Green University of Bangladesh
Department of Computer Science and Engineering (CSE)
Faculty of Sciences and Engineering
Semester: (Summer, Year: 2021), B.Sc. in CSE (Day)

Course Title: Structured Programming Lab
Course Code: CSE 104   Section: 211DB

Lab Project Name: AIRLINE RESERVATION SYSTEM

Student Details

Name	ID
1.	

Submission Date: _
Course Teacher's Name: _

[For Teachers use only: **Don't Write Anything inside this box**]

Lab Project Status	
Marks: …………………………………	Signature: ....
Comments:	Date: ....

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Chapter 1

Introduction

1.1   Introduction

Originally, 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:

1. The standard library concept;
2. the ease with that applications can be optimized by hand-coding isolated procedures;
3. a powerful and varied repertoire of operators;
4. the portability of the compiler;

1.2   Design Goals/Objective

● A bank management system would be able to maintain information and to keep to records of that particular event.
● The objective of this project is to make a system like a bank app.
● The program allows the user to create new account, to do cash deposit and withdrawal, show account information respectively.

Chapter 2

Implementation of the Project

1. Flow Charts

When the program is started, the user will direct to the main menu. The user will be required to select one of the four options.
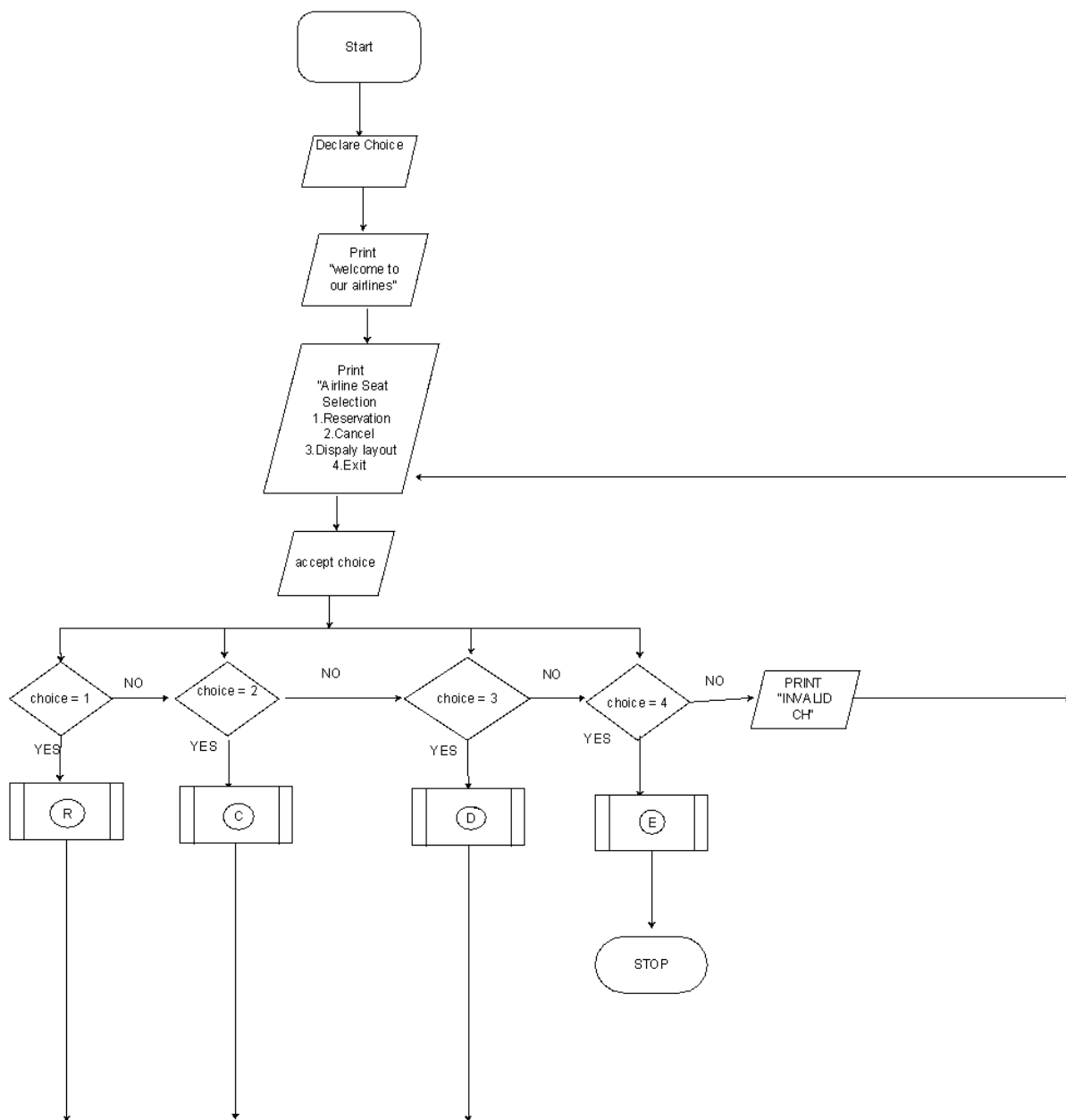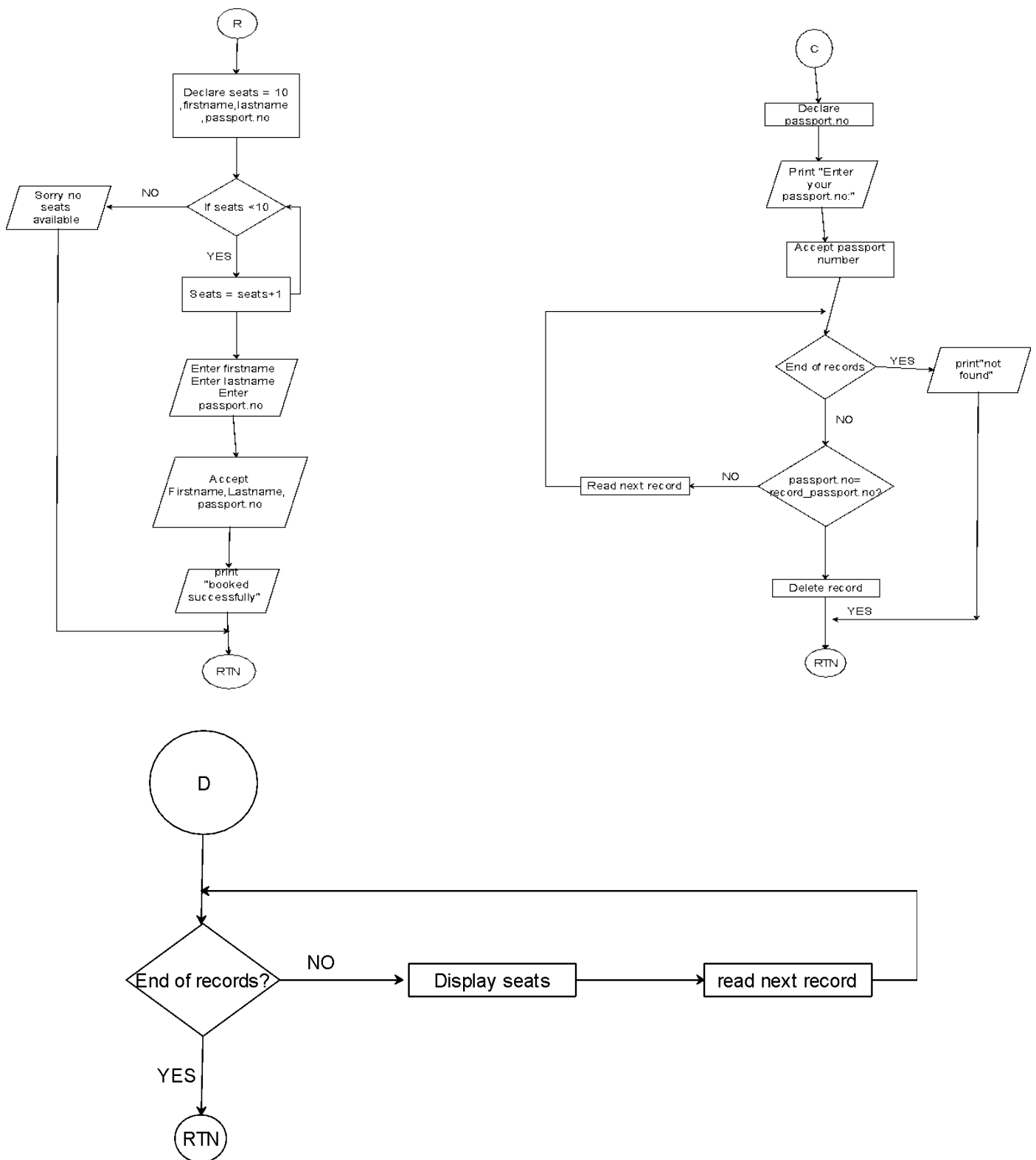

