International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395 -0056
Volume: 04 Issue: 05 | May -2017 www.irjet.net p-ISSN: 2395-0072

Smart Atm Access Using RFID,Biometric Finger Print and GSM Module

Saurbh Mirikar[1], Dhiraj Chikhale[2], Yogesh Dhumal[3], Sachin Indalkar[4]

[1, 2,3]Student, Dept. of ENTC Engineering , Dr.D.Y.Patil college of engineering Ambi,Maharashtra,India
[4]Professor, Dept. of ENTC Engineering, Dr.D.Y.Patil college of engineering Ambi,Maharashtra,India

---

Abstract:- In this project we are simply digitize the work , when user or customer come to the bank for opening new bank account for money saving , then the bank require some valid id proofs and one or two nominee . The proof or doccummentation for example true copy of aadhar card , voter id , electricity bill , mobile number for message services and internet banking facility and thumb print for authentication . when the user gives all of these doccument to bank then the bank save this data in to the bank authorise data base at a time of opening new account and the system generate the account no . When the process is completed then the bank give the smart card like ATM and passbook to the user . For accessing the bank account . Nowadays their are many technical fraud happen with ATM to avoid that we design this system . Our system provide triple security for ATM cash withdrawal transaction. Where accessing ATM first swap the RF ID card . System read the data from card and check the data or id in the main server data base . Server found the match for that message displayed on lcd screen is 'please scan the finger print' then next step is to scan the finger print after scanning the server again check match for that . When match is found system generate an OTP code means one time password and send it to the user register mobile number through GSM module which is installed in the system . And also display the message on lcd screen is 'enter the OTP' . User enter the OTP through keypad . Server match the OTP which is enter by the user to the OTP generated by the system . After found the match the system ON the LED and BUZZER for a very short time . It means that the all data entered by the user is correct and user can access the account .

1. INTRODUCTION:-

An embedded system is a mixture of software and hardware to perform a dedicated task. Some of the main devices used in embedded products are µps and µcs. µps are commonly referred to as general purpose processors as they simply accept the inputs, process it and give the output. In contrast, a µc not only accepts the data as inputs but also manipulates it, interfaces the data with various devices, controls the data and thus finally gives the result. All these tasks are possible with the µc because the µc has a CPU in addition to a fixed amount of RAM, ROM, I/O ports and timer all on a single chip. This fixed amount of RAM, ROM and number of I/O ports in µc makes them ideal for many applications where cost and space are critical. The system is designed to control devices at remote place. Relays or Triacs are connected to control the different equipments.

2. BLOCKDIAGRAM:-

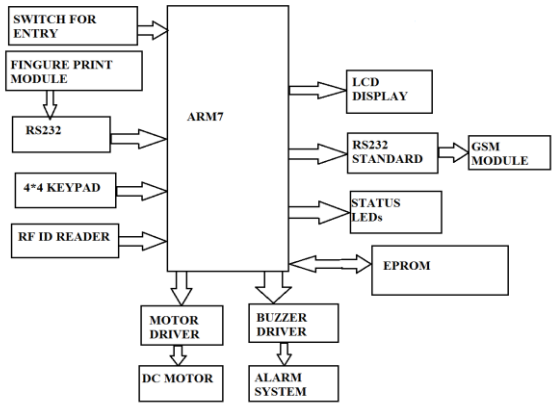


FIG.1:- BLOCK DIAGRAM OF THE DESIGN SYSTEM
It is the block diagram of system of smart atm access using RFID, BIOMETRIC FINGER PRINT MODULE and GSM.We use ARM7 LPC2148 µc and some other modules and components as follows:-

1. ARM7 (LPC2148)
2. RF ID reader module
3. BIO METRIC FINGER PRINT module
4. GSM module
5. 4*4 keypad
6. lcd
7. led status
8. EPROM
9. DCmotor
10. BUZZER

Why ARM7*?*

• It is a 32-bit ARM7TDMI-S µc in a very smallLQFP64 package.
• It has32 KB of on-chip static RAM and 512 KB of on-chip FLASH program memory.
• It has128-bit wide interface enables high-speed 60 MHz operation.
• LPC2138 have In-System Programming/In-Application Programming (ISP/IAP) via On-chip Boot Loader Software.
• LPC2138 have full chip erase, which erase in 400 MS and Programming of 256 B in 1MS.
• Embedded (ICE RT) and embedded trace interfaces offer real-time Debugging with the on-chip real monitor software and high-speed tracing of instruction execution.

• It has 8-channel 10-bit ADCs, which provide a total 16 Analog Inputs and takes conversion times as low as 2.44 MS per channel.
• It have Single 10-bit DAC provides variable analog output.
• LPC2138 have two 32-bit timers/external event counters.

