North South University
Department of Electrical and Computer Engineering

Lab Project Report

Semester	:	NSU Fall 2022
Course Code	:	CSE 115L
Section	:	12
Group Name	:	G3
Faculty	:	Rifat Ahmed Hassan (RIH)
Lab Instructor	:	A. S. M. Sabiqul Hassan
Project Topic	:	Atm Management System
GitHub Repo Link	:	https://github.com/ZaimaHossain/Lab-ATM-project
Submission Date	:	28/12/2022

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Introduction

ATM (automated-teller-machine) is a machine which is used for cash withdrawals, intake and out-take and some other small purposes. ATM is for those people who have bank accounts and eases the ability to access one's account 24/7 at multiple locations. Considering that we thought of an ATM Management System as the topic of our project. Our code will carry out some basic functions that all standard ATM machines do. Its goal will be to make various banking tasks for people easier.

Team Profile

1. **Zaima Hossain** (Idea, Planning, Programming, report editing)
2. **Kazi Tasmitun Islam** (Idea, Planning, Programming, report writing)
3. **Sadia Eva** (Idea, Planning, Programming, report analyzing)

We all distributed this project into different parts like programming, planning, etc. Parts of the whole project will be equally done by Sadia Eva and some by Kazi Tasmitun Islam and Some by Zaima Hossain.

Project Description(operations of our project)

The Project that we will be making will perform almost all basic functions of an ATM Machine and will be written in Programming Language C.

It will consist of the following functions:

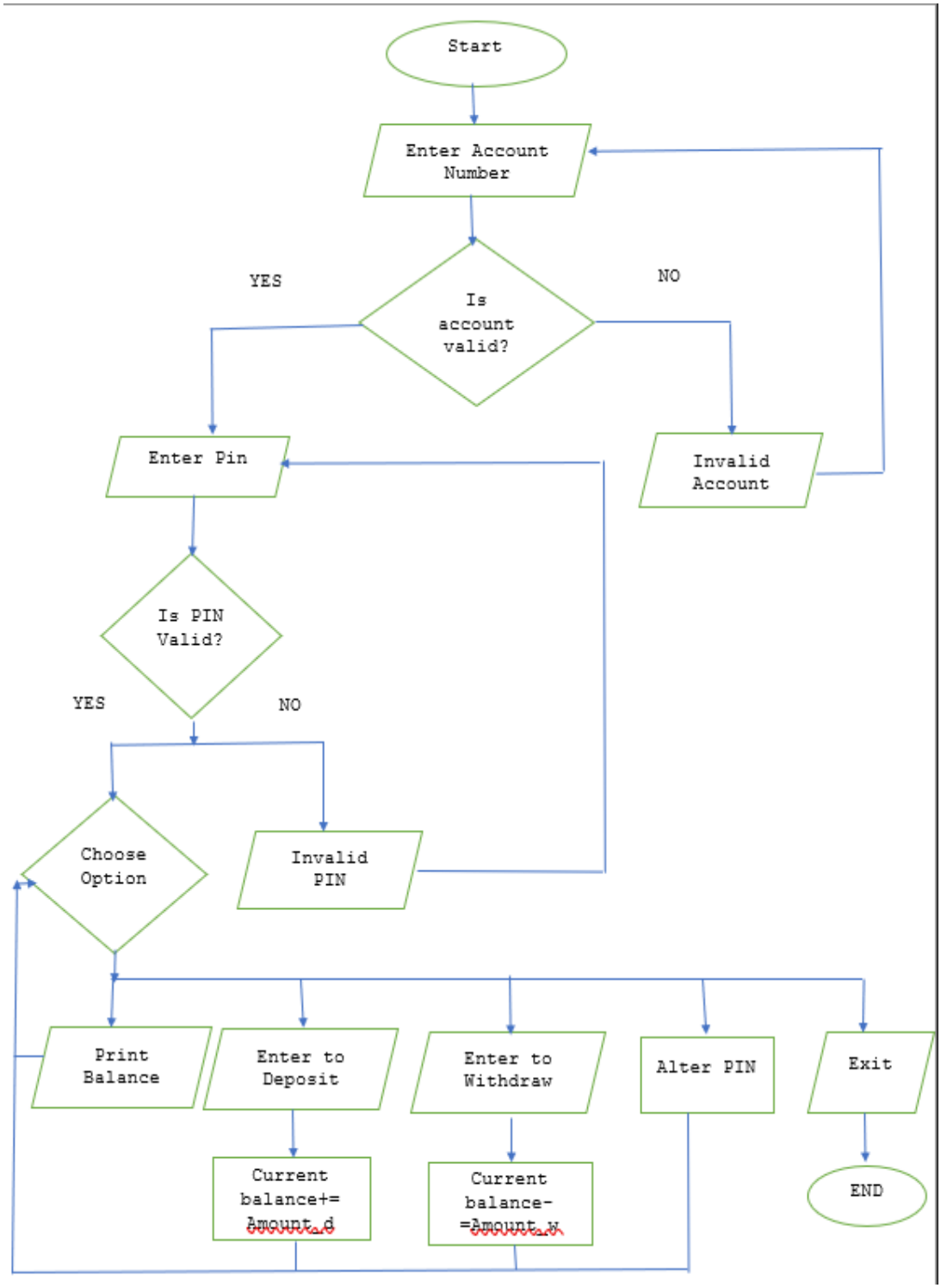
1. **Balance inquiry:** A balance inquiry is a transaction that enables users to know their account or accounts' current balances.

