Daffodil International University

Department of Software Engineering (FSIT)

Course : Software Engineering Project-I (Using C)

Course Code: SWE 231

Project Report

(Individual Project)

Project Name: Online Bank Management System

Version: V 1.9

Submitted By:

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ID: 161-35-1611

Section: B

Under Supervision

K. M. Imtiaz-Ud- Din

Assistant Professor

Department of Software Engineering

Daffodil International University

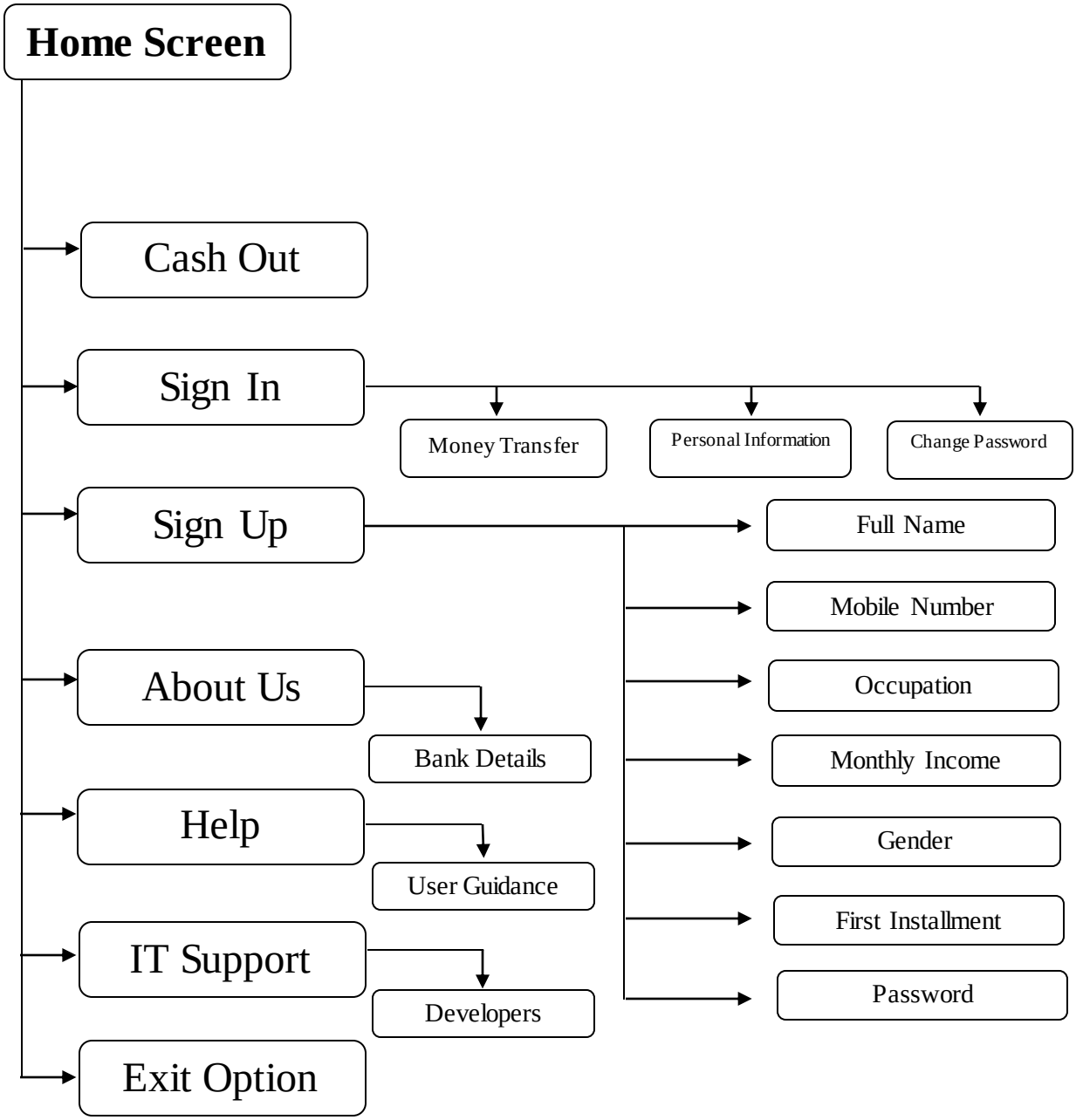
Description:

The main objective of the project is to develop online Banking system for banks. In this bank management system I'de automated all the banking process. In this bank management system user can check his balance online and he can also transfer money to other account online. The main purpose of developing bank management system is to design an application, which could store bank data and provide an interface for retrieving customer related details with 100% accuracy.

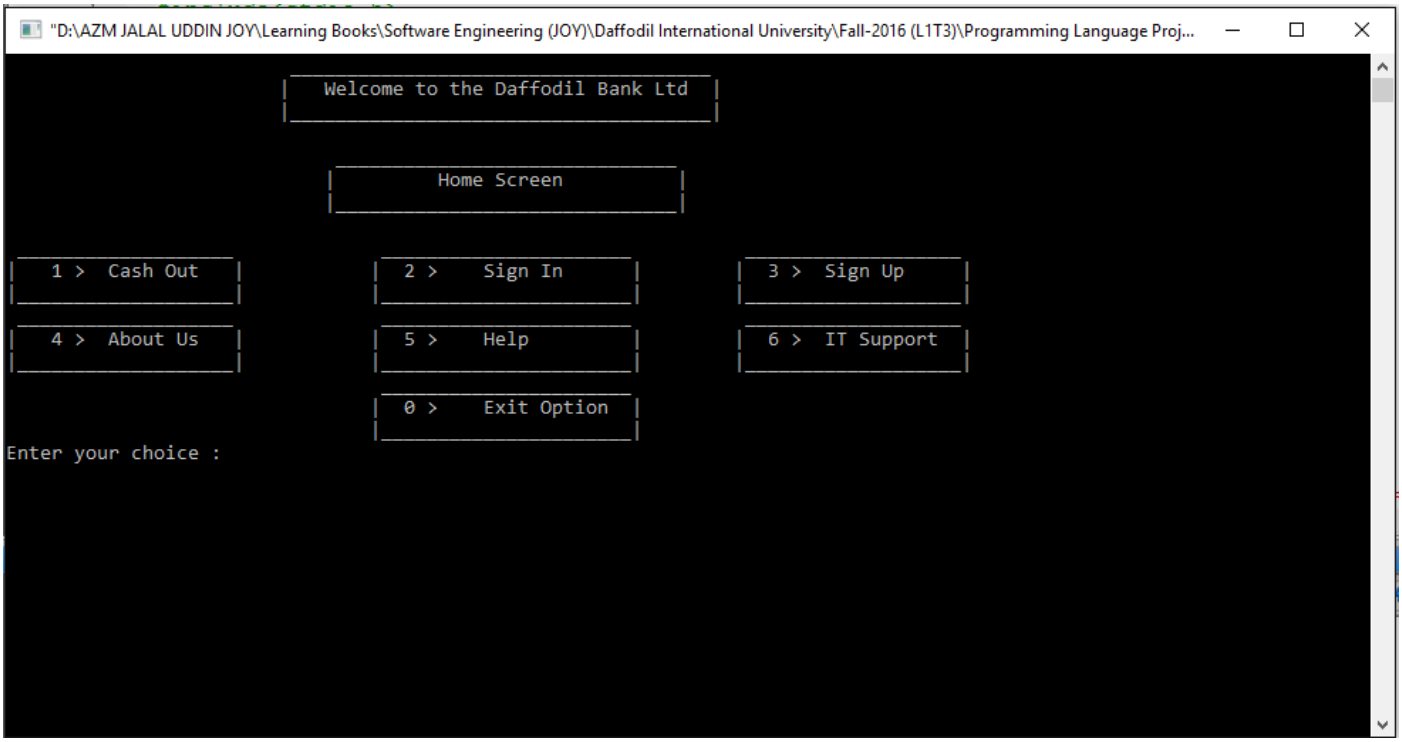
This bank management system also allow user to add new customer account, user can also modify existing user password. Using our bank management system user can also check any translation in any account.

