

# **An Analysis of Accounting Software of Mutual Trust Bank.**

**Thesis Paper on  
An Analysis of Accounting Software of Mutual Trust Bank.**

**Thesis Advisor  
Md. Mafijul Islam.**

Submitted By:

Kazi Asadur Rahman.  
ID# 01101043

*Submission Date: 01.01.2006*



**Department of Computer Science and Engineering**

**BRAC University**

## DECLARATION

I hereby declare that this thesis is based on the results found by myself. Materials of work in analysis of the accounting software of Mutual trust Bank found by other researcher are mentioned by reference. This thesis, neither in whole nor in part, has been previously submitted for any degree.

Signature of  
Supervisor

Signature of  
Author

## **ACKNOWLEDGEMENTS**

At first, I should thank Almighty Allah for enabling me to complete of my project in time. I was assigned to work in Uttara Model Town Branch of Mutual Trust Bank. I was here to analyze their accounting software and gather experience of working in office environment. I have tried to present my study in this paper. I would like to express my gratefulness and thanks to my respected thesis supervisor Md. Mafijul Islam for giving me the opportunity to work on real life activity. His dynamic guidance at all stages of work encouraged me to accomplish my work successfully. I always felt that I was under guidance of highly qualified and experienced personal. I would like to thank BRAC University CSE department for giving me overall support and co-operation.

## **ABSTRACT**

Banking sector of our country is playing an important role in our economic situation. There are a large number of banks operating in our country successfully. Most of the banks are automated. As a result every bank has accounting software to operate their task easily and efficiently. It also helps them to give effective and quick service to the customers. That's why I took this opportunity to know about the accounting software of Mutual Trust Bank. I want to make proper use of my education in this section. I try to find out what the employee and the customer want from this service, and what the output actually they get from their software. I analyze the software to find any problem of the software. If there is any problem then I try to give the effective solution of that problem to make the software more efficient and useful to the employee and the customer of the bank

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## Chapter 1 INTRODUCTION

### 1.1 ORIGIN OF THE REPORT

This report is being submitted to the Executive Vice President, Human resource division, Mutual Trust Bank Limited, Dhaka and placement committee of department of Computer Science & Engineering, BRAC University, as the requirement for the completion of Bachelor degree in Computer Science. The internship was completed over three month period between October-December, 2005.

## **1.2 OBJECTIVES**

### **1.2.1 Primary Objective:**

- To present an overview of Mutual Trust Bank Limited.
- Analysis the existing software of the Bank
- Analysis the Products of bank with Prospect and Prosperity.

### **1.2.2 Secondary Objective:**

- To have a practical relation & reliability of the topics we have achieved from textual background in our educational life.
- To develop understanding of Computer Science application in banking sector.
- To develop the capabilities as an employee in realistic field of the job market.

## **1.3 SCOPE**

The report will cover mainly the analysis of the software they use, but go through all sectors. More specifically I will try to find out any problem or shortcomings in the software. And if there is any problem in the software then propose the solution.

## **1.4 LIMITATIONS**

The banking sectors always maintain very high security in their software section. They do not provide any user account with out their employee. As I was the intern in their bank, they do not provide me any user account to access the

software. They only give me some limited access in the software, which is not helpful to analyze the software. Though a very comprehensive and a well-organized report has been tried to be produced but there are still some limitations present here.

- Since the time allocated for internship program is twelve weeks, it may have a coercive effect on this study lowering the actual value and standard.
- The communication gap among the different personnel because of excessive workload.
- Inexperience about practical work.
- Because of sensitiveness, the department does not want to disclose information about the financial situation, which lead to do report.
- Lack of accessibility to respondents.
- The bank authorities are so busy that they could not give me sufficient time for discussion about the Software and its problems.

## **1.5 METHODOLOGY**

### **1.5.1 Sample Information**

Samples are collected from the employees of Mutual Trust Bank Department. Here, the samples have had been picked up on a judgmental basis. As for the organization part, information has had been collected from different published articles, journal, brochures and websites. All the information incorporated in this report has been collected both from the primary sources and as well as from the secondary sources.

### **1.5.2 Source of Data**

#### **1.5.2.1 Primary Source**

To prepare this report I was highly depended on Primary Data, which was collected from face to face conversation with the Manager and Employee of the bank in-depth interview.

#### **1.5.2.2 Secondary Source**

I used also secondary data for preparing this report. Data are collected from the annual reports of the company for the years under our review. I also collect some official scheme, brochure, web site paper that helped me lot to present this report. After ensuring the accuracy of the data I utilized this data to my report.

## **Chapter 2**



## **THE MUTUAL TRUST BANK LTD.**

- A promising private sector commercial bank incorporated and began its journey to serve people in superior value with banking supports on October 1999.
- Incorporated as a banking Company under the companies Act. 1994.
- All types of commercial banking services are provided by the bank within the stipulations lay down by the Bank Companies Act 1991.
- Sponsored by a group of dynamic Bangladeshi Entrepreneurs, Industrialist and professionals.

### **2.1 MISSION**

MTB aspires to be the most admired financial institution in the country, recognized as the dynamic, innovative and client focused company that offers an array of products and service in the search for excellence and to create an impressive economic value.

### **2.2 VISION**

To be the bank of first choice by creating an exceptional value for our clients, investor and employees.

### **2.3 OBJECTIVES**

- The main objective of the bank is to be a provider of higher valued services in term of customer services.
- To encourage and motivate the new entrepreneurs by boosting up investment in private sector.
- To financing foreign in Export and Import.
- To enhance saving tendency of the people by offering attractive and lucrative new savings schemes.

- To develop the standard of living of the limited income group by offering consumer credit.
- To boost up mobilization of savings both from urban and rural area.
- To develop the model of participatory banking.
- To develop competitive, most modern scientific and social welfare oriented banking institution on the country.

## 2.4 Management Organogram

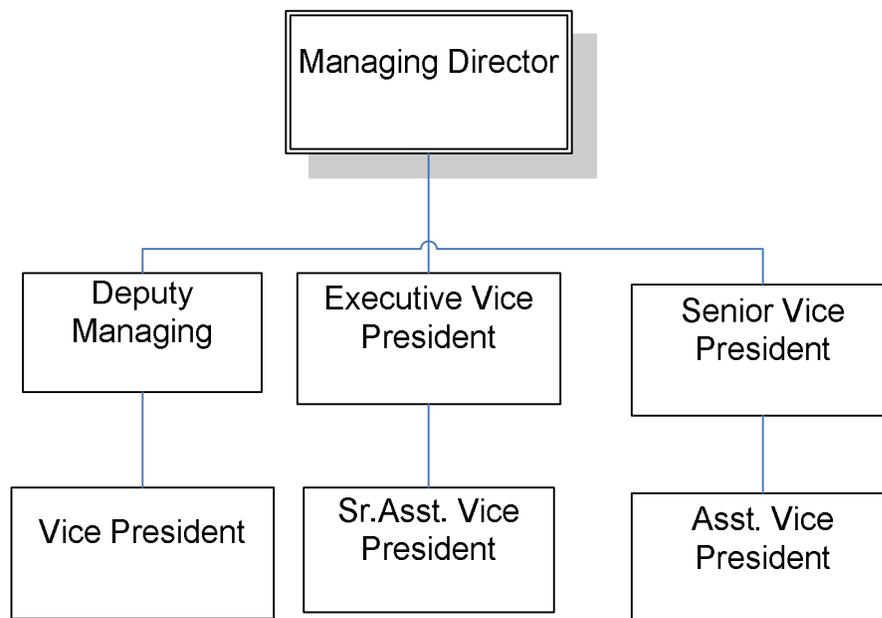


Fig: 2.4 Management Organogram

## 2.5 Services of the MTB

In order to cater to the needs of our clients, MTB offer a conglomerate of banking services with twenty two(22) branches, whereby employment will be generated, industrial growth will gain impetus and MTB can ultimately contribute to the economic development of Bangladesh.

### **2.5.1 Consumer Banking**

MTB aims to satisfy all clients. Individuals will be counseled on the best type of accounts suitable for them such as Current, Savings, Short Term Deposits, Fixed Deposits, Monthly Savings Schemes, etc. MTB will innovate and introduce many lucrative schemes such as – Monthly Money Earner and money Booster Plan, Bangladeshi Wage Earners Scheme for those working overseas, Income generating schemes for small entrepreneurs.

