

## Secure Travel System Using Aadhaar Card

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### Abstract

*This paper proposed a public transport system which focuses on secure travel technique by using Aadhaar card as a travel card. In this study we aim to explain the use of mobile services like mobile ticketing in public transportation firstly, this paper provides a brief glance at secure travel system, since the passengers flow in public transportation is increasing day by day as the population is increasing secure travel is an important social need of today which done by using Aadhaar card. Aadhaar card. Aadhaar consist of 12-digit unique number which is the unique identification authority of India (UIDAI). For each and every individual, transaction –ID for every customer will be unique. Customer detail will be stored in the database for each and every route, thus it would be beneficial for retrieving the data from database in case any disaster or terrorist attack providing efficient and convenient mechanism for recharge facility for the customer make this system user friendly.*

### 1. Introduction

Advancing technology has brought a lot of innovation and improvement to this sector and still there is scope for lot of advancement. Thus, secure travel is an important social need of today. Many of the regions in the country are afflicted, at differing intensities by various insurgent and terrorist movement. Due to rapidly increasing number of passengers there is a bottleneck on the existing system due to long queues

and something that will enable faster, smoother travelling is the need of the today [4].

Nowadays, authentication in a country is a necessary entity. In today's works booking a bus ticket and its Aadhaar authentication is a very essential entity. A reservation and current ticket booked for a person travelling on that ticket should be authenticated. This system also aimed at developing a ticket booking system which consists of sending ticket as a SMS (short message service) on the register mobile.

In conventional or existing paper based ticket system has certain drawbacks, since lot of paper ticket are being printed. And after travelling, the passengers usually throw away the ticket. Again large numbers of trees are being destroyed and they ultimately pollutes the environment and also lots of paper is consumed [2]

The proposed system consist of secure travel using Aadhaar card, Aadhaar is a 12-digit unique number which is the unique identification authority of India (UIDAI) will issue for all resident in India (on a voluntary basis). The number will be stored in centralized database and linked to basic demographics and biometric. Aadhaar card is unique and robust enough to eliminate the large number of duplicate and fake identities in government and private database. The database contains detail information about bus and the passengers travelling in that bus, the source and destination information of each and every passenger will be further useful for retrieving the data in any accidental case, terrorist attack, disaster situation and also analyzing the frequency of buses for particular route.

### 2. Related Work

A. Automatic Ticket Vending via messaging service [4]

This paper provides a brief glance firstly at ATVMs (Automatic Ticket Vending Machine) and CVM (Coupon validating machine) technology which are already implemented in the Mumbai Suburban Railway and its drawbacks. Later it provides an insight into their proposed technology ATVMS (Automatic Ticket Vending via messaging service) which uses SMS (Short Messaging Service) as a medium to issue ticket.

*B. RFID-based Ticketing for Public Transport System: Perspective Megacity Dhaka [ 2]*

The paper based public transport ticketing system, prevailing in the megacity Dhaka (Bangladesh), introduces severe malfunction in the system, malicious argument among public, corruption and most of all traffic jam. This paper actually suggests a much more public friendly, automated system of ticketing as well as the credit transaction with the use of RFID based tickets. The total system mainly acts to bring out the consistency among various bus agencies that will conclude in uniform access of passengers in daily rides through an automated server being updated every single time the passengers travel by carrying the RFID based tickets.

*C. Prestige-contactless smartcard ticketing on London Transport [3]*

This paper describes London Transport's Harrow Bus Smartcard Trial and the development of a challenging new project called "Prestige" (Procurement of Revenue Services) which has been initiated by London Transport to progress the procurement of a new revenue collection service for London's buses and Underground. The Harrow Trial has demonstrated that contactless smartcard technology is a feasible system for public transport ticketing and consultation with industry has not identified a convincing alternative. The business case for a new revenue collection system covering London's bus and Underground network has been agreed and procurement of the Prestige system is progressing in accordance with European Community procedures.

*D. A smart model for urban ticketing based on RFID applications [1]*

Mobility of persons and goods currently represents an interesting field of application for innovative ICT tool as Radio Frequency Technology (RFID). RFID technology is increasingly spreading in logistics activities, such as warehouse management, supply chain traceability. RFID could support an automatic

vehicle and person identification system by reduced investment costs. In the present paper, authors propose an Integrated Mobility System (IMS) aiming to improve performances of ticketing management in a public transport network based on an intensive application of RFID technology.

### 3. Implementation

The Implementation of the project consist of the modules such as the MYSQL server for designing database about the customer accounts, ticket fare, time constraints of travel, source and destination, bus information. Server Admin module and a server connected to the hardware, connectivity is done using JDBC.GUI design using Swing. It is the primary java GUI widget toolkit. Internet connection must be at both ends for registration new customer accounts, deleting, updating existing ones and for recharging the customer accounts, the operators at the ticket booth are equipped with a web-app facility.

Firstly the traveller has to fill all personal details to system at the time of registration. Aadhaar card registration is necessary for the use of secure travel system. Start with ticket booth, passenger use this for searching route and bus fare detail. After selecting particular route for journey he/she has to scratch card RFID card on booth, it validates and check amount, If sufficient amount is present the ticket booking booth send request to SMS gateway for sending ticket detail on registered mobile number as SMS.

