Multiple Account Access Using Single ATM Card

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Abstract— Present day, ATM system provides the facility to access any ATM card in any ATM system to a user. The problem with the present ATM system is that if a user has more than one account, he has to carry all the ATM cards associated in his account to access multiple bank accounts and also has to remember multiple passwords. In this paper we are introducing an application for banking purpose particularly for ATM card. Here we are integrating multiple bank accounts into a single ATM card. SMS based OTP (One Time Password) is used to prevent fraud and to avoid PIN (Personal Identification Number) which provides higher security. It provides the user one level higher convenience for accessing multiple accounts. Here the face and fingerprint along with OTP plays 3 levels of security.

Keywords— Multiple account access, Face recognition, OTP, R305 fingerprint sensor

I. INTRODUCTION

ATM is an electronic gadget which gives the client to perform exchanges without the need of clerk, bank employee. ATM administrations are mainstream on account of their effectiveness for banking frameworks. In current ATMs, the client record can be distinguished by embeddings a plastic card with attractive strip that contains his or her record number. The client at that point confirms his or her character by entering a password (i.e.) individual recognizable proof number (PIN) of four digits. On the off chance that the number is entered inaccurately a few times thusly (normally the, most ATMs will hold the card as security safety measure to keep an approved client from accepting the PIN by mystery, etc. Additionally the client needs to pay exchange charges. By keeping with or without weights, a novel methodology bank fondness card been proposed in this task. In the proposed framework, the individual with the card needs to swipe the card first and after that ATM requests the unique mark confirmation. In the event that the unique mark matches with the card subtleties, at that point it will request the face acknowledgment. On the off chance that the face is perceived, the ATM will give all the ledgers connected to a similar number from which an individual can choose any one. Upon bank determination, the money exchange should be possible. Both the bank choice and money exchange method in the proposed framework is verified based One Time Password (OTP) which will be sent to the enrolled portable number.

Following are the issues looked by average citizens which persuade us to proposed "Various Account Access Using Single ATM Card", User needs to convey more than one ATM card for progressively number of financial balances and furthermore client needs to recall secret word for every ATM card. Client needs to pay additional charges when exchanges are done from various bank's ATM other than ATM card after expense exchanges over.

II. LITERATURE SURVEY

The thought behind inserted brilliant ATM card proposed in [1] is that the clients can utilize a solitary ATM card to work distinctive financial balances as opposed to having individual card for each ledger. In this the client swipes his/her shrewd card in the ATM machine, at that point it demand for OTP in the server side. In the wake of choosing the bank the solicitation is sent to the comparing bank through a system and connections it with the banks server for getting to the database of the client so the exchange is handled. In the EXISTING procedure, enormous information is an open door based condition. Huge information examination can prompt important learning for some associations. RFID savvy card is utilized in [2] as ATM Card for exchange. Client can make account and get the ATM card from the bank. The client can coordinate all his financial balances which can be incorporated in this single card with novel PIN numbers likewise. Client conduct is checked through HMM Model and he can set up an equation based confirmation. The client can incorporate all his relatives' records subtleties to this equivalent card. The client can pull back money from their records after fruitful confirmation of the comparing PIN numbers.

The structural plan of framework proposed in [3] comprise of three layers in particular view layer, the board layer and access layer. The view layer is obvious to the clients which comprise of the GUI (Graphical User Interface) which is utilized in UI and menu which is utilized by the client for choosing the choices. The administration layer isn't obvious to the client it is utilized to produce the record subtleties and furthermore to inform the mistake messages. The entrance layer is obvious to the client and it is the layer which gives the client choices to exchanges.

This widespread ATM card that structured in [4] can also be utilized in petroleum bunks for programmed filling of oil for the ideal sum. In such cases the card carries on as a prepaid card, so in the wake of swiping the card for the ideal sum it consequently initiates the siphon. It comprises of a signal segment which shows the actuation of the siphon. For such applications we select one of the banks as default so the sum is naturally derived from that record alone.

The investigation did in [5] is an endeavor into the e-banking framework, particularly ATMs for simple, brisk and different gets to client's records with improved security. Clients can get to various records utilizing a solitary ATM card to direct unique financial exchanges. The framework is additionally progressively helpful for clients since they need not convey a

few bank ATM cards around and attempt to retain numerous PINs.

