Automatic Teller Machine Transaction Approach on the Basis of New era

Muhammad Yasir Imam[1], Nabila Jannat[2], Muhammad Bilal Suleman[3], Ayesha Rehman[4]

[1,2,3] Dept. CS and IT, Al-Hamd Islamic University Islamabad, Bhara Kahu Islamabad, Pakistan

Yasirimam5110@gmail.com[1], khan27135110@gmail.com[2], sulemanbilal88@gmail.com[3]

[4]Dept. Botany, Mirpur University of Science and Technology, Bhimber AJK, Pakistan

Abstract— The main aim of this article presents a new idea of OTP (one-time password) and giving brief details of the close by ATM machine and the amount of cash presently now available in the close by ATM machine if there is a shortage of cash in ATM we are presently using for transactions. Other than that, we also have a deposit slot in our research paper through which the user can transfer money to their account in very short time. The amount of cash being withdrawn from the ATM machine is limited. As all of you know that the limitation of Rs.25,000 is withdrawn at one time, which is being allow for one transaction only. Our research enables us to withdraw a handsome amount of cash within a time period of five minutes utilizing OTP which is counted as for one transaction and the customer can use this service for handsome amount of cash being withdrawn per day. There is a limit of transaction every day in different banks.

Keywords — OTP, ATM, ATM Card, Cash dispenser, Card Reader, Deposit slot, Cash withdrawn and deposit.

————————————— ◆ —————————————

1. INTRODUCTION

THE Automated Teller Machine is an electronic device that allows the users of a financial departments/companies to done financial transactions, especially money withdrawal, without any need of human cashier, like bank teller or clerk etc. [1]. On the most advanced ATMs, the users are authorized by installing an ATM card with a magnetic stripe or a smart card with chip that carry a unique card number and some kind of important security information, like expire date of ATM card or CVVC (CVV). Identification is given by the user by putting a personal identification number (PIN).

By utilizing an ATM machine, user can gain entry to their bank credit or deposit accounts to make a variety of transactions and deals such as money withdrawals, check account balances, or credit mobile phones, deposit money to accounts. If the cash is withdrawn from the ATM machine is different from that in which the bank account is depending on the cash will be turned at an official exchange rate, that's means if the user does not link to this bank, then some transactions exchange rates are applied. Thus, ATMs often provides best or potential exchange rates for foreign travelers, and massively utilized for this purpose.

In our research paper, if the cash insufficient during ATM transactions, the system tells the user the closest ATM location so that they can complete the transaction. In addition, the user can transfer the cash deposit to their account using deposit slot. After the transfer of money in the account, a computer-generated slip will be received. And also, by using OTP operation user can withdraw handsome amount of money at a single transaction in a limited time period of five minutes. After 5 minutes OTP pin will be expired and regenerated if user required by option. It saves lot of user time and also increase the satisfaction of the user.