2. **Cash deposit:** Typically, a cash deposit is money that is sent via an ATM into a checking account.

3. **Cash Withdrawal:** Cash Withdrawal is any sum collected from an ATM for debit to the Account using the Debit Card and the PIN provided by user.

4. **PIN change:** Users have the option to alter their pin from the choices given.

5. **Exit:** Enables the users to leave the option menu bar after which he needs to re-enter the pin again.


Start
Enter Account Number
Is account valid?
YES
NO
Enter Pin
Invalid Account
Is PIN Valid?
YES
NO
Choose Option
Invalid PIN
Print Balance
Enter to Deposit
Enter to Withdraw
Alter PIN
Exit
Current balance+= Amount_d
Current balance-=Amount_w
END

Project Codes

```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include<conio.h>
void printWelcomeMessage();
int checkAccount(int user_acc);
int checkPin(int user_acc, int PIN);
void login();
void optionsMenu();
void checkBalance();
void deposit();
void withdraw();
void PINchange();


struct accINFO
{
    int acc_num;
    int pin;
    float balance;
};

struct accINFO acc[1000];
int serial_no;
int index = -1;
FILE *acc_file;

int main()
{
    system("color 3f");

    login();

    return 0;
}

void printWelcomeMessage()
{
    printf("\t * * * * * * * * * * * * * * * *");
    printf("\n\n\t *   WELCOME to our mini ATM   *");
    printf("\n\n\t * * * * * * * * * * * * * * * *\n\n");
}
```

