existing system that is cant finding in GPS location about toll plaza. Payment options is not available for all type of toll plaza and online payment is robust. In case of technical issue and congestion problem, couldn't solve the issue with proper time duration. Therefore existing systems are very much tedious.

Our propose system is providing proper solution to all .Especially, in this modern and engine world , user cant afford the sufficient time to other things .This proposed system make this very much efficient and convenient way .

IV. PROPOSED APPLICATION ARCHITECTURE

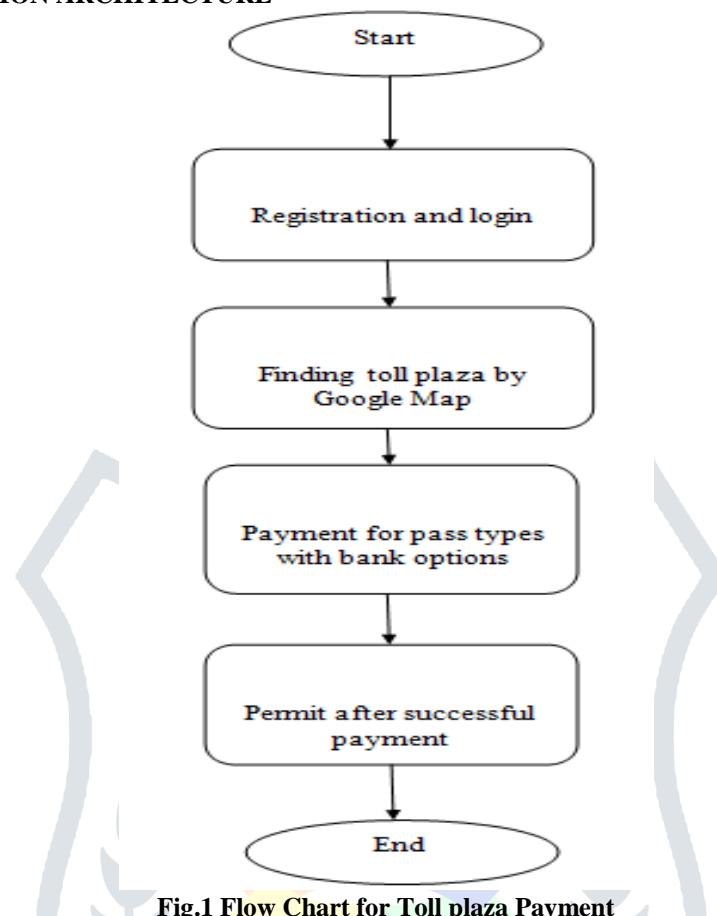


Fig.1 Flow Chart for Toll plaza Payment

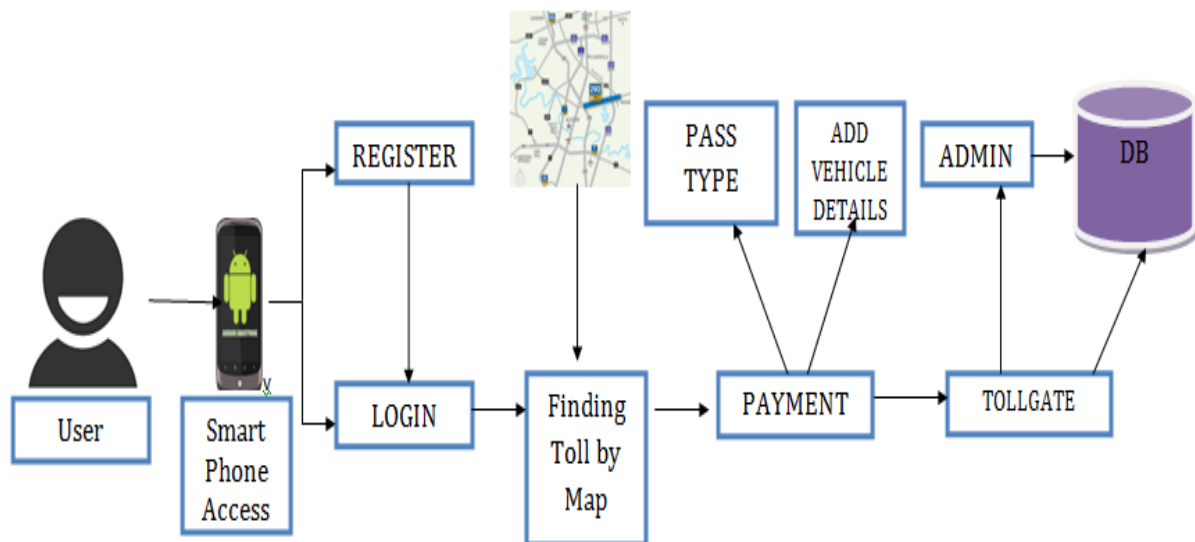


Fig.2 Architecture for proposed application

The above architecture(Fig.2) and Flow chart(Fig.1) are explained briefly about propose system modules clearly. User Registration ,login access then payment options , banking accessibility and then finally received acknowledge through mail .

