

Banking Locker System with Odor Identification & Security Question Using RFID & GSM Technology

M. Jasmin, S. Philomina and G. Angelo Virgin

Abstract--- This paper portrays Banking Locker Security framework with Odor ID, Security Questions utilizing RFID and GSM innovation which can be utilized as a part of banks, organizations and at individual secured places. Just unique record holder can utilize his locker. This framework utilizes Odor ID, Security address strategy, RFID innovation and GSM innovation which makes it more secured than whatever other framework. The framework is more secured as 4 stages are required for check. RFID tag is confirmed utilizing RFID innovation, then legitimate individual needs to answer the security address utilizing Security address programming system and it ought to be same as that of put away (at first amid record opening), then the substantial individual gets message in his versatile utilizing GSM innovation and needs to sort secret key from his portable and keypad of locker, both passwords ought to match to open the entryway of the locker, and after that scent distinguishing proof will be done, the smell example ought to coordinate with the scent design put away in the microcontroller.

Keywords--- GSM Technology, RFID, Banking Locker.

I. INTRODUCTION

Clients keep their significant things and cash in bank locker, It is vital for each bank that it ought to give high security to Locker framework .In this paper by utilizing RFID ,Odor identification, Security Question and GSM innovation we will give more security than different frameworks. RFID is an acronym for Radio Frequency Identification. When all is said in done terms, RFID is a method for recognizing a man or question utilizing a radio recurrence transmission. Smell Identification and Security inquiries can be utilized as an additional level of security for clients to confirm their distinguish. We can then incite them for the response to the question they select. At the season of enrollment of record of the client, they will be approached to pick a security address for which they need to give reply. Every one of the records of security inquiries of various clients will be put away in microcontroller that will be finished by making suitable programming for security address utilizing C or C++.At the season of entering in locker framework, Firstly RFID tag will be checked by the microcontroller, Different clients in light of their RFID tag and past data put away in chip will be requested that pick security address ,in the event that they will give the correct reply, than GSM innovation will be utilized to send SMS to the clients portable number. The client will enter the watchword utilizing keypad and portable. In the event that the secret key is coordinated. The entryway

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will be opened generally the entryway will stay shut. After these confirmations, smell recognizable proof strategy is utilized as a part of which the scent of their individual is coordinated with the scent designs at first put away in the microcontroller. This framework is more secure than different frameworks since four stages are required for confirmation.

II. RELATED WORKS

In this segment some related works are –

- (a) To expand the security of the clients in ATM machine utilizing security Questions and GSM innovation, by this more security will be given to ATM clients so that if their ATM card is stolen and criminal know its secret key, then additionally he won't have the capacity to prepare the exchange.
- (b) This framework is utilized for maestro shopping card, where it gives security to clients.
- (c) To build the security of trade rooms out bank utilizing RFID and GSM technology.
- (d) This framework is utilized to protect home things and offer security when the proprietor is out of the home.
- (e) This framework is utilized for airplane terminal securities utilizing smell ID.

III. IDENTIFICATION OF ODOR

Each individual has his/her own smell. This is utilized for the recognizable proof of individual in locker framework. At the point when the RFID, Security address, GSM ID is done, then the individual needs to experience Odor recognizable proof. At first amid record opening the smell examples of various record holders is put away in the microcontroller. An electronic nose has been composed and is furnished with a product that can distinguish personal stench. A variety of metal oxide sensors was utilized as a part of this framework for identifying scent. Diverse sensors can be utilized to distinguish scent including conductivity, Piezoelectric, Metal-oxide-silicon field impact transistor(MOSFET),optical Fiber, and spectrometry based sensors. It utilizes standard part analysis(PCA) calculation executed for example acknowledgment and grouping. It is associated with the microcontroller where it checks whether the smell is of confirmed individual or not. On the off chance that the smell matches with the example at first put away in the microcontroller, the locker entryway is opened else it stays in shut position. This strategy of recognizable proof of smell by electronic nose gives an additional level of security in locker framework for bank clients.

IV. SECURITY QUESTION SYSTEM

Security inquiries can be utilized as an additional level of security for clients to check their recognize. You can then incite them for the response to the question they select. At the season of enrollment of the client they will be approached to pick a security address for which they need to give reply. Every one of the records of security inquiries of various clients will be put away in microcontroller that will be finished by making fitting programming for security address utilizing C or C++.At the season of entering in locker framework, distinctive clients in view of their RFID tag and past data put away in chip will be requested that pick security address, on the off chance that they will give the correct reply, then GSM innovation will be utilized to send SMS ready secret word to the clients versatile number. The client will enter the secret word utilizing keypad and if the watchword is coordinated then the client will experience smell ID, if the example coordinates, the entryway will be opened else the entryway will stay shut.