Version 1.9

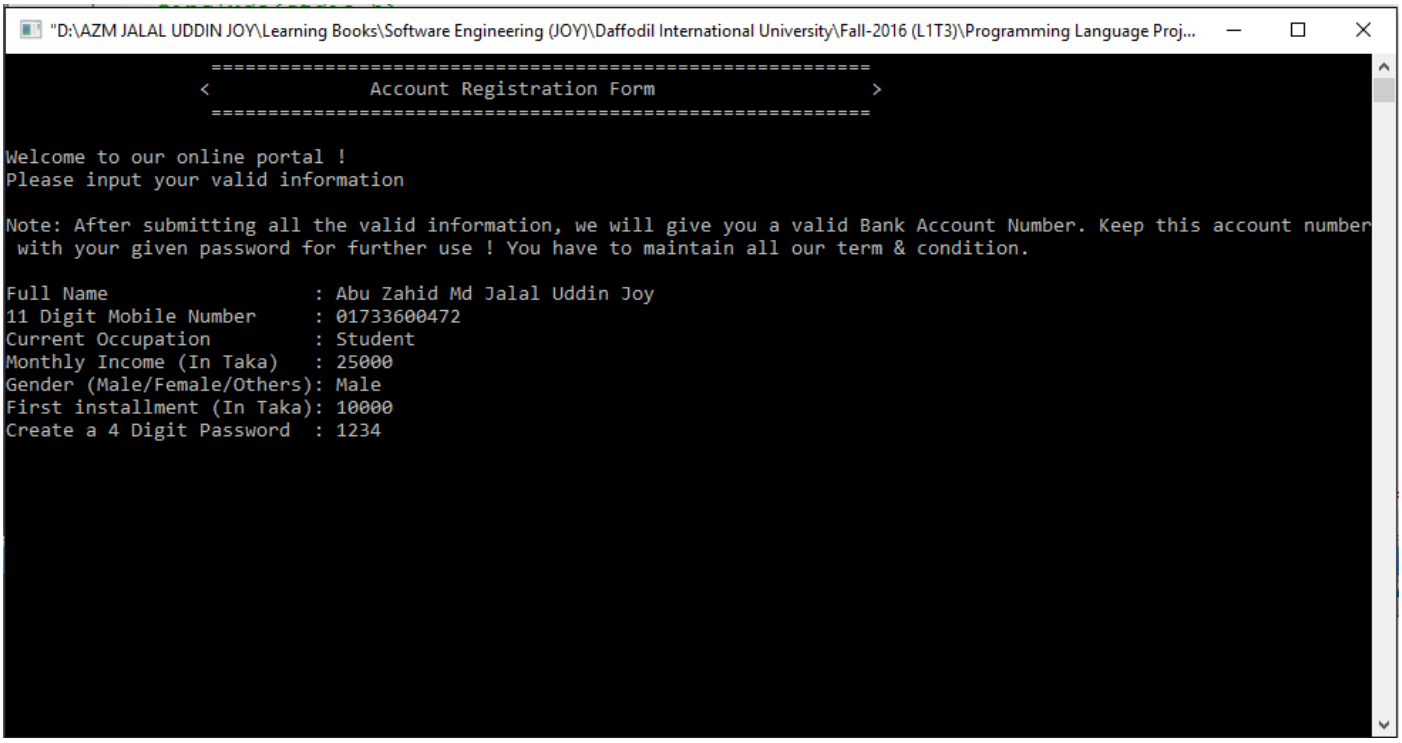
With chart:


Home Screen
Cash Out
Sign In
Money Transfer
Personal Information
Change Password
Sign Up
Full Name
Mobile Number
Occupation
Monthly Income
Gender
First Installment
Password
About Us
Bank Details
Help
User Guidance
IT Support
Developers
Exit Option

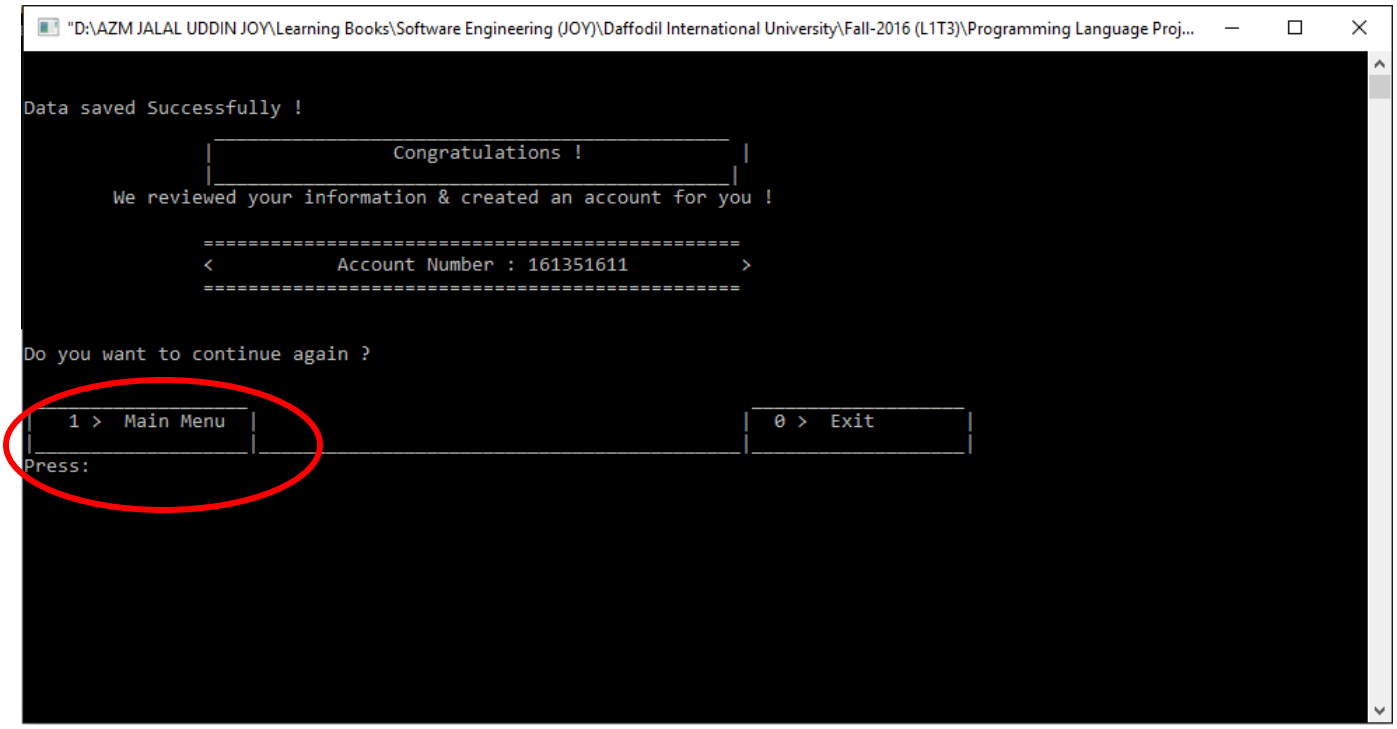
Output Screens:



3 > Sign Up



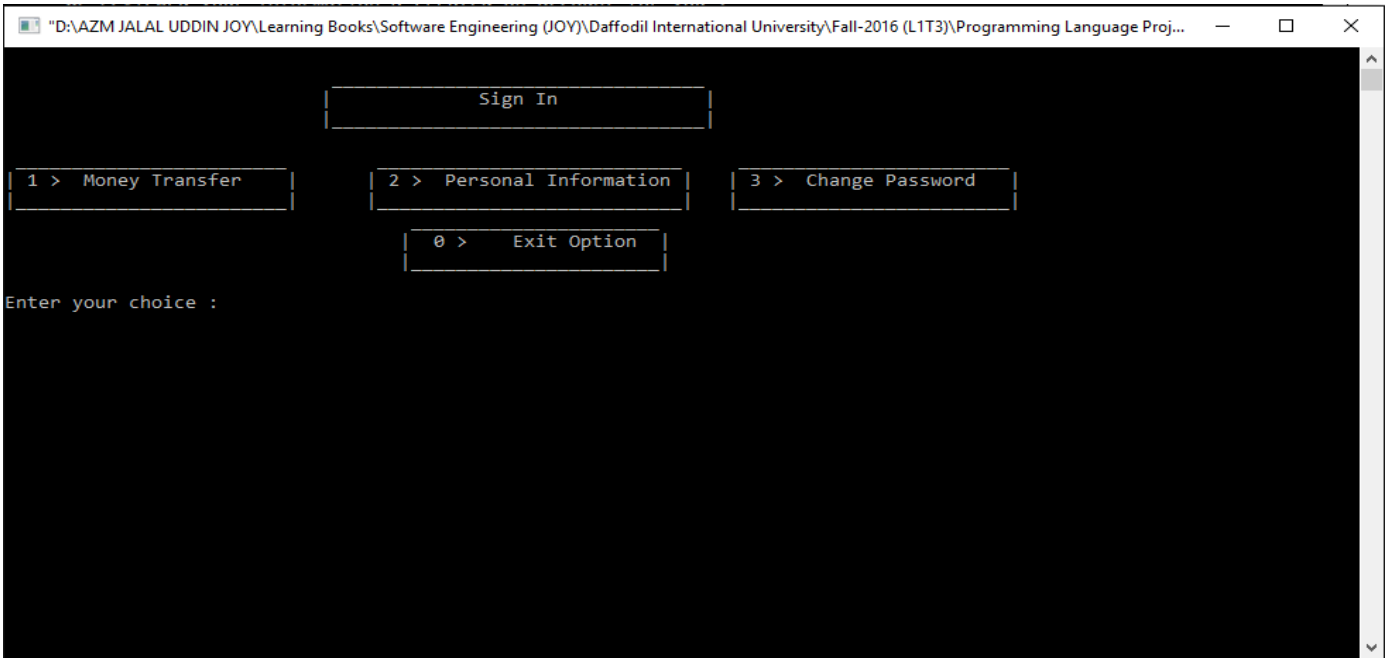
Press Okey.