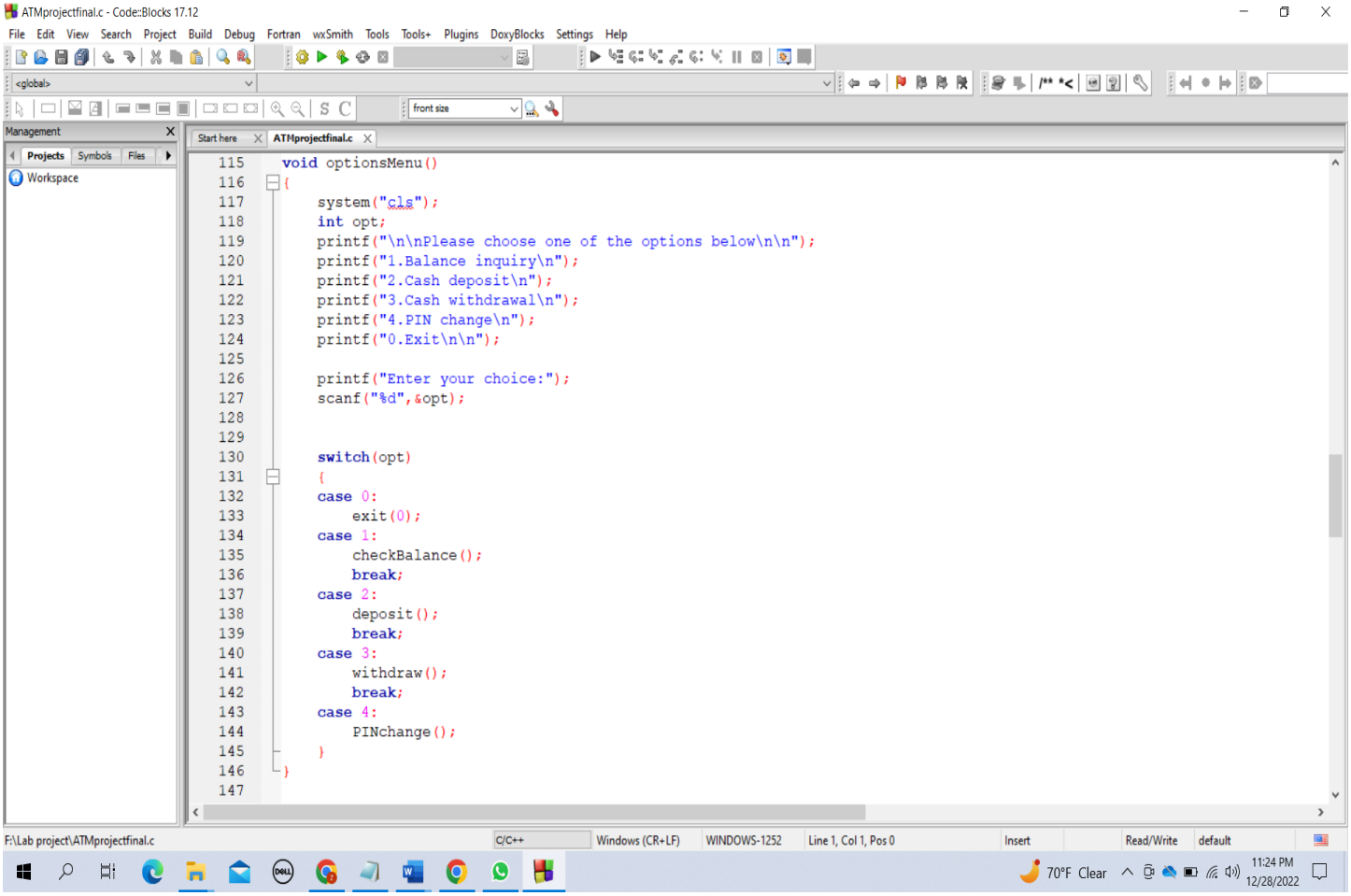
```
int checkAccount(int user_acc)
{
    int i;
    for(i=0; i<serial_no; i++)
    {
        if(acc[i].acc_num == user_acc)
            return i;
    }
    return -1;
}

int checkPin(int user_acc, int PIN)
{
    int i = checkAccount(user_acc);
    if(i == -1)
        return 0;
    if(acc[i].pin == PIN)
        return 1;

    return 0;
}

void login()
{
    int u_acc;
    int u_pin;
    printWelcomeMessage();

    acc_file=fopen("INFO.txt","r");

    int i=0;
    while(fscanf(acc_file,"%d            %d            %f",&acc[i].acc_num,
&acc[i].pin,&acc[i].balance)==3)
    {
        i++;
    }
    serial_no=i;


    while(1)
    {
        printf("\nEnter your account number:");
        scanf("%d", &u_acc);
        index=checkAccount(u_acc);

        if(index>=0)
        {
```

