SMARTCARD LESS-BIOMETRIC TECHNIQUE(SLBT) USER AUTHENTICATION DEFENDING AGAINST ILLEGITIMATE ACCESS

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ABSTRACT *- The authentication scheme is an important cryptographic mechanism, through which two communication parties could authenticate each other in the open network environment. We are going to implement hybrid fusion method of fingerprint identification for high security application. "Am I Really the Person Who Is Accusing the Resources" will be solved by implementing Smartcard Less Biometric Techniques (SMBT). The card holder who accesses the resources through biometric details will be upgraded by providing a unique ID for every citizen to the e-service then user can access by using fingerprint which will match to those fixed details on the servers, there by defending against illegitimate access. The predefined information of every individual user is stored in IOT. This method is highly secured. The account will get locked more than three wrong attempts. Therefore, biometric-based authentication schemes gain wide attention.*

Key Words: **IOT, SMBT, PIC,. etc.**

1. INTRODUCTION

In biometric-based authentication schemes, the checking of the biometric characteristics is performed in the servers. Checking biometric in the servers is the method to preserve the privacy of the biometrics because such design makes anyone else to obtain the biometric characteristics**.** Biometric sensors use human physiological or behavioral characteristics to uniquely verify an individual's identity. Common biometric characteristics used for identification purposes. People must have their personal account/business account on different bank this is usual one. All must carry their debit/credit card at all time. If they missed their card they may pay some amount to bank and get a new card this is one case. Another case is due to crime your card is robbed by some un trusted people and debited your money from your account. Smartcard Less Biometric Technique (SLBT) is employed primarily to overcome this issue. In our developing country this is one of most required technique which must be implemented and also the crime is reduced. This is done by the unique ID of each citizen (Aadhaar number) is linked with bank account of each user. Once the Aadhaar card is linked with bank account all the details are fetched and the user can accesses anywhere. On the other side the ATM machine is provide with fingerprint scanner by this next process of four digit security pin and then accesses your account. This is highly secured so if your attempts take more than three times your card will get blocked. Once the transaction is made the message will send from the bank to the particular account holder.

2. OBJECTIVE

- In order to reduce crime and illegitimate accesses of personal account.
- No need to carry our Credit/Debit card wherever we go.
- Our personal account will be protected.

3. METHODOLOGY

EXISTING SYSTEM

We need to carry our smart card(credit/debit) at anytime for our transaction. Sometimes thief (un trusted people) also who knows theirs card details and try to made transaction. Some people forget to carry along with them the card. On those situations they may don't sufficient money for some purpose. If the card may get damaged we will not able to make our transaction properly.

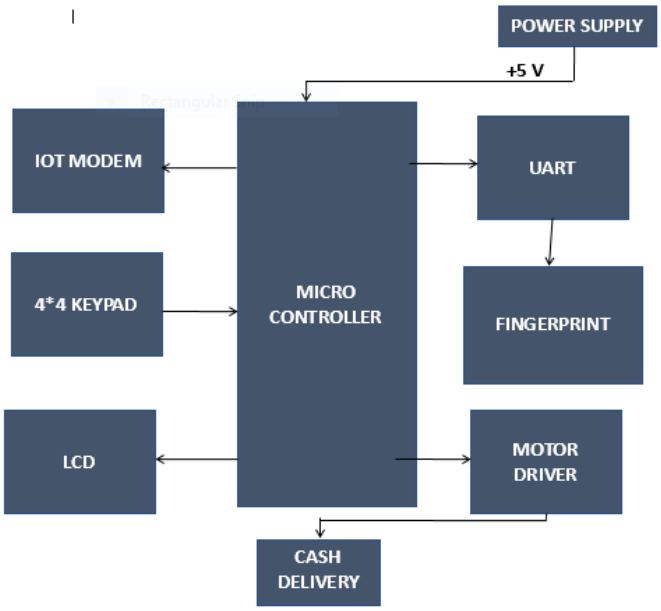

FIG1: BLOCK DIAGRAM

The card contain chip in that all data's is stored and the ATM contains card slot in which the user insert the card. The card made contact with the slot and fetch all the details from the servers. Also the bank will not able to fine whether the

transaction is legal or illegal. To overcome these issue we are going to deal with SLBT.

PROPOSED SYSTEM

The central idea of this project is the process of inclusion of fingerprint which replaces the smart card to enhance the security from cyber theft. By using this device the personal account can be easily accessed by the individual. All the account details of each citizen is upgraded to the e-service server when the person is issued with new account. User will access their account for transaction by placing their fingerprint on fingerprint module and then enter four digit security pin. This authentication will match to those fixed details on the server and the account details of that user will be display on the screen of ATM. Details like account number, account holder name, phone number, what type of account then the user can easily accesses their own account and complete their transaction and then the transaction details is message to their mobile phones of particular user. In this method we have used Finger print sensor to sense our fingerprint, IOT modem is used to store the fingerprint of every account holder and LCD display is used to display the contents like enter the pin, transaction successful etc.,