### **2.5.2 Institutional Banking**

MTB will provide comprehensive range of financial services to foreign missions, NGO's and voluntary organizations, consultants, airlines, shipping lines, contractors, schools colleges and universities.

### **2.5.3 Corporate Banking**

MTB will provide a complete range of financial services such as Corporate Deposit Accounts, Project Finance, Investment Business Counseling, Working Capital, Performance Bonds, Guarantees, and Consortium/Syndicate Loans.

### **2.5.4 Commercial Banking**

MTB will provide wide ranging banking services to all types of commercial concerns such as Trade Finance, Dealing with Import/Export L/Cs, Investment Advice, Foreign Remittance and other Specialized Services as required.

### **2.5.5 Lease Finance Facility**

The bank will design a very flexible arrangement of Lease Finance Scheme to assist and encourage genuine, capable entrepreneurs and professionals for acquiring capital machineries, computers, etc.

### **2.5.6 Consumer Credit Facility**

MTB will introduce Consumer Credit Schemes to provide financial ease to the average income group for purchasing essential household appliances.

### **2.5.7 Standing Instruction Services**

MTB will arrange payment of various utility bills such as Gas, WASA, Electricity, Telephone, etc. as per our clients' instructions. Special arrangements may be made for elderly retired people.

### **2.6 Other Services**

Aside from all the services mentioned above, MTB will arrange individual client required services such as:

- Remittance of Funds between banks/branches
- Foreign Exchange Dealings
- Collection of Cheques, bills, dividends
- Locker Facility

## **2.7 FINANCIAL PROSPECTS**

*Taka in Million*

<b>Particulars</b>	<b><u>2004</u></b>	<b><u>2003</u></b>
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<b>Paid Up Capital</b>	<b>720.00</b>	<b>620.00</b>
<b>Total Capital(core+supplymentary)</b>	<b>1,335.08</b>	<b>1,030.35</b>
<b>Total Asset</b>	<b>15,931.03</b>	<b>9,037.35</b>
<b>Total Deposit</b>	<b>13,164.13</b>	<b>7,163.67</b>
<b>Total Loans &amp; Advances</b>	<b>11,692.97</b>	<b>5,904.18</b>
<b>Profit After Provision &amp; Tax</b>	<b>247.19</b>	<b>190.34</b>
<b>Surplus in provision</b>	<b>0.57</b>	<b>0.96</b>
<b>Cost of fund</b>	<b>7.86%</b>	<b>8.22%</b>
<b>Earning Assets</b>	<b>14,779.16</b>	<b>8,300.61</b>
<b>Return on Investment(ROI)</b>	<b>5.17%</b>	<b>5.64%</b>
<b>Return on Assets(ROA)</b>	<b>1.55%</b>	<b>2.11%</b>
<b>Income From Investment</b>	<b>86.63</b>	<b>56.14</b>
<b>Earnings Per Share</b>	<b>34.33</b>	<b>43.37</b>
<b>Profit Per Share</b>	<b>34.33</b>	<b>43.37</b>
<b>Price-Earning Ratio</b>	<b>17.10</b>	<b>5.14</b>

## **2.8 PRODUCTS OFFERED BY MTBL**

### **2.8.1 DEPOSIT**

#### **2.8.1.1 Current Deposit**

Tailored to meet the need of individual and commercial customer. The current account gives the facilities like free cheque book and can access from any branch of the country.

### 2.8.1.2 Savings Deposit

This deposit can be opened by individuals or in joint names and non profit earnings organizations minimum deposit of certain amount. It could be two types—chequing or non-chequing account. Interest is provided 6% on chequing account. Depositor can withdraw money once in a week but can deposit.

### 2.8.1.3 Fixed Deposit

Higher rate for longer period, interest payable on Maturity. Opened with some terms and conditions----

It can be opened for a term of

- for three month— 9.50% interest rate
- for six month— 10.00% interest rate
- for 1-2 years period— 10.25% interest rate

### 2.8.1.4 Sundry Deposit

It is other deposit or access deposit, which Cheque/cash Bank can't pay individually and have been fallen some problem, Bank reserve the amount in Sundry deposit

## 2.8.2 Deposit Schemes

### 2.8.2.1 MTB MONTHLY BENEFIT PLAN

This plan offers the customer to generate monthly income out of his deposit. It has been designed to help and assist conscious savers from all strata of the society.



- Minimum Deposit- Tk. 50,000/= or in multiples thereof.
- No upper limit.
- 3 or 5 years term.

- Required to open a current or savings account.  
Monthly income will be credited to the account.

### Withdrawal

Withdrawal is not allowed before maturity, but if it is withdrawn before the agreed term, then interest will be calculated at prevailing savings rate.

#### 2.8.2.2 CHOTTOMONIDER SHIKKHA

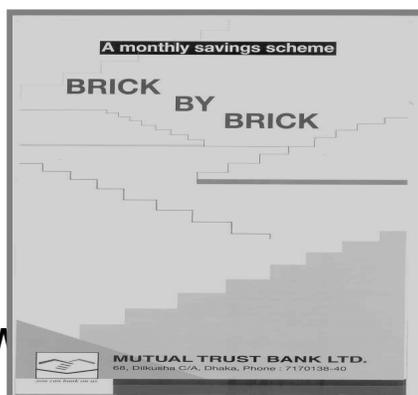
This plan is developed to the children's education & to encourage people to the banking activities.



- 4 years term.
- It is possible to deposit any amount of money in any time. Every deposit has to be minimum Tk. 250/=.
- To open account, minimum deposit required is Tk. 500.00/=
- The account is maintained by children's parents.

#### 2.8.2.3 BRICK BY BRICK

This is a monthly savings account as people's future financial safe-guard with the slogan "Drops of water make an ocean."



- 5, 8 & 10 years periods.
- Installment Tk. 500/=, Tk. 1000/=, Tk. 2000/=, & Tk. 5000/=
- To open account, depositor have to open a savings account.

Withdrawal is not allowed before maturity, but if it is withdrawn before the agreed term, then interest will be calculated at prevailing savings rate. No Interest will be paid, if deposit is withdrawn within 1 year.

#### **2.8.2.4 BEST INVEST**

It offers an efficient high return investment plan. This plan helps a customer build up sizeable income in easy and affordable installment. This plan allows a customer to own 5 times the initial invested amount. Best Invest offers two separate and convenient term deposit periods for 4 & 6 years respectively.



#### **Best Invest Calculation**

The best invest is available in units worth Tk. 50,000 each. A customer will invest Tk. 10,000 as down payment for purchasing 1 (one) unit & the bank will provide loan for Tk. 40,000. The customer also has the option to buy units in multiples of Tk. 50,000 but maximum up to Tk. 1 crore.

#### **Maximum Investment**

The best invest can be opened in multiples of Tk. 50,000. The maximum limit of Best Invest is Tk. 1 Crore.

### **2.8.3 LOAN AND ADVANCES**

Different kinds of Loans and Advances

#### **2.8.3.1 House Building Loan**

Repayable at monthly installment on amortization basis at fixed rate of interest against mortgage of real estate covering cost of construction only. The following types of loans may be extended:

- i. Residential House Building Loan
- ii. Commercial House Building Loan
- iii. Low Cost Housing for Rural Areas
- iv. Housing Scheme for Rural Areas

#### **2.8.3.2 Agricultural Loan**

As many as possible schemes for financing agricultural & rural sectors taken & credit under these schemes with nominal formalities be provided. The schemes may be as follows:

- Fisheries loan scheme.
- Banana Cultivation credit
- Shrimp culture credit.
- Credit for small farmers under International Fund for Agricultural Development (IFAD) etc.
- 100 crore Special Agricultural Credit Program (SACP)

#### **2.8.3.3 Cash Credit**

This is similar to overdraft, but as in this case of overdraft, it is not necessary to have current account under this arrangement. Customer can continuously avail the bank credit usually against securities deposited, without the need to maintain credit balance at any time. It is elastic because the limits fluctuate with the need of businessmen.

#### **2.8.3.4 Industrial Loan**

This loan is mainly formulated to finance new industrial units from the Bank's own source details of which are to be circulated. It may be mentioned that this type of

scheme may be termed as a new dimension in the history of commercial banks of this country.

### **2.8.3.5 Over Draft**

Overdraft is arrangement in relation to a person's current account and under the arrangement the customer can overdraw up to an agreed limit. The party has the liberty to repay the overdraft partly or fully and borrow again at his own convenience.