Figure1: Flow Chart of Main Menu

R

Declare seats = 10, firstname, lastname, passport.no

If seats <10

NO → Sorry no seats available

YES

Seats = seats+1

Enter firstname Enter lastname Enter passport.no

Accept Firstname, Lastname, passport.no

print "booked successfully"

RTN

C

Declare passport.no

Print "Enter your passport.no:"

Accept passport number

End of records — YES → print"not found"

NO

passport.no= record_passport.no? — NO → Read next record

YES

Delete record

YES

RTN

D

End of records? — NO → Display seats → read next record

YES

RTN

Figure 2: Flow Chart of different Activities involved in different functions of the project

2. Implementation

C source code

```c
#include<stdio.h>
#include<stdlib.h>
#include<windows.h>
#include <stdbool.h>
int i,j;
int main_exit;
void menu();
int atm();
void close();
struct date{
    int month,day,year;


    };
struct {

    char name[60];
    int acc_no,age;
    char address[60];
    char citizenship[15];
    double phone;
    char acc_type[10];
    float amt;
    struct date dob;
    struct date deposit;
    struct date withdraw;

    }add,upd,check,rem,transaction;

float interest(float t,float amount,int rate)
{
    float SI;
    SI=(rate*t*amount)/100.0;
    return (SI);

}
void fordelay(int j)
{   int i,k;
    for(i=0;i<j;i++)
        k=i;
}
```

```c
void new_acc()

{
    int choice;
    FILE *ptr;

    ptr=fopen("record.dat","a+");
    account_no:
    system("cls");
    printf("\t\t\t==== ADD RECORD  ====");
    printf("\n\n\nEnter today's date(mm/dd/yyyy):");
    scanf("%d/%d/%d",&add.deposit.month,&add.deposit.day,&add.deposit.year);
    printf("\nEnter the account number:");
    scanf("%d",&check.acc_no);
                while(fscanf(ptr,"%d    %s    %d/%d/%d    %d   %s   %s   %lf   %s   %f
%d/%d/%d\n",&add.acc_no,add.name,&add.dob.month,&add.dob.day,&add.dob.year,&add.age,add.
address,add.citizenship,&add.phone,add.acc_type,&add.amt,&add.deposit.month,&add.deposit
.day,&add.deposit.year)!=EOF)
    {
        if (check.acc_no==add.acc_no)
            {printf("Account no. already in use!");
            fordelay(1000000000);
                goto account_no;

        }
    }
    add.acc_no=check.acc_no;
        printf("\nEnter the name:");
    scanf("%s",add.name);
    printf("\nEnter the date of birth(mm/dd/yyyy):");
    scanf("%d/%d/%d",&add.dob.month,&add.dob.day,&add.dob.year);
    printf("\nEnter the age:");
    scanf("%d",&add.age);
    printf("\nEnter the address:");
    scanf("%s",add.address);
    printf("\nEnter the citizenship number:");
    scanf("%s",add.citizenship);
    printf("\nEnter the phone number: ");
    scanf("%lf",&add.phone);
    printf("\nEnter the amount to deposit:$");
    scanf("%f",&add.amt);
                printf("\nType    of    account:\n\t#Saving\n\t#Current\n\t#Fixed1(for    1
year)\n\t#Fixed2(for 2 years)\n\t#Fixed3(for 3 years)\n\n\tEnter your choice:");
    scanf("%s",add.acc_type);
```

```c
                        fprintf(ptr,"%d     %s     %d/%d/%d     %d     %s     %s     %lf     %s     %f
%d/%d/%d\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.age,add.addre
ss,add.citizenship,add.phone,add.acc_type,add.amt,add.deposit.month,add.deposit.day,add.
deposit.year);



    fclose(ptr);
    printf("\nAccount created successfully!");
    add_invalid:
    printf("\n\n\n\t\tEnter 1 to go to the main menu and 0 to exit:");
    scanf("%d",&main_exit);
    system("cls");
    if (main_exit==1)
        menu();
    else if(main_exit==0)
            close();
    else
        {
            printf("\nInvalid!\a");
            goto add_invalid;
        }
}
void view_list()
{
    FILE *view;
    view=fopen("record.dat","r");
    int test=0;
    system("cls");
    printf("\nACC. NO.\tNAME\t\t\tADDRESS\t\t\tPHONE\n");

            while(fscanf(view,"%d     %s     %d/%d/%d     %d     %s     %s     %lf     %s     %f
%d/%d/%d",&add.acc_no,add.name,&add.dob.month,&add.dob.day,&add.dob.year,&add.age,add.ad
dress,add.citizenship,&add.phone,add.acc_type,&add.amt,&add.deposit.month,&add.deposit.d
ay,&add.deposit.year)!=EOF)