V.PROPOSED SYSTEM MODULES AND IMPELEMENATIONS

Our proposed system contains the following modules .Such that

- Registration and Login
- Vehicle Category and its Details
- Setting in MAP
- Choose Pass Type and finding history

A. Registration and Login :

This is first module of this system .User must register with their credentials in order to access this system. After complete that authentication process, user will get login details that s shown in Fig.3 and Fig.4

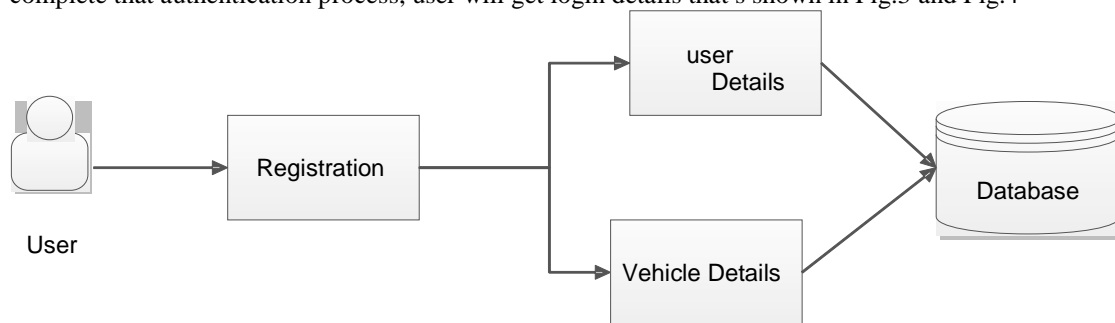


Fig.3 User registration and login access

B. Vehicle Category and its Details:

This is another module for this system. Here vehicle details are entered by user .At that same time, tollgate pass amount will be displayed according to that toll plaza conditions which are nearby. Generally administrator will authorized all details. Because amount will be varied according to types of vehicle and also changing as per government procedure also.

C. Setting in Map:

In this module, user able find the location of near by (distance <1 km) toll plaza. This is very much useful for user to find the toll plaza details and payment options also That's shown in Fig 5 and Fig.6

C. choosing the pass types and finding history :

In this module , user will get pass after verified all details as per toll plaza procedures. Some pass categories also available like Daily pass, monthly and year pass .Some options also available for advance payment for commercial purpose. From this module ,we able find history of last trip details .This is mainly used for commercial and business purpose especially for auditing that is sown in Fig.7

D. Payment details and its options:

This is final stage .After complete all modules,user will get this module. In this module, user can choose various banks to pay amount as per toll plaza norms and its revaluations .Payment will be successful after receiving the OTP with registered user mobile with bank and this system also that is shown in Fig.8 and Fig.9