Mrs.FarhaKouser In and et al proposed multi record bank partiality card framework; the independent activities are achieved by utilizing Arduino in their paper [6]. The Arduino is the focal center part in this framework. The Arduino has numerous highlights which empower all the security concerned application for the ATM card issues. The RF ID peruser, unique mark sensor, GSM module and keypad are the key modules interfaced with the Arduino.

The framework proposed in [7] comprises of RFID tag and peruser, keypad, camera, PC and show gadget associated with a microcontroller. We are utilizing RFID keen card as ATM Card for exchange. Client can make account and get the ATM card from the bank. Client can incorporate every one of his records in which client is approaching bank can be coordinated in this single ATM card with explicit PIN numbers as needs be. Client face is likewise perceived for the confirmation part. Client conduct is observed through HMM (Hidden Markov Model) Model. Client can incorporate all his relatives' records subtleties additionally in a similar card. Four digits PIN number can be entered through Keypad. In the event that the entered PIN number is right, at that point camera is naturally on and catches the essence of the client and vein sensor is utilized for confirmation. After validation process client can pull back sum from atm. Server will screen the client's recurrence of sum (normal sum withdrawal) and number of exchange tally (ordinarily three exchange times at once) utilizing HMM model. On the off chance that any variety is identified during exchange, it will request to enter security number/equation, which is set by the client at the season of enrollment. Presently the exchange is conceivable just, when the client will enter the right code/equation.

The innovation behind the result of the administration is that including all the client financial balances to an inserted keen ATM card. In framework [8] the client swipes his/her keen card in the ATM machine, at that point it demand for OTP (One Time Password) in the server side. Machine will produce OTP (One Time Password) and send to client's enrolled versatile number. At that point client need to type OTP and on the off chance that it right record will be open and client will be took into account drawing cash with his/her ATM card, at that point it shows the rundown of all banks that the client is having account. Presently the client can choose the bank from which he/she is eager to perform exchange. Subsequent to choosing the bank the solicitation is sent to the comparing bank through a system and connections it with the banks server for getting to the database of the client or client so the exchange is prepared.

The thought behind paper [9] is to implant more than one financial balance into a solitary shrewd card so the client can execute as he wishes with a solitary swipe. Here we use Lab see 2012 and Code writer studio v5 programming's for the coding reason. The equipment utilized is MSP430G2553 microcontroller and UART Module. Here the microcontroller demonstrations like a savvy card that holds the remarkable card number. This number is moved to the framework sequentially by UART module. That number offers access to the subtleties of financial balances of the user.Thus the client can deal with his/her numerous records in different saves money with the assistance of this single savvy card which gives simple access and lessens the multifaceted nature of overseeing more than one ATM card and their individual passwords.

In venture proposed in [10] Fingerprint gives an increasingly feasible technique for recognizing clients' adequate security level for the ATM framework. The utilization of human qualities in this model improvement handles a great deal of security usage issues in distinguishing proof and validation of ATM.

III. PROPOSED SYSTEM

The idea behind this embedded smart ATM card is that the customers can use a single ATM card to operate different bank accounts instead of having individual card for each bank account. In this the user swipes his/her smart card in the ATM machine, then it request for OTP in the server side. GUI (Graphical User Interface) build in visual basic software displays “insert OTP”. User has to enter received OTP on through the keypad.

After successful authentication of finger and face, GUI displays the list of banks, select bank by entering no. opposite to bank. GUI then displays options for transactions like cash withdrawal and balance enquiry. After selecting the bank the request is sent to the corresponding bank through a network and links it with the banks server for accessing the database of the user so that the transaction is processed.