3.FLOWCHART:-

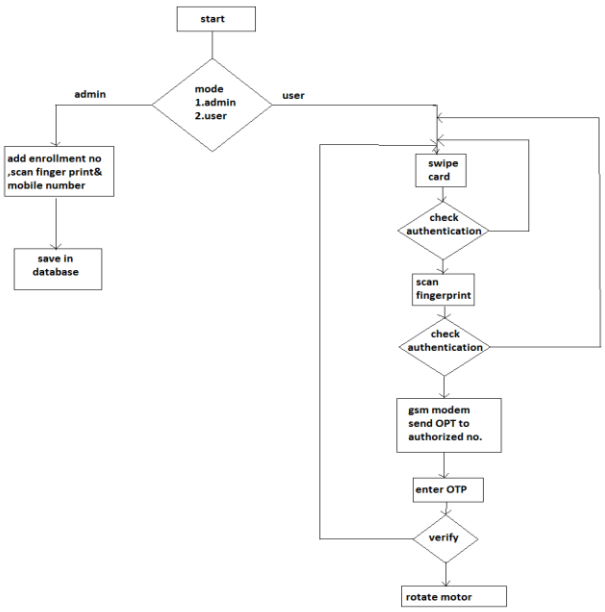
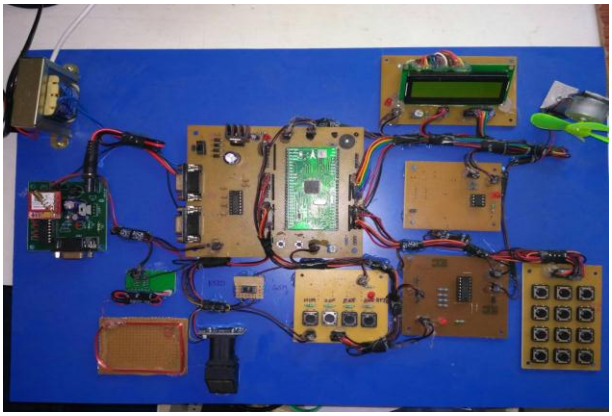
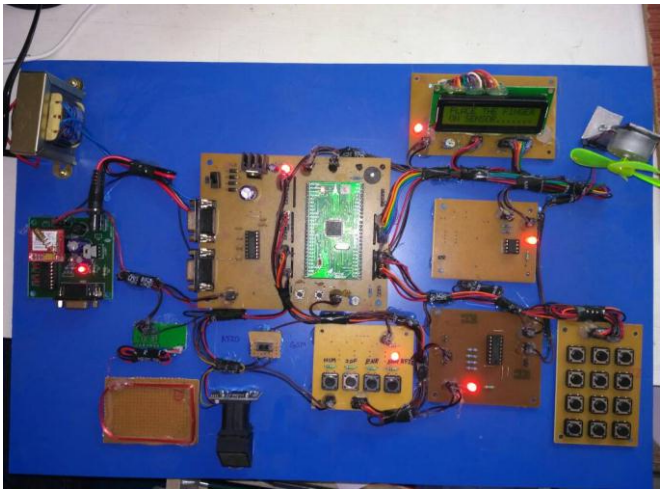


FIG.2:-FIOWCHART

SYSTEM PICTURES:-



PIC -1: Hardware view in OFF state



PIC -2: Hardware view in ON state

ADVANTAGES:-

1. we do not forget our fingers,
2. Users respect them,
3. fraudsters are afraid of them,
4. Protects privacy.
5. Fingerprints do not change over time,
6. Fingerprints stop unauthorized access

DISADVANTAGES:-

1. Higher cost of sensors are used.

APPLICATION:-

1. Government Elections
2. Bank lockers
3. Company / Corporate internal elections
4. Union Elections
5. ATM's
6. In industries for account section
7. laboratory
8. In defence or military

4. CONCLUSIONS

In this project work, we have studied and implemented a complete working model using a µc. The programming and interfacing of µc has been mastered during the implementation. This work includes the study of **BIOMETRIC FINGERPRINT and RF identification modules.**

REFERENCES

[1] Anil K. Jain and Arun Ross, "Multibiometric Systems", *Communications Of The ACM*, January 2004/Vol. 47, No. 1, pp. 34-40

[2] Moses Okechukwu Onyesolu, Ignatius Majesty Ezeani, "ATM Security Using Fingerprint Biometric Identifer: An Investigative Study", *(IJACSA) International Journal of Advanced Computer Science and Applications*, Vol. 3, No.4, 2012, pp. 68-72