International Journal of Research in Engineering, Science and Management
Volume-2, Issue-7, July-2019
www.ijresm.com | ISSN (Online): 2581-5792

Women Safety using Aadhaar Card Technology

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***Abstract*: The main object of this paper is proposed to design a security for women safety to protect them unwanted situation. The project based on Aadhaar card Technology. The Aadhaar card barcode detecting kit is placed in the public vehicles such as taxis, auto rickshaws, etc. and passenger travelling can operate the kit. The Aadhaar card barcode detecting kit can scan the barcode in the Aadhaar card. The barcode detecting kit will detects the Aadhaar card barcode. Once the correct password is entered, the passenger can enter the details like boarding and dropping points. Once the details are entered, it will be updated to the control room webpage. It is priory installed with a database containing the details of the woman in that region. The webpage is designed in such a way that it is accessible only by control room through a valid User ID and password. Once logged in, the Control Room can monitor the details of the travelling point within the area of their control limit. In case the woman faces any danger, she can press the emergency button provided in the kit. Immediately an alert message will be sent to the Control Room can involve in rescue action immediately. Further, the details obtained helps in investigation purposes. IoT (Internet of Things) technology is used to register the details of the woman in a region to a control database. The project is developed with the aim of enhancing women's safety.**

***Keywords*: Aadhaar card barcode, Internet of Thinks, Global System for Mobile, Global Positioning System.**

1. Introduction

Women harassment is the fastest growing crime in the country and as many as 18 women are assaulted or the other every hour across India. Women safety is become a mandatory issue in today's world. Women harassment is increasing nowadays all around the world. This paper deals with providing safety for women travelling in public vehicles. This paper is mainly based on Aadhaar card barcode detecting technology. In this paper we have used Aadhaar card provides the information of the passenger and the details of the vehicles also. The women travelling in the public vehicles must have a protected feeling and this project ensures it. The main object of the paper is to provide a safe travel experience to women travelling in public vehicles like auto rickshaws and taxis. The women nowadays are not feeling safe while travelling in public vehicles. This paper helps in monitoring the travel of women by police Control Room .In case of any emergency, an alert message alone with the current location of the vehicle will be sent to the control room thus helping in quick and easy rescue of the women in danger.

2. Existing system

The following work done related to the women safety. Development of vehicle tracking system using GSM and GPS modem paper present the development of the vehicle tracking system's hardware prototype. The system will provide users with the capability to track vehicle remotely through the mobile network. The main hardware components of the system are AT89C52, Max232.LCD, GSM and GPS, RFID. The developed vehicle tracking system demonstrates the feasibility of real time tracking of vehicles and improved customizability.

3. Proposed system

Women safety using Aadhaar card barcode technology system is proposed to design a security smart card for women safety to protect them from dangerous situation. The security system will be installed in all public vehicles like auto rickshaws and taxis. Every women have a unique Aadhaar card. When the Aadhaar card is shown in the device prefixed in the public vehicles, the details of the women and details of the vehicle drives will be updated to the control room by Wi-Fi module. IoT (Internet of things) technology is used to register the details of the person to the Control Room database's is to pass the alert message end GPS gives the current location of the women when they are in danger to the control room . The information is continuously updated to the control room and helps in recue purposes.

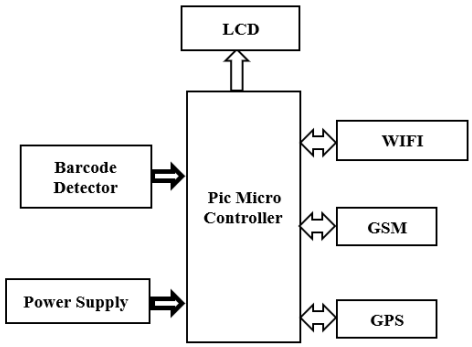

Fig. 1. Block diagram

A. Barcode detector

A bar code reader (or bar code scanner) is an electronic device that can read and output printed barcodes to a computer.

