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A SECURE ATM CARD VERIFICATION BASED ON FACIAL RECONGINITION AND OTP

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Abstract-Facial recognition is done using biometric methodology (using PCA algorithm).Insert the card in machine once the face is recognized ,The transaction is proceeded .If the face is not recognize the PIN number is entered and the OTP is automatically generated to registered mobile number or email. If the person enters the OTP wrongly an alert message is send by using GSM module.

Keywords- Authentication, Digital forensics, Biometric securities, Identity theft, and OTP methods.

I. INTRODUCTION

ATM is a machine which is used to dispense and deposit money. ATM processor is a Automatic Teller Machine, In modern ATM machine , the customer will insert a plastic ATM card which has magnetic stripe or a plastic smart card which has a chip which contains a unique card number and consist of few security information such as an expiration date or CVVC. Each ATM card has unique number called PIN number which provide authentication .Personal identification number has four digits which are randomly chosen. Sometimes it is also in sequence order, it is based on the account which is provided by the bank. The customer entered PIN number should match the PIN stored in the chip on the card (if the card is so equipped) or in the issuing financial institution's database. i.e. by scratching the ATM card into the machine and entering PIN number, one can easily perform transaction, transfer money, etc.

An ATM card is any payment card which is provided by a financial institution that enables a customer to access an automated teller machine (ATM) to perform transactions like deposits, cash withdrawals, obtaining account information, etc. ATM cards are also called as bank card, MAC (money access card), client card, key card or cash card, etc.. In this ATM we have use an a new concept face recognition to process the transaction A face recognition system is known as computer application which are mainly used for identifying or verifying a person from a digital image. Face detection is one of the computer technology used in various kind of applications that identifies human faces in digital images .the face is recognized and the detected facial features are stored in a database. Faces are detected using a biometric method A Biometric device is defined as security identification and authentication device. It has various characteristics include fingerprints, facial images, Iris prints and voice recognition etc. we have also used an another concept OTP. A one-time password (OTP) is a password which is valid for only one login transaction, on a computer system .OTP is very secured mechanism. In some exceptional case if a person cannot go to ATM .A person colleagues can go to ATM and process the transaction using OTP .If the person enter the OTP wrongly ,using GSM module an alert message is sent to the required person who registered the account.

II. SYSTEM ANALYSIS

2.1 Existing System

Now a days people use PIN number to get a money in ATM machine. PIN number is provided in the financial institution for every account. It is not secured because hackers can crack the Four digit number easily by fixing the camera near ATM machine. ATM plastic card consist of sixteen digit serial number, while inserting the card in ATM machine the sixteen digit number is scanned using some of the

tools and it is stored in their database so, hackers can easily fix those numbers in a duplicate plastic card and enter the PIN number finally they process the transaction and they get the money. So, Many of the transaction process goes wrongly by using PIN number

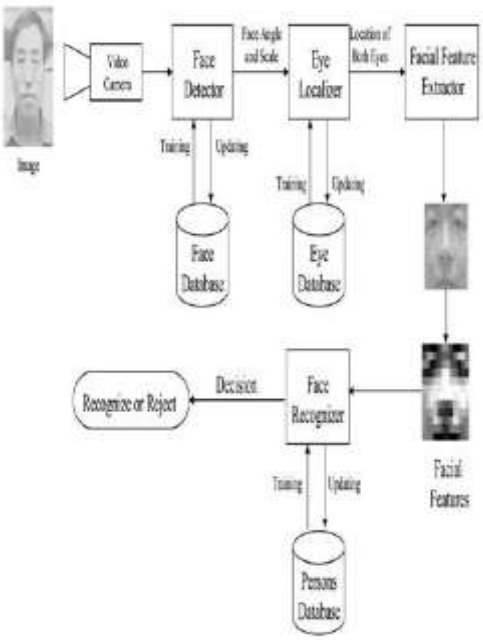
2.2Proposed System

Instead of pin number our idea is to use face recognition, which is done using biometric method. People have to register their details while opening their account for ATM card. While the process of registration, a person face is scanned and stored in a database. Registration includes persons details such as name ,Age, address, mail id, phone number. In this paper we add an another concept i.E OTP (one time password).In some exceptional case if a registered person cannot able to go to atm. A respected person colleagues or relatives can get a cash in ATM using OTP If the face is not recognized it just simply show enter PIN NUMBER. After entering the PIN number, OTP is generated to the person mailid The OTP is sent to the person mail id who have an account. The required person will intimate an OTP to his/her colleagues .once the OTP is entered the transaction is proceeded. If the OTP is entered wrongly an alert message is sent to the person who registered the account.