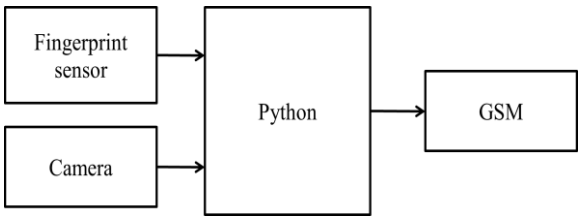

Fig 1: block diagram of proposed system

Face recognition:

- Input: Input to the framework is picture caught by camera
- Pre-Processing: Pre-preparing pictures ordinarily includes evacuating low-recurrence foundation clamor, normalizing the power of the individual particles pictures, expelling reflections, and covering bits of images.Image pre-handling is the method of improving information pictures preceding computational handling.
- Feature extraction: Feature extraction includes decreasing the measure of assets required to portray an enormous arrangement of information. When performing investigation of complex information one of the serious issues comes from the quantity of factors included. Investigation with an enormous number of factors for the

most part requires a lot of memory and calculation control, likewise it might make an order calculation over fit to preparing tests and sum up inadequately to new examples. Highlight extraction is a general term for strategies for developing mixes of the factors to get around these issues while as yet portraying the information with adequate exactness. Many AI specialists accept that appropriately streamlined element extraction is the way to viable model development

- Classification: Image order alludes to the undertaking of removing data classes from a multiband raster picture. The subsequent raster from picture order can be utilized to make topical maps. Contingent upon the cooperation between the investigator and the PC during characterization, there are two kinds of order: regulated and unsupervised.