VII. PROPOSED SYSTEM RESULTS

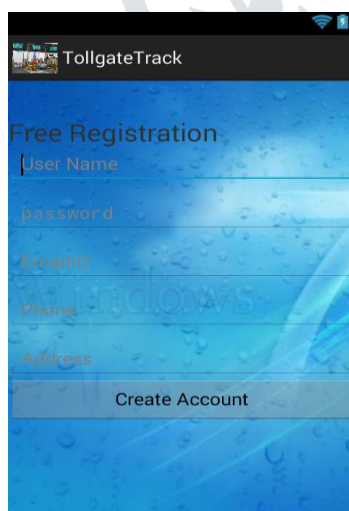


Fig.4 User Registration

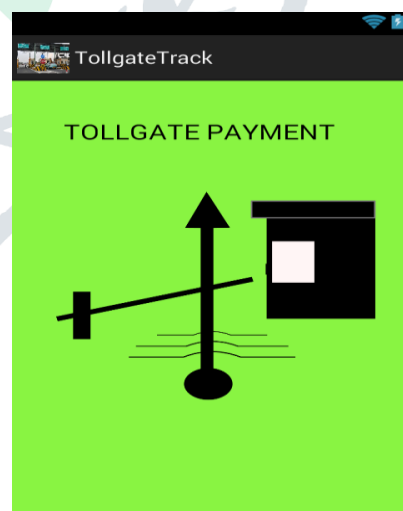


Fig.5 Home page of payment for searching

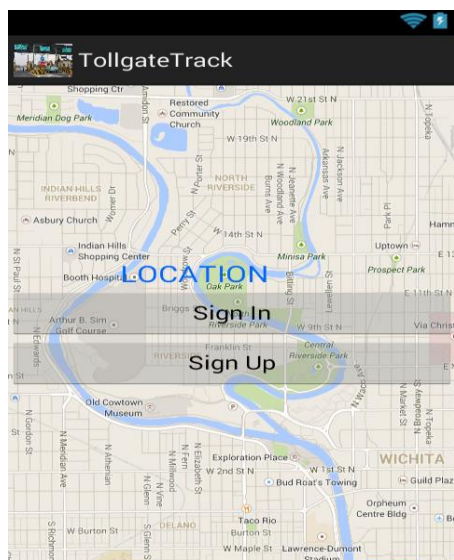


Fig.6 Location searching

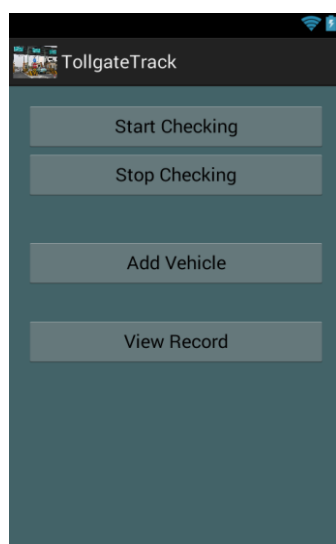


Fig.7 Add vehicle checking

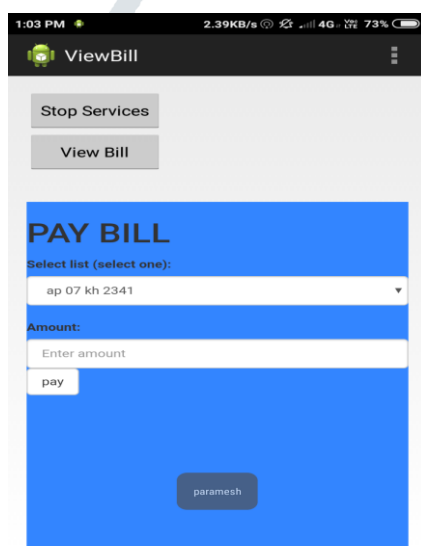
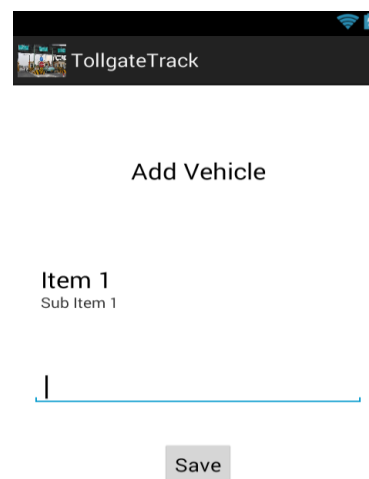


Fig.8 Payment Options

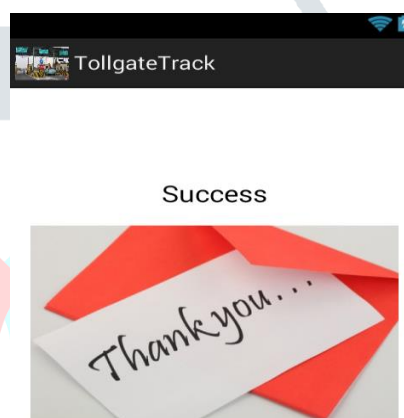


Fig.9 Acknowledgment

VI. CONCLUSION AND FUTURE WORK

Our proposed system explained properly that solution to existing system. To save time, energy and tree, this is proposed e-payment option with efficient manner. Before reaching toll plaza, user able to pay toll plaza successfully without any problems that means digitalized way option is one of ways of save the trees that is one of main aim of this system. Payment details will be sent through registered user mail account. In future enhancement the vehicle, payment to toll plaza can be done at anyplace and anywhere and at time.

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