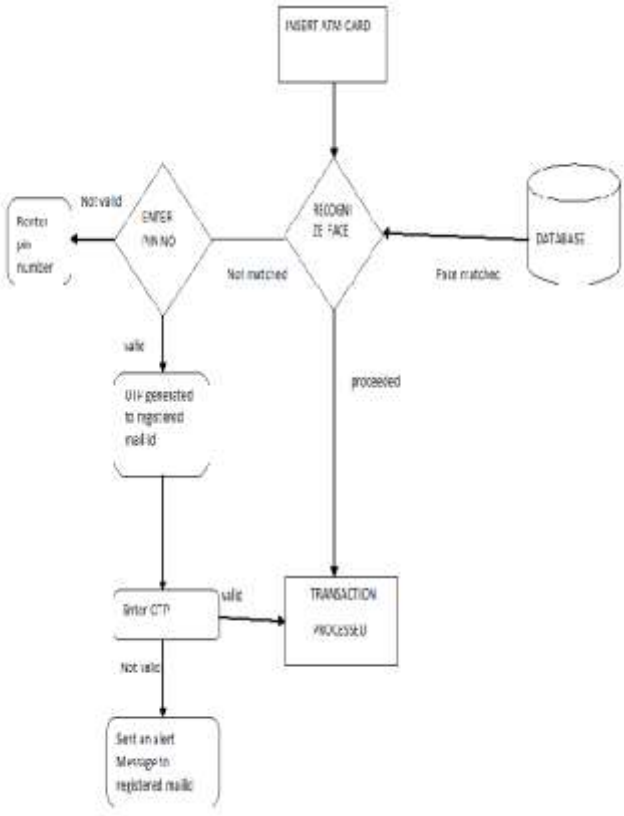
III. METHODOLOGY

The methodology involved in this project is facial recognition ,By using the Biometric method the facial features are scanned and stored in the database .If two of the person looks similar i.e. Twins in this situation the eyeball is detected and stored in the database. retina get varied, using the retina feature the face is recognized. Once the face is recognized the transaction will be processed.).In some exceptional case if a registered person cannot able to go to atm. A respected person colleagues or relatives can get a cash in ATM using OTP If the face is not recognized it just simply show enter PIN NUMBER. After entering the PIN number, OTP is generated to the person mailid The OTP is sent to the person mail id who have an account. The required person will intimate an OTP to his/her colleagues. once the OTP is entered the transaction is proceeded .If the OTP is entered wrongly an alert message is sent to the person who registered the account.

IV. ARCHITECTURE DIAGRAM



This architecture diagram is for recognizing the facial features and stored in the database. If a person show their face in Web camera, the face is detected and search in the database ,If the facial features matched with the features stores in database it moves to the next process eye localizer. here, the person eye is detected and search in the database .If the retina matched with the retina stored in the database then the facial features are extracted and then the transaction is processed .If the facial feature is not matched with the database it is rejected and it go for an OTP process.



This Flowchart shows how the process works, Once the person insert the ATM card , the web camera will opened and the face is recognized if the facial features are matched with the database the transaction is proceeded. If the person facial feature is not matched with the database its shows enter PIN number. If the PIN number entered wrongly then it give a chance to reenter the PIN number if the PIN number is correct OTP is automatically generated to the person mailid then the OTP is entered and the transaction is processed. if the person enter the OTP wrongly an alert message is sent to the person phone number.

V. EXPECTED OUTPUT

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In this manner the face is recognized and the transaction is processed .here we have to click detect and recognize button after that the process is proceeded.

VI. CONCLUSION

Biometric Authentication with smart cards is a stronger method of authentication and verification as it is uniquely bound to individuals.An ATM model that is more reliable in providing security by using facial recognition Software along with OTP. We can have safe and secure transaction.

If we use PIN number hackers can easily crack the PIN number by fixing the camera near ATM machine . ATM plastic card consist of sixteen digit serial number, while inserting the card in ATM machine the sixteen digit number is scanned using some of the tools and it is stored in their database so, hackers can easily fix those numbers in a duplicate plastic card and enter the PIN number finally they process the transaction and they get the money.

So, Many of the transaction process goes wrongly by using PIN number This is avoided if we use Face recognition system. The security level is getting secured .By the use of OTP concept, we can also have safer transaction.

If an hacker try to crack the PIN number he/she is supposed to enter the OTP. Definitely they will enter the wrong OTP, immediately an alert message is sent to the person phone number. Then the transaction process get failed. It is really useful because in this concept we added three level security system.

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