

Course Based Learning

(Via Projects)

Project is Based on the Language **Python**
BANK ATM VENDOR SYSTEM

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ABSTRACT

Every year our local banks spend a lot of money for installing and maintaining switching software provided by foreign vendors. We tried to find out shortcomings of implementing ATM switching software. We did survey in banks IT sector and talked with Vendor of switching software. Finally we tried to estimate manpower and time needed to implement switching software.

It has been almost four decades that banks and other financial organizations have been gradually computerised, in order to improve service and efficiency and to reduce cost. The birth of Electronic Fund Transfer and Automated Teller Machines has given rise to 24-hour banking and a great variety of services for the customer. This method uses a computer to transfer debits and credits, with the help of electronic pulses, which are carried through wires either to a magnetic disk or tape. ATM has become an important part in our daily lives. People use ATM for various purposes such as money withdrawal, checking balance, changing password etc.

BANKING SYSTEM

- 1.Preface
- 2.Introduction
- 3.Glossary
- 4.Specific requirements
- 5.Conclusion
- 6.References

Software Requirements Specifications for the Banking System

1. Preface

- This document ,Software Requirements Specification (SRS),created to document the software requirements for the Banking System,as described in the section.
- This document was created on the request of the ‘XYZ Bank Inc’.-the ‘Client’.The creator of this document is ‘A Software Hose Inc.’- ‘Vendor’.The ‘Client ’has asked the ‘Vendor’ to develop an SRS for the Banking System.The ‘Vendor’ will also be responsible for the development of the software based on this SRS.
- This is the first version of the SRS.

2.Introduction

- A bank has several automated teller machine (ATMs), which are geographically distributed and connected via a wide area network to a central server. Each ATM machine has a card reader, a cash dispenser, a keyboard /display, and a receipt printer. By using the ATM machine, a customer can withdraw cash from either checking or savings bank account, query the balance of an account, or transfer funds from one account to another. A transaction is initiated when a customer inserts an ATM card into the card reader. Encoded on the magnetic strip on the back of the ATM card are the card number, the start date, and the expiration date. Assuming the card is recognized, the system validates the ATM card to determine that the expiration date has not passed, that the user-entered PIN (personal identification number) matches the PIN maintained by the system, and that the card is not lost or stolen. The customer is allowed three attempts to enter the correct PIN; the card is confiscated if the third attempt fails. Cards that have been reported lost or stolen are also confiscated.

3.Glossary

- ATM :Automated Teller Machine
- PIN:Personal Identification Number

4. Specific Requirements

1. The XYZ Bank Inc. can have many automated teller machines (ATMs), and the new software system shall provide functionality on all ATMs.
2. The system shall enable the customers of XYZ Bank Inc., who have valid ATM cards, to perform three types of transactions ; a) withdrawal of funds , b) transfer of funds, c) transfer of funds from one bank account to another account in the same bank.
3. An ATM card usage shall be considered valid if it meets the following conditions:
 - a) The card was issued by an authorized bank .
 - b) The card is used after the start date , i.e., the date when the card was issued.
 - c) The card is used before the expiration date , i.e., the date when the card expires.
 - d) The card has not been reported lost or stolen by the customer, who had been issued that card.
 - e) The customer provides correct personal identification number (PIN), which matches the PIN maintained by the system.
4. The system shall confiscate the ATM card if it detects that a lost or stolen card has been inserted by a customer. The system shall also display an apology to the customer.
5. The system shall allow the customer to enter the correct PIN in no more than three attempts. The failure to provide correct PIN in three attempts shall result in the confiscation of the ATM card.
6. The system shall ask for the transaction type after satisfactory validation of the customer PIN. The customer shall be given three

options:withdrawl transaction,or query transaction ,or transfer transaction.

7.If a customer selects withdrawl transaction ,the system shall prompt the customer to enter account number and amount to be dispensed.

8.For a withdrawl transaction ,the system shall determine that sufficient funds exit in the requested account ,that the maximum daily limit has not be exceeded ,and that there are sufficient funds available at the local cash dispenser.

9.If a withdrawl transaction is approved ,the requested amount of cash shall be dispensed,a receipt shall be printed containing information about the transaction,and the card shall be ejected.The information printed on the receipt includes transaction number,transaction type,amount withdrawn,and account balance.

10.If a customer selects transfer transaction ,the system shall prompt the customer to enter from account number,to account number,and amount to be transferred.

11.If a query transaction is approved,the system shall print a receipt and eject the card.The information contained on the receipt includes transaction number,transaction type and account balance.

12.If a customer selects transfer transaction ,the system shall be prompt the customer to enter from account number,to account number,and amount to be transferred.

13.The system shall check if there are enough funds available in the from account,which are being requested for transfer to the account.

14.If the transfer transaction is approved ,a receipt shall be printed and card shall be ejected.The information printed on the receipt includes transaction number,transaction type,amount transferred ,and account balance.

15.The system shall cancel any transaction if it has not been completed if the customer presses the Cancel button.

16.The customer records ,account records,and debit card records will all be maintained at the server and shall not be the responsibility of the system.

17.The system shall enable an ATM operator to shutdown or start up an ATM for routine maintenance.

18.The system shall enable an ATM operator to add cash to the cash dispenser.

19.The system shall not be responsible for opening or closing of accounts,and to create,update,and delete customer and debit card records.These tasks are performed elsewhere by a bank.

20.The system shall be linked with the bank server through communication systems,which are beyond the scope of the current system.It is assumed that this facility is always available.

21.The system shall not be responsible for the maintenance of the hardware devices of the ATM or network facilities.

5.Coclusion

- From this presentation ,one can observe that an ATM system is associated with the bank transaction of the consumers.
- Majorly ,the ATM system is utilized for the money associated transactions from the consumers. Consumers make major use of the ATM to withdraw money from their bank account.
- It is fast way to get money out of your account,especially when on the go or during a trip.

6.References

-Online training sessions and videos on python language by FUTURE VISION BIE training institute.

-python tutorials:<http://money.howstuffworks.com/personal-finance/banking/atm3.htm>.