## **2.8.4 Bill Purchased/Discount**

### **2.8.4.1 Bills Discounted**

In this case the banker loans the funds by receiving a promissory note or bill payable at a future date and deducting from the interest on the amount of the instrument. This rate of interest applicable to bills and promissory notes is called rate of discount and the amount deducted is called the discount.

### **2.8.4.2 Bills Purchased**

The Banker may sometimes purchase bills instead of discounting them. But this is generally done in the case Documentary bills and that too from approved customers only.

## **2.8.5 BILLS PAYABLE**

### **2.8.5.1 Demand draft (DD)**

The demand draft is a written order by one branch of a bank upon another branch of the same bank to pay certain sum of money to or to the order of a specified person.

- A draft is always an order and never a 'bearer' instrument.
- It is a negotiable instrument like a cheque i.e. it can be endorsed, collected and delivered to the endorsee.

- D.D. may be issued to any person and it can also be issued in favor of a firm, company or local authority on written request duly signed by the purchaser.

#### **2.8.5.2 Issue of a D.D.**

The purchaser is asked to complete the prescribed form which is treated as an application as well as credit voucher for Gen. Account (Branch Concerned)

#### **2.8.5.3 Amount & Commission**

If against cash— the application is given to the customer to deposit the cash with the cashier.

#### **2.8.5.4 Payment of D.D**

After Receipt of IBCA: The IBCA received from issuing branch is responded by the drawee branch and then this becomes voucher.

Dr. General A/C- Drawer Br.

Cr. Bills Payable A/c-D.D. Payable.

A particular of DD is entered in D.D. Payable Register under initial of an officer.

#### **2.8.5.5 Cash Payment**

Satisfy as to the identity and respectability of the presenter and particularly the genuineness of signatures of the drawing officials. Signature of Letter of introduction issued by Drawer Branch Identification by a constituent/ respectable gentleman known to the branch would normally be acceptable.

### **2.9 FORM OF TRANSACTION**

Banking transactions occur in three forms i.e. Cash, Clearing and Transfer.

#### **2.9.1 Cash Transaction:**

The transaction, which directly involve with cash i.e. either cash receive or payment is treated as cash transaction. All cash receive and payment will be recorded as cash transaction.

### **2.9.2 Clearing Transaction**

The transaction, which involve with other bank through clearing house i.e. one party of the transaction either debit or credit is other bank is treated as clearing transaction. All collection from other bank or payment to other bank will be recorded as clearing transaction.

### **2.9.3 Transfer Transaction**

The transaction, which involve with two parties account or between party account to other account head of the bank but not in the form of cash is treated as cash transaction. For example fund transfer from one party account to other party account or one branch to other branch or party account to banks' account vice versa will be recorded as transfer transaction.

Every transaction must have evidence i.e. voucher. Voucher may be either debit or credit but all voucher must be authenticate by authorized officer. Its have to a valid date and amount. Amount in ward and figure must be the same. Every cutting must be confirmed by drawer (in case of cheque) or authorized officer. The purpose of the transaction should be briefly narrated in the body of the voucher and supporting memo if any must be with the voucher.

### **2.10 AUTHENTICATION OF VOUCHER**

Authorized officer with joint signature, one of which is the departmental in-charge, must sign every voucher. But in case of expenditure voucher except interest expenditure, branch in-charge must sign on the basis of expenditure power and budget given by head office time to time. If it is required to incur expenditure, which exceeds branch in-charge power must have to take permission from head office.

## **2.11 RECORDING OF TRANSACTION**

Base on transaction type transaction recording procedure vary, but all transaction records should be maintained on daily basis. Branches should record transaction through computer and the computer software is already developed for the branches.

### **2.11.1 Recording cash Transaction**

Cash transaction may be received or payment.

Cash receiving cashier should maintain cash receiving register and records all cash receive serially through crediting the related account and the corresponding debit would be the cash but he has not to issue any voucher for every cash receive. Cash receive registers' total balance shows the total figure of cash debit and one voucher should be pass for total cash received after the day transaction complete.

Cash paying cashier should maintain cash payment register and records all cash payment serially through debiting the related account and the corresponding credit would be the cash but he has not to issue any voucher for every cash payment. Cash payment registers' total balance shows the total figure of cash credit and one voucher should be pass for total cash payment after the day transaction complete.

### **2.11.2 Recording Transfer Transaction**

Transfer transaction should be recorded through transfer register. Ledger keeper record all transfer transaction serially. After receiving the transfer voucher, accounts officer posted the voucher on respective account or account head with a serial number on both debit and credit entry.

### **2.11.3 Recording Clearing Transaction**

Clearing transaction should be recorded through clearing register. Ledger keeper record all transfer transaction serially. After receiving the clearing voucher, accounts officer posted the voucher on respective account or account head with a serial number on both debit and credit entry.

**2.12 BOOKS OF ACCOUNTS**

Branch should maintain General ledger, Cashbook, Cash receive register, Cash payment register, Transfer register, Clearing register and also party account ledger on daily basis as per pro forma enclosed.

**2.13 REPORTS**

Branch should prepare statements:

Statements of affairs as per pro forma on daily basis,

Cash Book as per pro forma on daily basis,

Inter-branch transaction extract as per pro forma on daily basis,

Income & expenditure statement on monthly basis

# Chapter 3

## SOFTWARE OVERVIEW

The branch is maintained by four departments. General banking, Foreign trade, Loan & advancement and Accounting are the four departments. All the departments are divided into Cash, Clearing and Transfer section. This section is used the software to complete their transaction.

### 3.1 Use Case Diagram

Use cases are requirements; primarily they are functional requirements that indicate what the system will do. It also define a promise or contract of how a system will behave.

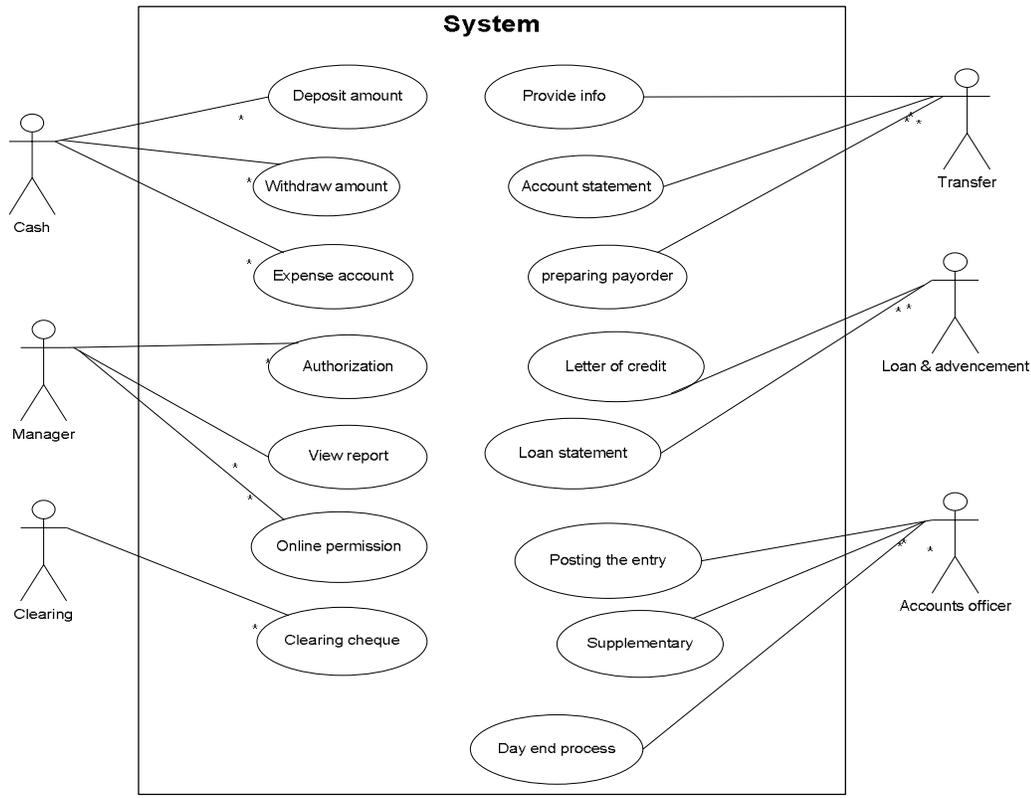


Fig3.1: UML diagram

### 3.2 Context Diagram

The context diagram is a physical data flow diagram that shows only data movement, not the movement of materials or other physical items. Data about physical item such as cash deposit, withdraw which is data about deposit system of the account. This is shown in a physical data flow diagram.

