

# BANK LOCKER SECURITY SYSTEM USING ANDROID APPLICATION

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**Abstract** - In today's modern world, security plays an important role. Every person has precious accessories like gold, jewelry or cash. It is not enough to have these accessories, but security of this is very important, for this purpose we keep them in bank lockers. Still we often hear or read in news paper that some fake person has access the locker of another person and have stolen money.

In order to overcome this type of frauds, authentication of the person who wants to use the locker is very important. In this project; We are designing advance security systems for banking which will ensure the genuine access of the locker overcoming all the misuses. For this we are using unique password technique, password verification and lastly the OTP verification. The unique password technique to be applied in bank security system because this kind of technique is effective and fast, and after entering the first door user has to enter OTP which is being sent through android application so that IR is disabled and second door is opened, if the user enters the first door and crosses the IR without entering the OTP provided the alarm signal would be raised to make an alarm. After verification of the OTP he has entered second door will be opened, and the person can Access locker only and only if he clears the three security level.

**Key Words:** ATMEGA32 (MC), Android phone, IR Sensor, Buzzer, DC Motor etc.

## 1. INTRODUCTION

In today's modern world, security plays an important role. Every person has precious accessories like gold, jewelry or cash. It is not enough to have these accessories, but security of this is very important, for this purpose we keep them in bank lockers. Still we often hear or read in news paper that some fake person has access the locker of another person and have stolen money. In order to overcome this type of frauds, authentication of the person who wants to use the locker is very important. In this project; we are designing advance security systems for banking which will ensure the genuine access of the locker overcoming all the misuses. Electronic Lockers offer an easy, secure and convenient facility for customers or staff members to store any personal items such as

valuable, handbags, laptops, shopping bags, or any other items. The objective of this project to design three level "BANK LOCKER SECURITY SYSTEM USING ANDROID APPLICATION" by using Android phone, Bluetooth module, Buzzer, Atmega32 microcontroller and android application. User has to open first two doors before the lockers by entering his unique password on keypad in android application provided to him. LCD of android phone is used to see the password that the user will entered while opening the second gate and also simultaneously particular locker will get open. When locker gets open, an SMS would be sent on user's cell phone to inform that his locker has been opened. In case if someone tries to cheat him by opening his locker in his absence, he will be alerted via SMS. comes content here. Paragraph comes content here. Paragraph comes content here. Paragraph comes content here. Paragraph comes content here. Paragraph comes content here. Paragraph comes content here. Paragraph comes content here. Paragraph comes content here. Paragraph comes content here. Paragraph comes content here. Paragraph comes content here. Paragraph comes content here. Paragraph comes content here.

## 2. LITERATURE SURVEY

The idea came to us while searching for good project topics. We always wanted to put theoretical ideas into practice. An embodiment of the present invention provides a compact electronic security locker system that includes an array of lockers, each of which is electronic locked and electronically accessed. One aspect of an embodiment of the present invention allows authorized personnel access to the identification of the person storing an article in a particular locker. In another aspect of an embodiment of the present invention, the storage lockers are arranged in a matrix of rows and columns and are constructed to have a size to accommodate items having a size of common cell phones. Nowadays, banks are continuously improving their locker security systems by integrating increasing amount of electronic components. Therefore, we are making a system for the protection of bank locker using Android application, IR sensors, Bluetooth module, and buzzer. Basically, we are using a keypad to enter the password. When locker gets open, an SMS would be sent on user's cell phone to inform that his locker has been opened. In case if someone tries to cheat him by opening his locker in his absence, he will be alerted

via SMS. The circuit used for our design is obtained from the data-sheets which made our task easier.

**BLOCK DIAGRAM:**

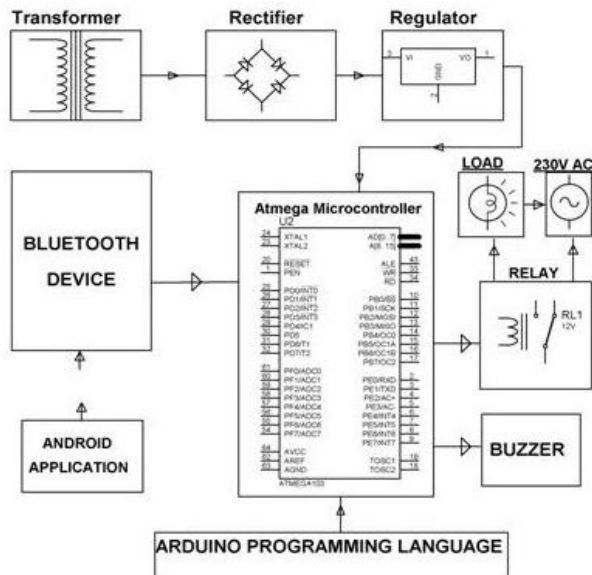


FIG.1: Block Diagram of android application based locker security system

**Table -1:** Specifications of microcontroller.

Components	Voltage	Current
1.Micro-Controller(Atmega32(L))	5.5V	1.5mA
2.GSM Modem	5.3-12V	2A
3.Relay	12V	1A
4.DC Motor(10RPM)	12V	1A
5.MAX-232	5V	3mA
6.Driver IC ULN2803a	30V	500mA
7.LCD(16x2)	5V	103mA

**3. PROPOSED METHODOLOGY**

In this proposed work, the RFID reader reads the data from tag and send to the microcontroller, if the card is valid then microcontroller display the account holder name and number. Then the account holder need to enter the password, if the password is valid then microcontroller sends the SMS to account holder mobile number. Then account holder sends the password to the microcontroller through mobile phone using GSM. The microcontroller compares the passwords entered by

keyboard and received through mobile phone. If these passwords are correct the microcontroller provides necessary control signal to open the bank locker. This method is simple and more secure than other system.

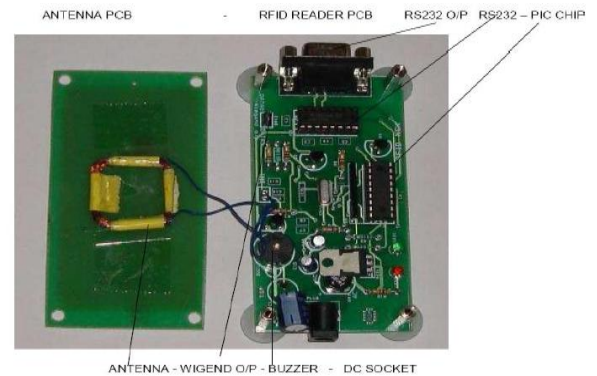


Fig.2: RFID reader

**4. CONCLUSION**

It can be concluded here that the system has been successfully implemented and the aim is achieved without any deviations. The results achieved in this project are genuine and are a product of sincerity and hard work. All the devices communicate well, especially the android application and Infrared Sensor communicates well with the GSM modem in android phone and the SMS is sent successfully. There is a lot of future scope for the project, because a security system helps you protect your property and your privacy. The product can also be developed or modified according to the rising needs or demands.

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