    {
        printf("\n%d\t%s\t\t\t%s\t\t%.0f",add.acc_no,add.name,add.address,add.phone);
        test++;
    }

    fclose(view);
    if (test==0)
    {
        system("cls");
```

```c
        printf("\nNO RECORDS!!\n");
    }


view_list_invalid:
    printf("\n\nEnter 1 to go to the main menu and 0 to exit:");
    scanf("%d",&main_exit);
    system("cls");
    if (main_exit==1)
        menu();
    else if(main_exit==0)
        close();
    else
    {
        printf("\nInvalid!\a");
        goto view_list_invalid;
    }
}
void edit(void)
{
    int choice,test=0;
    FILE *old,*newrec;
    old=fopen("record.dat","r");
    newrec=fopen("new.dat","w");

    printf("\nEnter the account no. of the customer whose info you want to change:");
    scanf("%d",&upd.acc_no);
                while(fscanf(old,"%d    %s    %d/%d/%d    %d    %s    %s    %lf    %s    %f
%d/%d/%d",&add.acc_no,add.name,&add.dob.month,&add.dob.day,&add.dob.year,&add.age,add.ad
dress,add.citizenship,&add.phone,add.acc_type,&add.amt,&add.deposit.month,&add.deposit.d
ay,&add.deposit.year)!=EOF)
    {
        if (add.acc_no==upd.acc_no)
        {    test=1;
                                    printf("\nWhich    information    do    you    want    to
change?\n1.Address\n2.Phone\n\nEnter your choice(1 for address and 2 for phone):");
            scanf("%d",&choice);
            system("cls");
            if(choice==1)
                {printf("Enter the new address:");
                scanf("%s",upd.address);
                                    fprintf(newrec,"%d  %s  %d/%d/%d  %d  %s  %s  %lf  %s  %f
%d/%d/%d\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.age,upd.addre
ss,add.citizenship,add.phone,add.acc_type,add.amt,add.deposit.month,add.deposit.day,add.
deposit.year);
```

```c
                    system("cls");
                    printf("Changes saved!");
                    }
                else if(choice==2)
                    {
                        printf("Enter the new phone number:");
                    scanf("%lf",&upd.phone);
                                    fprintf(newrec,"%d   %s   %d/%d/%d   %d   %s   %s   %lf   %s   %f
%d/%d/%d\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.age,add.addre
ss,add.citizenship,upd.phone,add.acc_type,add.amt,add.deposit.month,add.deposit.day,add.
deposit.year);
                    system("cls");
                    printf("Changes saved!");
                    }


            }
            else
                                fprintf(newrec,"%d   %s   %d/%d/%d   %d   %s   %s   %lf   %s   %f
%d/%d/%d\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.age,add.addre
ss,add.citizenship,add.phone,add.acc_type,add.amt,add.deposit.month,add.deposit.day,add.
deposit.year);
        }
        fclose(old);
        fclose(newrec);
        remove("record.dat");
        rename("new.dat","record.dat");

if(test!=1)
        {   system("cls");
            printf("\nRecord not found!!\a\a\a");
            edit_invalid:
              printf("\nEnter 0 to try again,1 to return to main menu and 2 to exit:");
              scanf("%d",&main_exit);
              system("cls");
                 if (main_exit==1)

                    menu();
                else if (main_exit==2)
                    close();
                else if(main_exit==0)
                    edit();
                else
                    {printf("\nInvalid!\a");
                    goto edit_invalid;}
```

```c
            }
        else
            {printf("\n\n\nEnter 1 to go to the main menu and 0 to exit:");
            scanf("%d",&main_exit);
            system("cls");
            if (main_exit==1)
                menu();
            else
                close();
            }
}

void transact(void)
{   int choice,test=0;
    FILE *old,*newrec;
    old=fopen("record.dat","r");
    newrec=fopen("new.dat","w");

        printf("Enter the account no. of the customer:");
    scanf("%d",&transaction.acc_no);
            while  (fscanf(old,"%d   %s    %d/%d/%d   %d   %s   %s   %lf   %s   %f
