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RESEARCH, TRAINING AND DEVELOPMENT

A report on

“ ATM MACHINE SYSTEM ”

Under the guidance of (mentorship of)

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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 cashand 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:

1. verification process
2. language, service and account selection
3. Banking services
4. Transactions
5. 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.

Objectives

The project to be designed will control a simulated automated teller machine (ATM) having a magnetic stripe reader for reading an ATM card, a customer console (keyboard and display) for interaction with the customer, a slot for depositing envelopes, a dispenser for cash (in multiples of $20), a printer for printing customer receipts, and a key-operated switch to allow an operator to start or stop the machine. The ATM will communicate with the bank's computer over an appropriate communication link. Design the ATM system in detail with the architectural design. Use use cases, sequence diagrams, class structural models and behavioral models.

Background

ATM System will be the premier software to be chosen by Banks to receive money from around the country in just a few minutes! It will be a package of software applications for everyone that combine grace, simplicity and ease of use with the powerful and robust feature set most requested by experts.

Following are few outlines of the solutions that ATM system is intended to provide.

1) It will be easy to Configure and Personalize with complete control.

2) It will offer a variety of different form of transaction. (i.e. Withdrawal, Account Balance, Account infomation etc.).

There are different sy stems that serve different purposes thus it is necessary to define the scope of ATM System to make it better understand the specific goals and usage of this system regarding user perspective.
Account holder can take money everywhere from country through ATM. Customer can do transaction every time in country Customer can check his/her Balance of Account

The ATM system is designed to run for 24 hours and to allow bank clients to carry out transactions in a secured way. The data will be held in a bank database. The system is connected to the bank database using a modem.

Hardware and software requirements:-

1) Hardware Requirements:
   i) Processor :- Intel Pentium 4 or Later or Compatible
   ii) Hard Disk:-410GB or more
   iii) RAM :- 1GB or more

   iv) Printer :- Any

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

   vi) Pointing Device : Touch Pad or Keys

2) Software Requirements:
   i) Operating System :- Microsoft Windows XP or Later or Equivalent
   ii) Front End:- Visual Basic 6.0
   iii) Back End :- Oracde 8i 5

CODING

This program uses basic concepts of class, Access Modifiers in C++, data types, variables, Switch Case, etc. Below are the functionalities that are to be implemented
:setvalue(): This function is used here to set the data using basic input and output method in C++ i.e., cout and cin statements which displays and take input from the keyboard i.e., from the user respectively.

showvalue(): This function is used to print the data.

deposit(): This function helps to deposit money in a particular account.

showbal(): This function shows the total balance available after deposition.

withdrawl(): This function helps to withdraw money from the account.

main(): This function there is a simple switch case (to make choices) inside an infinite while loop so that every time user gets to select choices.

```
// C++ program to implement the ATM
// Management System
#include <iostream>
#include <stdlib.h>
#include <string.h>
using namespace std;
class Bank {

    // Private variables used inside class
private:
    string name;
    int accnumber;
    char type[10];
    int amount = 0;
    int tot = 0;

    // Public variables
public:
    // Function to set the person's data
    void setvalue()
    {
        cout << "Enter name\n";
        cin.ignore();

        // To use space in string
        getline(cin, name);
```