The context diagram of the system is given below:

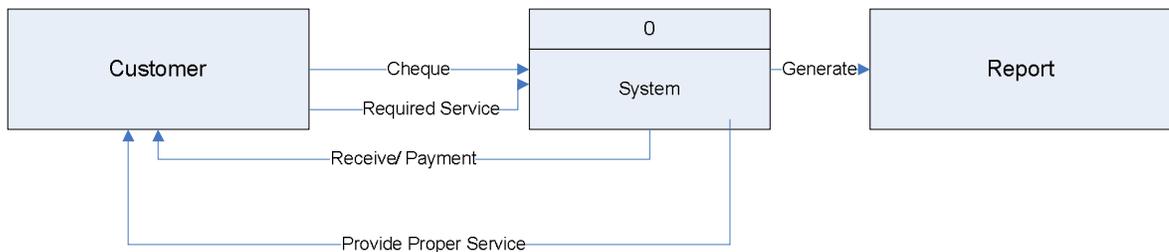


Fig3.2: Context Diagram

### 3.3 Data Flow Diagram

Data flow diagrams are versatile diagramming tools. This diagram is to represent the both physical and logical information system. I only describe the level-0 DFD for my report.

### 3.4 Cash Transaction

In this section, two kinds of transaction is occurred cash withdrawal and cash deposit.

#### 3.4.1 Deposit

To deposit any amount in the customer's account, customer gives the deposited cheque with amount to the teller. The teller gives entry to the customer's account in the software and customer receives the confirmation copy of the account.

Finally, another officer give passing of that entry in the software that means the data is updated in the software.

The level-0 Data Flow Diagram of this transaction is given below:

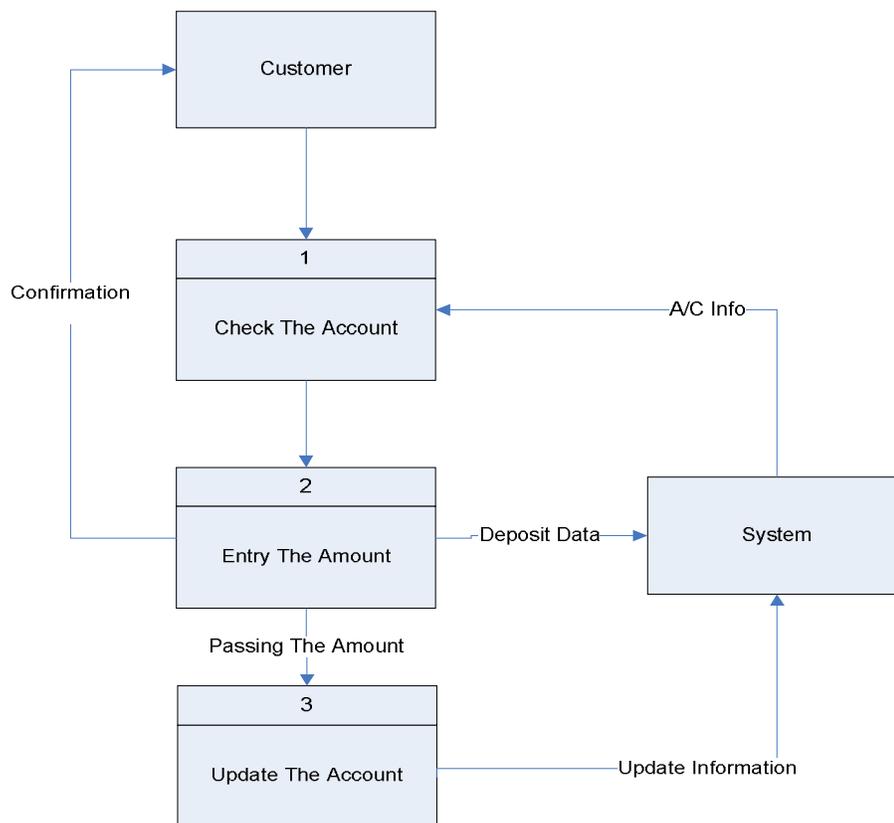


Fig3.4.1: Cash Deposit

**Process 1: Check the Account**

In this process, the officer checks that the account number and name is valid or not from the software. The officer also checks the amount in word and in digit is same or not.

**Process 2: Entry the Amount**

The teller gives entry of deposited amount in the software of the customers account number. The customer receives his/her confirmation copy of deposit amount.

**Process 3: Update the Account**

The passing officer confirms the entry in the software by passing the amount in that account number. As a result the data is updated in the software.

**3.4.2 Withdraw**

To withdraw any amount from the customer's account, customer gives the cheque with amount to the teller. The teller checks the account of the customer and send to another officer to verify his/her signature. After the verifying, the officer passes the amount in customer's account and then the teller pay to the customer.

The level-0 Data Flow Diagram of this transaction is given below:

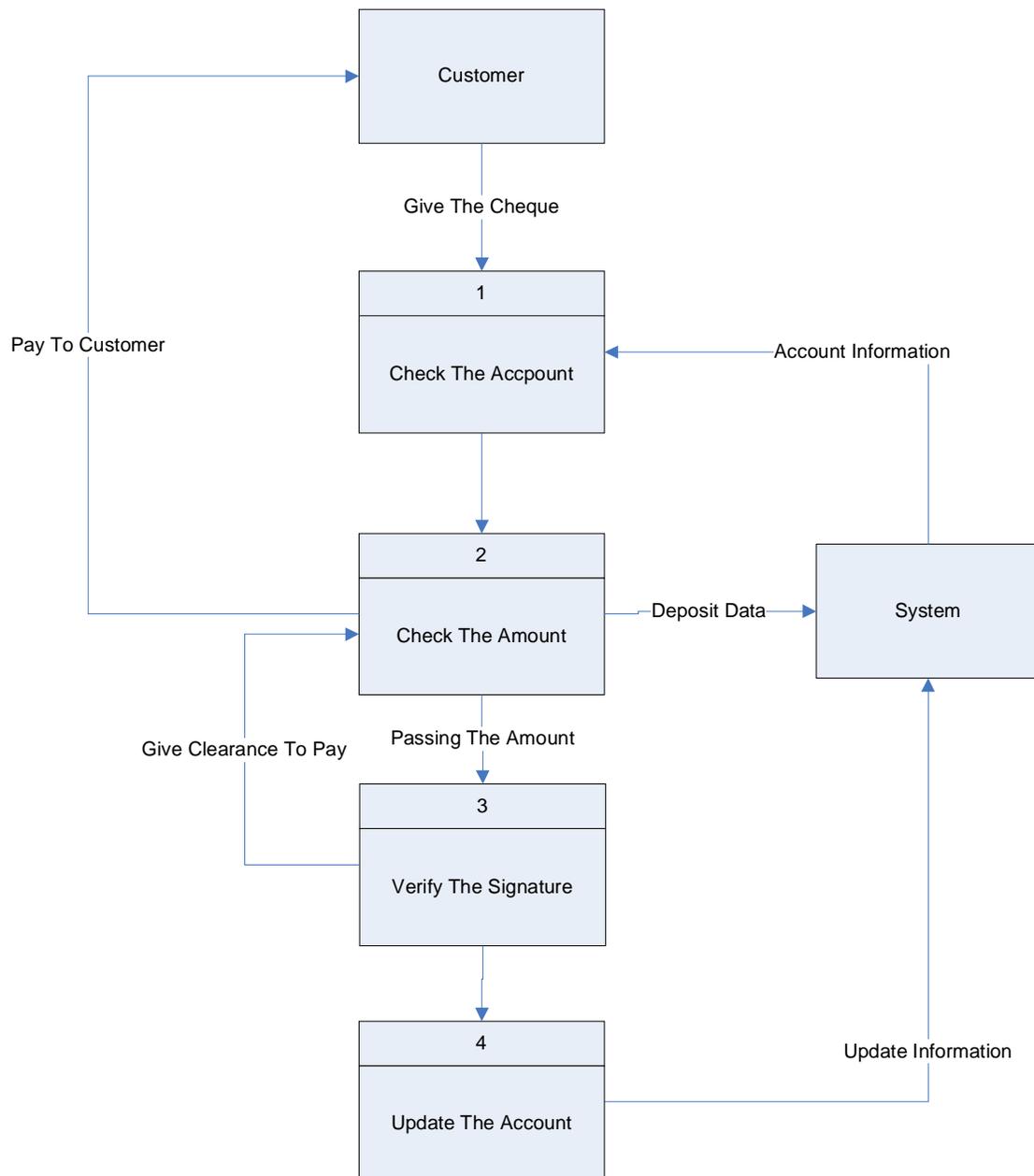


Fig 3.4.2: Cash Withdraw

### Process 1: Check the Account

In this process, the officer checks that the account number and name is valid or not from the software. The officer also checks the amount in word and in digit is same or not.