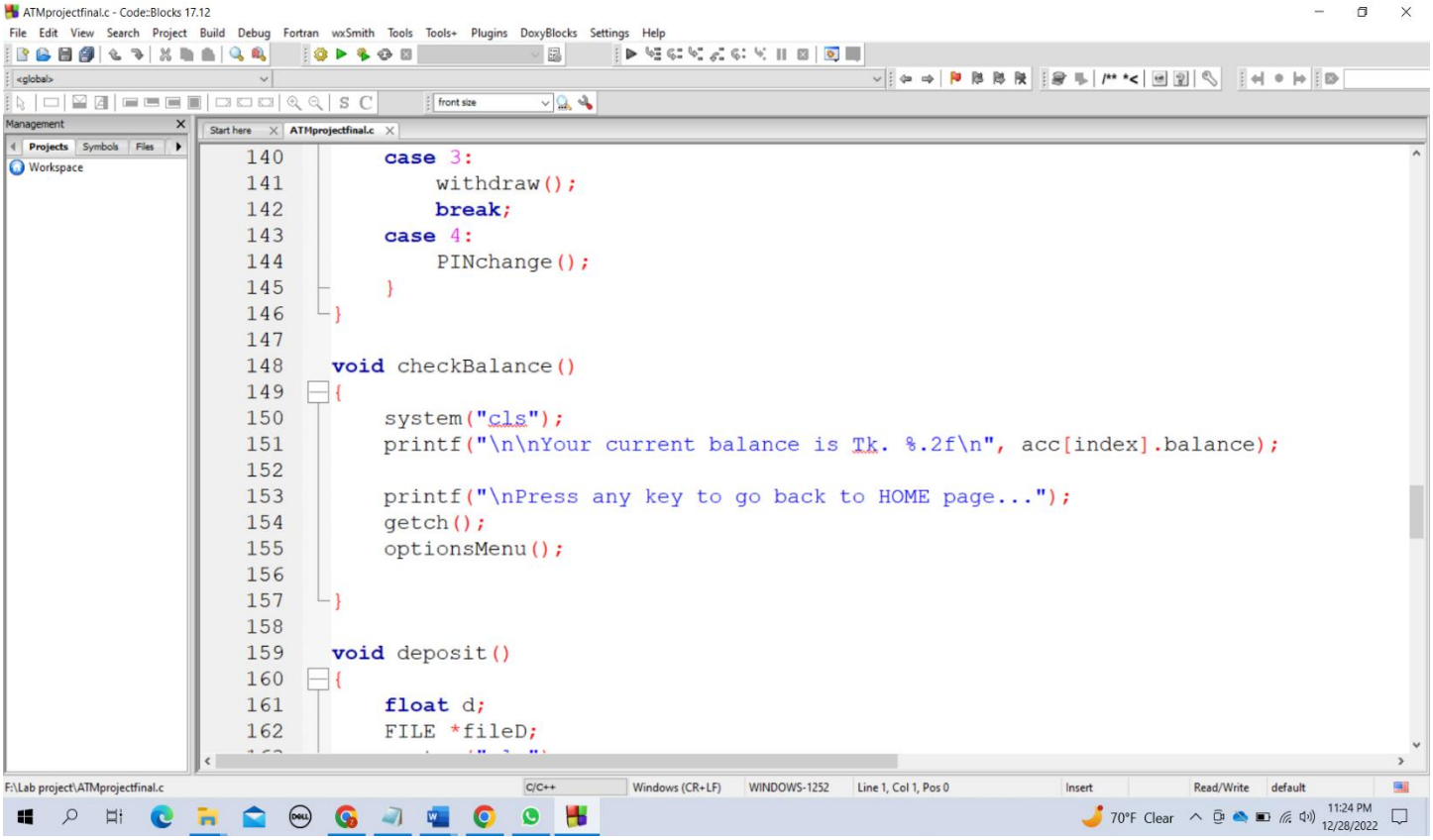
```
            while(1)
            {
                printf("Enter your 4 digit PIN:");
                scanf("%d", &u_pin);//gets(u_pin);
                if(checkPin(u_acc,u_pin))
                {
                    optionsMenu();
                    break;
                }
                else
                {
                    printf("\nInvalid PIN.\n");
                }
            }
            break;
        }
        else
        {
            printf("\nNo valid accountNo. found.\n");
        }
    }
    fclose(acc_file);

}

void optionsMenu()
{
    system("cls");
    int opt;
    printf("\n\nPlease choose one of the options below\n\n");
    printf("1.Balance inquiry\n");
    printf("2.Cash deposit\n");
    printf("3.Cash withdrawal\n");
    printf("4.PIN change\n");
    printf("0.Exit\n\n");

    printf("Enter your choice:");
    scanf("%d",&opt);


    switch(opt)
    {
    case 0:
        exit(0);
    case 1:
        checkBalance();
        break;
```