%d/%d/%d",&add.acc_no,add.name,&add.dob.month,&add.dob.day,&add.dob.year,&add.age,add.ad
dress,add.citizenship,&add.phone,add.acc_type,&add.amt,&add.deposit.month,&add.deposit.d
ay,&add.deposit.year)!=EOF)
    {

            if(add.acc_no==transaction.acc_no)
            {   test=1;

if(strcmpi(add.acc_type,"fixed1")==0||strcmpi(add.acc_type,"fixed2")==0||strcmpi(add.acc
_type,"fixed3")==0)
                {
                        printf("\a\a\a\n\nYOU CANNOT DEPOSIT OR WITHDRAW CASH IN FIXED
ACCOUNTS!!!!!");
                    fordelay(1000000000);
                    system("cls");
                    menu();

                }
                    printf("\n\nDo you want to\n1.Deposit\n2.Withdraw?\n\nEnter your
choice(1 for deposit and 2 for withdraw):");
                scanf("%d",&choice);
                if (choice==1)
                {
```

```c
                        printf("Enter the amount you want to deposit:$ ");
                        scanf("%f",&transaction.amt);
                        add.amt+=transaction.amt;
                                    fprintf(newrec,"%d  %s  %d/%d/%d  %d  %s  %s  %lf  %s  %f
%d/%d/%d\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.age,add.addre
ss,add.citizenship,add.phone,add.acc_type,add.amt,add.deposit.month,add.deposit.day,add.
deposit.year);
                        printf("\n\nDeposited successfully!");
                }
                else
                {
                        printf("Enter the amount you want to withdraw:$ ");
                        scanf("%f",&transaction.amt);
                        add.amt-=transaction.amt;
                                    fprintf(newrec,"%d  %s  %d/%d/%d  %d  %s  %s  %lf  %s  %f
%d/%d/%d\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.age,add.addre
ss,add.citizenship,add.phone,add.acc_type,add.amt,add.deposit.month,add.deposit.day,add.
deposit.year);
                        printf("\n\nWithdrawn successfully!");
                }

            }
            else
            {
                            fprintf(newrec,"%d  %s  %d/%d/%d  %d  %s  %s  %lf  %s  %f
%d/%d/%d\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.age,add.addre
ss,add.citizenship,add.phone,add.acc_type,add.amt,add.deposit.month,add.deposit.day,add.
deposit.year);
                }
    }
    fclose(old);
    fclose(newrec);
    remove("record.dat");
    rename("new.dat","record.dat");
    if(test!=1)
    {
         printf("\n\nRecord not found!!");
         transact_invalid:
        printf("\n\n\nEnter 0 to try again,1 to return to main menu and 2 to exit:");
        scanf("%d",&main_exit);
        system("cls");
        if (main_exit==0)
          transact();
      else if (main_exit==1)
```

```c
            menu();
        else if (main_exit==2)
            close();
        else
        {
            printf("\nInvalid!");
            goto transact_invalid;
        }


    }
    else
    {
        printf("\nEnter 1 to go to the main menu and 0 to exit:");
         scanf("%d",&main_exit);
        system("cls");
        if (main_exit==1)
            menu();
        else
            close();
    }


}
void erase(void)
{
    FILE *old,*newrec;
    int test=0;
    old=fopen("record.dat","r");
    newrec=fopen("new.dat","w");
    printf("Enter the account no. of the customer you want to delete:");
    scanf("%d",&rem.acc_no);
            while    (fscanf(old,"%d    %s    %d/%d/%d    %d    %s    %s    %lf    %s    %f
%d/%d/%d",&add.acc_no,add.name,&add.dob.month,&add.dob.day,&add.dob.year,&add.age,add.ad
dress,add.citizenship,&add.phone,add.acc_type,&add.amt,&add.deposit.month,&add.deposit.d
ay,&add.deposit.year)!=EOF)
    {
        if(add.acc_no!=rem.acc_no)
                            fprintf(newrec,"%d    %s    %d/%d/%d    %d    %s    %s    %lf    %s    %f
%d/%d/%d\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.age,add.addre
ss,add.citizenship,add.phone,add.acc_type,add.amt,add.deposit.month,add.deposit.day,add.
deposit.year);

        else
            {test++;
            printf("\nRecord deleted successfully!\n");
```

```
