

Automated Teller Machine System

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Abstract: Because of the trouble and limit, cryptography to a cloud is to be a standout amongst the best properties for huge information stockpiling and access. Anyway confirming the entrance authenticity of a client and safely refreshing cryptography in the cloud dependent on another entrance approach chosen by the information proprietor are likewise basic difficulties to make cloud-based enormous information stockpiling down to earth and dynamic. In this paper, we propose a safe and access control dependent on NTRU cryptosystem for huge information. Our procedure enables the cloud server to productively refresh the cryptography when another entrance arrangement is distinguished by the information proprietor, who is additionally ready to confirm the update to counter against duping practices of the cloud. It conjointly allows the information proprietor and qualified clients to successfully confirm the authenticity of a client for getting to the information, and a client to approve the data given by various clients to legitimate plaintext recuperation.

Keywords : Cryptanalysis, Randomized Algorithms

I. INTRODUCTION

We are very glad to introduce our project “AUTOMATED TELLER MACHINE”. Now a day each company or organization prefers the computerized paper-work. Definitely the computer system is more reliable than the manual works. The common human errors can be eliminated with the help of system.[1]

The following details are involved in this ATM system project,

- ATM Card holder /account /bank customer detail.
- Daily transaction detail of each ATM card holder.[2]

A. Existing System

- Existing system creates complexity in doing calculation of collection of money because it is manual.[3][4][5]
- Existing system creates problems in maintaining records of book keeping.
- Existing system, there is large documentary work so it requires space for its storage.[6][7][8]
- To do the documentary work there is need of extra staff worker.

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- Existing system takes much more time to updating process of records.
- Due to existing system crowding of customer in bank premises are more & pressure of work on bank servants are also more. [9]

B. Need for the new system

- Proposed system need to maintain all the records in computerized form.
- It is useful to store record systematically & accurately by using this system.
- It is useful to reducing the extra work which maintains the records of book keeping & paper less work.
- We can easily handle data efficiently & effectively.[10]
- The storage space, extra workers, missing files all these possibilities are decreased through this system.
- This system helps to save time & cost spending on documentation.
- With the help of this system ATM card holder can see all the records about his account only at any time efficiently.[11]
- The most important facility provided by this system is that, there is no any possibility of miss any records.
- This system is useful for recording daily transactions done by customers.[12]
- So, this system helps to overcome the problems of previous system.[13]
- An ATM card is an ISO card issued by a bank, credit union or building society. Unlike a debit card, in-store purchases or refunds with an ATM card can generally be made in person only, as they require authentication through a personal identification number or PIN. In other words, ATM cards cannot be used at merchants that only accept credit cards.[14]

C. Scope of the work

As this is software it can be used by a wide variety of banks to automate the process of manually maintaining the records related to the each transaction of bank account holder. The main goal of this application is to provide very reliable & efficient service to bank account holder at any time & any location. [15]

This system will cover the following modules,

D. Detail information about system modules

1. Cash Withdrawal :-

It mainly used for withdrawal of cash as per customer demand. For any authorized ATM card holder the ATM system requests for its ATM no & PIN no then customer tologin in their accounts, then amounts are given to system and customer can withdraw amount.[16]

2. Balance Enquiry :-

It refers to enquiry of bank balance of an authorized ATM card holder account to check for the resulting balance after certain transactions.[17]

3. Mini Statement:-

It refers to enquiry of last ten transaction of an authorized ATM card holder. It includes deposit & withdrawal amount of transaction & also contains respective transaction date and current available balance.[18][19][20]

4. PIN Change:-

It refers to the Change of PIN no of an authorized ATM card holder. I require giving system old PIN no of the ATM card & then giving new PIN no & confirm the new PIN no.

5. Cash Deposit:-

It mainly used for deposit cash amount to their bank account as per customer demand. It is easy process of deposit amount to their bank accounts without filling deposit slip.

6. Loan Information:-

It mainly used for to give information about various bank loan rates to ATM card holder.

7. Help Menu:-

Help menu gives information about how to use ATM card when you give correct information to ATM system. I describe information about all transaction menus & what is used of each menu.

E. Feasibility study

Feasibility Study is essential to evaluate cost & benefit of the proposed system. This is very important step because on the basis of this; system decision is taken on whether to proceed or to postpone the project or to cancel the project. Feasibility study forms the most important phase in the system development life cycle so that the people who are affected by the system benefit from the change. [22] This involves some very crude estimates of schedules of completion of the proposed system and the cost of the system. This study ensures that the system meets the objectives of the organization before it can be approved for development. It also involves the study of different risks involved in developing the system.[21]

The major areas to consider while determining the feasibility of a system are:-

Technical Feasibility: The technical feasibility study always focuses on the existing computer hardware, software and personal. This also includes need for more hardware, software or personal and possibility of procuring or installing such facilities.[23]

A. ATM is a system that can work on single stand alone Pentium machine with 128 MB RAM, Hard disk drive size of 80 GB, mouse, monitor and keyboard & it also require internet connection to corresponding computer. [24] The equipments are easily available in the market, so technically the system is very much feasible.[25][26]