Fig. Automatic Teller Machine

2. PARTS OF ATM

The research work analyzes the effect of Automated Teller Machine and impression of ATM on client's satisfaction. Automated Teller Machine refers to an electronic machine that acts as a bank teller by receiving money and issuing cash to and from the Automated Teller Machine account holders, customers and users. You are probably one of the millions who have utilized ATM. As you know, an ATM has only two input devices: inserting ATM card and keypad. But in our system, there is three input devices: inserting ATM card slot, keypad and deposit cash slot. And ATM has four output devices: Speaker, Display Screen, Receipt printer, Cash machine/Cash withdrawn machine.
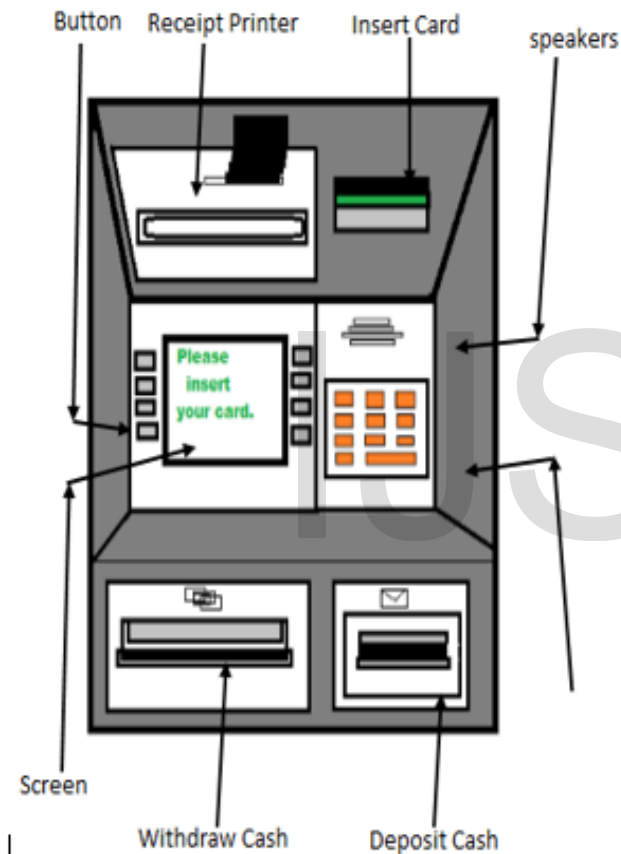

Fig. Components of ATM Machine [2]

2.1. ATM Card Slot/Card reader

The ATM card slot/card reader apprehend the customer account information saved on the magnetic stripe on the back of an ATM/credit or debit card. The host processor utilizing this information to direction the transaction to the ATM cardholder's bank.

2.2. Keypad

Keypad used to enter customers personal identification number. Keypad lets the ATM cardholder tell the bank what type of transaction is needed (account balance inquiry, money withdrawal, money deposit etc.) and for what kind of amount. In addition, the bank demands the cardholder's unique personal identification number (PIN) for verification. Federal law needs that the PIN block be dispatch to the host processor in encrypted form.

2.3. Deposit Slot

Deposit slot is used to transfer the money into account. After entering the pin, user can select deposit option and deposit money to their account. User enter the money into deposit slot, the scanner scans the money and judge the amount.

After amount judgment, system verify it again and complete the transaction process. You don't require to fill out deposit slips and withdrawal slips as is needed at the bank. It makes all transactions faster than going to the bank- no long lines. It increases user satisfaction and save lot of time.

2.4. Speaker

Speaker is used to provide built-in audio services. Such as choosing language audio sound, entering pin code audio sound, select operation which you want to perform audio sound etc. The speaker supplies ATM card holder with auditory reaction when a key is pressed.

2.5. Display screen

The display screen is a user's communication source with an ATM machine. Dial-up machines often utilize a color Liquid Crystal Display or monochrome. Leased-line machines often utilize a color CRT or monochrome display. New systems used LED display. Also, some uses touchscreen display.

2.6. Receipt printer

The receipt printer supplies the ATM card holder with a paper receipt which holds information of the transaction process.
In which following information is mentioned account detail, transaction amount, available amount in account, these for money withdrawn operation and for deposit operation it provides the deposit money detail like with account number, amount etc.

2.7. Cash Machine

The heart of Automatic Teller Machine is the safe and money dispensing mechanism. Cash machine contains cash. It is like a locker which contains cash for withdrawn money operation. The whole base section of most small ATMs is a safe that occupy the money [2].

Fig. Debit Card [3]

2.8.   ATM Card

An ATM card is a kind of payment card provided by a bank that allows a user to approach an ATM in order to execute transactions like money withdrawn, deposits money, getting account information, account balance check etc. ATM cards are also called by a different kind of names like Money Access Card, bank card, user card, key card or client card, money card, etc. Mostly many payment cards, like credit cards and debit cards also play role as ATM cards [4].

Fig. Credit Card

3. WORKING OF ATM

3.1.   Exercise basic safety procedures.

People utilizing ATMs will sometimes be targets of robberies and like that other sin, so you have to make sure you stay safe. First of all, make sure that you are alone and the zone is well lit. If you show other people, be your guardian. Stand up so that your screen and key press are masked. Make sure that you also close the ATM door, then start your transaction operation.

