ATM BANKING SYSTEM

MINI-PROJECT S1

SRMIST CSE AI ML

18CSS101J

MINI PROJECT - C LANGUAGE

SRMIST 1ST YEAR – CSE AI & ML (S1)

TITLE   :   ATM BANKING SYSTEM

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Introduction

Originally, the C language is developed from two previous languages, BCPL and B. BCPL which were developed in 1967 by Martin Richards as a language for wring operating systems and compilers. C was evolved from B by Dennis Ritchie at Bell Laboratories and it was implemented in 1972. It initially became widely known as the development language of the UNIX operating system. Lots of today's leading operating systems are written in C and C++. C language is mostly hardware independent as it is possible to write C programs that are portable to most computers.

Why we use c language C has been used successfully for each kind of programming problem thinkable from operating systems to spreadsheets to expert systems - and efficient compilers are accessible for machines ranging in power from the Apple Macintosh to the Cray supercomputers. the largest measure of C's success appears to be based on strictly sensible considerations: The standard library concept; the ease with that applications can be optimized by hand-coding isolated procedures; a powerful and varied repertoire of operators; the portability of the compiler;

Project Explanation:

The project is ATM BANKING SYSTEM

PROBLEM DESCRIPTION:
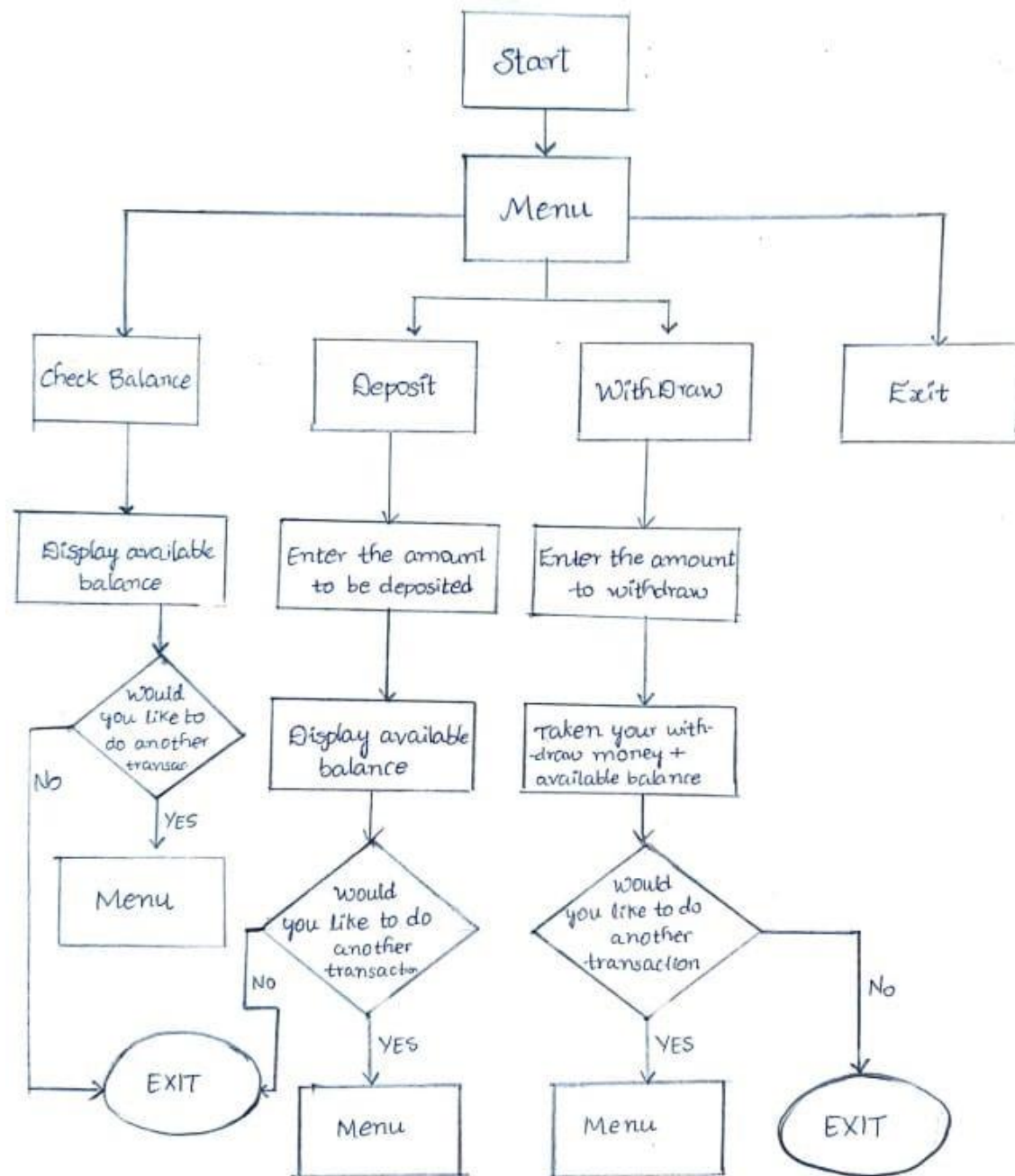
This C Program performs ATM transaction.