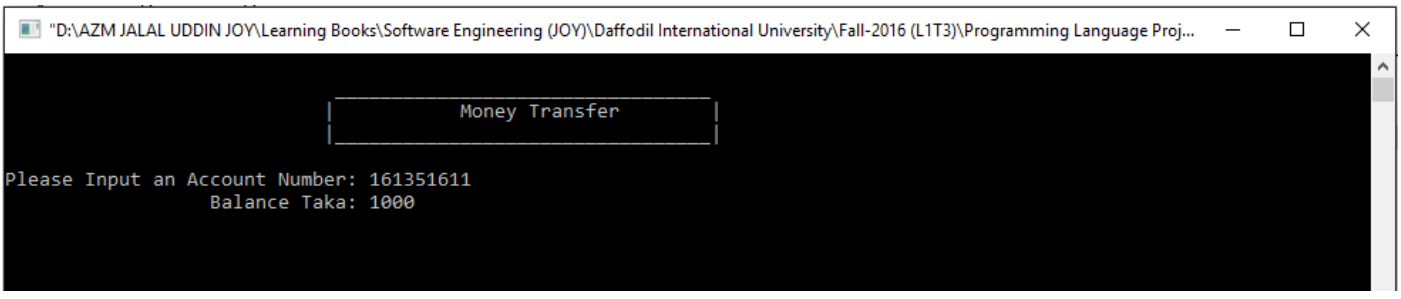
Press 1:

2 > Sign In

Again Press 2:

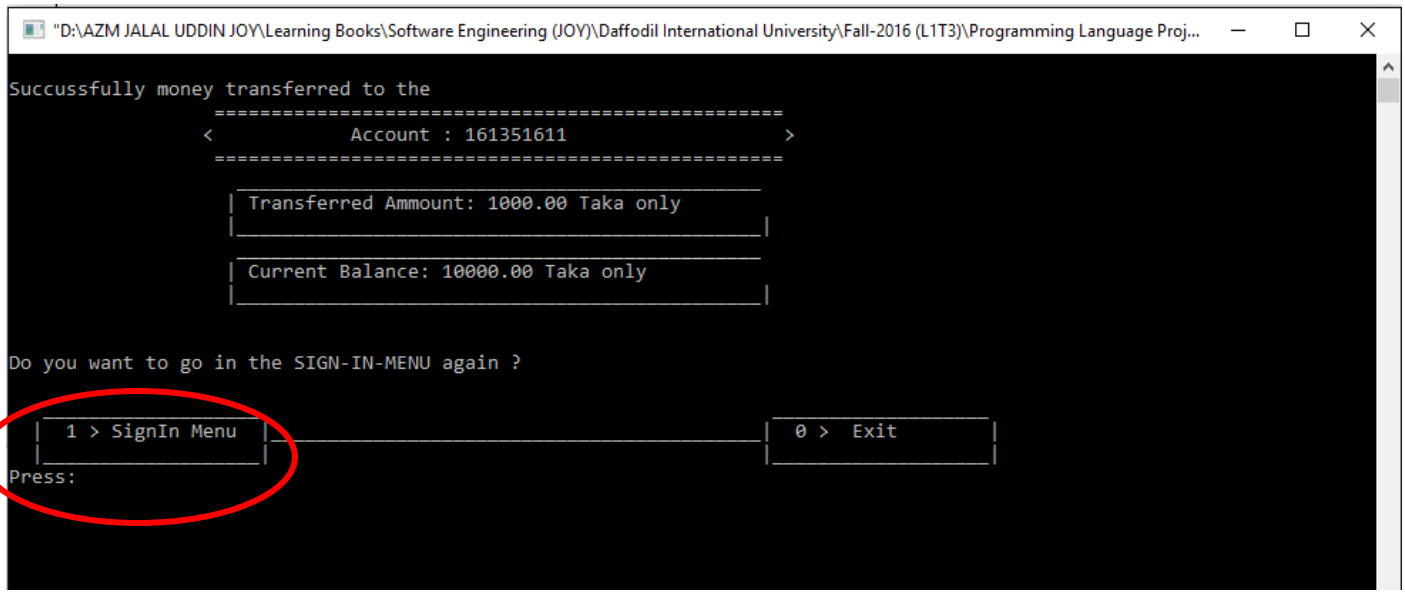


Press 1: (Sign In/Money Transfer)