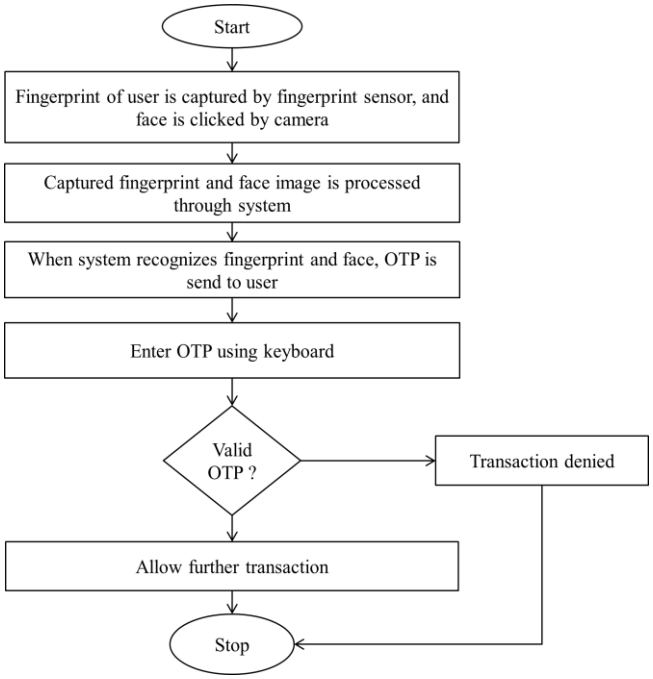

Fig .2.flowchart of proposed system

IV. RESULT

Fig.3. Face Authentication

Fig .4. Face Authentication

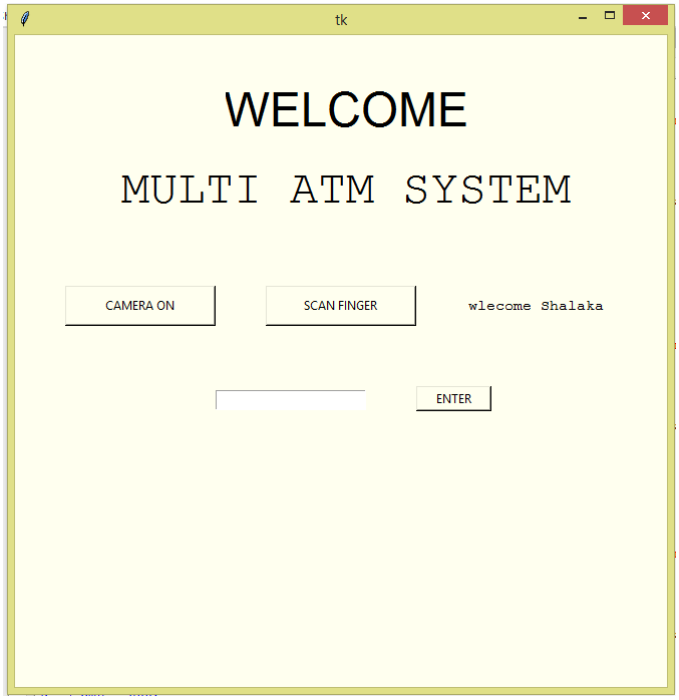

Fig .5. Welcome Page

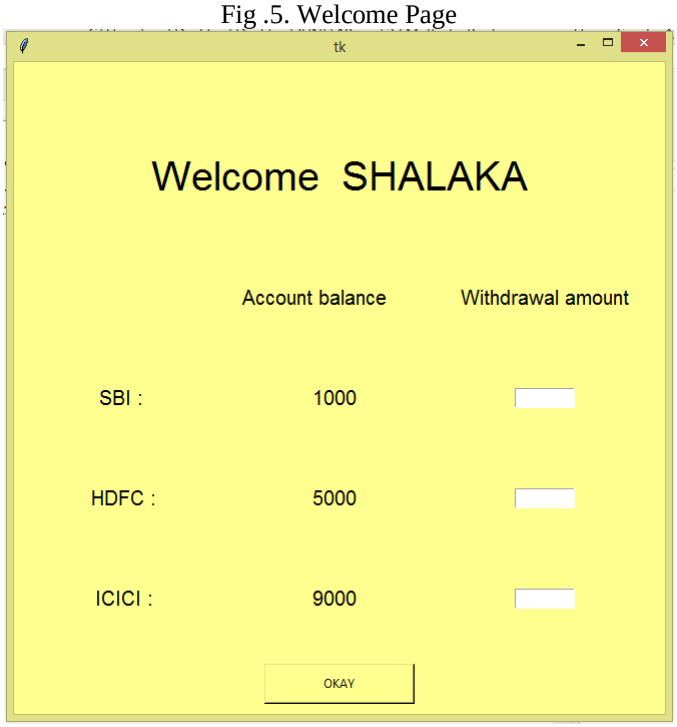

Fig .6. View all Account Details

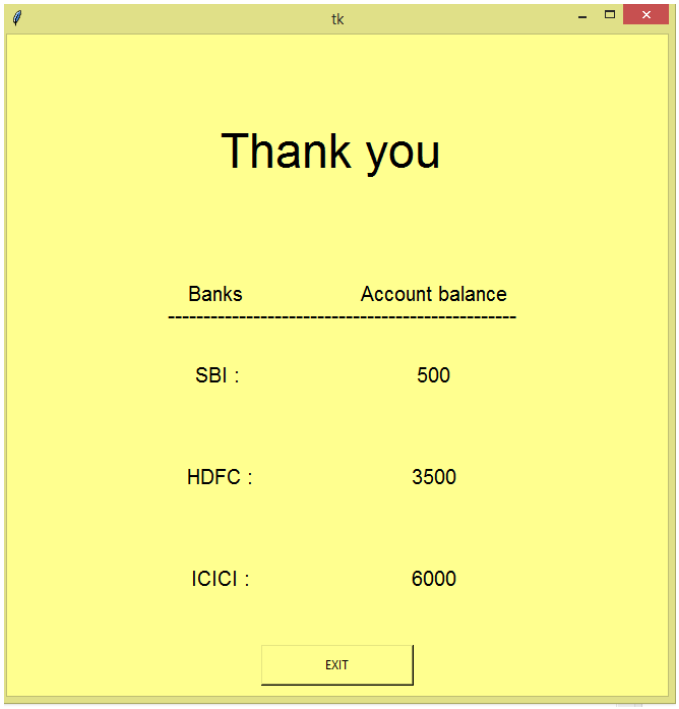

Fig .6. Transaction Details

V. CONCLUSION

In this project user can manage his/her multiple accounts in various banks with the help of this single smart card ATM which provides easy access and reduces the complexity of managing more than one ATM card and their respective passwords. In this project OTP provides a more viable method of identifying user's sufficient security level for the ATM system. The security features were enhanced largely for the stability and reliability of owner recognition. The whole system is built on the technology of embedded system which makes the system safe, reliable and easy to implement. Hence the vulnerabilities of the ATM fraud will be reduced in future.

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