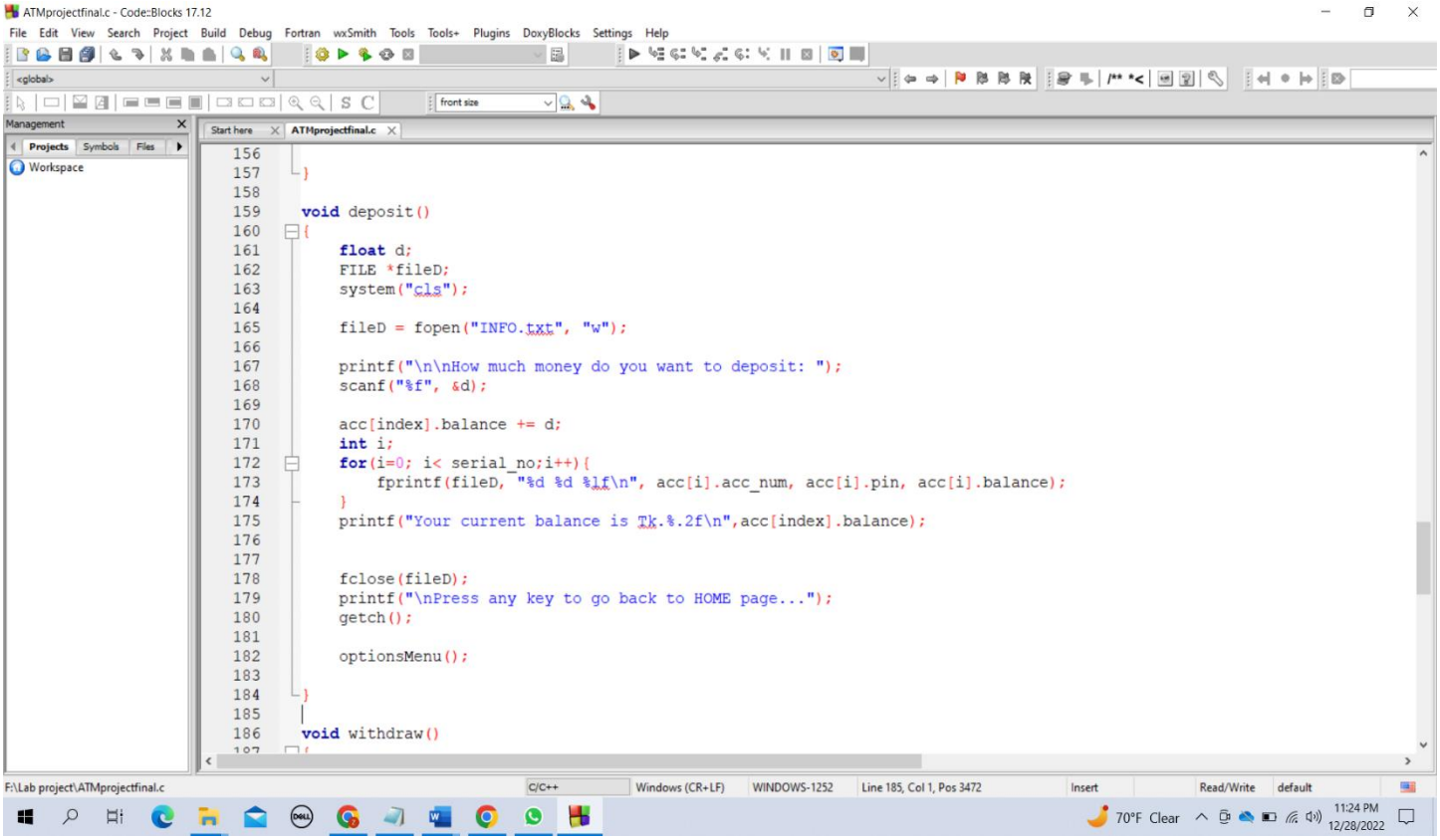
```
    case 2:
        deposit();
        break;
    case 3:
        withdraw();
        break;
    case 4:
        PINchange();
    }
}

void checkBalance()
{
    system("cls");
    printf("\n\nYour current balance is Tk. %.2f\n", acc[index].balance);

    printf("\nPress any key to go back to HOME page...");
    getch();
    optionsMenu();

}

void deposit()
{
    float d;
    FILE *fileD;
    system("cls");

    fileD = fopen("INFO.txt", "w");

    printf("\n\nHow much money do you want to deposit: ");
    scanf("%f", &d);

    acc[index].balance += d;
    int i;
    for(i=0; i< serial_no;i++){
        fprintf(fileD,   "%d   %d   %lf\n",   acc[i].acc_num,   acc[i].pin,
acc[i].balance);
    }
    printf("Your current balance is Tk.%.2f\n",acc[index].balance);


    fclose(fileD);
    printf("\nPress any key to go back to HOME page...");
    getch();

    optionsMenu();
```

