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Revolutionizing ATM Security with Fingerprint-Based Cardless Transactions

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ABSTRACT:

In a fingerprint secured ATM, customers only need to rest their finger on scanner surface and identify gets verified instantly. To ease acquiring of biometrics from users, we can use a database to verify fingerprints of a user of a bank, as it is linked to bank accounts. Basically user has to enroll fingerprint in ATM system and enter the usual PIN, and select from which bank they want to transact. The system will return with options to various features in ATM only if the fingerprint gets verified.The IVR System and Braille Keyboard will guide the visually challenged people to access the ATM.

Keywords— Security, Capacitive Scanner, Braille Keyboard, Interactive Voice Response System, Fingerprint matching,Eclipse,Visual Studio 2017 Community Edition.

INTRODUCTION :

Automated Teller Machine (ATM) is most commonly used for money transactions such as cash deposit, cash withdrawal, online payment etc.

Existing System:

In the existing ATM system, the person is identified with the PIN only. The crimes at ATMs have been rapidly increasing. There may be chances to forget the PIN ,there is also a possibility of the PIN being hacked.

Thus the security in the existing system is not as it should be. There is a need to implement some other new techniques to be more secured while using ATMs. Some techniques that help to enhance the ATM security is-

Finger print recognition

Iris recognition

Retina recognition

Face recognition

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Voice recognition ,etc

A) Proposed System

In our proposed system, we are improving the security by using the Fingerprint Recognition Technique in ATM that will help the user to access multiple bank accounts without the need of different cards.The IVR System and the Braille Keyboard will be a better guide for the motive of helping the visually challenged people acces the ATM.

PROPOSED AND IMPLEMENTED SYSTEM ARCHITECTURE

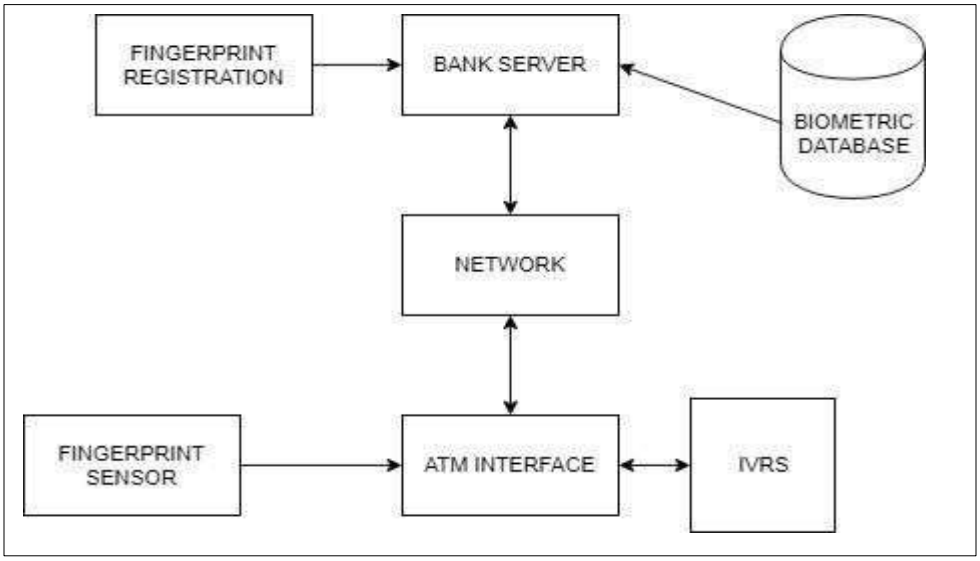

Figure 2- system architecture

Working of proposed system

Step 1: Select bank

Step 2: Enroll Fingerprint

Step 3: Select transaction method

Step 4:Select transaction type

Step 5: Enter amount if NO then go to Step 1

Step 6: Enter pin if no then goto Step 1.

Transaction Successful

LITERATURE SURVEY:

SR.NO	TITLE	PUBLICATION DETAIL	ADVANTAGES	LIMITATIONS
1	One Touch Multi-banking Transaction ATM System using Biometric and GSM Authentication	IEEE (2017)	Card less Transactions.	If ATM card is lost or stolen, wait till a new ATM card is handed out to you. Mobile is always required.
2	MFCC and VQ Voice Recognition Based ATM Security.	IEEE (2017)	All the bank accounts are managed in a single finger touch thus no need to carry multiple cards and remember their passwords.	Cough, colds or overall health condition of the speaker may provide variations in speaker's voice quality.
3	A Self Banking Biometric Machine with Fake Detection Applied to Fingerprint and Iris along with GSM Technology for OTP	IEEE(2017)	Using the two most stable physiological biometrics as a means of identification of an individual has made the system more reliable.	Mobile is always required.

WORKING:

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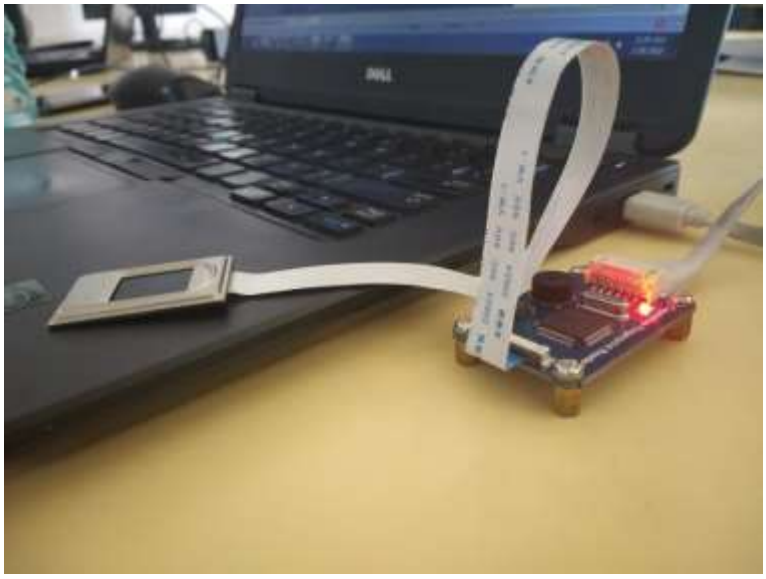

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CONCLUSION:

The proposed card less ATM system has advantages such as saves manufacturing cost of cards and overcomes drawbacks of the traditional system like carrying multiple cards, losing of card, fraud calls related to ATM card, etc. and provides high security by using authentication like fingerprint therefore making it easy to use multiple bank account transaction in a single touch. This system provides an IVR system which guides the user to operate the system,also has a Braille keyboard helping the visually challenged people. Performance of system can be increased by increasing efficiency of fingerprint algorithm. Biometric authentication can be used for payments in merchant shops instead of traditional card swiping for payments

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