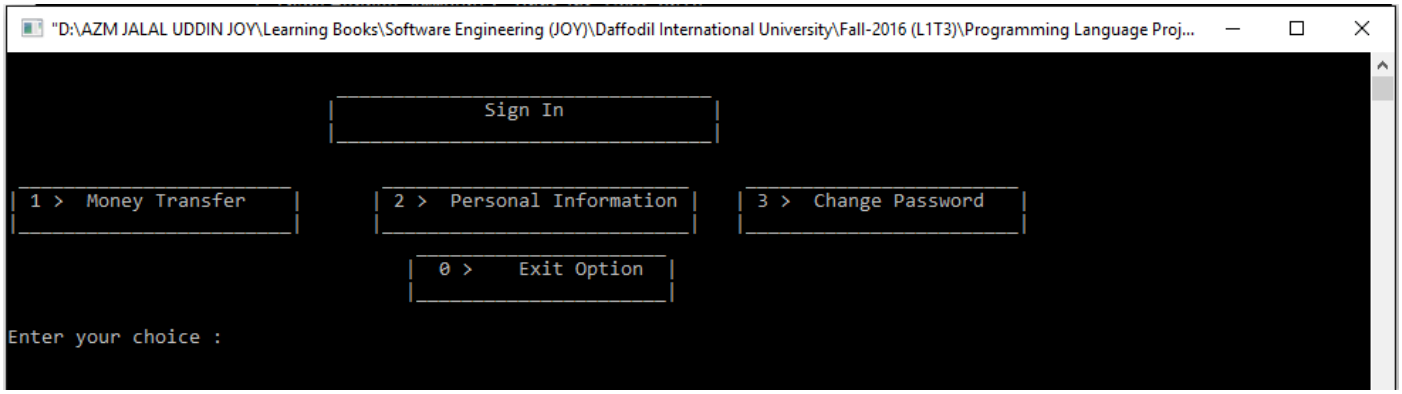


161-35-1611

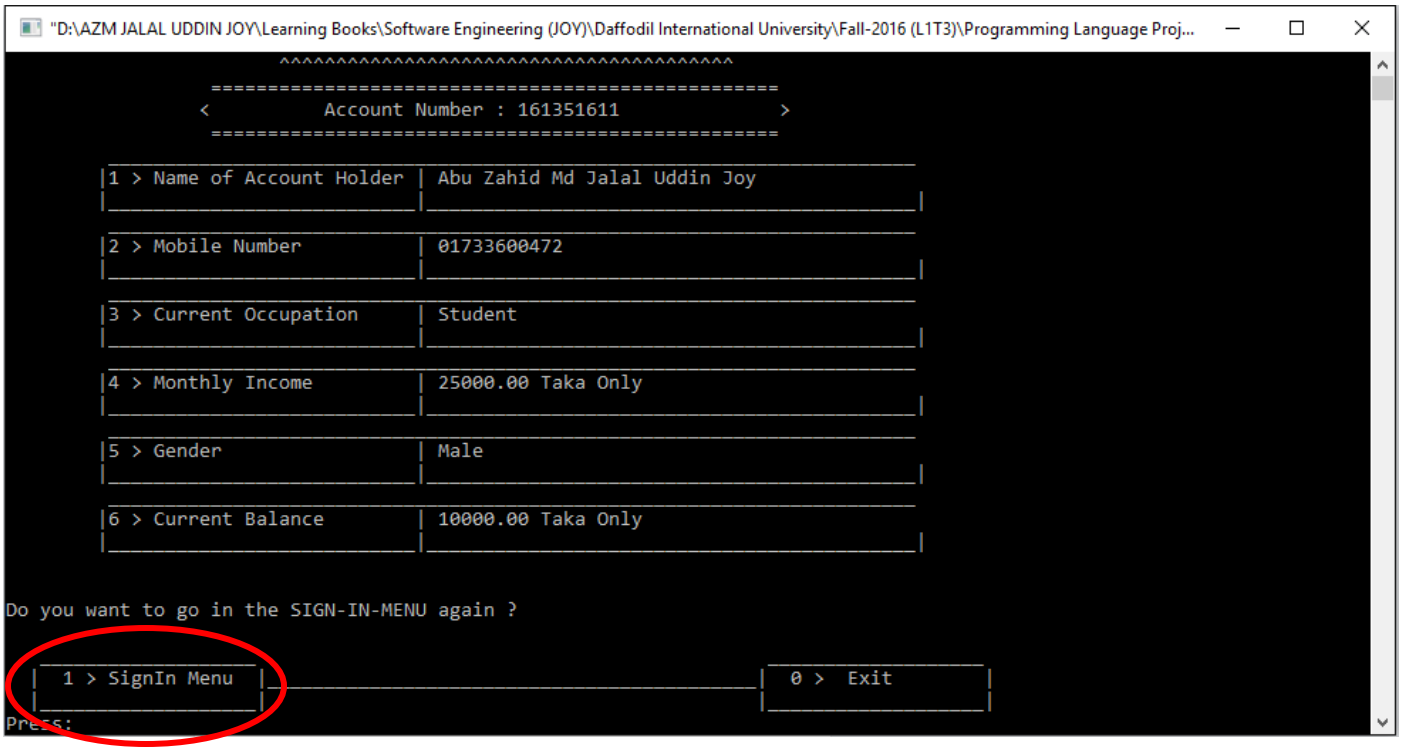
Enter:



Press 1:

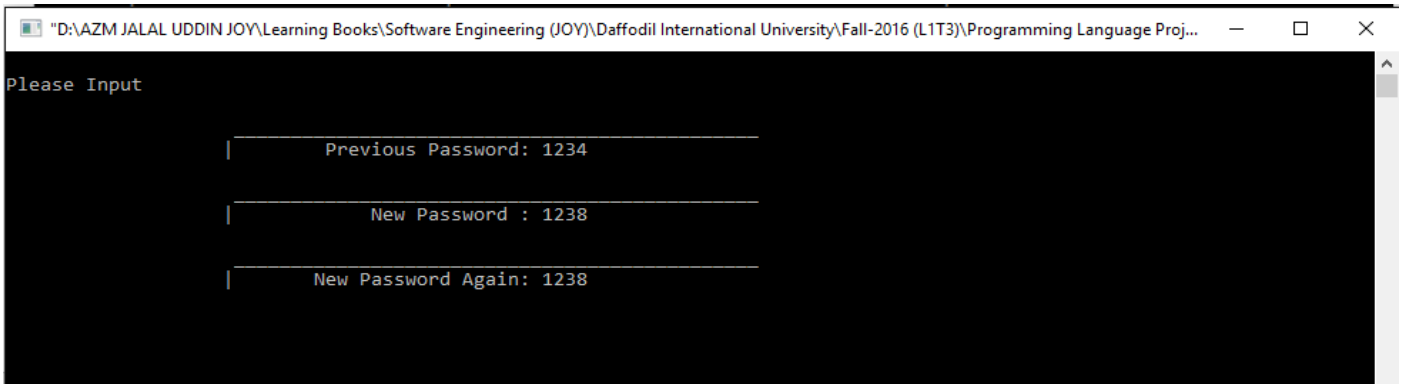


Press 2: (Sign In/Personal Information)

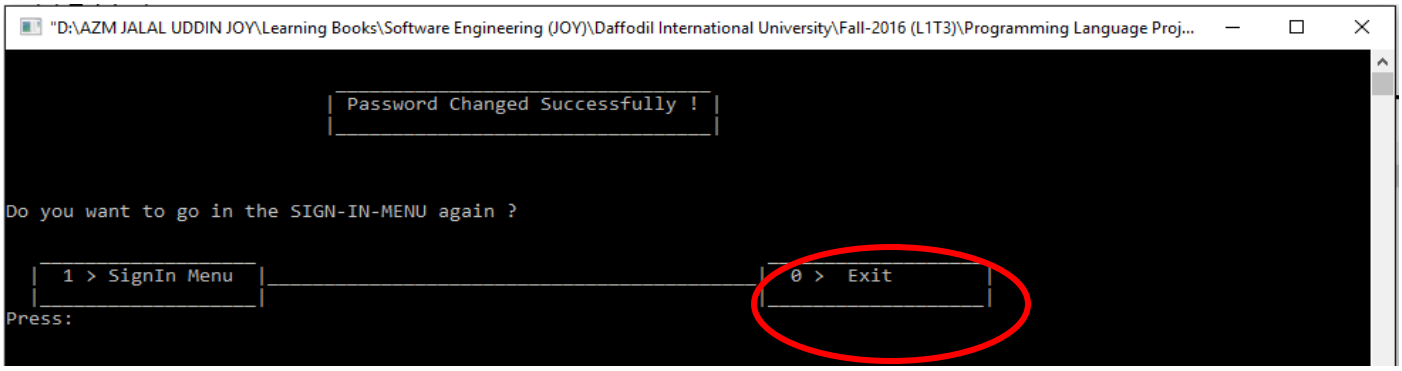


Press 1:

Press 3: (Sign In/Change Password)



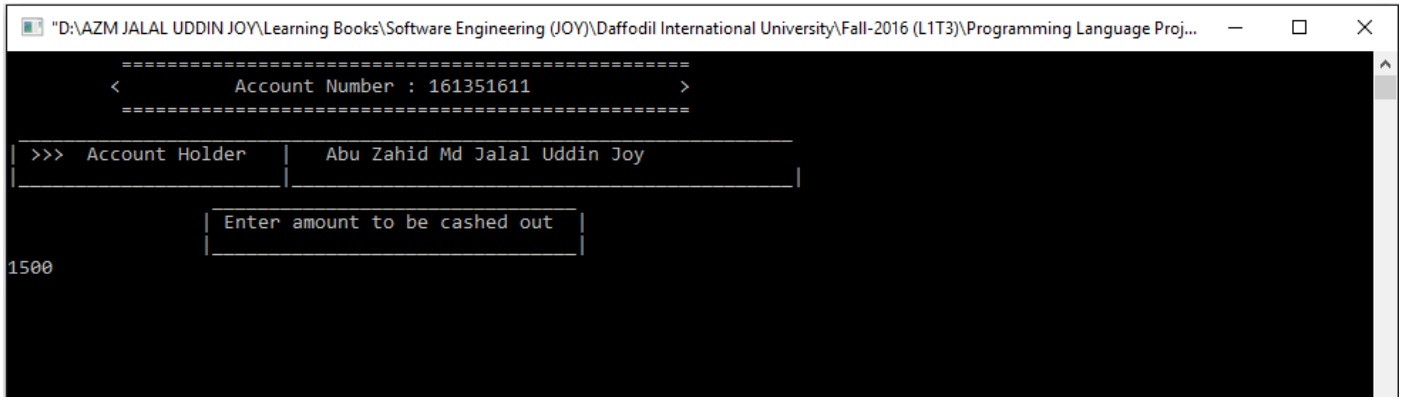
Enter:



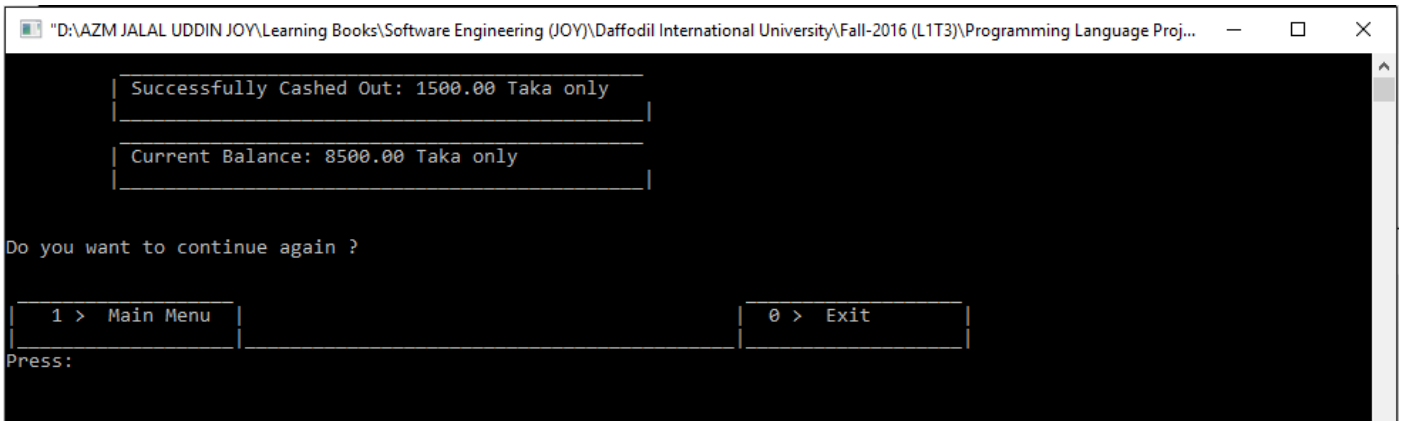
Press 0:

1 > Cash Out

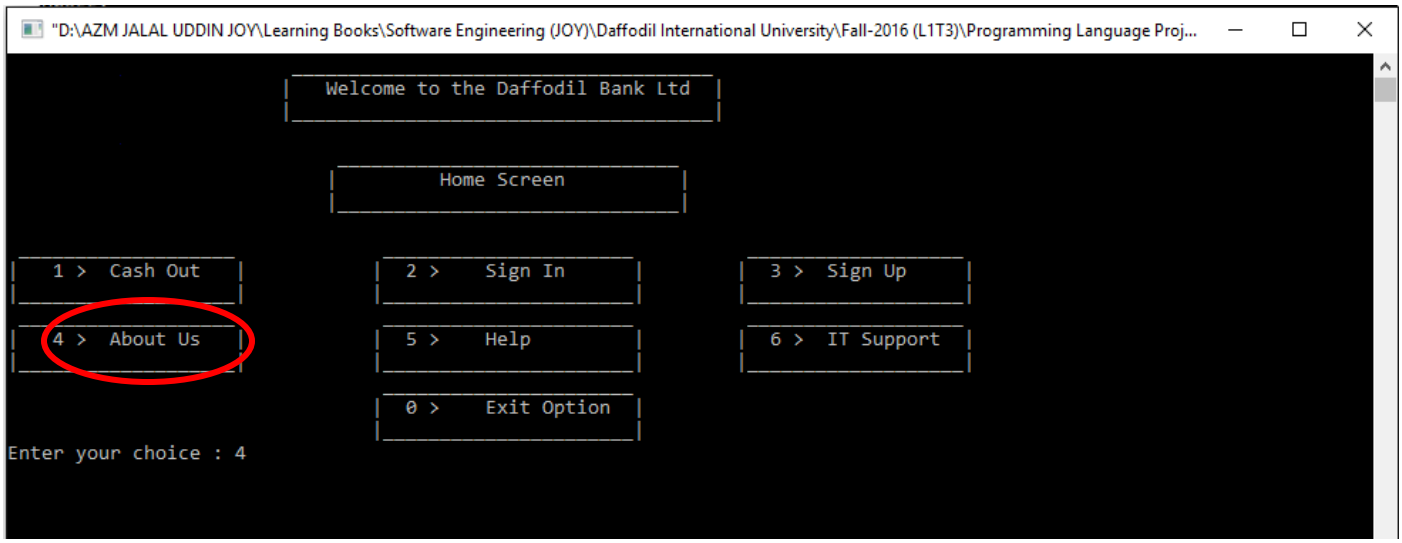
Enter:

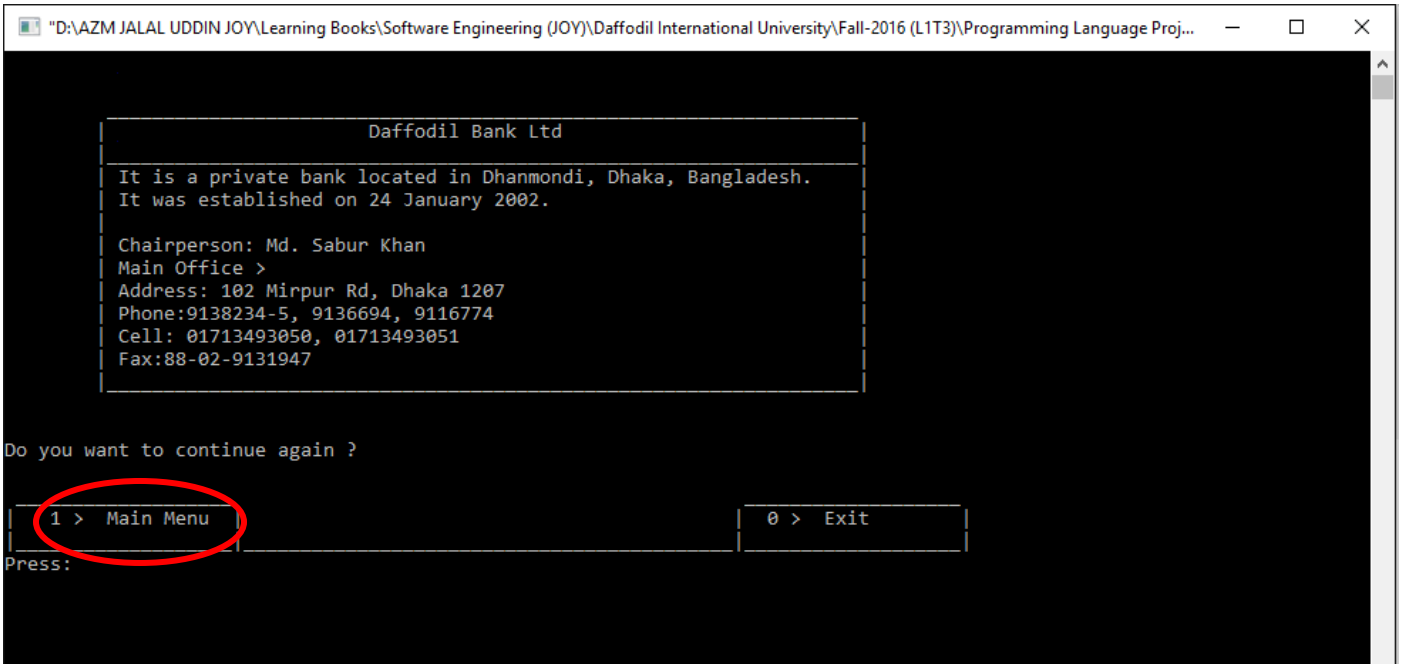


Enrer:

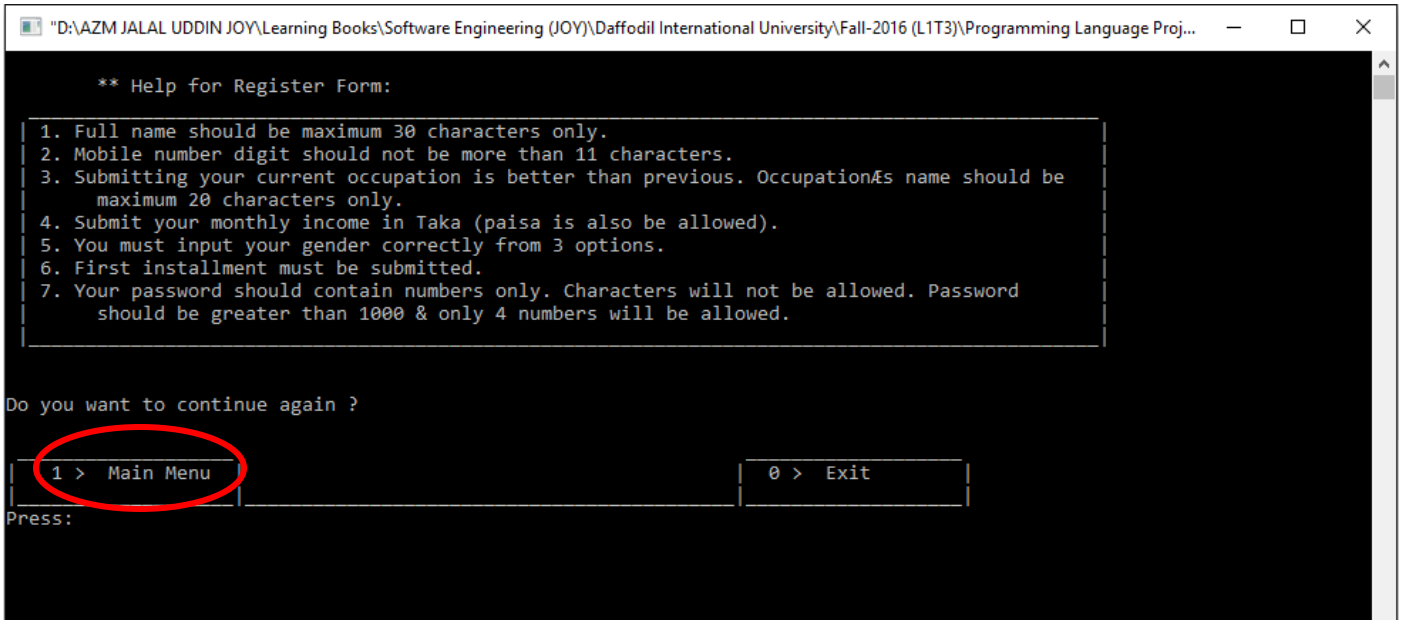

"D:\AZM JALAL UDDIN JOY\Learning Books\Software Engineering (JOY)\Daffodil International University\Fall-2016 (L1T3)\Programming Language Proj...
Successfully Cashed Out: 1500.00 Taka only
Current Balance: 8500.00 Taka only
Do you want to continue again ?
1 > Main Menu
0 > Exit
Press:

4 > About Us

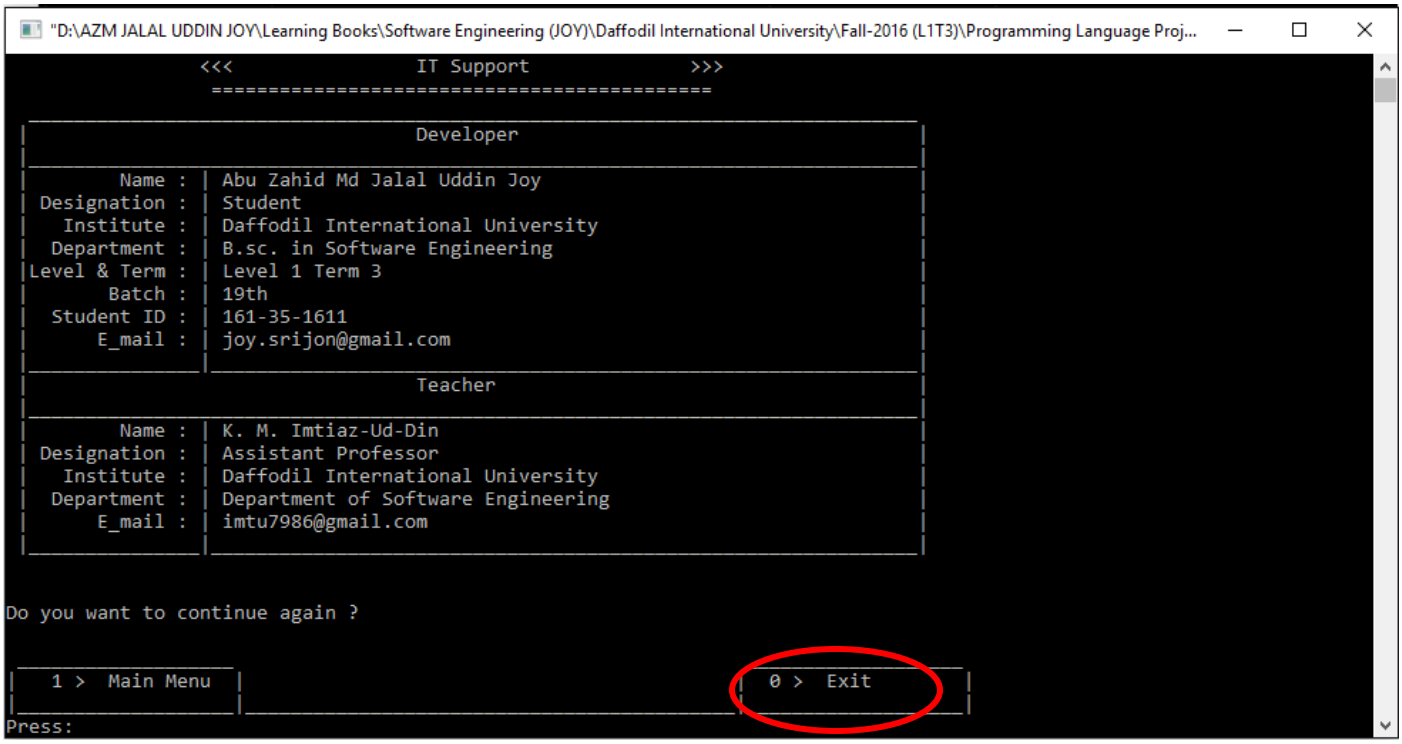

"D:\AZM JALAL UDDIN JOY\Learning Books\Software Engineering (JOY)\Daffodil International University\Fall-2016 (L1T3)\Programming Language Proj...
Welcome to the Daffodil Bank Ltd
Home Screen
1 > Cash Out
2 > Sign In
3 > Sign Up
4 > About Us
5 > Help
6 > IT Support
0 > Exit Option
Enter your choice : 4


"D:\AZM JALAL UDDIN JOY\Learning Books\Software Engineering (JOY)\Daffodil International University\Fall-2016 (L1T3)\Programming Language Proj...
Daffodil Bank Ltd
It is a private bank located in Dhanmondi, Dhaka, Bangladesh.
It was established on 24 January 2002.
Chairperson: Md. Sabur Khan
Main Office >
Address: 102 Mirpur Rd, Dhaka 1207
Phone:9138234-5, 9136694, 9116774
Cell: 01713493050, 01713493051
Fax:88-02-9131947
Do you want to continue again ?
1 > Main Menu
0 > Exit
Press:

5 > Help Menu



6 > IT Support



Exit.

```
#include<stdio.h>
#include<string.h>
#include <stdlib.h>
#define account_capacity 15//globally variable declaration
struct sign_up_info{
    char name[30];
    char mobile[12];
    char occupation[20];
    float monthly_income;
    char gender[6];
    float first_installment;
    int account_number;
    int password;
}sign_up[account_capacity];//sign up array
int main ()
{/*Here's f,i,j,k,l,m,n,p all are used as counter variable*/
    int option=1, choice, sign_in_option=1, sign_in_choice,f=0, i, j=0, k=0,
l=0, m=0,n=0,p=0, sign_in_account_number,sign_in_password,
signin_money_transfer_account, signin_change_pass_request_previous_password,
signin_new_password_step1, signin_new_password_step2,
asking_for_password_recover;
    float cash_out_balance, signin_money_transfer_taka;
    char fullname_forgotten_password[30], mobile_forgotten_password[12],
occupation_forgotten_password[20];
    FILE*inputfile;//Loading information from File
    inputfile = fopen("accounts_information.txt", "r");
        if (inputfile!=NULL){
                fprintf(stderr, "\nData Loaded Successfully from file
\"accounts_information.txt\"\nPlease continue...\n");
            }//Saved data willbe loaded from file
            fscanf(inputfile, "%d\n", &f);
            for (p=0; p<account_capacity; p++){
                    fread(&sign_up[p], sizeof(struct sign_up_info), 1,
inputfile);
                }//loading data by index
                i=f;//value of f transfers to i; for sign up purpose
```

```
    while (option){

        printf("\t\t\t _____\n\t\t\t|   Welcome
to the Daffodil Bank Ltd
|\n\t\t\t|_____|\n\n\t\t\t
_____\n\t\t\t    |         Home Screen
|\n\t\t\t    |_____|\n\n");

        printf(" _____\t\t _____\t\t
_____\n|   1 >  Cash Out   |\t\t|  2 >    Sign In      |\t|  3 >
Sign Up
|\n|_____|\t\t|_____|\t|_____|\n")
;

        printf(" _____\t\t _____\t\t
_____\n|   4 >  About Us   |\t\t|  5 >    Help         |\t|  6 >
IT Support
|\n|_____|\t\t|_____|\t|_____|\n")
;

        printf("\t\t\t\t _____\n\t\t\t\t|  0 >    Exit Option
|\n\t\t\t\t|_____|\n");

        printf ("Enter your choice : ");

        scanf    ("%d", &choice);

        switch (choice){

        case 1://input 1 for cash out request

            system("cls");//system-cls using for cleaning the screen

        printf("\n\n\t\t\t**************************************\n\t\t\t<\t
Cash Out     \t\t>\n\t\t\t**************************************\n");

        printf("Enter Your 9 Digit Account Number : ");

        scanf("%d", &sign_in_account_number);

        printf("Enter Your 4 Digit Password  \t  : ");

        scanf("%d", &sign_in_password);

            for (k=0; k<account_capacity; k++){

                if (sign_in_account_number==sign_up[k].account_number &&
sign_in_password==sign_up[k].password)

                {system("cls");

                    printf("\t
==============================================\n\t <\t    Account Number :
%d\t\t   >\n\t  ==============================================\n",
sign_up[k].account_number);

                    printf("
_____\n| >>>
Account Holder \t|
%s\n|_____|_____|\n",
sign_up[k].name);
```

```
                    printf("\t\t  _____________________________________\n\t\t |
Enter amount to be cashed out  |\n\t\t |_____________________________________|\n");

                    scanf("%f", & cash_out_balance);

//cash out balance should be smaller than account total balance

                    if (cash_out_balance <= sign_up[k].first_installment){

                        system("cls");

                        printf("\t
_____________________________________________\n\t | Successfully Cashed Out:
%.2f Taka only  \n\t |_____________________________________________|\n",
cash_out_balance);

sign_up[k].first_installment=sign_up[k].first_installment-
cash_out_balance;//cash out balance is deducting from main account

printf("\t  _____________________________________________\n\t | Current
Balance: %.2f Taka only  \n\t
|_____________________________________|\n",
sign_up[k].first_installment);

                        break;}

                    else{system("cls");

                        printf("\n\t\t\a
_____________________________\n\t\t |\t     Low Balance\t  |\n\t\t
|_____________________________|\n");

                        printf("\t
_____________________________________________\n\t | Your Current Balance is:
%.2f Taka only  \n\t |_____________________________________________|\n",
sign_up[k].first_installment);

                        break;}

                    break;}

                else if (k==account_capacity-1)

//checking all the accounts and if the account and password is absent in the
database, error will be shown{system("cls");

                        printf("\n\n\t\t
\a================================================\n\t\t <\tWrong Account or
Password combination !     >\n\t\t
================================================\n");

                    }

            }break;

        case 2://case 2 is using for the sign in menu

            system("cls");

printf("\n\n\t\t\t^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^\n\t\t\t<\t      SIGN
IN   \t\t>\n\t\t\t^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^\n");

            printf("Enter Your 9 Digit Account Number : ");
```

```
            scanf("%d", &sign_in_account_number);
            printf("Enter Your 4 Digit Password  \t  : ");
            scanf("%d", &sign_in_password);
                for (j=0; j<account_capacity; j++){
                        if (sign_in_account_number==sign_up[j].account_number
&& sign_in_password==sign_up[j].password){
                            sign_in_option=1;
                        while (sign_in_option){
                            system("cls");//sign in menu has 3 option for
handling
                            printf("\n\t\t\t
_____\n\t\t\t    |\t\t  Sign In\t      |\n\t\t\t
|_____|\n\n");
                            printf(" _____\t
_____\t _____\n| 1 >  Money Transfer
|\t| 2 >  Personal Information |\t| 3 >  Change Password
|\n|_____|\t|_____|\t|_____
_____|\n");
printf("\t\t\t\t    _____\n\t\t\t\t   |  0 >    Exit Option
|\n\t\t\t\t   |_____|\n");
printf ("\nEnter your choice : ");
scanf    ("%d", &sign_in_choice);
switch (sign_in_choice){
case 1 ://case 1 is using for for money transferring
system("cls");
  printf("\n\t\t\t     _____\n\t\t\t    |\t\tMoney
Transfer\t      |\n\t\t\t    |_____|\n\n");
printf("Please Input an Account Number: ");
scanf("%d", & signin_money_transfer_account);
printf("\t\t  Balance Taka: ");
scanf("%f", & signin_money_transfer_taka);
for (l=0; l<account_capacity; l++){
if (signin_money_transfer_account==sign_up[l].account_number)
{//money transfer will be allowed only for registered account
if (signin_money_transfer_taka <= sign_up[l].first_installment)
{sign_up[j].first_installment=sign_up[j].first_installment-
signin_money_transfer_taka;
```

```
sign_up[l].first_installment=sign_up[l].first_installment+signin_money_transfer
_taka;

system("cls");

printf("\nSuccussfully money transferred to the\n");

printf("\t\t  ================================================\n\t\t <\t
Account : %d \t\t    >\n\t\t
================================================\n",
signin_money_transfer_account);

printf("\t\t    _____________________________________________\n\t\t   |
Transferred Ammount: %.2f Taka only  \n\t\t
|_____________________________________________|\n",
signin_money_transfer_taka);

printf("\t\t    _____________________________________________\n\t\t   |
Current Balance: %.2f Taka only  \n\t\t
|_____________________________________________|\n",
sign_up[j].first_installment); break; }

else{system("cls");//low balance will be shown when the necessity of Taka is
lower than the account balance

printf("\n\t\t\a  _____________________________\n\t\t |\t     Low Balance\t
|\n\t\t |_____________________________|\n");

break; }

}else if(l==account_capacity-1) {system("cls");printf("\a\n\t\t\t
_____________________________\n\t\t\t    | Money Transfer can't be
possible|\n\t\t\t    |_____________________________|\n\n");}

}break;

case 2 ://case 2 is working for showing account holder details

system("cls");
printf("\t\t\t^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^\n\t\t\t<\t  Personal
Information\t\t>\n\t\t\t^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^\n");

printf("\t\t  ================================================\n\t\t <\t
Account Number : %d \t\t    >\n\t\t
================================================\n",
sign_up[j].account_number); printf("\t
_____________________________________________________________________\n\t|1 >
Name of Account Holder |
%s\n\t|_____________________________|_____________________________________|
\n", sign_up[j].name); printf("\t
_____________________________________________________________________\n\t|2 >
Mobile Number          |
%s\n\t|_____________________________|_____________________________________|
\n", sign_up[j].mobile); printf("\t
_____________________________________________________________________\n\t|3 >
Current Occupation     |
%s\n\t|_____________________________|_____________________________________|
\n", sign_up[j].occupation);
```

```
printf("\t
_____\n\t|4 >
Monthly Income         | %.2f Taka
Only\n\t|_____|_____
_|\n", sign_up[j].monthly_income); printf("\t
_____\n\t|5 >
Gender                 |
%s\n\t|_____|_____|
\n", sign_up[j].gender); printf("\t
_____\n\t|6 >
Current Balance        | %.2f Taka
Only\n\t|_____|_____
_|\n", sign_up[j].first_installment); break;

 case 3 ://it's using for changing password

system("cls");

printf("\nPlease Input\n");

printf("\n\t\t    _____\n\t\t   |\t
Previous Password: ");

scanf("%d", & signin_change_pass_request_previous_password);//previous password
verification request

printf("\n\t\t    _____\n\t\t   |
\t\tNew Password : ");

scanf("%d", & signin_new_password_step1);

printf("\n\t\t    _____\n\t\t   |\t
New Password Again: ");

scanf("%d", & signin_new_password_step2);

if (signin_change_pass_request_previous_password==sign_up[j].password &&