The types of ATM transaction are:

1) Balance checking
2) Cash withdrawal
3) **Cash deposition**.

PROBLEM SOLUTION:

1. Use switch statement to do the operations like Balance checking,
Cash withdrawal, Cash deposition etc.

2. Use while loop to terminate or restart the process.

C source code

#include <stdio.h>

```c
#include <stdlib.h>

#include <stdbool.h>

#include <math.h>


//Functions

void login();

void mainMenu();

void checkBalance(float balance);

float moneyDeposit(float balance);

float moneyWithdraw(float balance);

void menuExit();

void errorMessage();


//Main Code

int main() {

    //Local Declarations

    int option;

    float balance = 150000.00;

    int choose;
```

```c
bool again = true;

// insert code here...

while (again) {

mainMenu();

printf("=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-\n");

printf("Your Selection:\t");

scanf("%d", &option);

    switch (option) {

        case 1:

                system("CLS");

            checkBalance(balance);

            break;

        case 2:

                system("CLS");
```

```c
            balance = moneyDeposit(balance);

        break;

    case 3:

            system("CLS");

        balance = moneyWithdraw(balance);

        break;


    case 4:

            system("CLS");

        menuExit();

        return 0;


    default:

        errorMessage();

        break;

}


printf("=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=\n");

printf("Would you like to do another transaction:\n");

printf("< 1 > Yes\n");
```

```c
        printf("< 2 > No\n");

        scanf("%d", &choose);


        system("CLS");

        if (choose == 2) {

            again = false;

            menuExit();


        }


}


    return 0;
}//main code



//Functions


void mainMenu() {
```

```c
    printf("*******Hello!******\n");

    printf("***Welcome to ATM Banking****\n\n");

    printf("*Please choose one of the options below*\n\n");

    printf("< 1 >  Check Balance\n");

    printf("< 2 >  Deposit\n");

    printf("< 3 >  Withdraw\n");

    printf("< 4 >  Exit\n\n");


}//Main Menu


void checkBalance(float balance) {

    printf("You Choose to See your Balance\n");

    printf("\n\n****Your Available Balance is:   $%.2f\n\n", balance);


}//Check Balance


float moneyDeposit(float balance) {

    float deposit;

    printf("You choose to Deposit a money\n");
```

```c
        printf("Your Balance is: $%.2f\n\n", balance);

        printf("**Enter your amount to Deposit\n");

        scanf("%f", &deposit);


        balance += deposit;


        printf("\n****Your New Balance is:   $%.2f\n\n", balance);

        return balance;


}//money deposit


float moneyWithdraw(float balance) {

    float withdraw;

    bool back = true;


    printf("You choose to Withdraw a money\n");

    printf("Your Balance is: $%.2f\n\n", balance);


    while (back) {
```

```c
printf("Enter your amount to withdraw:\n");

scanf("%f", &withdraw);



if (withdraw < balance) {

    back = false;

    balance -= withdraw;

    printf("\nYour withdrawing money is:  $%.2f\n", withdraw);

    printf("**Your New Balance is:   $%.2f\n\n", balance);



}



    else  {



    printf("You don't have enough money!\n");

    printf("Please contact to your Bank Customer Services\n");

    printf("**Your Balance is:   $%.2f\n\n", balance);



}

}
```

```c
        return balance;



}//money withdraw



void menuExit() {

    printf("--------------Take your receipt!!!-----------------\n");

    printf("-----Thank you for using ATM Banking Machine!!!-----\n");



}//exit menu



void errorMessage() {;

    printf("You selected invalid number!\n");

}//error message
```

PROGRAM EXPLANATION:

1. Use switch statement to do the operations like Check Balance, Withdraw Cash, Deposit Cash and Quit.

2. For Check Balance simply print the variable amount as output and exit.

3. For Withdraw Cash, first ask the amount to withdraw and store it in the variable withdraw.

4. If withdraw % 100 != 0, then ask user to enter the amount in multiplies of 100.

5. If withdraw amount is greater than (amount-500), then print the output as "INSUFFICENT BALANCE".

6. Otherwise subtract the variable withdraw from variable amount, print the amount and exit.

7. For deposit operation, ask the user for amount and store it in the variable deposit.

8. Add the variable deposit to variable amount, print the amount and exit.

9. If quit, then finally ask the user if they wish to continue or not. Ask them to type y/n and store it in the variable transaction.

10. If variable transaction is y/Y, then continue the operation. Otherwise terminate the while loop by assigning 1 to variable k.

Conclusion

The ATM BANKING SYSTEM is designed for users to check balance, deposit cash and withdraw cash.

From this Project, I have learned to implement a few C concepts in future projects such as functions, switch statements and do…while statements, arrays, pointers, and structures in the program. I have also learned to create flow charts for explaining the program.

~THANK YOU!