                }
        }
    fclose(old);
    fclose(newrec);
    remove("record.dat");
    rename("new.dat","record.dat");
    if(test==0)
            {
                printf("\nRecord not found!!\a\a\a");
                erase_invalid:
                  printf("\nEnter 0 to try again,1 to return to main menu and 2 to exit:");
                  scanf("%d",&main_exit);


                     if (main_exit==1)
                          menu();
                    else if (main_exit==2)
                          close();
                    else if(main_exit==0)
                          erase();
                    else
                        {printf("\nInvalid!\a");
                        goto erase_invalid;}
            }
      else
          {printf("\nEnter 1 to go to the main menu and 0 to exit:");
          scanf("%d",&main_exit);
          system("cls");
          if (main_exit==1)
              menu();
          else
              close();
          }


}


void see(void)
{
    FILE *ptr;
    int test=0,rate;
    int choice;
    float time;
    float intrst;
    ptr=fopen("record.dat","r");
    printf("Do you want to check by\n1.Account no\n2.Name\nEnter your choice:");
```

```c
        scanf("%d",&choice);
        if (choice==1)
        {   printf("Enter the account number:");
            scanf("%d",&check.acc_no);


                    while   (fscanf(ptr,"%d   %s   %d/%d/%d   %d   %s   %s   %lf   %s   %f
%d/%d/%d",&add.acc_no,add.name,&add.dob.month,&add.dob.day,&add.dob.year,&add.age,add.ad
dress,add.citizenship,&add.phone,add.acc_type,&add.amt,&add.deposit.month,&add.deposit.d
ay,&add.deposit.year)!=EOF)
            {
                if(add.acc_no==check.acc_no)
                {   system("cls");
                    test=1;

                    printf("\nAccount NO.:%d\nName:%s \nDOB:%d/%d/%d \nAge:%d \nAddress:%s
\nCitizenship No:%s \nPhone number:%.0lf \nType Of Account:%s \nAmount deposited:$ %.2f
\nDate                                                                             Of
Deposit:%d/%d/%d\n\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.age
,add.address,add.citizenship,add.phone,

add.acc_type,add.amt,add.deposit.month,add.deposit.day,add.deposit.year);
                if(strcmpi(add.acc_type,"fixed1")==0)
                    {
                        time=1.0;
                        rate=9;
                        intrst=interest(time,add.amt,rate);
                                    printf("\n\nYou will get $%.2f as interest on
%d/%d/%d",intrst,add.deposit.month,add.deposit.day,add.deposit.year+1);
                    }
                else if(strcmpi(add.acc_type,"fixed2")==0)
                    {
                        time=2.0;
                        rate=11;
                        intrst=interest(time,add.amt,rate);
                                    printf("\n\nYou will get $.%.2f as interest on
%d/%d/%d",intrst,add.deposit.month,add.deposit.day,add.deposit.year+2);

                    }
                else if(strcmpi(add.acc_type,"fixed3")==0)
                    {
                        time=3.0;
                        rate=13;
                        intrst=interest(time,add.amt,rate);
                                    printf("\n\nYou will get $.%.2f as interest on
```

```c
                            %d/%d/%d",intrst,add.deposit.month,add.deposit.day,add.deposit.year+3);

                        }
                    else if(strcmpi(add.acc_type,"saving")==0)
                        {
                            time=(1.0/12.0);
                            rate=8;
                            intrst=interest(time,add.amt,rate);
                                printf("\n\nYou will get $.%.2f as interest on %d of every
month",intrst,add.deposit.day);

                        }
                    else if(strcmpi(add.acc_type,"current")==0)
                        {

                            printf("\n\nYou will get no interest\a\a");

                        }

                }
            }
        }
    else if (choice==2)