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Ticket_ID:-T1019

Source:-ABC

Destination:-XYZ

Fare:-RS 15/-

Balance:-RS 45/-

Time:-8:30 AM

Date:-12/12/13

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**Figure: 1 SMS ticket format**

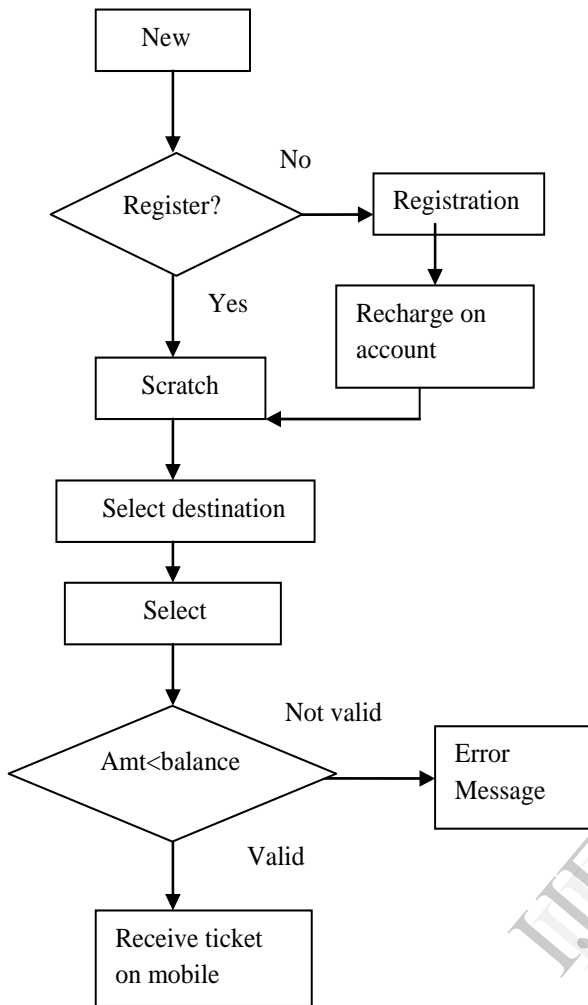


Fig 2.client side flow diagram

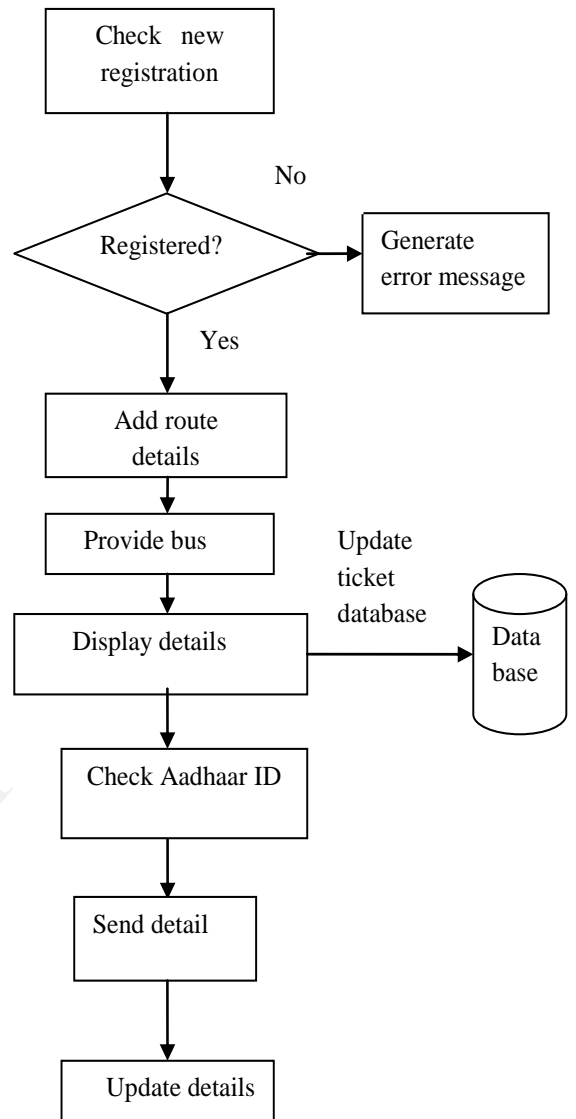


Fig 3.server side flow diagram

#### 4. Conclusion

This paper focuses on the system to be implemented for providing better secure travel using Aadhaar card. The major advantage of this project is its secure authentication schema which has a cashless ticket system and convenient recharge facility for passengers travelling in public transport considering the scenario of existing system. This is a preliminary model which

on further deliberation and full-scale modelling will eliminate or at least reduce some drawbacks or limitation of the existing public transportation system.

### References

[1] Industrial Engineering and Engineering Management, 2009. IEEM 2009. IEEE International Conference on : A smart model for urban ticketing based on RFID applications".

[2] Computer Science and Information Technology (ICCSIT), 2010 3rd IEEE International Conference on RFID-based ticketing for public transport system: Perspective megacity Dhaka

[3] Public Transport Electronic Systems,1996., International Conference on\_: " Prestige-contactless smartcard ticketing on London Transport "

[4] Kaushal ambani, Harshali Gandhi, Priyank shah,2012 international journal of computer application on Automatic Ticket Vending via Messaging service(ATVMS).

[5][www.irishtimes.com/business/sectors/financial-services](http://www.irishtimes.com/business/sectors/financial-services)

[6] [www.thefinanser.co.uk/fsclub/2013/07/which-country-has-the-worlds-best-bank-note.html](http://www.thefinanser.co.uk/fsclub/2013/07/which-country-has-the-worlds-best-bank-note.html)

[7][www.oracle.com/technology/tech/migration/workbench/index.html](http://www.oracle.com/technology/tech/migration/workbench/index.html)

[8][www.oracle.com/technology/documentation/index.html](http://www.oracle.com/technology/documentation/index.html)

[9][www.oracle.com/technology/sample\\_code/index.html](http://www.oracle.com/technology/sample_code/index.html)