**Process 2: Check the Amount**

The teller must check the required amount with the balance of customers account number. The current balance must be greater than the required amount to withdraw.

**Process 3: Verify the Signature**

The officer verifies the signature of the given cheque with the signature that stored in the software. If the signature is not match then the cheque returns to the customer. This process is very essential to protect the fraud.

**Process 4: Update the Account**

After verifying the signature, the officer debited the customers account. The new balance is stored in the software. Finally, the customer receives the money from teller.

Other than cash deposit and withdrawal the expense account is also under cash transaction. Any kind of expense like transportation cost, computer and printer parts, beautification of branch and recreation. To keep record all of this expense the teller make voucher for each kind of expense of the day with authorized signature of branch in charge. The accounts officer gives posting in software. The reports are generated for expense of the day from software at the end of day.

**3.5 Clearing Transaction****3.5.1 Outward Transaction**

The officer gives entry of the cheque in the software that come from other bank in the name of this bank customer. At the end of day all this cheque sends to clear house. In the next morning the officer make phone call to the principal branch of the bank to know whether the cheques are pass or not.

The level-0 Data Flow Diagram of this transaction is given below:

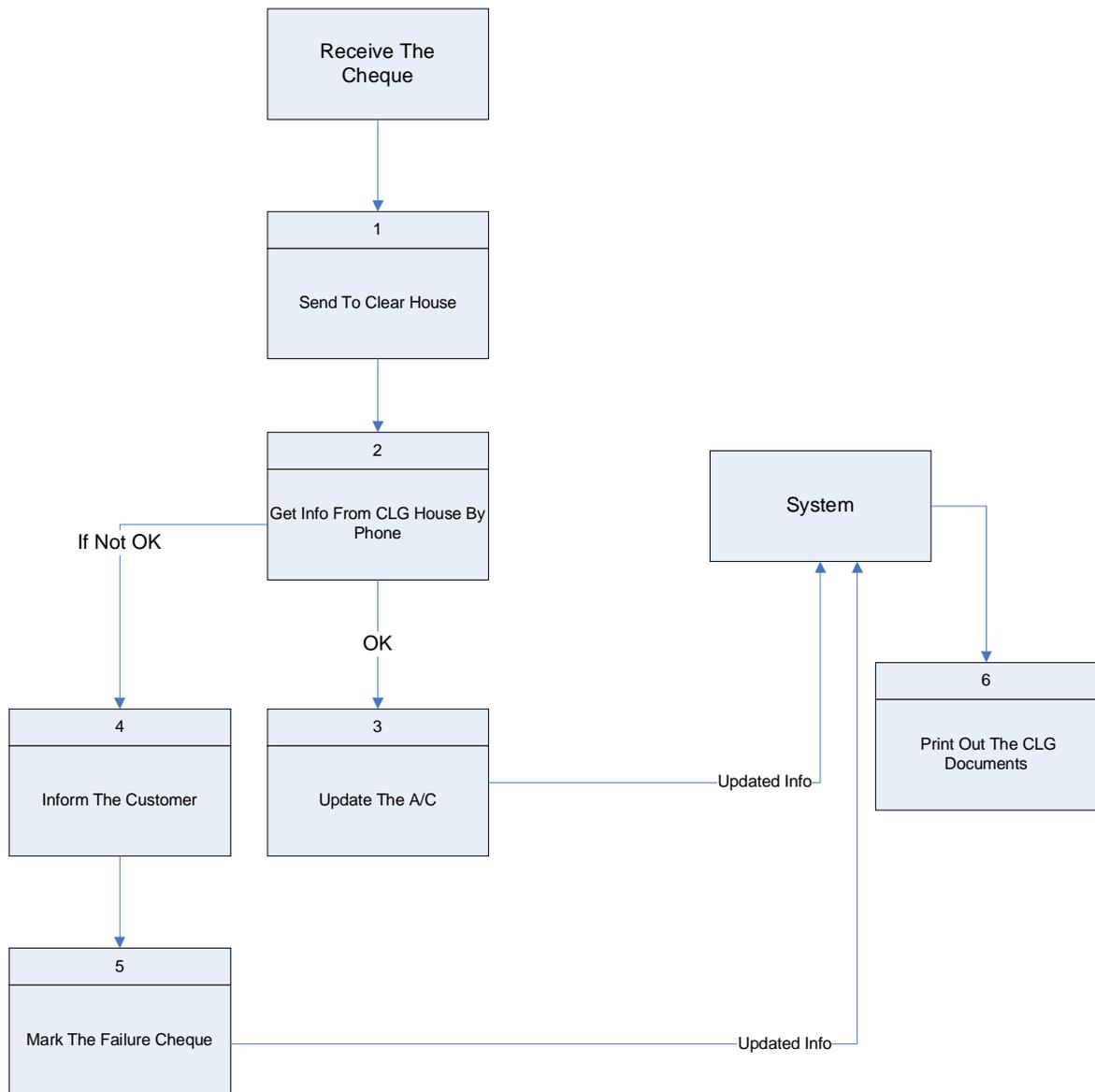


Fig3.5.1: Clearing Outward

**Process 1: Send to Clear House**

The customers give their cheque of other bank to collect money to their account. These cheques send to clearing house from where those cheques are distributed for collection to the required bank.

**Process 2: Get Information From Clear House**

The next day of sending cheque, the officer make a phone call to know about their cheques. The clearing house give information of the number of cheque is accepted and the number of cheque is return. If the cheque is return then they give reason of return the cheque.

**Process 3: Update The Account**

If the cheque is accepted then the officer gives entry in that customer's account number in the software. After updating the account, customer can withdraw from his/her account.

**Process 4: Inform The customer**

If the cheque is return, the bank informed customer the reason of returning the cheque. The customer can cancel the cheque or request the bank to send again to the clear house.

**Process 5: Mark The Failure Cheque**

The officer marks the failure cheque in the software. As a result only the accepted cheque is stored in the software. So that no wrong amount is transferred to any account. To update this transaction the user name and password is required by the software. Because the software keeps track of the officers identity to verify next time by the branch in charge.

**Process 6: Print Out The Document**

The officer takes the print documents from the software to inform the customer.

**3.5.2 Inward Transaction**

The accounts officer checks all the incoming cheques from software by account number. If the requested amount and other documents are correct then the officer give posting in software of that cheque, otherwise dishonor the cheque.

The level-0 Data Flow Diagram of this transaction is given below:

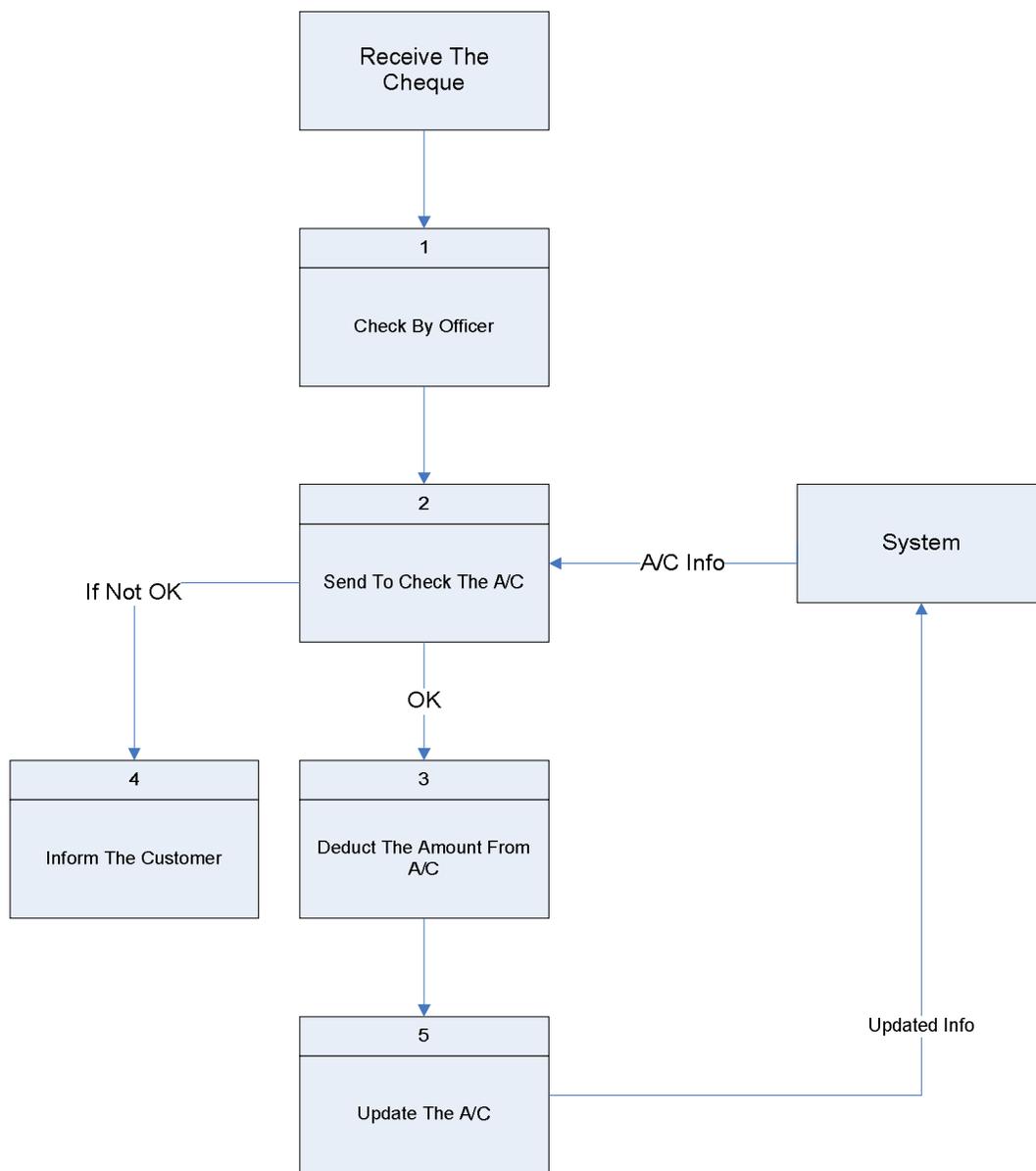


Fig3.5.2: Clearing Inward

**Process 1: Check By Officer**

The inward cheque is checked by second officer. The officer checked that the signature, the date and the amount are correctly write in the cheque. Then it sends to accounts officer to give entry in the software.

**Process 2: Check The Account**

In this process, the officer checks that the account number and name is valid or not from the software. The officer also checks the amount in word and in digit is same or not and current balance of the account.

**Process 3: Deduct The Amount**

If every thing of the cheque is correct then the accounting officer give the entry in the software. This amount is debited from the accounts balance.

**Process 4: Inform The Customer**

If the cheque is return then the bank inform to customer by making a phone call. The phone number is stored in the software.

**Process 5: Update The Account**

If the cheque is accepted then the officer gives entry in that customer's account number in the software. The new balance is stored in the software.

For inward clearing, in current system the bank make a phone call to their valued customer incase of dishonor their cheque. But the problem is some time their phone not available at that moment. That's why it becomes difficult to inform the customer timely. To avoid this problem, there should be an auto mailing system in the software to inform their valued customer. During the posting of cheque there should be a mail option which contain the mail address of each valued customer against their account number. When the accounts officer sees any chance to dishonor the cheque, s/he just press the mail button to inform the customer timely. As a result the customer will able to give solution just in time.

### 3.6 Transfer Transaction

In this section any type of general banking is occurred. The primary data flow of all this transaction is same.

The level-0 Data Flow Diagram is given below:

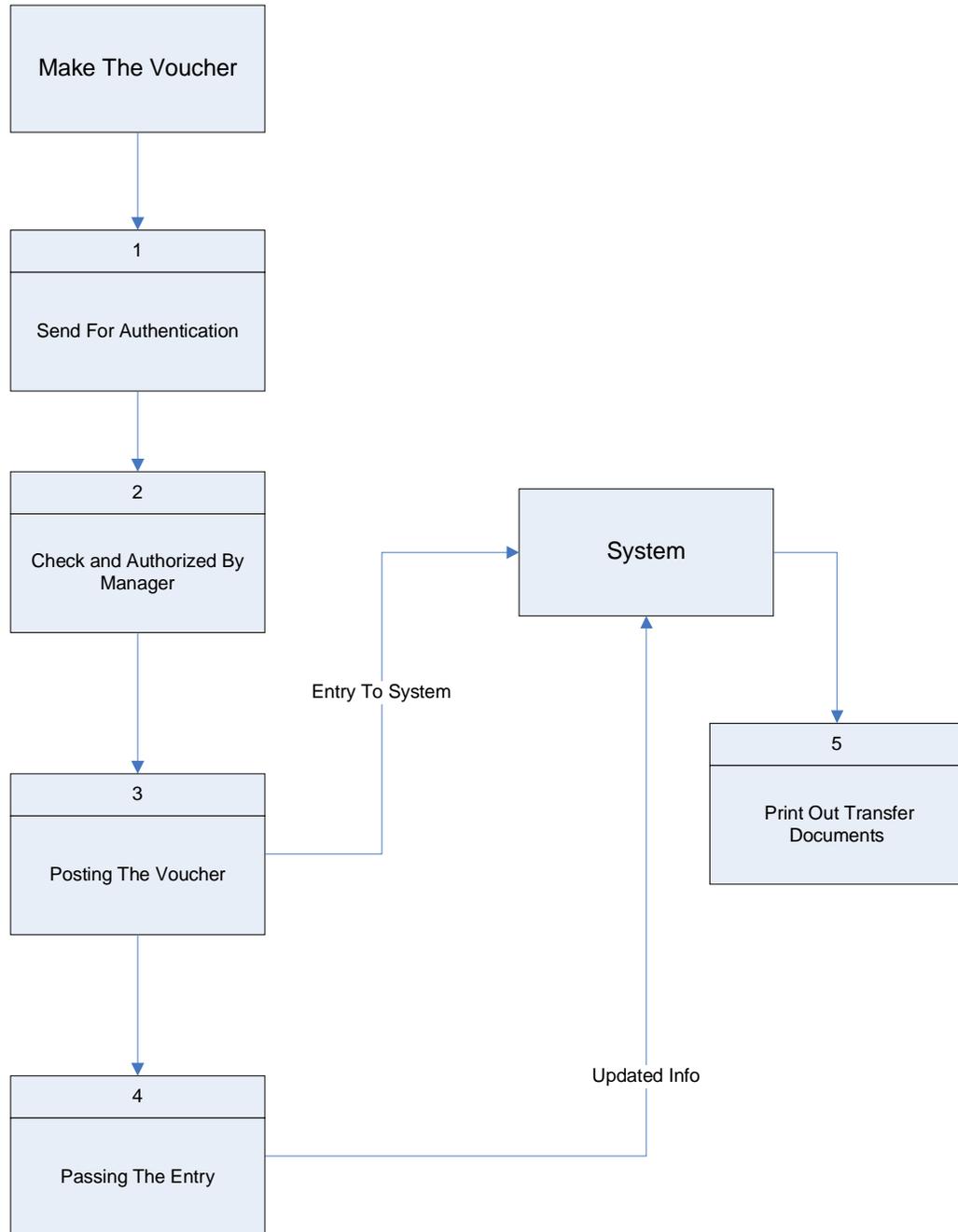


Fig3.6: Transfer Transaction

### 3.6.1 Account Opening

In current system to open an account the customer fill the form and give all the necessary documents to the officer. The introducer gives the introduced signature and his/her account number in the form of new account holder. Then the officer gives an account number to the customer. After that the officer gives entry in account opening form of the software. This form contain three pages, page one contain the account holders name, account number and other personal information. Page two contains the official information and page three contains the nominee information and address of account holder. The manager and another officer give authorized signature in the form. Finally the signature verified card to another officer to scan to the software.