3.2.   Admit credit/debit card into ATM

Mobile banking cards come in two categories — credit and debit cards. Debit cards are often used in ATMs, they are connected your right amount in your bank account. In some cases, credit cards can be used, but fees and interest rates generally make them expensive. Put your card in a card slot, face the direction indicated by the picture on the machine. Try utilizing ATMs and debit cards that will be provided by its same bank. For example, if you have an NBP (National Bank of Pakistan) debit card, find an NBP ATM or local branch. Even you can utilize almost any kind of debit card on almost any kind of ATM, if you have an ATM not relative to your account, you will be charged an extra fee to withdraw money. Other than that, some kind of services presented by ATM cannot be obtainable if your card and ATM are not match.

Fig. Admit card

3.3.   Choose your language

Most ATMs will provide transactions in many different kinds of languages, usually where you live at least three or more. This allows you to choose the language of your choice. During the process you can change language by machine.

3.4.   Enter your PIN

"PIN" abbreviation is "personal identification number," and it's a four-digit secret password people utilize to gain approach to their bank account. Enter your secret PIN number when inquire by the ATM machine, making sure to cover the pad with your own hand so that close by observer can't see it. You should also watch for cameras that are fixed

on the ATM machine itself, as these can be fixed by lawbreakers in order to loot your ATM card information.

3.5.   Deposit cash

Deposit slot is used to transfer the money into account. After entering the pin, user can select deposit option and deposit money to their account. User enter the money into deposit slot, the scanner scans the money and judge the amount. After amount judgment, system verify it again and complete the transaction process. You don't require to fill out deposit slips and withdrawal slips as is needed at the bank. It makes all transactions faster than going to the bank- no long lines. It increases user satisfaction and save lot of time.

3.6.   Withdraw Cash

You can withdraw cash from any kind of ATM machine, regardless of the related bank (though it may cost). Enter the amount of cash to withdraw using keypad. After entering the amount using keypad confirm the amount by pressing enter button. After pressing enter button, transaction process started.

Fig. Withdraw Money

3.7.   Withdrawing cash based on time

We can withdraw cash in two or more transaction based on time, who will be utilize as an only one transaction. This is the main function of our research paper.

3.8.   OTP (One-Time Password)

Once you enter secret PIN, it takes you to the services given by the banks. when you add the cash details for the withdrawal which increases bank's per on day limitation, an OTP service is inquire on the screen, if customer option for it then the OTP is created and will be sent to the customer's mobile phone own number and then you require to enter that password to complete the transaction processes. By using OTP operation user can withdraw handsome amount of money at a single transaction in a limited time period of five minutes. After 5 minutes OTP pin will be expired and regenerated if user required by option.

3.9.   Providing Details

If the needed cash is not obtainable in the ATM, then current ATM machine gives brief detail of close by ATM location, cash details so that the customers transaction don't get stop in the middle. It saves lot of user time and also increase the satisfaction of the user.

4. CONCLUSION

In this work we present an ATM transaction approach on the basis of new era. The main aim of our research is new idea of OTP and giving brief detail of the close by ATM machine and also the amount of cash available in the close by ATM machine.

Other than that, we have a deposit slot in our presented system through which user can transfer cash to their account in very short time. OTP operation enables user to withdrawn a handsome amount of cash with in a time period of 5 minute, which is treated as a single transaction. A user can withdraw handsome amount of transaction using OTP if amount increases the bank one day transaction limit. Our proposed system increases the customer satisfaction and save lot of time. We take overview for our proposed system from large number of ATM customers, all customers satisfied by our proposed system. Because it saves lot of customer's time and customers do not need to stay in any kind of bank lines for depositing cash, withdrawn money and balance check etc. Our system will prove to be very useful.

5. REFERENCES

[1]http://en.wikipedia.org/wiki/automated_Teller_machine
[2]http://money.howstuffworks.com/Personalfinance/Banking/atm3.htm
[3] Dhanush J. Nair ATM Transaction IJSETR, Volume 4, Issue 6, June 2015   2254   ISSN: 2278   –   7798
[4] http://en.wikipedia.org/wiki/atm_car