Like a flatbed scanner, it consists of a light source, a lens and a light sensor translating optical impulses into electrical ones. Additionally, nearly all barcode readers contain decoder circuitry analyzing the bar code's image data provided by the sensor and sending the barcode's content to the scanner's output port. Aadhaar Card can now be scanned to collect the data like Number, Name, Year of Birth, Address and Pin Code. This data can be easily recorded in one click. Than on your Aadhaar card you will find a code like QR/Barcode which is on left side below the Aadhaar Card number.

B. GPS

GPS Stands for "Global Positioning System." GPS tracking unit is a navigation device, Normally carried by vehicle or person ,that uses the Global Positioning System(GPS) to track the device's movements and determine its location, The recorded location data can either be stored within the tracking unit or transmitted to internet-connected device using cellular(GPRS or SMS),radio, or satellite modem embedded in this unit.

C. Wi-Fi Module

ESP8266 WIFI MODULE: In this modern world, the Wi-Fi technology has removed the distances, in which the electronic devices are used, which are connected to the wireless Lan (WLAN) network, by using at 2.4 gigahertz or 5 gigahertz radio frequency bands. The Lan network provides the facility of password protection and also allows the device to use the network which is within the range of that device. In this advance technology different types of modules are used, which have different features. Here we would explain the ESP8266 WI-FI module is details but before explaining this types of module, first of all we would explain the brief history of Wi-Fi.

D. GSM

GSM uses a variation of time division multiple access (TDMA) and is the most widely used of the three digital wireless telephony technologies: TDMA, GSM and code-division multiple access (CDMA). GSM digitizes and compresses data, then sends it down a channel with two other streams of user data, each in its own time slot. It operates at either the 900 megahertz (MHz) or 1,800 MHz frequency band.

E. Microcontroller

Microcontroller is made by many Integrated circuit constructed in a single chip.in this controller used to control the function using program.

F. LCD

Liquid crystal display hear used to display the information like travel starting place and destination place.

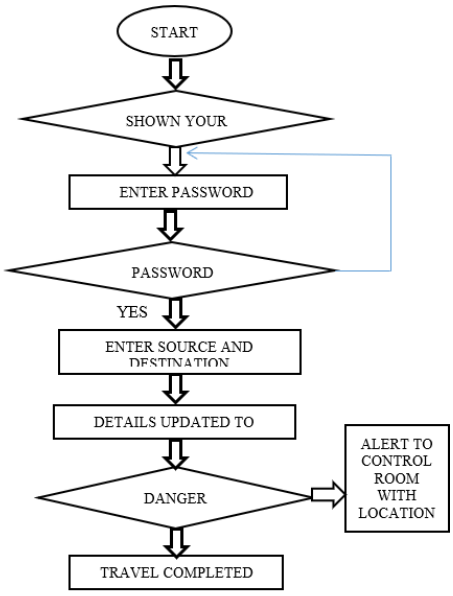

Fig. 2. Flowchart

4. Step by procedure for Women safety using Aadhaar card Technology

- Scan the Aadhaar card in a barcode scanner which is fitted into a vehicle. Each bar in the card which represents the database of the passenger which is collected from the database web which contains the details of the passenger. It will show the details of the passenger like passenger name, permanent address, parent's name, area of the passenger, etc. will be shown in the barcode scanning machine which is entirely controlled by a controller room.
- The passenger can enter the password for security purpose which is given to each and every passenger and After the login, the machine can check the password for the corresponding passenger to display their clear details to the controller room .Then the passenger can enter the correct dropping location and the passenger in time and out time which ensures the passenger's safe travel and can be able to make a safe travel while travelling in public vehicles, auto rickshaws, and cabs etc. which sends to the controller room which send by GSM module. The driver details and the vehicle's details also send to the controller room web through the GSM technology.
- Then the travelling location of the passenger will be track by GPS in which the signals are track by the controller room. The GPS can track the location of the passenger by using the transceiver model fitted in the kit which sends the signal which gives the vehicle location and direction to the dropping location and it is monitored by control room which receives the signal to track the location of the vehicle's.