    {   printf("Enter the name:");
        scanf("%s",&check.name);
                    while  (fscanf(ptr,"%d  %s  %d/%d/%d  %d  %s  %s  %lf  %s  %f
%d/%d/%d",&add.acc_no,add.name,&add.dob.month,&add.dob.day,&add.dob.year,&add.age,add.ad
dress,add.citizenship,&add.phone,add.acc_type,&add.amt,&add.deposit.month,&add.deposit.d
ay,&add.deposit.year)!=EOF)
        {
            if(strcmpi(add.name,check.name)==0)
            {   system("cls");
                test=1;
                    printf("\nAccount No.:%d\nName:%s \nDOB:%d/%d/%d \nAge:%d \nAddress:%s
\nCitizenship No:%s \nPhone number:%.0lf \nType Of Account:%s \nAmount deposited:$%.2f
\nDate                                                                              Of
Deposit:%d/%d/%d\n\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.age
,add.address,add.citizenship,add.phone,

add.acc_type,add.amt,add.deposit.month,add.deposit.day,add.deposit.year);
                if(strcmpi(add.acc_type,"fixed1")==0)
                    {
                        time=1.0;
                        rate=9;
```

```c
                        intrst=interest(time,add.amt,rate);
                                        printf("\n\nYou will get $.%.2f as interest on
%d/%d/%d",intrst,add.deposit.month,add.deposit.day,add.deposit.year+1);
                    }
                else if(strcmpi(add.acc_type,"fixed2")==0)
                    {
                        time=2.0;
                        rate=11;
                        intrst=interest(time,add.amt,rate);
                                        printf("\n\nYou will get $.%.2f as interest on
%d/%d/%d",intrst,add.deposit.month,add.deposit.day,add.deposit.year+2);

                    }
                else if(strcmpi(add.acc_type,"fixed3")==0)
                    {
                        time=3.0;
                        rate=13;
                        intrst=interest(time,add.amt,rate);
                                        printf("\n\nYou will get $.%.2f as interest on
%d/%d/%d",intrst,add.deposit.month,add.deposit.day,add.deposit.year+3);

                    }
                else if(strcmpi(add.acc_type,"saving")==0)
                    {
                        time=(1.0/12.0);
                        rate=8;
                        intrst=interest(time,add.amt,rate);
                            printf("\n\nYou will get $.%.2f as interest on %d of every
month",intrst,add.deposit.day);

                    }
                else if(strcmpi(add.acc_type,"current")==0)
                    {

                        printf("\n\nYou will get no interest\a\a");

                    }

            }
        }
    }


    fclose(ptr);
```

```c
     if(test!=1)
        {   system("cls");
            printf("\nRecord not found!!\a\a\a");
            see_invalid:
               printf("\nEnter 0 to try again,1 to return to main menu and 2 to exit:");
               scanf("%d",&main_exit);
               system("cls");
                 if (main_exit==1)
                     menu();
                else if (main_exit==2)
                     close();
                else if(main_exit==0)
                     see();
                else
                    {
                         system("cls");
                         printf("\nInvalid!\a");
                         goto see_invalid;}
        }
    else
        {printf("\nEnter 1 to go to the main menu and 0 to exit:");
         scanf("%d",&main_exit);}
         if (main_exit==1)
         {
             system("cls");
             menu();
         }

         else
            {

              system("cls");
             close();
             }

    }


void close(void)
{
    printf("\n\n\n\nThank You!");
    }
```

```c
void menu(void)
{    int choice;
     system("cls");
     system("color 8f");
     printf("\n\n\t\t\t        BANK MANAGEMENT SYSTEM");
         printf("\n\n\n\t\t\t\xB2\xB2\xB2\xB2\xB2\xB2\xB2  WELCOME  TO  THE  MAIN  MENU
\xB2\xB2\xB2\xB2\xB2\xB2\xB2");
       printf("\n\n\t\t[1]  Create  new  account\n\t\t[2]  Update  existing  account\n\t\t[3]
