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FINGERPRINT-BASED CARDLESS BANK MACHINES

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ABSTRACT:

Customers at a fingerprint-protected ATM need simply to lay a finger on the scanner surface for rapid identity verification. Since fingerprints are often associated with bank accounts, using a database to authenticate a user's fingerprints may simplify the process of collecting biometric data. The user simply enrolls their fingerprint in the ATM system, enters their PIN, and chooses the bank from which they want to do business. Only when the fingerprint is authenticated will the system provide you access to the different ATM functions.Those who are visually impaired may use the ATM with the help of the IVR system and Braille Keyboard.

Keywords— Technology, Capacitive Scanner, Braille Keyboard, IVR, AFIS, Eclipse, Visual Studio 2017 Community Edition, Fingerprint Matching, Biometrics.

INTRODUCTION:

Common uses for ATMs include making deposits and withdrawals as well as making online payments.

Preexisting Structure:

The current ATM system simply uses the PIN to verify the user's identity. ATM robberies have skyrocketed in recent years. It's possible to lose track of the PIN, and it's also possible for someone to steal it.Therefore, the current system's security is inadequate. Additional innovative approaches are required to make utilizing ATMs safer. Methods that aid in strengthening the safety of ATMs include-

Verification via fingerprints

Recognition of the iris

- Eye-tracking technology
- Recognizable faces
- Voice-activated devices, etc.

A) Proposed System

Our suggested method enhances security by incorporating fingerprint recognition technology into automated teller machines, allowing customers to access a number of accounts with a single swipe.The goal of facilitating access to the ATM for those with visual impairments may be better served by the IVR System and the Braille Keyboard.

SYSTEM ARCHITECTURE RECOMMENDATIONS AND CASE STUDIES

Figure 1- External Components of the system

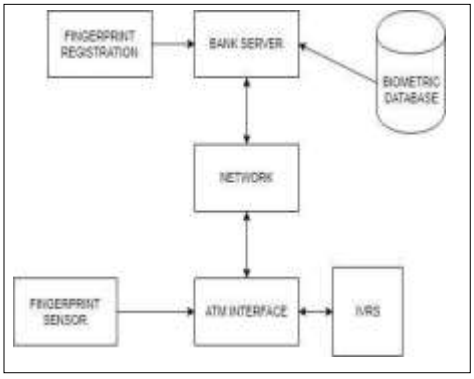

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Figure 2- system architecture

Working of proposed systemStep 1: Select bank
Step 2: Enroll Fingerprint
Step 3: Select transaction methodStep 4:Select transaction type
Step 5: Enter amount if NO then go to Step 1Step 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 identificationof an individual has made the system more reliable.	Mobile is always required.

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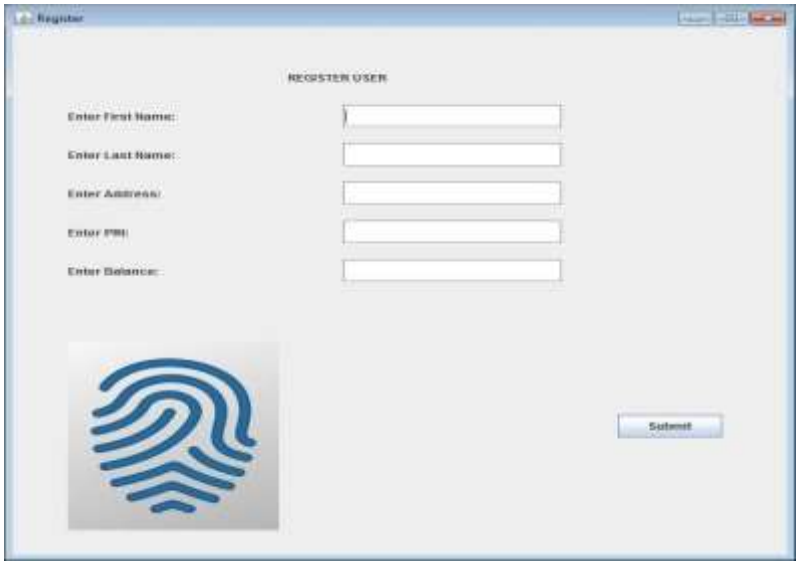
WORKING:



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CONCLUSION:

The proposed cardless ATM system has advantages such as saving manufacturing cost of cards and overcoming drawbacks of the traditional system like carrying multiple cards, losing of card, fraud calls related to ATM card, etc., and providing high security by using authentication like fingerprint, so it is simple to use multiple bank account transactions with a single touch. This system has an interactive voice response (IVR) system that instructs users on how

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to use the system, and it also includes a Braille keyboard to aid the visually impaired. Boosting the fingerprint algorithm's efficiency will improve the system's performance. Instead of using a credit card reader, stores might employ biometric authentication to process transactions.

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