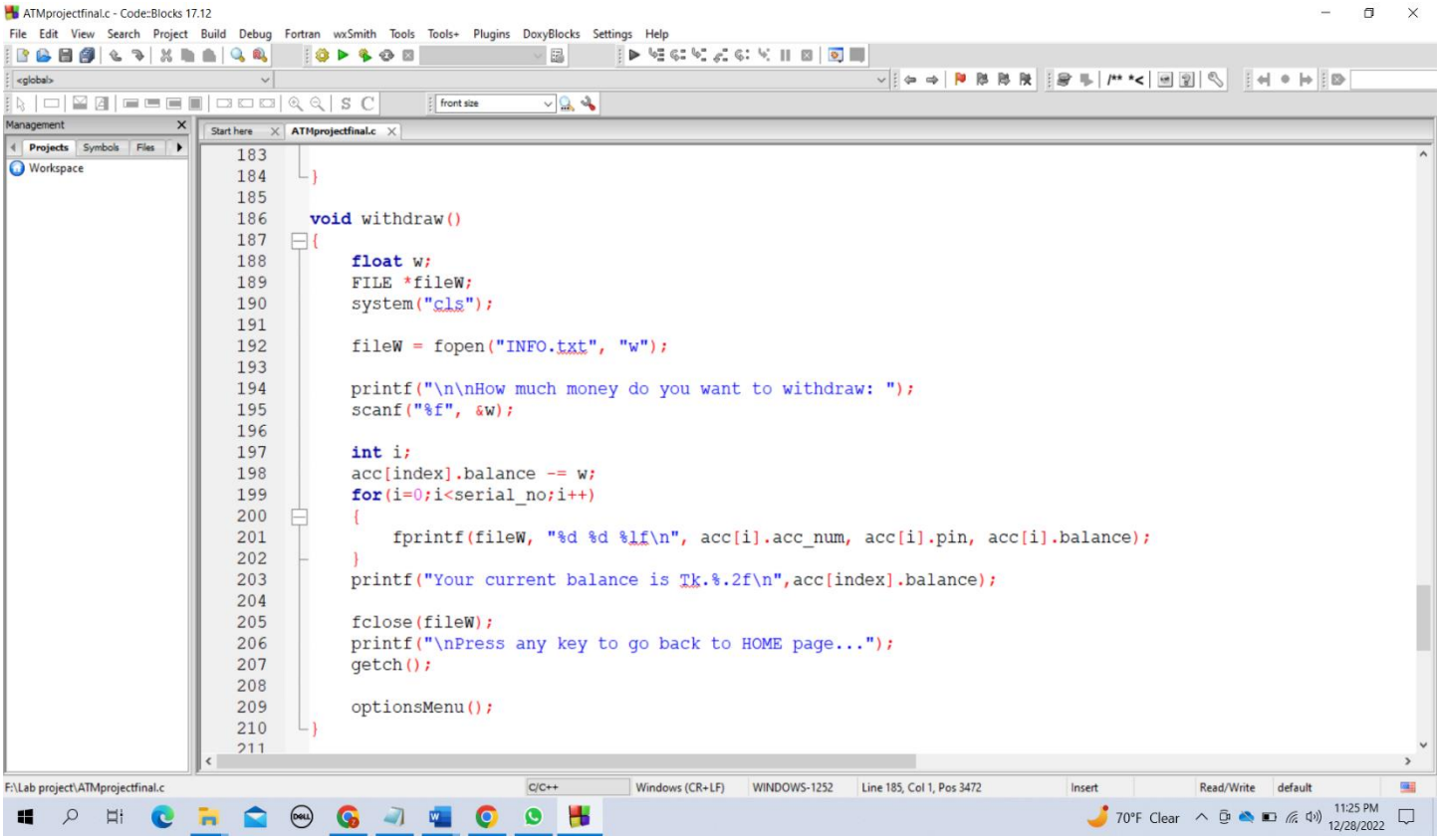
```
}

void withdraw()
{
    float w;
    FILE *fileW;
    system("cls");

    fileW = fopen("INFO.txt", "w");

    printf("\n\nHow much money do you want to withdraw: ");
    scanf("%f", &w);

    int i;
    acc[index].balance -= w;
    for(i=0;i<serial_no;i++)
    {
        fprintf(fileW,   "%d   %d   %lf\n",   acc[i].acc_num,   acc[i].pin,
acc[i].balance);
    }
    printf("Your current balance is Tk.%.2f\n",acc[index].balance);

    fclose(fileW);
    printf("\nPress any key to go back to HOME page...");
    getch();

    optionsMenu();
}

void PINchange()
{

    int user_pin, new_pin;
    system("cls");

    printf("\n\nEnter your current PIN: ");
    scanf("%d", &user_pin);
    int i;

    if(user_pin == acc[index].pin)
    {
        printf("Please enter your new PIN: ");
        scanf("%d", &new_pin);
        acc[index].pin = new_pin;
        printf("PIN changed!\n");
        FILE *filet;
```