V. WORKING PRINCIPLE

This framework comprises of microcontroller, Security Questions Software, RFID per user, GSM modem, electronic nose, console and LCD. The RFID peruser peruses the ID number from uninvolved tag and sends it to the microcontroller where it checks whether it is of substantial individual or not (from put away information in memory of microcontroller) .If the ID number is legitimate, then microcontroller approach the Security question(different for various clients) from clients and it checks whether it is right or not(from put away information), If the answer is right then microcontroller sends the SMS ask for to the validated individual's portable through GSM, for getting unique secret key to open the bank locker. At the point when the individual sends the secret word to the microcontroller, it will confirm the passwords entered by the console (by individual present before locker) and got from verified individual's cell phone. In the event that these two passwords are coordinated then smell confirmation will be done through electronic nose where it checks the scent design put away in microcontroller. On the off chance that both the examples are coordinated locker will be opened else it will stay in shut position.

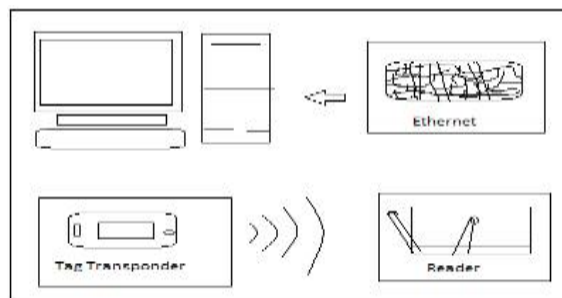


Figure 1. RFID Reader

VI. Flow Chart

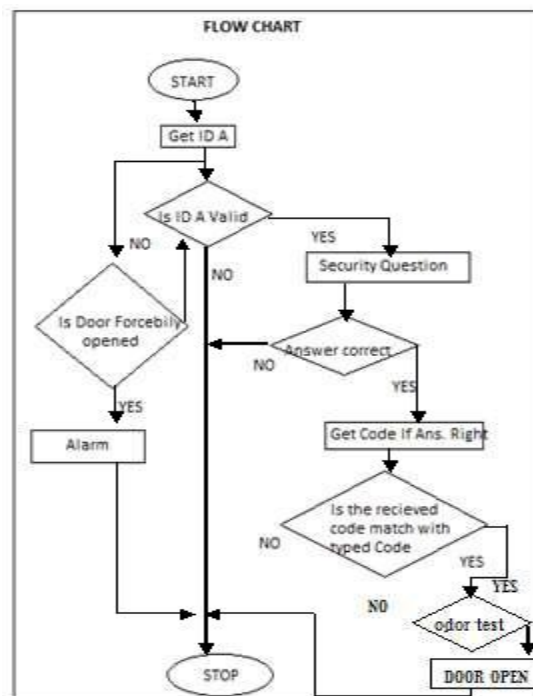


Figure 2. Locker Security System Based On RFID,GSM, Security Questions & Odor Identification

The Flow graph of Banking Locker framework in view of RFID ,Odor recognizable proof, Security questions and the GSM innovation is appeared in the figure 2. As per which the framework will first get ID An and microcontroller will check whether the ID An is legitimate or not, If ID An is substantial, the framework will ask a security address, if the reply of the security question is right, then framework will ask watchword code, if the wrote and the got code coordinates then the scent distinguishing proof will be done, if the smell matches with the example put away in microcontroller then the entryways of the Locker opens else they stay shut.

VI. BLOCK DIAGRAM

The square graph of Banking Locker framework in light of RFID, electronic nose, Security Questions and the GSM innovation is appeared in the figure 3. It comprise of force supply segment, console, Security Question, RFID Reader, AT9C51 microcontroller, MAX232, transfer and driver unit, GSM modem, LCD Display and DC engine. Electronic nose is utilized for smell ID. RFID peruser peruses the information given to MCU AT9C51, Keypad is utilized to enter the code and to answer the security address, LCD show shows the entered watchword or reply of security question, GSM is utilized to send SMS to cell phone of the clients.

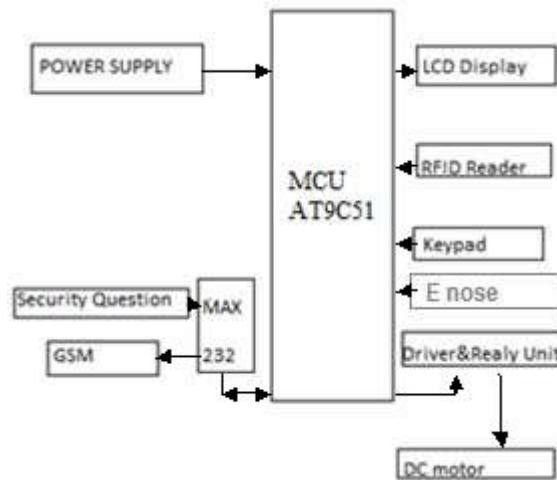


Figure 3. Block Diagram of Locker Security System

VII. CONCLUSION

A managing an account locker security framework with Odor recognizable proof, Security Questions, utilizing RFID innovation, PASSWORD and GSM is executed. It is more secured framework which is financially savvy. The microcontroller looks at reply of the security address and entered at the season of record opening. It likewise thinks about the passwords entered by console and got through cell phone. In the event that these passwords coordinates the microcontroller offers flag to open the locker.

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