# ATM MANAGEMENT SYSTEM

## PROJECT REPORT

SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENT FOR THE AWARD OF THE
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## BACHELOR OF TECHNOLOGY

(C.S.E.)

SUBMITTED BY

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# 1-ABSTRACT

The ATM System is the project which is used to access their bank accounts in order to make cash withdrawals. Whenever the user need to make cash withdraws, they can enter their PIN number (personal identification number) and it will display the amount to be withdrawn in the form of 50's, 100's and 500's. Once their withdrawn was Successful, the amount will be debited in their account.

The ATM System is developed in VB.Net and back-end database as Ms-Access. VB.Net is the one of the powerful versions of Framework and object oriented programming. Hence we use this software in our project.

The ATM will service one customer at a time. A customer will be required to enter ATM Card number, personal identification number (PIN).

Both of which will be sent to the database for validation as part of each transaction. The customer will then be able to perform one or more transactions. Also customer must be able to make a balance inquiry of any account linked to the card.
.
The ATM will communicate each transaction to the database and obtain verification that it was allowed by the database. In the case of a cash withdrawal, a second message will be sent after the transaction has been physically completed (cash dispensed or envelope accepted). If the database determines that the customer's PIN is invalid, the customer will be required to re-enter the PIN before a transaction can proceed.
.
If a transaction fails for any reason other than an invalid PIN, the ATM will display an explanation of the problem, and will then ask the customer whether he/she wants to do another transaction
.
The ATM will provide the customer with a printed receipt for each successful transaction, showing the date, time, machine location, type of transaction, account(s), amount, and ending and available balance(s) of the affected account ("to" account for transfers).

# 2-Introduction

Automated Teller Machine enables the clients of a bank to have access to their account without going to the bank. This is achieved only by development the application using online concepts.

When the product is implemented, the user who uses this product will be able to see all the information and services provided by the ATM, when he enters the necessary option and arguments. The product also provides services like request for cheques, deposit cash and other advanced requirement of the user. The data is stored in the database and is retrieved whenever necessary. The implementation needs ATM machine hardware to operate or similar simulated conditions can also be used to successfully use the developed product.

To develop this ATM system the entire operation has been divided into the following step:

- ➢ Verification process.

- ➢ Language, service and account selection.

- ➢ Banking services.

- ➢ Transactions.

Special services the program is designed in such a way that the user has to card and pin number. Once verified, he is provided a menu and he/she had to enter the option provided in the menu.

For example, when the user wants to view the list of payment history than he/she had to enter the option for payment history provided in the main menu. When the option is entered alone with the respective argument, then the payment history is displayed on the screen. The user also must be given option to browse through the pages like previous page, next page, etc. The user may experience a delay in retrieving or viewing the data, when there are many users logged on to the same bank branch system.

ATM stands for Automated Teller Machine which is a self-service banking outlet. You can withdraw money, check your balance, or even transfer funds at an ATM. Different banks provide their ATM services by installing cash machines in different parts of the country. You can withdraw money from any of these machines irrespective of whether or not you are an account holder in the same bank.

ATM transactions are either free or bear a nominal charge depending upon the banks. Banks usually do not charge for the first 3-5 ATM transactions in a month. Once you cross the limit of free transactions, you may have to pay a nominal charge. Also, some banks levy charges if you withdraw money from the ATM of another bank of which you are not an account holder.

ATMs are designed to provide you with seamless accessibility to your bank account. You can find ATMs in strategic locations such as public spaces, malls, transportation hubs – wherever you could require cash to purchase goods / services. You can use any ATM that is compatible with your bank's network, regardless of the bank that operates the ATM.

ATMs are extremely convenient as they are available 24×7, unlike traditional bank branches that have fixed working hours. You can use ATMs at any time of the day or night, without having to wait in long queues at the bank branches. There are no charges for the first 3-5 transactions per month and you can also save money by avoiding service fees for using ATMs of your own bank or its network partners. ATMs are secure and reliable as they use encryption and authentication methods to protect your data and transactions.