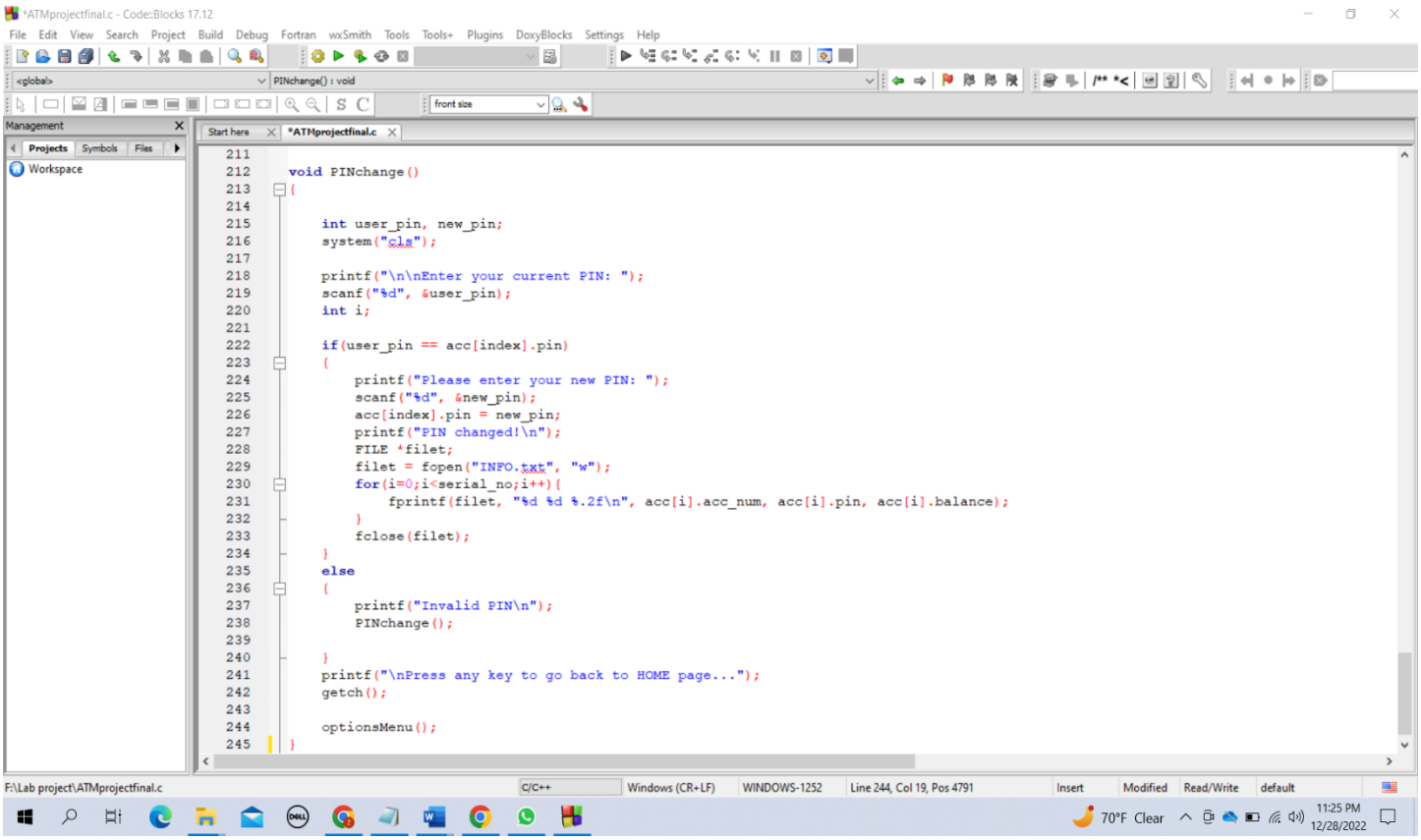
```
        filet = fopen("INFO.txt", "w");
        for(i=0;i<serial_no;i++){
            fprintf(filet,  "%d  %d  %.2f\n",  acc[i].acc_num,  acc[i].pin,
acc[i].balance);
        }
        fclose(filet);
    }
    else
    {
        printf("Invalid PIN\n");
        PINchange();

    }
    printf("\nPress any key to go back to HOME page...");
    getch();

    optionsMenu();

}
```