signin_new_password_step1==signin_new_password_step2 &
signin_new_password_step1<=9999 && signin_new_password_step2>=1000)

{system("cls");

printf("\n\t\t\t     _____\n\t\t\t    | Password
Changed Successfully ! |\n\t\t\t    |_____|\n\n");


sign_up[j].password=signin_new_password_step2; }

else{//mismatched password or activity will be shown as error

system("cls");

printf("\n\t\t\t\a     _____\n\t\t\t    |    Error
in Change request  !   |\n\t\t\t    |_____|\n\n");

}break; }fflush (stdin); printf ("\n\nDo you want to go in the SIGN-IN-MENU
again ?\n\n");//asking for going to sign in menu even or not !

printf("   _____\t\t\t\t\t   _____\n  |  1 >
SignIn Menu  |_____|  0 >  Exit\t
|\n  |_____|\t\t\t\t\t  |_____|\nPress: ");
```

```
scanf ("%d", &sign_in_option); if (sign_in_option != 1)//input 1 for return in
the sign in menu

break; }break; }

else if (j==account_capacity-1)

{//if wrong password or account number is submitted, forgotten password request
will be shown

system("cls");

printf("\n\n\t\t  \a==============================================\n\t\t
<\tWrong Account or Password combination !     >\n\t\t
==============================================\n");

printf("Forgot password ?\nDo You want to recover ?");

printf("\n   _____\t\t\t\t\t\t   _____\n  |1 >
Ignore        |_____________________________________|0 > Recover
Password|\n  |_____|\t\t\t\t\t\t  |_____|\n");

printf("\nEnter Your Choice: ");

scanf("%d", & asking_for_password_recover);

if (asking_for_password_recover==0) {system("cls");

printf("\n\t\t\t   _____\n\t\t\t  |\t   Forgotten
Password ?\t    |\n\t\t\t  |_____|\n\n");

printf("Please Answer correct to the question below:\n\n");

printf("Full Name\t\t   : ");//upper case letter and lower case letter is
mandatory for checking

scanf(" %[^\n]",fullname_forgotten_password);

printf("11 Digit Mobile Number\t   : ");

scanf(" %[^\n]", mobile_forgotten_password);

 for (m=0; m<account_capacity; m++){if (strcmp(fullname_forgotten_password,
sign_up[m].name)==0) {system("cls");

printf("\n\t\t\t   _____\n\t\t\t  | Your Password
|\t%d\t    |\n\t\t\t
|_____|_____|\n\n",sign_up[m].password);

break; }

else if (m==account_capacity-1) {

printf("\n\t\t\t\a   _____\n\t\t\t  |Your Given
Information Is wrong !|\n\t\t\t  |_____|\n\n");

break; }}break;

}

}//forgot password recovery ending process

}break;

        case 3://case 3 is using for registering form
```

```
            {system("cls");
                printf("\t\t
==========================================================\n\t\t <\t\tAccount
Registration Form\t\t    >\n\t\t
==========================================================\n");
printf("\nWelcome to our online portal !\n");
printf("Please input your valid information\n\n");
printf("Note: After submitting all the valid information, we will give you a
valid Bank Account Number. Keep this account number with your given password
for further use ! You have to maintain all our term & condition.\n\n");
                printf("Full Name\t\t   : ");
                scanf(" %[^\n]",sign_up[i].name);
                printf("11 Digit Mobile Number\t   : ");
                scanf(" %[^\n]",sign_up[i].mobile);
                printf("Current Occupation\t   : ");
                scanf(" %[^\n]",sign_up[i].occupation);
                printf("Monthly Income (In Taka)   : ");
                scanf(" %f",&sign_up[i].monthly_income);
                printf("Gender (Male/Female/Others): ");
                scanf(" %[^\n]",sign_up[i].gender);
                printf("First installment (In Taka): ");
                scanf("%f",&sign_up[i].first_installment);
                printf("Create a 4 Digit Password  : ");
                scanf("%d", &sign_up[i].password);
                if (sign_up[i].password>=9999 || sign_up[i].password<=1000)
                    {//checking password for 4 digit only
                        system("cls");
printf("\a\t\t _____________________________________________\n\t\t|
Error in terms & condition !\t\t|\n\t\t|\t\t\tor\t\t\t|");
printf("\n\t\t|        password submission error !\t\t|\n\t\t|   Please input
at least 4 number only
!\t|\n\t\t|_____________________________________________|\n");
 printf("\t\t _____________________________________________");
printf("\n\t\t| For any help, go to Main Menu & Click Help\t|");
printf("\n\t\t|_____________________________________________|\n");
                    }
                else{system("cls");
```

```
sign_up[i].account_number=161351611+i;//account registering will be started
from this ID

  printf("\n\nData saved Successfully ! \n");

printf("\t\t _____________________________________________\n\t\t|\t\t
Congratulations !
\t|\n\t\t|_____________________________________________|\n");

printf("\tWe reviewed your information & created an account for you !\n\n");
printf("\t\t==============================================\n\t\t<\t
Account Number : %d
\t\t>\n\t\t==============================================\n",
sign_up[i].account_number); }

            i++;//counter variable will be increased after using sign up
function once and}break;

        case 4://case 4 is using for About Us function. it's showing details
about this bank

            system("cls");

printf("\n\n\t
_____________________________________________________________\n\t|\t\t\tDa
ffodil Bank Ltd\t\t\t   |");
printf("\n\t|_____________________________________________________________
|\n\t| It is a private bank located in Dhanmondi, Dhaka, Bangladesh.    |\n");

            printf("\t| It was established on 24 January 2002.\t\t\t
|\n\t|\t\t\t\t\t\t\t\t   |\n\t| Chairperson: Md. Sabur Khan\t\t\t\t\t   |\n");

            printf("\t| Main Office >\t\t\t\t\t\t\t   |\n\t| Address: 102
Mirpur Rd, Dhaka 1207\t\t\t\t   |\n\t| Phone:9138234-5, 9136694,
9116774\t\t\t\t   |\n\t| Cell: 01713493050, 01713493051\t\t\t\t   |\n");

            printf("\t| Fax:88-02-9131947\t\t\t\t\t\t
|\n\t|_____________________________________________________________|\n");

            break;

        case 5://case 5 is for help line

            system("cls");

            printf("\n\t** Help for Register Form:\n");printf("
_____________________________________________________________________________
_____________\n");

            printf(" | 1. Full name should be maximum 30 characters
only.\t\t\t\t\t\t|\n");

            printf(" | 2. Mobile number digit should not be more than 11
characters.\t\t\t\t|\n");

            printf(" | 3. Submitting your current occupation is better than
previous. Occupation's name should be\t|\n |\tmaximum 20 characters
only.\t\t\t\t\t\t\t|\n");

            printf(" | 4. Submit your monthly income in Taka (paisa is also be
allowed).\t\t\t\t|\n");
```

```
            printf(" | 5. You must input your gender correctly from 3
options.\t\t\t\t\t|\n");

            printf(" | 6. First installment must be
submitted.\t\t\t\t\t\t\t|\n");

            printf(" | 7. Your password should contain numbers only. Characters
will not be allowed. Password\t|\n |\tshould be greater than 1000 & only 4
numbers will be allowed.\t\t\t\t|\n");printf("
|_____________________________________________________________________________
_________________|\n");break;

        case 6://showing IT Support of this program

            system("cls");

            printf("\t\t  ========================================\n\t\t
<<<\t\t    IT Support \t\t    >>>\n\t\t
========================================\n");printf("
_____________________________________________________________________________\
n");printf(" |\t\t\t\t    Developer\t\t\t\t\t|\n");

printf("
|_____________________________________________________________________________
|\n");

printf(" |\t  Name : | Abu Zahid Md Jalal Uddin Joy\t\t\t\t\t|\n");

            printf(" | Designation : | Student\t\t\t\t\t\t\t|\n");

printf(" |   Institute : | Daffodil International University\t\t\t\t|\n");

printf(" |  Department : | B.sc. in Software Engineering\t\t\t\t|\n");

            printf(" |Level & Term : | Level 1 Term 3\t\t\t\t\t\t|\n");

            printf(" |\t Batch : | 19th\t\t\t\t\t\t\t\t|\n");

            printf(" |  Student ID : | 161-35-1611\t\t\t\t\t\t\t|\n");

            printf(" |\tE_mail : | joy.srijon@gmail.com\t\t\t\t\t|\n");

            printf("
|_________________|_____________________________________________________________
|\n");

            printf(" |\t\t\t\t    Teacher \t\t\t\t\t|\n");

printf("|_____________________________________________________________________
________|\n");

            printf(" |\t  Name : | K. M. Imtiaz-Ud-Din\t\t\t\t\t\t|\n");

            printf(" | Designation : | Assistant Professor\t\t\t\t\t|\n");

            printf(" |   Institute : | Daffodil International
University\t\t\t\t|\n");

            printf(" |  Department : | Department of Software
Engineering\t\t\t\t|\n");

            printf(" |\tE_mail : | imtu7986@gmail.com\t\t\t\t\t|\n");
```

```
            printf("
|_________________|_____________________________________________________________
|\n");break; }fflush (stdin);

        printf ("\n\nDo you want to continue again ?\n\n");//Ask user what
they'd like to do

        printf(" _____________________\t\t\t\t\t\t _____________________\n|   1 >
Main Menu  |\t\t\t\t\t|  0 >  Exit\t
|\n|_____________________|_____________________________________________|_________
________|\nPress: ");

        scanf    ("%d", &option);

        system("cls");

        if (option != 1)

        {f=i;

            FILE*outputfile;

//creating file for saving this data for further use

            outputfile = fopen("accounts_information.txt", "w");

                if (outputfile==NULL) {

//stderr is using for showing standard error

                        fprintf(stderr, "\nerror creating file
accounts_information.txt\n\n");

                        exit(1);//(usually) indicates unsuccessful termination.
}//sending data to the created file

                    fprintf(outputfile, "%d\n", f);

                    for (n=0; n<account_capacity; n++){

                    fwrite(&sign_up[n], sizeof(struct sign_up_info), 1,
outputfile); }break;

        }

    }

    return 0;

}
```