The concept of Automated Teller Machines was introduced by Barclays Bank in London during the late 1960s. These machines were created to provide banking services outside traditional banking hours and locations. Initially, there were technology issues and concerns regarding safety. However, over time, advancements in technology improved the reliability and security of ATMs. PINs were introduced as a crucial step in ATM usage to enhance security. PINs ensured that only authorized individuals could access their accounts through an ATM.

During the 1970s and 1980s, ATMs rapidly spread throughout the world, revolutionizing the way people conducted banking transactions. This widespread adoption allowed individuals to conveniently withdraw cash, deposit money, transfer funds between accounts, check account balances, and perform various banking tasks for which they previously had to spend a significant amount of time at the bank.

# 3-Types of ATMs

Automated Teller Machines (ATMs) are mainly of two types. One is a simple basic unit that allows you to withdraw cash, check your balance, change the PIN, get mini statements and receive account updates. The more complex units provide facilities for cash or cheque deposits and line of credit & bill payments.

There are also onsite and offsite Automated Teller Machines- the onsite ATMs are within the bank premises, unlike the offsite ones which are present in different nooks and corners of the country to assure that people have basic banking facilities and instant cash withdrawals if they can't go to a bank branch.

## 3.1) Location Based Types of ATM:

### On site ATM:

In this, ATMs are situated either within the branch or is close to the premises of the branch so that customers can avoid the line that are present in the branch and can save their time to complete the transaction.

### Offsite ATMs:

In this, ATMs are located outside the bank like shopping malls, railway stations, airports and petrol pump etc. This is on a standalone basis where there is no physical branch present. This is being done by banks to reach more and more customers in the geographical areas where there is no branch of them but customers could still able to use their services.

### Worksite ATM:

Worksite ATMs are the ATMs that are located within the premises of an organization and generally meant only for the employees of the organization.

## Mobile ATM:

Also known as ATM on wheels. In this, the ATMs move in various areas for the customers to let them use their services. This is done for the convenience of the customers. **ICICI BANK** was the first private sector bank to start mobile ATM in India. As per now some other banks have also started ATMs on wheels.

## 3.2)  Operation Based Types of ATM:

ATMs that are provided by NBFC (NON-BANKING FINANCIAL COMPANY) are known as white label ATMs. These are set up, owned and operated by non-bank entities which are approved by RBI and are incorporated under the companies act, 1956. To drive ATM penetration in the country, RBI has approved (WLAs) i.e. Non-Bank entities to set up and operate their own brand of ATMs in the country. In these ATMs, transaction

# 4-Methodology

➢ The completion of the project involved acute scanning of the library and different text books. A lot of information has also gathered from the web.

➢ A visit to HDFC Bank and IDBI Bank also made to gather information pertaining to the project.

➢ The information collected has been diluted and presented in very simple and lucid manner, which will help the reader to understand the topic.

# 5-Objective

The system mainly used by the bank clients. When a client comes to ATM centre to update and delete their account. It reduces the time consumption and lot of paper work. For any single operation it involves numerous references and updating also takes subsequent changes in other places.

Now-a-days every one very busy in their work. So they feel that the job must be easier so the system is used to reduce their work which is done in the ATM system. Instead of keeping lots of paper into a record or file and it may be missed somewhere so, this system help to keep the record of the customer it also keeps the details of the customer. It is also easy to access.

The system customer transactions, satisfies the requirements of the existing system in full-fledged manner. Through this system, customer can make fast transactions and view the last transactions easily.

# 6-Scope

Our main objective is to speed up the transactions done by customers. No manual transactions needed generally. The second objective is to save the time which is very important now-a-days. It will include other objectives such as:

- ➢ To render accurate services to customer.

- ➢ The reduction of fraudulent activities

- ➢ To achieve speedy processing of customer data

- ➢ To reduce error processing, the guarantee of increase security

- ➢ It can be implemented in ATM machine by owner of bank or in charge of branch.

- ➢ It is easy to learn the task.