ATMprojectfinal.c - Code::Blocks 17.12
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
Management
Projects Symbols Files
Workspace
Start here
ATMprojectfinal.c
void optionsMenu()
{
system("cls");
int opt;
printf("\n\nPlease choose one of the options below\n\n");
printf("1.Balance inquiry\n");
printf("2.Cash deposit\n");
printf("3.Cash withdrawal\n");
printf("4.PIN change\n");
printf("0.Exit\n\n");
printf("Enter your choice:");
scanf("%d",&opt);
switch(opt)
{
case 0:
exit(0);
case 1:
checkBalance();
break;
case 2:
deposit();
break;
case 3:
withdraw();
break;
case 4:
PINchange();
}
}
F:\Lab project\ATMprojectfinal.c
C/C++
Windows (CR+LF)
WINDOWS-1252
Line 1, Col 1, Pos 0
Insert
Read/Write
default
70°F Clear
11:24 PM
12/28/2022


ATMprojectfinal.c - Code::Blocks 17.12
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
Management
Projects Symbols Files
Workspace
Start here
ATMprojectfinal.c
case 3:
withdraw();
break;
case 4:
PINchange();
}
}
void checkBalance()
{
system("cls");
printf("\n\nYour current balance is Tk. %.2f\n", acc[index].balance);
printf("\nPress any key to go back to HOME page...");
getch();
optionsMenu();
}
void deposit()
{
float d;
FILE *fileD;
F:\Lab project\ATMprojectfinal.c
C/C++
Windows (CR+LF)
WINDOWS-1252
Line 1, Col 1, Pos 0
Insert
Read/Write
default
70°F Clear
11:24 PM
12/28/2022


ATMprojectfinal.c - Code::Blocks 17.12
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
Management
Projects Symbols Files
Workspace
Start here
ATMprojectfinal.c
156 }
157
158
159 void deposit()
160 {
161 float d;
162 FILE *fileD;
163 system("cls");
164
165 fileD = fopen("INFO.txt", "w");
166
167 printf("\n\nHow much money do you want to deposit: ");
168 scanf("%f", &d);
169
170 acc[index].balance += d;
171 int i;
172 for(i=0; i< serial_no;i++){
173 fprintf(fileD, "%d %d %lf\n", acc[i].acc_num, acc[i].pin, acc[i].balance);
174 }
175 printf("Your current balance is Tk.%.2f\n",acc[index].balance);
176
177
178 fclose(fileD);
179 printf("\nPress any key to go back to HOME page...");
180 getch();
181
182 optionsMenu();
183
184 }
185
186 void withdraw()
F:\Lab project\ATMprojectfinal.c
C/C++
Windows (CR+LF)
WINDOWS-1252
Line 185, Col 1, Pos 3472
Insert
Read/Write
default
70°F Clear
11:24 PM
12/28/2022


ATMprojectfinal.c - Code::Blocks 17.12
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
Management
Projects Symbols Files
Workspace
Start here
ATMprojectfinal.c
183
184 }
185
186 void withdraw()
187 {
188 float w;
189 FILE *fileW;
190 system("cls");
191
192 fileW = fopen("INFO.txt", "w");
193
194 printf("\n\nHow much money do you want to withdraw: ");
195 scanf("%f", &w);
196
197 int i;
198 acc[index].balance -= w;
199 for(i=0;i<serial_no;i++)
200 {
201 fprintf(fileW, "%d %d %lf\n", acc[i].acc_num, acc[i].pin, acc[i].balance);
202 }
203 printf("Your current balance is Tk.%.2f\n",acc[index].balance);
204
205 fclose(fileW);
206 printf("\nPress any key to go back to HOME page...");
207 getch();
208
209 optionsMenu();
210 }
211
F:\Lab project\ATMprojectfinal.c
C/C++
Windows (CR+LF)
WINDOWS-1252
Line 185, Col 1, Pos 3472
Insert
Read/Write
default
70°F Clear
11:25 PM
12/28/2022



•Things we planned but could not finish:

-Fash Cash
-Mini statement
-Money Transfer