Economical Feasibility: This feasibility is useful to find the system development cost and checks whether it is justifiable. The cost overheads include software and hardware maintenance cost, training costs that includes cost required for manpower, electricity, stationary etc. The proposed system will provide the right type of information at right time, and in the required format. This will save time required for decision-making and routine operations. Considering all these advantages, the cost overheads of the system are negligible. So the system is economically feasible.[27][28][29]

Operational Feasibility :

It is also known as resource feasibility. The operation users of the system are expected to have minimum knowledge of computer. The developed system is simple to use, so that the user will be ready to operate the system. The proposed system is developed using JAVA programming language & Mysql database which is platform independent and user friendly. So the system is operationally feasible.[30]

F. Programming Languages Used:

In this system we use JAVA Platform for programming language. JAVA Platform means the environment which is used to run program. JAVA is platform independent language since not only single operating system can be required by the java. All the different operating system can execute the java programming language. [31]

Java provides huge functionality that means it provide A huge library.

- ❖ Containing lots of reusable codes.
- ❖ An execution environment that provides services such as security.
- ❖ Portability across operating system.
- ❖ Automatic garbage collection.

G. Requirement Analysis

This involves studying the current system to find out how it is working and where the improvements should be made. These studies consider both manual and computer methods. Hence an early step in investigation is to understand situation. [32][33]

1. Requirement Investigation:-

This activity is at the heart of system analysis. Using a variety of tools and skills analyst study the current system and documents its features for further analysis. Requirement investigation relies on the fact-finding techniques [34]

2. Requirement Specification:-

The data produced during fact-finding investigation are analyzed to determine requirement specification. This is the description of features for new system. [35]

H. Fact Finding Techniques

Fact-Finding is the formal process of using research, interviews, questionnaires, sampling and preferences. It is also called information about systems, requirements, and

preferences. It is also called **Information Gathering** or **Data Collection**. Tools, such as data and process models, document facts, and conclusion are drawn from facts. If you can't collect the facts, you can't use the tools. Fact-Finding skills must be learned and practiced.[36]

Different types of Fact-Finding techniques are:

- INTERVIEWS
- QUESTIONNAIRE
- RECORD REVIEW
- OBSERVATION

Interviews :

Meeting procedure is utilized to gather the data from people gatherings. Investigator should choose reacts that are connected with the framework under examination. In this technique the questioner (examiner) countenances to look with respondent and records of his/her reactions. This questioner must plane ahead of time and ought to completely know the issues under thought. He should pick a reasonable time and spot, with the goal that the questioner may feel calm during interview.[37]

Questionnaire:

A survey performs containing an arrangement of inquiries to inspire data generally from a huge no of people. Drafting of polls requires expertise. The inquiries must be clear, basic and to the point. They should be efficient from the perspective of the respondent and planned in such a way as to give the information to the extent that conceivable in the ideal structure. A survey might be sent to people who are mentioned to compose the appropriate response of each inquiry and return supplemented performs back by post.[38]

Record view:

Data related with the framework might be available as records like books, magazines, paper, authentic archives, letters, diaries, manuals, government distributions. This sort of record audit gives truly significant data to the expert about the framework, association and different methods and standards.

Record survey might be performed in the start of concentrate to gather beginning data or toward the finish of the investigation to look at genuine operations.[39]

Observations:

If information is not collected from the other fact-finding methods, then observation method is used. In this method analyst observes the flow of documents, way the process is carried out, step followed, the persons involved etc. If the analyst is familiar with the system then he/she knows what to observe and how to gather information. In experienced person may observe unnecessary things, which delays the system study. [40]

J. Use interface design: - Input Screens using sample data:

Welcome screen:



ATM card no screen: on success then below screen.



ATM card no screen:if enter wrong ATM no or PIN no.



ATM card no screen :if ATM card is out expiry date



ATM card no screen:each screen display out of 20sec then below message.



Account type screen: if account type is correct then go to transaction menu & wrong then appear below screen & go to welcome screen.



- Transaction menu screen:



- Cash withdrawal screen: if cash withdrawal is success then appear below screen, if we click on YES then go to balance enquiry screen, if NO then show available balance.[41]



- Cash withdrawal screen: if we enter amount >10000 then below appear screen.



- Cash withdrawal screen: if per day withdrawal amount >25000 then below appear screen if your account is saving & account is current then amount >50000.



- Cash deposit screen: if cash deposit is success then appear below screen, if we click on YES then go to balance enquiry screen, if NO then show available balance.



- Balance Enquiry screen:



- PIN change screen: if we enter old pin no correct and new & confirm pin no same then appear below screen.



- PIN change screen: if we enter old pin no wrong and new & confirm pin no same then appear below screen.



- PIN change screen: if we enter old pin no correct and new & confirm pin no different then appear below screen.