# 7-System Requirements

## 7.1) Hardware Requirements:

- Processor: - Intel Pentium 4 or Later or Compatible

- Hard Disk: - 410GB or more

- RAM: - 1GB or more

- Printer: - Any

- Monitor: - SVGA Color Monitor (Touch Screen or Simple)

- Pointing Device: - Touch Pad or Keys

## 7.2) Software Requirements:

- Operating System: - Microsoft Windows XP

# 8-System Analysis:

## 8.1) Study of current/Existing system:

In the manual system, firstly the bank manager and its staff have to manage information regarding the accounts and transaction of all the customers manually. Doing this manual transaction was really tedious job. Secondly information regarding accounts and transactions of customers were to be maintained. This process is time consuming and it requires a great manual effort.

### Disadvantages:-

- More time is consumed.

- More hard work to maintain all records.

- Bulk of paper is to be searched for a single search.

## 8.2) Feasibility study:

### Technical feasibility:-

The system is being developed in Visual Basic 6.0. It provides comprehensive function to make it user friendly. The data entry and report generation is also made easy. Backup and restore of the database facility are also provided. It also provides easy retrieval of data. The machine configuration also supports this software.

### Social feasibility:-

As this system is user friendly and flexible some problems will also be solved which employee may be facing when using existing system. So we can say that system is socially feasible.

### Operation feasibility:-

Since the system is being in user friendly way, the new customers within a few times can master it.

## 8.3) Design of new proposed system (UML):

This system provides paperless maintenance. Initially a cashier or a clerk cans be appointed to do all the transaction and update and maintain records. In the new system the customer himself can do all the transaction and the computerized system automatically updates and maintains the records.

## Advantages:-

- Less effort to complete transaction.

- Less time required.

- No need to maintain the bulk of papers.

