Two Level Authentication for Banking System

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Abstract - *In this project, we can add more security to ATM (Automated Teller Machine) system. Now a days we are suffering from some problems like shoulder suffering, use of skimming devices etc. so we can overcome such problem by using biometric authentication and OTP system. At the time of bank account creation, banker's will collect the account holder's information like mobile number and fingerprint also for validation of account fingerprint will be scanned, if fingerprint get matched then OTP will be send on valid mobile number which is given at the time of account opening. OTP will be of 10 digit number which will only valid for one use. Next time we cannot use same OTP. Every time new OTP will received by account holder. There is no fixed PIN number hence it will increase the level of security.*

***Key Words*: ATM, OTP, Authentication, Fingerprint.**

1. INTRODUCTION

In existing system, we use the ATM card which is made with the help of plastic and the magnetic stripe. The stripe having all the information about the account holder but if the magnetic stripe is get scratched then information will be lost. This is the disadvantage of ATM card, we can overcome this problem by using the biometric authentication and OTP system. Another problem which can be occurred in existing system is losing the ATM card. ATM card also have number of drawback like forget pin, breaking card, losing card, stolen card and so on. Because of all these problem chances of frauds has been increased. User get service 24*7 hour from ATM, so the ATM system must be secure and fraud less. So, in this project we are going to overcome all the problem occurred in ATM. For this we will use biometrics system i.e. fingerprint scanner. First user will scan the fingerprint if it matches then system will shows account list that the user have in different banks. After selecting bank account the message will be send to the user which will be 10 digits OTP. The OTP will valid for particular time, next time we cannot use same OTP. There is no need to remember any pin.

1.1 Problem Definition

Now a days, the ATM system which we uses that accepts only on the PIN CODE security system, enabling the other person rather than the owner to access the account very easily. This ensures that traditional ATM system is not fully secured.

1.2 Project Scope

Scope of this project is very broad in terms of other security of user such as:

1.Hand Cash is not required by the user
2.easy and safe transaction every time for the user
3.E-Shopping and every other mean where transaction need to be done will be carried out by fingerprint based transaction

2. System Architecture

Fingerprint Module: This block is used for authentication purpose the primary step is to verify currently provided fingerprint with the fingerprint which is register in the database at the time of account opening.

Max 232: This block is used for serial communication this block is used to connect fingerprint module with PC /LAPTOP and GSM Module.

PC/Laptop: It is used store the database of account holder which are registered in bank, using Java and MySQL language.

GSM Module: In order to send OTP, GSM (Global System for Mobile Communication) technology is used with the help of GSM Modem. A GSM Modem is one of the specialized type of modem which accepts a SIM card, and operates over a subscription to a mobile operator, just like a mobile phone.

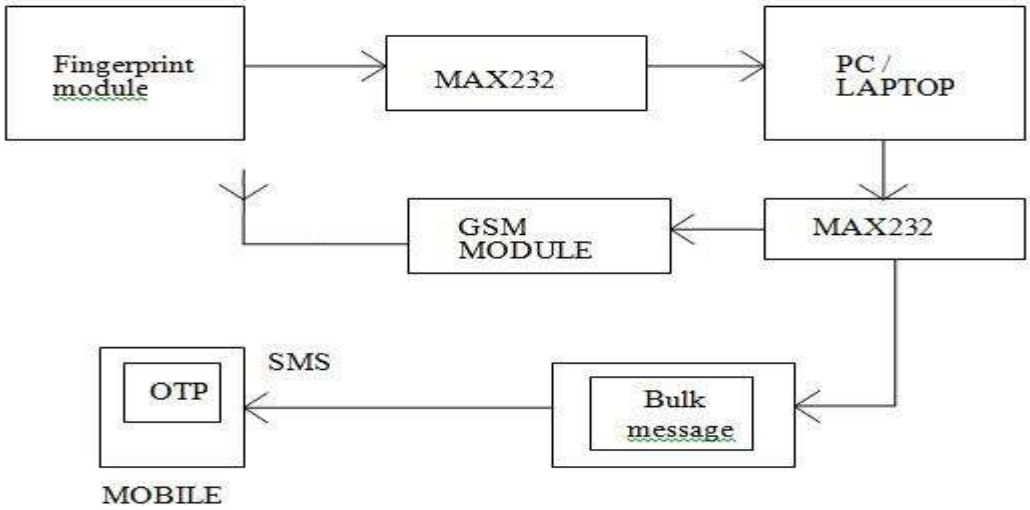

Fig -1:System Architecture

Fig-2: Fingerprint module

This is the device which we are going to use for the fingerprint scaning.

Advantages

[1]Very accuracy and security.

[2] It is the most economical biometric PC user authentication Technique.

[3] It is one of the most developed biometrics.

[4] Easy to use.

[5] It is standardized.

Application

[1] Bank

[2] Locker

3. CONCLUSION

Fingerprint is the less expensive, fastest, convenient and more reliable way to identify someone. It has many usability advantages over previous traditional systems such as passwords and PIN. This system used to uniquely identify the user. Fingerprint recognition technology is used for security purposes, to restrict illegal access. As fingerprint base ATM system develops, it is expected that more affordable and more portable fingerprint recognition devices will become available, and finger-print based system will be considered a safe and convenient personal identification system. Because of the PIN it is more secure and no one can access our account.

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