• **Loan Information:**



• **Help screen:**



• **Mini statement screen:**



II. OBJECTIVE

The fundamental target of this client manual is to present the client with the accessible offices in the ATM System. It gives a theoretical review of the working of the framework and the point by point dialog and reports.[30]

This user manual is divided into following logical parts:

1. Getting Started.
2. Functioning of the system.

The data in regards to how one can begin with the ATM framework and how to choose suitable catches on the appreciated screen can be seen and find in the Getting Started portion.[39]

The Functioning of the framework part manages the portrayal of the motivation behind every one of the menu things and screens. It additionally portrays the working of the framework for example where to include information, how to process it and the definite data about the reports and their printing. This part additionally depicts the reason for each info screen utilized in the system.[38]

The blunder messages and their clarifications and suitable moves to be made is taken care of by Trouble Shooting some portion of the client manual of this record.

• **Getting Started:**

To begin the ATM framework, the means to be pursued are:

1. Switch ON the terminal/PC.
2. Windows is stacked and goes the ATM venture envelope and in than run welcome.java record.
3. As soon as the appreciated record is executing/running then click on alright catch and next screen will be show up on the screen as ATM card no.
4. Enter ATM card no and PIN no on the off chance that it right, at that point go to record type screen, on the off chance that off-base, at that point re-enter.[37]
5. Select the record type, on the off chance that record type is right, at that point goes to the following screen as exchange menu on the off chance that off-base, at that point goes to the appreciated screen.
6. Select any choice from exchange menu screen and play out its individual activities.
7. To drop the present screen clicks in drop catch and next screen show up as welcome.
8. To exit from the framework taps on the 'Leave' catch on the appreciated screen.

• **Functioning of the System:**

This piece of the client manual depicts the fundamental working of the framework the technique to conjure the primary menu which has been portrayed previously.[40]

At the point when the exchange screen shows up the client can choose a few tasks that can be performed on the framework.

Coming up next is the rundown of procedures or various exchanges that can be performed legitimately through the exchange screen.

Menu Explanation:-

This area alludes to the different sorts of interfaces which the client needs to look during working the electronic arrangement of "Framework".

The area alludes with the whole interface [Screens] a client should confront while working the present framework. It demonstrates the different screens showing up for various exchanges. Every one of the screens of various exchanges in the framework are appeared here.

Menus and connections of ATM System are as per the following;

1) Welcome: - This is main file of ATM system, by using this we can enter to the ATM system & go to next screen as ATM card no.

2) ATM card no: - by using this we can enter the ATM card no and PIN no & these are correct then we go to next screen as Account type.

3) Account Type: - by using this we can press our account type if account type is match then go to next screen as Transaction. If account type is not match then display appropriate message and go to welcome screen.

4) Transaction Menu: - by using this we can go to various screens such as cash withdrawal, cash deposit, balance enquiry, mini statement, pin change, loan information and help.

5) Cash Withdrawal: - by using this we withdraw cash from our account.

6) Cash Deposit: - by using this we deposit cash to our account.

7) Balance Enquiry: - by using this we can see our available balance.

8) Mini Statement: - by using this we can see our last 10 transaction.

9) PIN Change: - by using this we can change or update our PIN no of ATM card.

10) Loan Information: - by using this we can see various loan rates such as home loan, car loan and personal loan.

11) Help: - by using this we can see how to operate existing system.

Drawbacks:-

1. ATM System requires 24 hours security therefore it requires security guards.
2. ATM System requires small shop to store machine therefore need to pay that shop rents.
3. If money in the ATM is not available then it takes some time to fill the money in the cash stock box in ATM machine.
4. If ATM card is lost & this lost ATM card uses any other person then it will become dangerous.

Limitations:-

1. Our system may become obsolete as in computer industry; technological developments are very fast, new software, new utilities may obsolete this system.
2. System security is ATM card no and PIN no dependent, if security about ATM card no and PIN no information is not maintained, system could be in great danger.
3. This system is constructed and developed for text environment so pack gives best appearance and performance under text environment but poor appearance on GUI environment.
4. System requires electricity to function; absence may result in chaotic situation in the organizational procedures.

Proposed enhancement:-

The system is designed keeping in mind the current requirements of the ATM. However some aspects were not considered and system can easily changing where shop requirements are changed.

Some of the enhancements can be:

- ❖ System can be design in GUI environment.
- ❖ System can be design to work without manpower by using Scratch card.
- ❖ The system can be made flexible so that new modules can be added at any given time.
- ❖ In future system can be construct the modules of fund transfer, mobile recharge, pay electricity bill can be developed.

III. CONCLUSION

After we have finished the undertaking we are certain that issue in the current framework would survive. "Mechanized Teller Machine (ATM). Framework" process has been modernized diminished human mistake and to build the productivity. The fundamental focal point of this venture is to diminish human endeavors. The support of record is made effective, as every one of the records are put away in the database through which the information can be recovered effectively. The route control is given in all structure to explore through huge measure of records. Our principle point of the undertaking is to give right financial administrations to client of the bank whenever wherever.

The issue which left in before framework, have been evacuated to huge degree. The computerization of the "Robotized Teller Machine (ATM)System." won't just improve the proficiency yet will likewise diminish human pressure consequently in a roundabout way improving human asset

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