4. CIRCUIT DIAGRAM

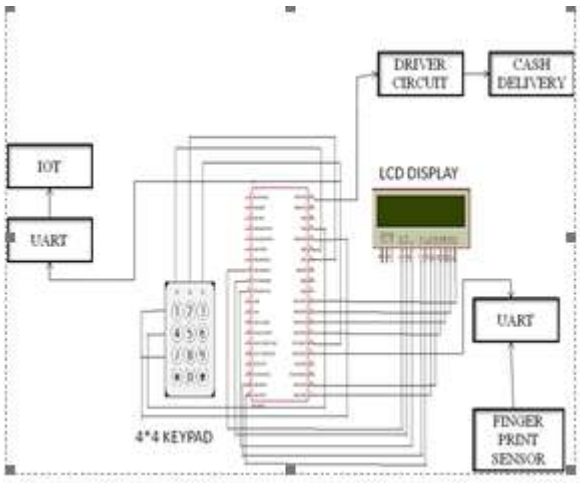

FIG2: CIRCUIT DIAGRAM

5. SYSTEMDESIGN

- ✓ **Step down transformer**

Transformer works on mutual induction principle. It is used for **step down the 230v ac into 12v ac** for operating the electronic components

- ✓ **Bridge rectifier**

Bridge Rectifier is an Ac to Dc converter. It rectifies main AC input to Dc output and mainly used in power supplies. It converts 12v Ac into 12v Dc

- ✓ **Voltage Regulator**

It maintains the output voltage to a constant level. Microcontroller works at 5v Dc, but the output after the bridge rectifier is around 16v.So to reduce this voltage from 12v to 5v dc and to maintain voltage at constant level

- ✓ **IOT Module**

Internet of things is a small electric device embedded in objects, machines and things that connect to wireless network and sends & receives the date. Internet of things board featured with SIM900 GPRS modem to activate internet connection also equipped with controller.

- ✓ **PIC Microcontroller**

PIC Microcontroller is one of the **cheap and best** and it has **40 pins** & **33 pins** are input and output. It has **minimum** number of **instruction sets**. **Main advantage** is that it can be **write-erase** many times because **of Flash memory**.

- ✓ **UART**

UART (Universal Asynchronous Receiver/Transmitter) is a piece of computer hardware that translates a data between parallel and serial forms. It can control the computers interface to its attached serial devices. It can exchange data from the sender through GPRS modem and other serial devices.

6. SIMULATIONS

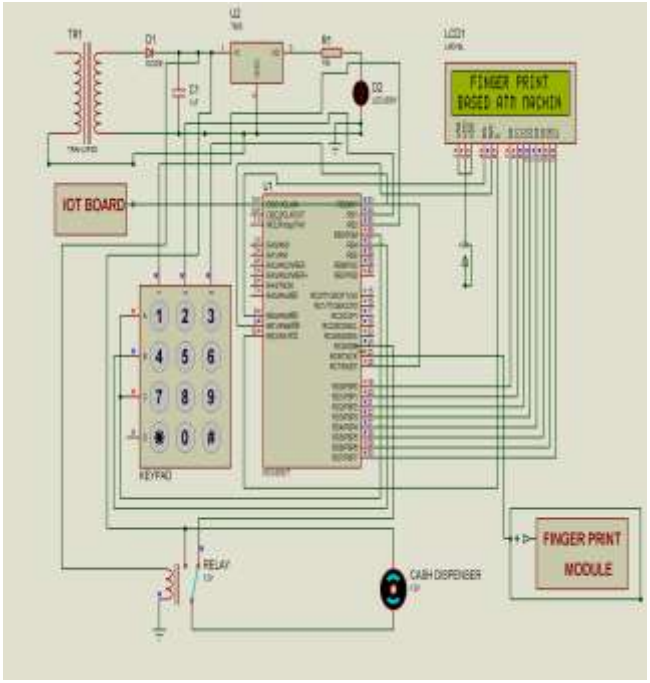

Fig.3.Simulation

7. HARWARE IMPLENTATION

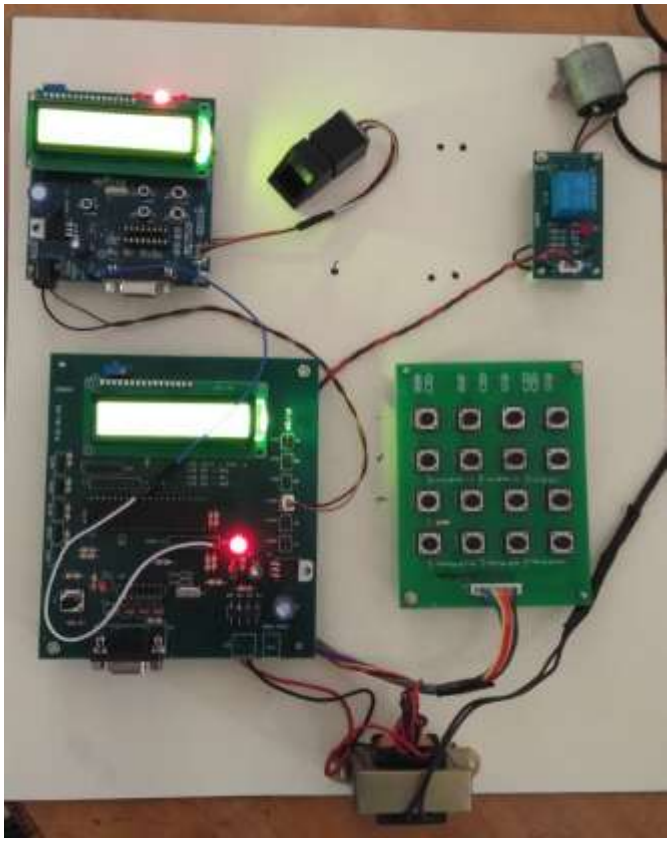

Fig.4.Hardware Design

8. CONCLUSION

Internet has brought a great revolution in our society. Internet of things is connecting everything to internet. IoT is seen everywhere now. IOT used in our project is to store the fingerprint details and we can retrive in all the atm machines. The main aim our project is to prevent against llegitimate access. By this method our personal account is protected.

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