# 9-IMPLEMENTATION

## 9.1) Flowchart: -
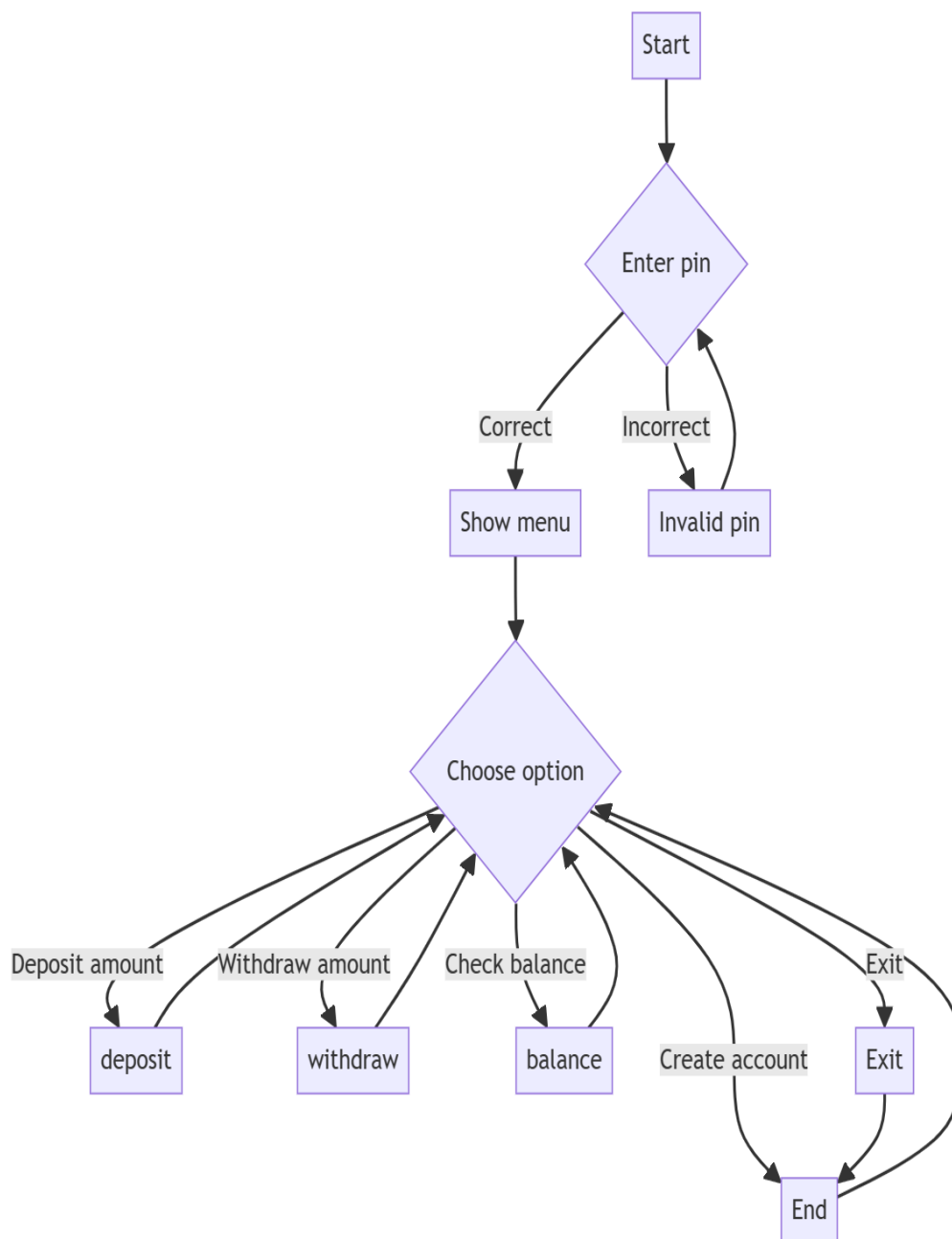
## 9.2) Project code: -

```
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
#define max 100
struct ATM
{
       long long int acno; char name[50]; float amount;
};
struct ATM A1;

void createaccount();
void deposit();
void withdraw();
void balance();

int main()
{
       System("color  7D");
       int choice=0,count=0;
       char ch1,ch2,ch3,ch4;
       printf("\nEnter your four digit pin : ");
       ch1=getch(); printf("*");
       ch2=getch(); printf("*");
       ch3=getch(); printf("*");
       ch4=getch(); printf("*");
       if(ch1=='2'&&ch2=='5'&&ch3=='5'&&ch4=='3')
       {
              while(choice!=5)
              {
                     printf("\n------ATM banking management system------");
                     printf("\n\t 1 create account");
                     printf("\n\t 2 deposit amount");
                     printf("\n\t 3 withdrawal amount");
                     printf("\n\t 4 check balance");
                     printf("\n\t 5 Exit");
                     printf("\n----------------------------------------");
                     printf("\nEnter your choice = ");
                     scanf("%d",&choice);
                     switch(choice)
                     {
```

```c
                    case 1: createaccount(); break;
                    case 2: deposit(); break;
                    case 3: withdraw(); break;
                    case 4: balance(); break;
                    case 5: exit(0);
                    default: printf("Invalid choice....");
                }
                printf("\n");
            }
        }
        else
            printf("\nInvalid pin...");
}

void createaccount()
{
        long long int n=0,number;
        printf("Enter 11 digit account number = ");
        scanf("%lld",&A1.acno);  number=A1.acno;
        while(A1.acno!=0)
        {
            A1.acno=A1.acno/10;
            n++;
        }
        if(n==11)
        {
            A1.acno=number;
            fflush(stdin);
            printf("enter the account holder name = ");
            gets(A1.name);
            fflush(stdin);
            printf("Enter amount = ");
            scanf("%f",&A1.amount);
        }
        else
        {
            printf("you didn't enter 11 digits...\n");
            createaccount();
        }
}

void deposit()
{
```

```c
        float amt;
        printf("\nEnter an amount for deposit = ");
        scanf("%f",&amt);
        if(amt<0)
                printf("\nInvalid amount...");
        else
                A1.amount=A1.amount+amt;
}

void withdraw()
{
        float amt;
        printf("\nEnter an amount for withdrawal = ");
        scanf("%f",&amt);
        if(amt<0)
                printf("\nInvalid amount...");
        if(amt>A1.amount)
                printf("\nInsufficient balance...");
        else
                A1.amount=A1.amount-amt;
}

void balance()
{
        printf("\naccount no : %lld",A1.acno);
        printf("\naccount holder name = ");
        puts(A1.name);
        printf("balance : %.4f",A1.amount);
}
```

