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CARDLESS TRANSACTION OF ATM MACHINE WITH A SECURITY OF FACIAL RECOGNITION AND OTP WITH SHUFFLING KEYPAD.

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ABSTRACT

The main objective of this paper is to design a secure ATM system using Face detection and an OTP system. The use of ATM machines is increasing day by day but fraud is also increasing rapidly. ATMs play an important role in bank transactions, but with increasing fraud, people are scared to use ATM systems. So, we can develop a system that is secure as well as user-friendly to completely eliminate fraud. In the present system is used only magnetic cards and static PINs for authentication. These magnetic cards are easily cloned and by using a shoulder surfing/camera located above the keypad, the PIN is easily found. So, to reduce these types of frauds we can construct a card less transaction in an ATM system by using face detection and OTP system.

Key Words:
Digital Image, Face Detection using LRR, OTP, Authentication, Shuffling Keypad, Security.

INTRODUCTION

In today's world to secure personal data is a big problem for the common man. Leaked personal data means losing all money within a minute and this type of fraud in India is increasing rapidly. In India, bank accounts and the use of ATMs are increasing rapidly, but fraud is also increasing in this system.

So, we are designing a system to improve the security of the ATM system. This system is very secure and not costly. There is only one additional step to give a live photo in the registration process. For security, people can use a face that has been unique, easy, safe, and accurate for identification. In this system, we can also give an advantage to the customer to give access to an ATM to relatives without any hesitation. For these we can add an OTP step in ATM for the guest user and OTP will send on account holder's mobile number. This OTP can be used only once in a transaction.

MOTIVATION

In India, lots of people lose their money due to a lack of security in ATM machines. So, we decide that to design software that increases the security of ATM machines. We proposed a system that is very secure and user-friendly. This system is convenient for transactions at the ATM system. We can use face recognition and OTP to increase the security of the ATM system. We can also use a shuffle keypad to protect from shoulder surfing attacks. We can use the face as the unique identity in the authentication. This system completely eliminates fraud in ATM systems and provides a secure transaction.

PROBLEM STATEMENT

For the security of ATM machines, we proposed a system with new features like face detection and OTP with a shuffle keypad to increase the security of the ATM system.

We can propose an ATM system to increase the security of ATM machines and minimize fraud. Presently the ATM machine uses a magnetic card and static PIN for personal identification. There are many security drawbacks in the present system that increase the fraud in this system and people lose their money. So, we can develop a system that is very secure and simple to use. At present work card cloning, shoulder surfing this type of fraud.

RELATED WORK

The secure online transaction is dependent on the security of ATM machines and banks. But now the present ATM system becomes very unsafe for transactions. The Atm system Cheak the card details and PIN with the bank database if it matches, the transaction is successful otherwise failed. But in the present system, the magnetic cards are easy to clone, and by the shoulder, surfing PIN getseasily.

To overcome this problem, we are giving more security to the ATM system. So, we made a Bank and ATM software with two-factor authentication for self-ATM users and guest-ATM users. In this system first, we can create a Bank module. In the bank module, different functions like creating a new account with a photo, depositing money, viewing transactions, deleting the account, etc. In the main ATM system, for self-user will enter bank account number and PIN and click on face detect. The system will match the face with the bank database if the information is correct then the transaction is successful. If information is wrong give it two more chances otherwise bank account is blocked. For guest-user, enter account number and PIN and click on generate OTP. The OTP will send an account holder's mobile number that is linked to a bank account. Guest user asks OTP to account holder and enter if entered OTP is correct, the transaction is successful. If OTP is not the correct system give one more chance otherwise transaction.

PROPOSED SYSTEM

We can propose an ATM system transaction-based face detection and OTP. In this project, we can build a cardless transaction of ATM-based on-face detection using the LRR algorithm. We can also increase the security by using a shuffle keypad. We can eliminate all drawbacks of the existing system.

There is three models in the below diagram

1.Bank Module

2.ATM-Self User

3. ATM-Guest User

Bank Module:

I) In the bank module first we login into the system.

II) There are different functions in the bankmodule.

III) We can create a new account, add all user's detail, take a live photo of the user and save it in the bank database.

ATM-self user:

I) User will enter the account number and PIN.

II) If the information is correct then click user click on take photo.

III) System will match the photo with the bank database by using the LRR algorithm.

IV) If the photo is matched withdrawal process is complete and the PIN update option is also enabled.

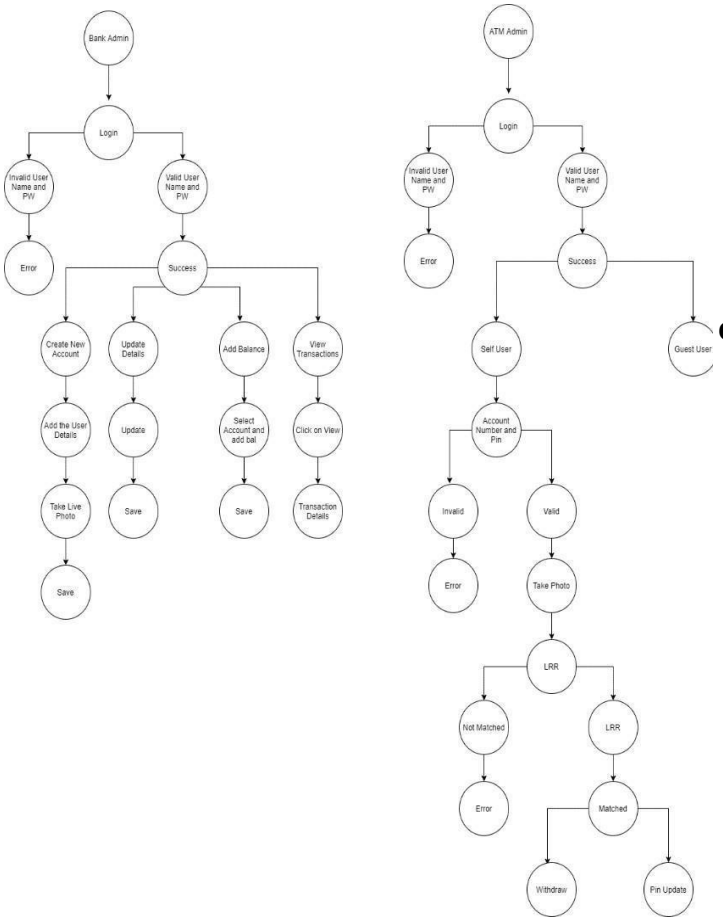
ATM-Guest user:

I) Guest users enter bank account numbers and PINs.

II) Then the user clicks on generate OTP and the system will send OTP onthe account holder's mobile number.

III) Guest user asks OTP and enter in shuffling keypad.

IV) If OTP is correct then withdrawal is completed successfully



SOFTWARE REQUIREMENTS

Sr. No.	PARAMETER	MINIMUM REQUIREMENT
1	OPERATING SYSTEM	Windows 7/8.
2	CODING LANGUAGE	JAVA/J2EE
3	IDE	Eclipse Kepler
4	DATABASE	SQL Yog community/XAMPP Server.
5	WEBSERVER	Apache Tomcat.

HARDWARE REQUIREMENTS

SR. No	Parameter	Minimum Requirement
1	Processor	Core I7
2	RAM	3GB

CONCLUSION

We are increasing the security of ATM machines by using the latest technology. To avoid skimming, shoulder surfing, etc. this type of fraud we are giving two- factor-authentication for ATM system. Face recognition and OTP with shuffle keypad give reliable security to ATM machines. So, the card less transaction with a shuffling keypad gives whole security to the ATM system for the transaction.

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