

A STUDY ON CONTACTLESS CASH WITHDRAWAL FROM ATM IN INDIA

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Abstract - Aim of this research paper is to withdraw your cash from ATM Machine without coming in physical contact with the ATM machine, by using your phone. So this is to propose an augment feature to upgrade the operability of ATM cash withdrawal in less amount of time with improved aspects of security without touching it. It is possible with the integration of both the ATM Machine and Mobile Banking App which make it effortless and minimize the time taken for withdrawing cash from ATM with rising level of safety, security and reliability by attaching some new features in the ATM as well as Mobile Banking App. There is very less change needed in the current methodology but few inclusions required. These few additions potentially have effective impact on the customer's convenience as well as transactions, if this is implemented with genuine and correct functioning by the banks then cash withdrawal can be done effortlessly. This Research can be useful in a COVID like situation because it allows transactions to be completed without coming in contact with ATM as well as people.

Keywords: ATM, Mobile Banking, QR code, Cash withdrawal, COVID.

1. INTRODUCTION

Considering some years ago, to withdraw your money, you have to go to banks, standby for your turn in long waiting queue, fill out the given form to get the money from banks. It was a complex as well as time consuming task to withdraw your own money. After sometimes, With the rise of technological advancement in the banking sector, ATM machine comes into the picture, which give money from account of an individual using a smart card (ATM Card) within few minutes hardly filling any particular form. Because of growing users, it can be clearly seen that, we have to stand idle in long waiting queue of ATM to withdraw the money. On the screen, we have the options like account type, language, print transaction etc. to withdraw the money from ATM, which absorb a lot of time. So, there is a need of some fast methodology which reduces the time and complexity of customers. In COVID situation, as we know coronavirus is also spreading through physical contact (by touching) and withdrawing money from ATM needs you to touch

lot of buttons of ATM which can increase the chances of spreading of virus. So this will definitely reduce the chance of spreading of virus by allowing customers to withdraw the money without in contact with the ATM. As we know, Mobile banking using particular banking App is expanding very fast because of customer convenience and low cost of operation.

2. PROPOSAL

As we can clearly see that withdrawing money has expanded from going physically to Bank then ATM machine to internet banking and from internet banking to Mobile Banking. All of these advancements are done to save customer's time, enhance the reliability and to create network more stable and secure. In this research, the main aim is to reduce the time taken of standing in the long waiting queue and create a system where transactions can be done contactless, so that time of withdrawing money from the ATM machine can be reduced as well as help us in the situation like COVID by making contactless transaction. Like many other features that are available in the Bank's App like balance check, transaction check, fund transfer, a new column of cash withdrawal from ATM will be appended in the listing of present options. Anybody, who desires to withdraw the money, will login in their Mobile Banking App with their credentials and click on cash withdrawal from ATM option from the list and User have to Enter Amount which he/she want to withdraw and ATM PIN of their Account. By clicking on generate a QR Code will be generated which contain the required details like Account details which can be scanned by the ATM for validation and it is save on Bank Server. Step one is completed on mobile but there will be no change in Customer account balance as transaction is not completed till now. A new column will be created on Bank server for verification, which will be maintaining the record of QR code generated using Mobile Banking App. This record will be present on Bank server only for a particular amount of time say 15 minutes under which user have to go to nearby ATM machine to withdraw the cash. And only one QR Code at a particular time can be created. User also has the right to delete the QR Code anytime. To get the cash, User has to go to any ATM and have to show that QR code to the Scanner or Camera that has to install with the ATM machine by the Banks. Now

ATM will redirect to the particular Bank Server and verify the details of QR Code with the user Account. If a transaction of that particular account is present on server and verified, then the system validates the transaction and give cash within few seconds. But in case of any discrepancy or time exceeded, then system will generate message for no such transactions or invalid Inputs.

3. METHODOLOGY APPLIED

1. In Mobile Banking Application: With the use of Mobile Banking transactions can be done anytime and anywhere. So, to decrease the time of cash withdrawal and save the time taken by customer on the ATM and making contactless transaction, a new column named “Cash Withdrawal” need to be added in the Mobile banking application just like many other columns such as fund transfer, balance check, transactions check etc. Here user have to Enter Amount which he/she want to withdraw and ATM PIN only and click on generate, then a QR code will be generated instantly which contains the required information of Bank details which will be required at ATM for automatic authentication, which will be store on the server as well as in the Bank app for the particular user account with current time stamp which will be valid for a particular amount of time or 15 minutes only.