## 9.3) RESULT: -           OUTPUT fig-1

```
F:\gaurav singh\C Practical\HTML\project\minipoject 2.exe

Enter your four digit pin : ****
------ATM banking management system------
        1 create account
        2 deposit amount
        3 withdrawal amount
        4 check balance
        5 Exit
----------------------------------------
Enter your choice = 1
Enter 11 digit account number = 52632412653
enter the account holder name = Gaurav Singh
Enter amount = 25000


------ATM banking management system------
        1 create account
        2 deposit amount
        3 withdrawal amount
        4 check balance
        5 Exit
----------------------------------------
Enter your choice = 4

account no : 52632412653
account holder name = Gaurav Singh
balance : 25000.0000

------ATM banking management system------
        1 create account
        2 deposit amount
        3 withdrawal amount
        4 check balance
        5 Exit
----------------------------------------
Enter your choice = 2

Enter an amount for deposit = 25000


------ATM banking management system------
        1 create account
        2 deposit amount
        3 withdrawal amount
```

# OUTPUT fig -2

F:\gaurav singh\C Practical\HTML\project\minipoject 2.exe

```
----------------------------------------
Enter your choice = 4

account no : 52632412653
account holder name = Gaurav Singh
balance : 50000.0000

------ATM banking management system------
        1 create account
        2 deposit amount
        3 withdrawal amount
        4 check balance
        5 Exit
----------------------------------------
Enter your choice = 3

Enter an amount for withdrawal = 10000


------ATM banking management system------
        1 create account
        2 deposit amount
        3 withdrawal amount
        4 check balance
        5 Exit
----------------------------------------
Enter your choice = 4

account no : 52632412653
account holder name = Gaurav Singh
balance : 40000.0000

------ATM banking management system------
        1 create account
        2 deposit amount
        3 withdrawal amount
        4 check balance
        5 Exit
----------------------------------------
Enter your choice = 5

----------------------------------------
Process exited after 67.71 seconds with return value
Press any key to continue . . . _
```

Type here to search
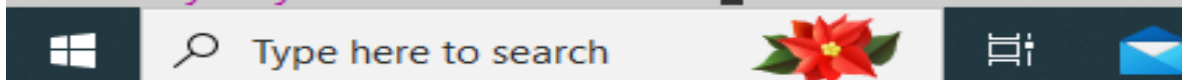
# 10-Conclusion

- The ATM Management system project has been developed and analyzed, aiming to create a functional and user-friendly interface for banking transactions. Throughout the development process, various aspects of ATM functionality, security measures, and user interaction have been considered and implemented.

- The system offers key functionalities including account creation, deposit, withdrawal, and balance checking. Users can perform these operations seamlessly, enhancing the user experience.

- Robust security measures, such as PIN verification and error handling for invalid inputs, have been implemented to safeguard user accounts and transactions.

- While the interface is functional, future iterations could focus on enhancing the user interface for improved navigation and visual appeal.

- Rigorous testing procedures have been conducted to ensure the reliability and accuracy of the system. This includes unit testing integration testing, and validation against predefined criteria.

# 11-REFERENCES

## ONLINE RESOURCES:-

- https://youtu.be/-pLCN0esqLA

- https://www.scribd.com/doc/54039271/ATM-Project-report

## BOOKS RESOURCES:-

- "The C Programming Language" by Brian W. Kernighan and Dennis M. Ritchie.

- "C: How to Program" by **Paul J.Deitel** and "**HarveyM.Deitel".**

- "Let us c++ " by **Yaswant kanitker"**.