SRM KIWIS

21CSS101J – PROGRAMMING FOR PROBLEM SOLVING

Mini Project Report

Submitted by

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TABLE OF CONTENTS

Problem Statement

In this Modern Era, where everyone is running out of time on day to day basis, Approaching Banks is kind of hard for many people even to do a simple transaction or to know their detail.

This Banking system helps to solve these problems of standing in a queue and entering the bank every time even for small details and transactions. People can now do transactions without going to the bank and near their homes. It is also time-efficient.

The transactions that are allowed are:

1. Password Authentication
2. Balance Checking
3. Cash Withdrawal
4. Cash Deposit

Methodology and Procedure

ATM Banking system Developed in C-lang. is based on the concept of managing an account personally. From this ATM Banking System C Mini Project, the user can easily check the total balance, Deposit Amount and Withdraw Amounts as it is not time-consuming.

- First of all, before the Main Function, We have declared some functions prototype to check the correct number of arguments passed to declared functions.

- We have to declare the Main Menu Module and populate the codes like greetings and choose the transaction to be performed like Balance Checking, Cash Deposit & Withdrawal

- while the time of execution, Just For Authentication, by the use of Conditional and Flow & Control Statements. This system will authenticate the correct Security Pin.

- Now, in the declared transaction action's function, we populated the functions with their respective actions like Showing The Balance, deduction of the balance on Withdrawal and addition on Deposit of the money.

- Then in the Main Module, We call the functions based on the chosen action by the user with the help of the Switch Case Statement.

- At Last, Exit & Error function module was declared and populated with the Exit Message & Error Message.

Coding - C

```c
#include <stdio.h>
#include <stdlib.h>
#include <stdbool.h>
#include <math.h>

void login();
void mainMenu();
void checkBalance(float balance);
float moneyDeposit(float balance);
float moneyWithdraw(float balance);
void menuExit();
void errorMessage();



int main() {

    int option,pin=1259 ,limit=0;
    float balance = 3210.22;
    int choose;

    bool again = true;

    printf("\n\n\t\t☆ ☆☆ ☆☆☆ ☆☆☆ ☆☆☆ ☆☆☆ ☆☆ ☆  HELLO :) ☆ ☆☆ ☆☆☆                ☆☆☆ ☆☆☆ ☆☆☆ ☆☆ ☆\n");
    printf("\t\t  ✣ ✣ ✣ ✣ ✣ ✣ ✣ ✣ Welcome to ATM Banking System ✣ ✣             ✣ ✣ ✣ ✣ ✣ \n\n");
    printf("\n\t\t\tEnter The Correct Pin ! :- ");
```

```
    scanf("%d",&pin);
    if (pin !=1259){
        while (pin!=1259){
            limit +=1;
            if (limit <4){
            printf("\t\t\t =-=-=-=Enter The Pin Again :-
");
            scanf(" %d",&pin);}
            else{
                printf("\n\t\t\t =-=-=-= You Entered
INCORRECT Pin 3                    Times =-=-=-=\n");
                printf("\t\t\t =-=-=-=Please Contact
Customer                           Support =-=-=-=\n");
                exit(0);
            }
        }
    }

    while (again) {
    mainMenu();

    printf("\t\t\t =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
=-=-\n");
    printf("\t\t\t Your Selection:\t");
    scanf("%d", &option);


        switch (option) {
            case 1:

                checkBalance(balance);
                break;
```

```
            case 2:

                balance = moneyDeposit(balance);
                break;
            case 3:

                balance = moneyWithdraw(balance);
                break;

            case 4:

                menuExit();
                return 0;

            default:
                errorMessage();
                break;
        }

        printf("\t\t\t =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
=-=-=-=-=-           =-=\n");
        printf("\t\t\t Would you like to do another
transaction:                \n");
        printf("\t\t\t < 1 > Yes\n");
        printf("\t\t\t < 2 > No\n");
        scanf("%d", &choose);




        if (choose == 2) {
            again = false;
```

```
            menuExit();

        }

}


    return 0;
}



void mainMenu() {

    printf("\n\n\t\t☆ ☆☆ ☆☆☆ ☆☆☆ ☆☆☆ ☆☆☆ ☆☆ ☆  HELLO :)
☆ ☆☆ ☆☆☆          ☆☆☆ ☆☆☆ ☆☆☆ ☆☆ ☆\n");
    printf("\t\t  ✣ ✣ ✣ ✣ ✣ ✣ ✣ ✣ Welcome to ATM Banking
System ✣ ✣       ✣ ✣ ✣ ✣ ✣ \n\n");
    printf("\t\t\t   **** Please choose one of the
options below              ****\n\n");
    printf("\t\t\t< 1 >  Check Balance\n");
    printf("\t\t\t< 2 >  Deposit\n");
    printf("\t\t\t< 3 >  Withdraw\n");
    printf("\t\t\t< 4 >  Exit\n\n");

}

void checkBalance(float balance) {
    printf("\t\t\t You Choose to See your Balance\n");
    printf("\n\n\t\t\t  ****Your Available Balance is:
Rs.             %.2f\n\n", balance);
```

```
}

float moneyDeposit(float balance) {
    float deposit;
    printf(" \t\t\t You choose to Deposit a money\n");
    printf("\t\t\t $$$$Your Balance is: Rs.%.2f\n\n",
balance);
    printf("\t\t\t **** Enter your amount to Deposit :-
\n");
    scanf("%f", &deposit);


    balance += deposit;

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

}

float moneyWithdraw(float balance) {
    float withdraw;
    bool back = true;

    printf("\t\t\t You choose to Withdraw a money\n");
    printf("\t\t\t $$$$Your Balance is: Rs.%.2f\n\n",
balance);

    while (back) {
    printf("\t\t\t Enter your amount to withdraw:\n");
    scanf("%f", &withdraw);
```

```
    if (withdraw < balance) {
        back = false;
        balance -= withdraw;
        printf("\n\t\t\t  $$$$Your withdrawing money is:
Rs.                  %.2f\n", withdraw);
        printf("\t\t\t  ****Your New Balance is:   Rs.
%.2f\n\n",               balance);

    }

        else  {

        printf("\t\t\t +++You don't have enough money+++
\n");
        printf("\t\t\t Please contact to your Bank
Customer                          Services\n");
        printf("\t\t\t ****Your Balance is:   Rs.
%.2f\n\n",                   balance);

    }
    }
    return balance;


}

void menuExit() {
    printf("\t\t\t --------------Take your
            receipt!!!-----------------\n");
    printf("\t\t\t -----Thank you for using ATM Banking
                Machine!!!-----\n");
```

```
}

void errorMessage() {;
    printf("\t\t\t +++!!!You selected invalid number!!!++
+\n");
}
```

Result

The ATM Card is encrypted and based on the user instruction provided, This ATM-BANKING SYSTEM performs the following actions.

1. Password Authentication

2. Balance Checking

3. Cash Withdrawal

4. Cash Deposit

Conclusion

This ATM - Banking System Project is being developed in C programming language, and this simple project can enhance the knowledge of beginners to develop their skills in C-language. This project uses standard libraries like <stdio.h>, <math.h>, <stdlib.h> and <stdbool.h> and their uses . This Project also Focuses on different programming concepts in C-lang like Input & Output, Flow Control, Functions & Function Prototype And Simple Math Operations. Also, this project is developed in simple language which makes it easy to understand and modify.