2. In ATM machine: To get the cash from ATM using this new feature, no smart or ATM card is required physically. There is a need for a Scanner or inbuilt Camera that can scan QR Code generated by the Mobile Banking App. After adding this new feature, ATM will redirect to check the account information and transaction information from Bank’s server using QR Code Information. If any transaction present on server done by Mobile on scanning QR-code, cash will come out of ATM and then transaction will be considered completed. And money will be deducted after this step. But in case of any discrepancy or time exceeded, then system will generate message for no such transactions or invalid Inputs. As it can be clearly seen that there is no physical contact of person with the ATM machine.

3. On Bank Server: This feature requires a new table on the Bank’s server that is attached with every account needs to be created without changing the existing ones. This new table contain the required fields that is related to a cash withdrawal transaction made by Mobile Banking App. This table only contain the data for one transaction only because only one QR code can be generated at a time using Mobile Banking App.

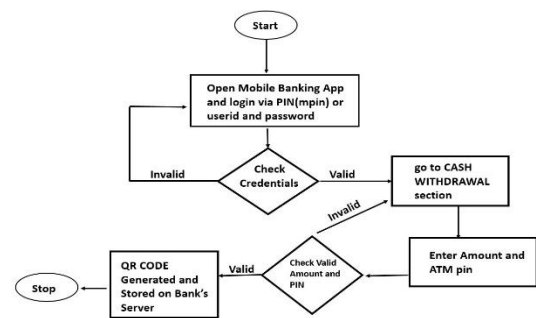


Figure 1 : Flowchart of user Interaction with Mobile Banking App.

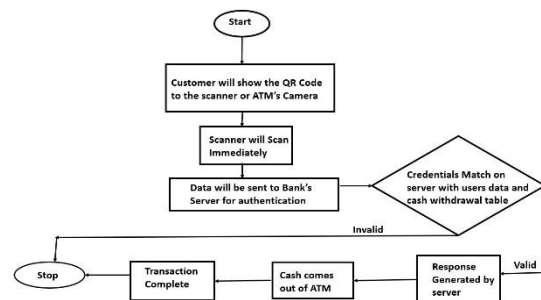


Figure 2 : Flowchart of User interaction with ATM Machine and server

Security can be provided with the use of enabling of face recognition, fingerprint scanner of mobile. All these security features can be integrated in the Banking App. User can be withdraw money without concerning about Tempered keyboard or Hidden Cameras. These features will definitely increase user experience and save customer time allow them to do a contactless transaction.

4. CONCLUSION & SCOPE IN FUTURE

Saving Customer time and contactless transaction from the ATM machine is the major objective of this Research by utilizing stand by time in the ATM waiting queue. Nowadays, a successful transaction on ATM machine takes at least 40 seconds or more, but by integrating these new features, a successful transaction can be done within 4-5 seconds. That means it is saving time up to 75% as well as allowing users to withdraw money without coming in contact with anybody which will be beneficial in situations like COVID.

These features provide security to user as there is no need of carrying the ATM card, so no chance of theft as well as user can be withdraw money without concerning about Tempered keyboard or Hidden Cameras.

5. REFERENCES

1. Mary Knich Vice President, ATM Products, First Data, "Take Your ATM Program to the Next Level", 30-Aug-2013, unpublished.
2. "Archana Sharma, Dr. Vineet kansal "Mobile Banking as Technology Adoption and Challenges (2008) Asian Journal of Communication, 18(4), 318-322.
3. Key Pousttchi, Martin Schurig "Assessment of Today's Mobile Banking Applications from the View of Customer Requirements" 37th Hawaii International Conference on System Sciences – 2010.
4. Dr. Nidhi Singh, Neena Sinha "A Study on Mobile Banking and its Impact on Customer's Banking Transactions: A Comparative Analysis of Public and Private Sector Banks in India".
https://www.researchgate.net/publication/305703732_A_Study_on_Mobile_Banking_and_its_Impact_on_Customer's_Banking_Transactions_A_Comparative_Analysis_of_Public_and_Private_Sector_Banks_in_India
5. Uday Hajare, Rajnandini Mahajan, Sulaxan Jadhav, Nishchal Pingale, Sagar Salunke "Efficient Cash Withdrawal from ATM machine using Mobile Banking"