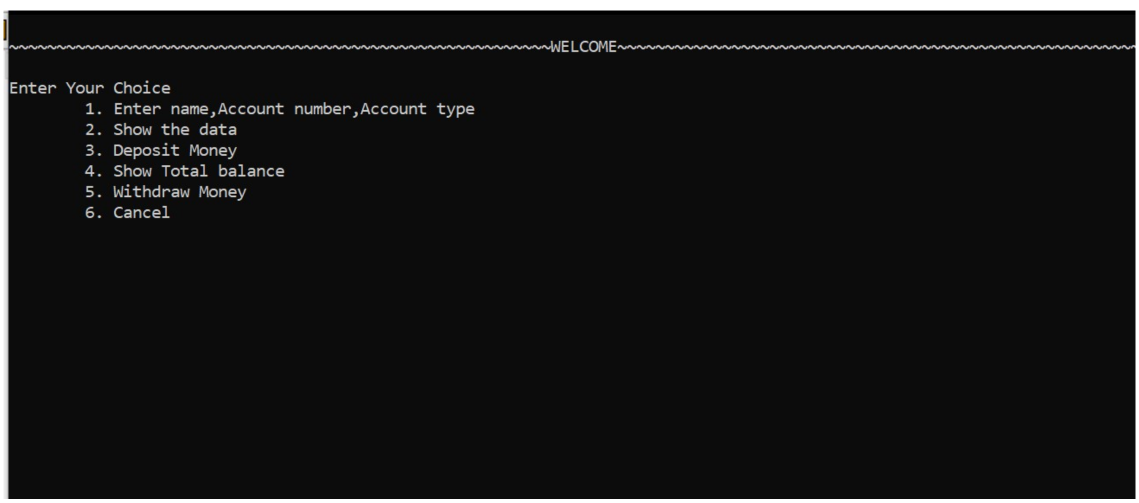
```
    cout << "Enter Account number\n";
    cin >> accnumber;
    cout << "Enter Account type\n";
    cin >> type;
    cout << "Enter Balance\n";
    cin >> tot;
}

// Function to display the required data
void showdata()
{
    cout << "Name:" << name << endl;
    cout << "Account No:" << accnumber << endl;
    cout << "Account type:" << type << endl;
    cout << "Balance:" << tot << endl;
}

// Function to deposit the amount in ATM
void deposit()
{
    cout << "\nEnter amount to be Deposited\n";
    cin >> amount;
}

// Function to show the balance amount
void showbal()
{
    tot = tot + amount;
    cout << "\nTotal balance is: " << tot;
}

// Function to withdraw the amount in ATM
void withdrawl()
{
    int a, avai_balance;
    cout << "Enter amount to withdraw\n";
    cin >> a;
    avai_balance = tot - a;
    cout << "Available Balance is" << avai_balance;
```

```
    }
};

// Driver Code
int main()
{
    // Object of class
    Bank b;

    int choice;

    // Infinite while loop to choose
    // options everytime
    while (1) {
        cout << "\n~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~"
             << "~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~"
             << "~~~WELCOME~~~~~~~~~~~~~~~~~~~~"
             << "~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~"
             << "~~~~~~~~~\n\n";
        cout << "Enter Your Choice\n";
        cout << "\t1. Enter name, Account "
             << "number, Account type\n";
        cout << "\t2. Balance Enquiry\n";
        cout << "\t3. Deposit Money\n";
        cout << "\t4. Show Total balance\n";
        cout << "\t5. Withdraw Money\n";
        cout << "\t6. Cancel\n";
        cin >> choice;

        // Choices to select from
        switch (choice) {
        case 1:
            b.setvalue();
            break;
        case 2:
            b.showdata();
            break;
        case 3:
            b.deposit();
            break;
```

```
        case 4:
            b.showbal();
            break;
        case 5:
            b.withdrawl();
            break;
        case 6:
            exit(1);
            break;
        default:
            cout << "\nInvalid choice\n";
        }
    }
}
```

OUTPUT SCREENSHOTS

1) Displaying the choices:



2) For Choice 1:

```
Enter Your Choice
        1. Enter name, Account number, Account type
        2. Balance Enquiry
        3. Deposit Money
        4. Show Total balance
        5. Withdraw Money
        6. Cancel
1
Enter name
Mohit Sahay
Enter Account number
98734567
Enter Account type
Current
Enter Balance
79000

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~WELCOME~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Enter Your Choice
        1. Enter name, Account number, Account type
        2. Balance Enquiry
        3. Deposit Money
        4. Show Total balance
        5. Withdraw Money
        6. Cancel
2
Name:Mohit Sahay
Account No:98734567
Account type:Current
Balance:79000
```

3) For Choice 2:

```
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~WELCOME~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Enter Your Choice
        1. Enter name, Account number, Account type
        2. Balance Enquiry
        3. Deposit Money
        4. Show Total balance
        5. Withdraw Money
        6. Cancel
2
Name:Mohit Sahay
Account No:98734567
Account type:Current
Balance:84000
```

4) For Choice 3:

```
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~WELCOME~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Enter Your Choice
        1. Enter name, Account number, Account type
        2. Balance Enquiry
        3. Deposit Money
        4. Show Total balance
        5. Withdraw Money
        6. Cancel
3

Enter amount to be Deposited
5000

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~WELCOME~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Enter Your Choice
        1. Enter name, Account number, Account type
        2. Balance Enquiry
        3. Deposit Money
        4. Show Total balance
        5. Withdraw Money
        6. Cancel
4

Total balance is: 84000
```

5) For Choice 5:

```
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~WELCOME~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Enter Your Choice
        1. Enter name, Account number, Account type
        2. Balance Enquiry
        3. Deposit Money
        4. Show Total balance
        5. Withdraw Money
        6. Cancel
5
Enter amount to withdraw
7000
Available Balance is77000
```

FUTURE SCOPE

The future scope of ATM machine system is:-

Many ATM vendors have devised specialized machines, embedded with biometric devices for authentication. Catering to the rural population, these machines have enabled them to interact with the machine in their local language and on a graphical user interface.

Many Companies are interested in the white-label ATMS Model, where the ownership of the ATM will not be with the banks but with third parties who deploy them and make money on fees charged on every transaction.

This can increase the scope of ATM services will maintain growth in the industry.

CONCLUSION

The project on "ATM SYSTEM "has been developed as the best flexible and efficient project within the available resources and time.

In Future Wer Planning to add new feature like Finger Print Reader and Eye Detection System for Authentication of user Security purpose.

Care has been taken at each step to make it more user friendly so that users can add new features where ever necessary while using this automated system. It May be Enhanced for Requirement of User.

REFERENCES AND BIBLIOGRAPHY

1) https://www.engineersgarage.com/atm-machine/
For code source purpose

2) Wikipedia , URL: http://www.wikipedia.org.

3) Answers.com, Online Dictionary, Encyclopedia and much more

4) Google, URL: http://www.google.co.in

THE END