Table 1
Data of the passenger by swiping their card which is send to the controller room

sl. No	Passenger Name & age	Vehicle No	source	destination	Passenger IN time	Passenger OUT time	Latitude and longitude
1	S. Diya, 28 yrs	TN 36 A 525	Gandhipuram	Peelamedu	8.20 AM	9.02 AM	----------
2	V. Rani, 52 yrs	TN45 B 1	Saravanampatti	Annur	1.05 PM	1.30 PM	----------
3	S. Vini, 44 yrs	TN 52 K5	Centrastation	Guindy	6.08 AM	----------	13.456''N, 80.275''E

- If in case of any critical situation met by the passenger or in case of any robbery or harassment ,they can press the emergency button which is in scanner kit which sends the signal which is used to represent the critical situation of the passenger in which the message will be send to the controller room to take the actions through GSM which also integrated into the kit. This is used for communication between the controller room web and the passenger who is travelling in the public vehicle to make the safe travel to the women's. The below tabular column shows that the details of the passenger while she swipe the Aadhaar card in to the barcode scanner kit which is fitted into the vehicle. If they can make a safe travel there is no issues. Then the last column shows that there is an emergency to the passenger. Then the latitude and longitude will be calculated to trace the current location of the passenger. Finally, the passenger will be safely dropped their home.
- That signal will sent to the controller room as a message. Then the controller room takes the further actions depending upon the situation of the passenger.

References

[1] O. Jo, Y. Kim, and J. Kim, "Internet of Things for Smart Railway: Feasibility and Applications," vol. 4662, no. c, pp.1-9, 2017.

[2] A. Paradkar, "All in one Intelligent Safety System for Women Security," vol. 130, no. 11, pp. 33–40.

[3] S. Shambhavi, M. Nagaraja, and M. Z. Kurian, "Smart Electronic System for Women Safety," vol. 4, no. 3, pp. 4–5, 2016.

[4] S. Sharma, F. Ayaz, R. Sharma, D. Jain, and K. Uv, "IoT Based Women Safety Device using ARM7," vol. 7, no. 5, pp. 11465–11466, 2017.

[5] R. Pavithra and M. S. Devi, "Design and Implementation of a Rescue System for the Safety of Women by using Arduino Controller," vol. 4, no. 2, pp. 329–333, 2018.

[6] G. C. Harikiran, K. Menasinkai, and S. Shirol, "Smart security solution for women based on Internet of Things(IOT)," Int. Conf. Electr. Electron. Optim. Tech. ICEEOT 2016, pp. 3551–3554, 2016.

[7] D. G. Monisha, M. Monisha, G. Pavithra, and R. Subhashini, "Women Safety Device and Application-FEMME," vol. 9, no. March, pp. 1–6, 2016.

[8] P. Yang, W. Wu, M. Moniri, and C. C. Chibelushi, "Efficient object localization using sparsely distributed passive RFID tags," IEEE Trans. Ind. Electron., vol. 60, no. 12, pp. 5914–5924, 2013.

[9] Z. Wu, M. Yao, H. Ma, and W. Jia, "Improving accuracy of the vehicle attitude estimation for low-cost INS/GPS integration aided by the GPS-measured course angle," IEEE Trans. Intell. Transp. Syst., vol. 14, no. 2, pp. 553–564, 2013.

[10] S. M. Hussain, S. A. Nizamuddin, R. Asuncion, and C. Ramaiah, "Prototype of an Intelligent System based on RFID and GPS Technologies for Women Safety," pp. 387– 390.

[11] V. B. Raja, "Innovative approach and performace analysis using LabVIEW in Solar assisted vapour absorption cooling system," pp. 808–813, 2013.