During my internship I face two problems in this system, one is to authorization in the software and another is to assign the account number to the account holder.

The account number is different for every scheme, for example for savings it starts with 031, for current 021, for Brick by Brick 038 and so on. A complete number of a Savings account is 0310006457 and for Current account 0210005643. The problem is last four digits may be similar fir both Current and Savings in this system. As a result there is a chance to transfer money wrongly in Savings account in replaced of Current account or vice versa.

To overcome from this problem there should be introduced a check digit in last digit of the A/c number. The last digit of A/c number just confirmed that whether it is a SB, CD or any type of A/c number. This number must be chosen randomly.

The advantage of introducing check digit is it will prevent any wrong posting of the account number. For example if the accounts officer gives SB A/c number instead of CD A/c then the software automatically reject the entry. As a result no wrong money transfer will happen.

### **3.6.2 Closing Account**

In the current system there is only a close mark button to close a specific account number as per the customer application. To complete the whole procedure, some manual voucher needs to be written by the on duty officer. As the entire amount taken from the account holder is fixed. So it becomes very easy to make an auto voucher by clicking the close button. After clicking the button an auto voucher will generate that contain the excise duty, source tax and closing charge. The total amount of this charge is deducted from the account holders deposit and the remaining amount return to the customer.

### **3.7 AUTOMATION & “ONLINE” SERVICES**

The banking operations of all branches of MTB have been automated with a view to get optimum benefit and increased efficiency in serving the valued customers. The bank plans to integrate the banking application software which will span the entire range of corporate and consumer products. This will also help manage growth and substantially reduce transactional processing costs. The bank has recently installed 'Reuters' screen for smooth operation of foreign currency dealings. 'On-line banking' has already been introduced by the bank to further strengthen the relationship with our clients and make banking more convenient and easy. The installation of SWIFT unstructured is in its final stage and will go 'LIVE' in the 1<sup>st</sup> quarter of 2004.

#### **3.7.1 Service**

Mutual Trust Bank is playing a pioneering role among its competitors in providing real time online banking facilities to its customers. Mutual Trust Bank online banking offers a customer to deposit or withdraw any sum of money from any

branch anywhere. Any account holder having a checking account with the bank can avail this service.

### **3.7.2 The Software**

Based on two-tier client-server architecture, the banking software works basically on central server approach providing the fastest possible access time to any client database from any branch as well as updating the transaction. The branch level server keeping the up to date transaction history of the client ensures the offline transaction ability in case of any failure in the remote communication. Using Microsoft's enterprise version of SQL Server 2000 as data reservoir, the software ensures the highest level of security at application, network, database and operating systems level ascertaining the confidentiality and security of customer's personal and account's information.

### **3.7.3 Hardware**

In order to ensure the safety and accessibility of mission critical data, the Central Data Center of Mutual Trust Bank is equipped with the state of the art Servers. The recently procured Dell 6600 Server, powered by 4 Xeon processors (RAID5 volume fault tolerance implemented) has been employed as the primary data reservoir of the bank. As a disaster recovery preparation, we have deployed Dell 4300 series Server as Backup server, powered by 2 Xeon processors, which ensures quick fail over of the primary server and smooth operation of online transactions.

### **3.7.4 The Wireless Network**

In order to provide data communication to ensure seamless operation of online banking system, all the branches of the Mutual Trust Bank (except two rural branches) are connected with the central server at its Head Office through Radio Link of 3.5 Frame Relay network and Fiber Optics provided by the country's

leading data communication service provider X-Net Limited, a joint venture company with GrameenPhone. The Bank has recently adopted V-SAT communication system to bring its rural branches under the online branch banking facilities. The V-SAT connectivity is being provided by Square Informatics Ltd.

### **3.7.5 Problem of Online Banking**

The main problem of online banking is it can not provide service for any loan account. It provides service only for SB and CD account. To provide service for loan account it needs some important documents that is not available in the software. The authority told me that the documents are quite big in size to store in the software. The terms and condition can change any time with negotiation of both parties. Another problem is the limit of the loan amount also changes any time. The software does not support any over limit pay to any account. The bank authority wants to handle loan transaction face to face with customer.

### **3.7.6 The Data Flow Of Online Banking**

Online deposit and online withdraw is two kinds of service delivered by the bank. So the DFD of this transaction is discussed below.

#### **3.7.6.1 Online Deposit**

The level-0 Data Flow Diagram of this transaction is given below:

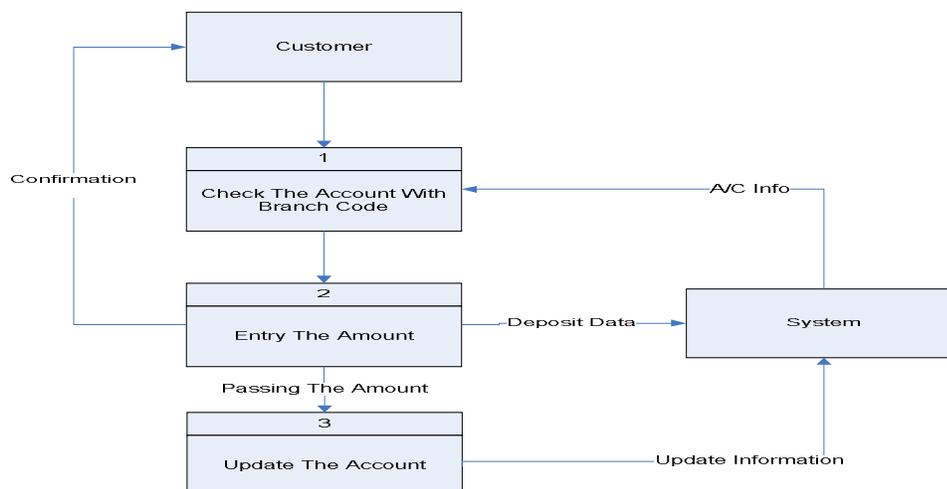


Fig3.7.6.1: Online Cash Deposit

### Process 1: Check The Account With Branch Code

In this process, the officer checks that the account number and name is valid or not from the software. The officer also checks the amount in word and in digit is same or not and the branch code of the required branch. The online service is not possible without branch code. Because the money is transferred with this branch code.

### Process 2: Entry The Amount

The teller gives entry of deposited amount in the software of the customers account number. The customer receives his/her confirmation copy of deposit amount.

### Process 3: Update The Account

The passing officer confirms the entry in the software by passing the amount in that account number. As a result the data is updated in the software.

### 3.7.6.2 Online Withdraw

The level-0 Data Flow Diagram of this transaction is given below:

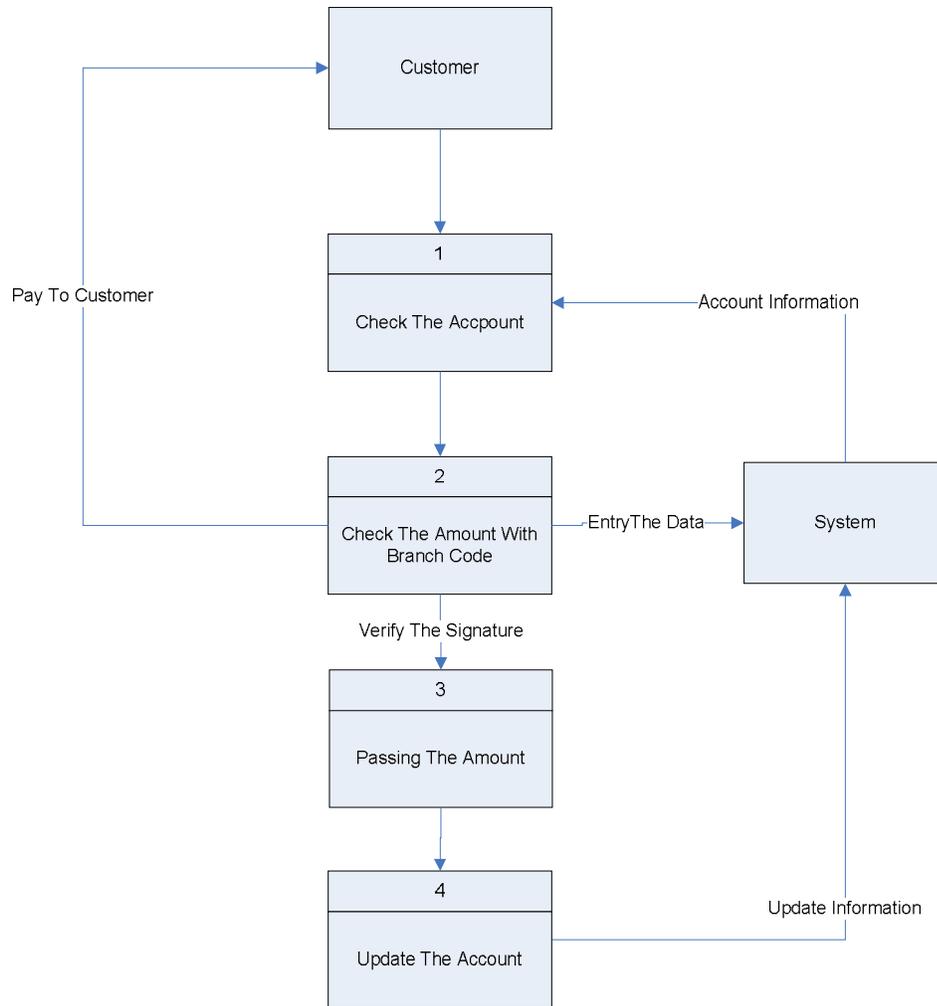


Fig3.7.6.2: Online Cash Withdraw

### Process 1: Check The Account

In this process, the officer checks that the account number and name is valid or not from the software. The officer also checks the amount in word and in digit is same or not and the branch code the required branch.

### Process 2: Check The Amount

The teller must check the required amount with the balance of customers account number. The current balance must be greater than the required amount to withdraw.

**Process 3: Verify The Signature**

The officer verifies the signature of the given cheque with the signature that stored in the software. If the signature is not match then the cheque returns to the customer. This process is very essential to protect the fraud.

**Process 4: Update The Account**

After verifying the signature, the officer debited the customers account with branch code. Finally, the customer receives the money from teller. The account is also updated in customer's actual branch.

**3.8 Statement**

The software provides statement for both customer and authority. The customers get information about their transaction with amount and date and also the current balance of the account. They also know the amount and date of transferring money to others account or to any client for future requirements from their statement. The software automatically reduces charges from the balance twice in a year. It also shows in statement. The bank provides account statement to the customer twice in a year.

For banks internal use different kind of statement is generated from the software. Monthly income and expenditure statement, monthly cash flow statement and some other statements are generated from the software. It helps the bank to know from which department they make more profit and as well as in which section is more expensive. They can take proper action according this statement to reduce expense or to increase profit. The cash flow statement gives information about the mount of cash flow from different department like cash remittance, LC and other. All this statement helps the bank to take steps for future improvement.

**3.9 Reports**

All the reports are generated by the software used by the officials. If there is any mistake at the end of the day they can easily find out exactly where the mistakes occur.

### **3.9.1 Supplementary Report**

The supplementary report contains the report of all transaction (cash, clearing and transfer) for both Dr. and Cr. section of the day. The total number of transaction occurred of each transaction are printed at the end of day. Every day this report is compared with manual voucher. If the manual voucher is match with report then all the transaction of the day is correct. If not match then from the report easily find out the mistake. After completion of all task this reports are printed from the software. For any emergency transaction occurred after the printing of reports it can print from the option of by module reports.

### **3.9.2 Online Report**

The online transaction of Mutual Trust Bank is till 2pm. After that time the online transaction reports are generated from the software. The report contains the information of how many transactions is occurred from one branch to another branch. The account name, number, amount and the cheque issued branch of each transaction is also recognized from the report.

### **3.9.3 Daily Transaction Report**

The daily transaction report contains the information of the amount of each transaction (cash, clearing and transfer) with Dr and Cr. If the report shows any differences in amount then it means there is a mistake to post or passing the amount of transaction. It also indicate that the mistake is occurred in Dr side or in Cr side. This indication helps a lot to find the mistake quickly.

### **3.9.4 Day End Report**

The day end report contain the information about the total number of transaction occurred in a day. It shows the number of transaction separately in Dr and Cr side of all transaction. The report has also the information of the cash amount of day starting and cash amount of day ending. Day end report is the most important report of the day.

### **3.9.5 Cash Receipt and Payment Report**

This report is generated after closing the cash transaction. The report contains the information about the total amount of cash deposit and withdraws. It also shows the amount of cash deposit or withdraws by account number. This report helps to find the amount of cash difference. If they receive more than the declared amount in the cheque or pay to the customer, then from this report they can find out the amount of cash that is wrongly pay or receive from the customer.

## **Chapter 4**

### **LIMITATIONS**

#### **4.1 Error Handling**

The software is providing error message only for wrong password or user name. But it should provide error message for any wrong entry. If any body give wrong account number like SB number instead of BB number. For this kind of error the software does not show any data and the officer understand that s/he made some problem. They are not able to know exactly what kind of mistake they made. The software should give error message like “wrong account number” for this mistake and the officer can know about his/her mistake. If they can know about their mistake, they will become more serious in future. It also helps them to increase their accuracy.

#### **4.2 Authorization In The Software**

To open the account only in manual form is authorized by the manager and another officer. But in the software there is no authorization. As a result there is a chance to make a mistake during posting the information. If the authorization system is also in software then it save the time and reduce error.

To ensure the authorization in the software some additional task need to add in the current software. After giving entry of all necessary information from the customer in the software, the on duty officer press a button “send for authorization” which linked to the manager or the second officer of the branch. They got a message like authorization is pending until they done the job. The manager then sees the whole pages of account opening information. If all the information is correct then S/he click a button “authorized”. As a result of double checking there is no chance to make a mistake. It also save valuable time, as no need of filling the manual form.

### **4.3 Customer Identity Code (CID)**

In the banking system one customer may have more than account. S/he may have one Savings, Current, Brick by brick and Consumer credit account. In current system every time of opening the account the officer need to fill the form for each account. This is not efficient system of banking. Some customers are not always ready to give same information again and again.

To solve this problem we can introduce CID. For every customer information have a CID. If a customer comes to open his/her second account then enter the previous CID to retrieve the information from previous account. By this way the bank can able to save their valuable time as well as customers also. As a result bank can give swift service to the customer.

## **Chapter 5**

### **NEW CONCEPT**

#### **5.1 Introducing ATM card**

Now a day the ATM (Automatic Teller Machine) card service is very attractive and essential service for the customer. In private bank sector every bank has this service. During my internship many customer asked to open this service by MTB. The customers are well known about the facility of this service. So the bank can easily open this new service as early as possible.

The bank can make a rule like if the customer has a account with this bank then an ATM card will automatically issued to the customer. They can take minimum amount from customers account. According to the customers transaction with the bank they can make the limit of amount for the customer. The bank can divide the customer in three classes according to their transaction.

Class A: Amount limit should be 50,000 to 60,000.

Class B: Amount limit should be 30,000 to 40,000.

Class C: Amount limit should be 20,000 to 25,000.

The customer can extend their limit by apply to the branch in charge with a reasonable explanation.

#### **5.2 Enhance Of Online Banking**

The people want to involve in more than one business or job. They want to make best utilizes of their time. Because the time is money. Some time the corporate people do not want to go to the place like bank for silly work like to open an account or to renew their fixed deposit term. To give proper support to this kind of corporate people the bank need to expand their online banking in new feature called e-banking. In this system the bank can provide some general service like account opening, renewal of any deposit scheme and information about balance

of account holder. To provide account opening service, as the bank has their website they just upload the account opening form in the website. The customer fills the pages and submits to the bank specifying a particular branch. The officer checks the pages and send to branch in charge for authorization. The customer also sends the introducer A/c number, the bank inform and ensure that person. After completion all the task the bank send an account number to the customer by mailing.

Maturity of deposit scheme page should be available in the website. To enter this page the account number and password is needed which is provided by the software. The customer can see the current situation of the account and if s/he wants to extend any of his/her account just click on a button called extend. To confirm this extension the account number and password is also needed. After completion the bank's task the customer get a confirmation mail from the specified branch of the bank.

## **CHAPTER 6 CONCLUSION**

The feature of this software is sufficient for the banking purpose with out some lacking and limitations. By analyzing the software I find out some lacking and limitations. I give some proposal to solve those problems. I also suggest some new feature to develop in the software. This feature will make the software more efficient and effective to the bank.

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