Transactions\n\t\t[4]   Check   the   account   details\n\t\t[5]   Remove   existing
account\n\t\t[6] View customer's list\n\t\t[7] ATM Feature\n\t\t[8] Exit\n\n\n\t\t Enter
your choice:");
     scanf("%d",&choice);

     system("cls");
     switch(choice)
     {
         case 1:new_acc();
         break;
         case 2:edit();
         break;
         case 3:transact();
         break;
         case 4:see();
         break;
         case 5:erase();
         break;
         case 6:view_list();
         break;
         case 7:atm();
         break;
         case 8:close();
         break;
     }



}
int main()
{
     char pass[10],password[10]="Meheraj";
     int i=0;
     printf("\n\n\n\t\t\t\t   Bank Management System\n\t\t\t\t\t User Login ");
     printf("\n\n\n\n\n\t\t\t\tEnter Password:");
     scanf("%s",pass);
```

```c
        if (strcmp(pass,password)==0)
            {printf("\n\nPassword Match!\nLOADING");
            for(i=0;i<=6;i++)
            {
                fordelay(100000000);
                printf(". ");
            }
            printf("\n");
                    system("pause");
                        system("cls");

            menu();
            }
        else
            {   printf("\n\nWrong password!!\a\a\a");
                login_try:
                printf("\nEnter 1 to try again and 0 to exit:");
                scanf("%d",&main_exit);
                if (main_exit==1)
                        {

                            system("cls");
                            main();
                        }

                else if (main_exit==0)
                        {
                        system("cls");
                        close();}
                else
                        {printf("\nInvalid!");
                        fordelay(1000000000);
                        system("cls");
                        goto login_try;}

            }
            return 0;
    }



    int atm(){

    void mainMenu();
```

```c
void checkBalance(float balance);
float moneyDeposit(float balance);
float moneyWithdraw(float balance);
void menuExit();
void errorMessage();

int login(void)
{
  float number = 1234;
  int pass;
  printf("\n\n\t\t\tEnter the PIN No:");
  scanf("%d", &pass);

  if (pass == number)
    {
      printf("\n\nPIN Matched!\nLOADING");
        for(i=0;i<=6;i++)
        {
            fordelay(100000000);
            printf(".");
        }
        system("cls");
      mainMenu();
    }
  else
    {
      printf("Invalid\n Try Again");
      login();
    }
  return 0;
}



    int option;
    float balance = 15000.00;
    int choose;
    bool again = true;


    login();
    while (again) {
```

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

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



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

            }else{
             mainMenu();
             }

    }
```

```c
        return 0;

    }



    void mainMenu() {

        printf("\n\n\t\t=========Welcome to ATM Feature=========\n\n");
        printf("\n\t\t----Please choose one of the options below----\n");
        printf("\n\t\t< 1 >  Check Balance\n");
        printf("\n\t\t< 2 >  Deposit\n");
        printf("\n\t\t< 3 >  Withdraw\n");
        printf("\n\t\t< 4 >  Exit\n\n");

    }


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

    }


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


        balance += deposit;

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


    }

    float moneyWithdraw(float balance) {
```

```c
        float withdraw;
        bool back = true;

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

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


        if (withdraw < balance) {
            back = false;
            balance -= withdraw;
            printf("$$$$Your 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);

        }
        }
        return balance;


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



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

Screenshots
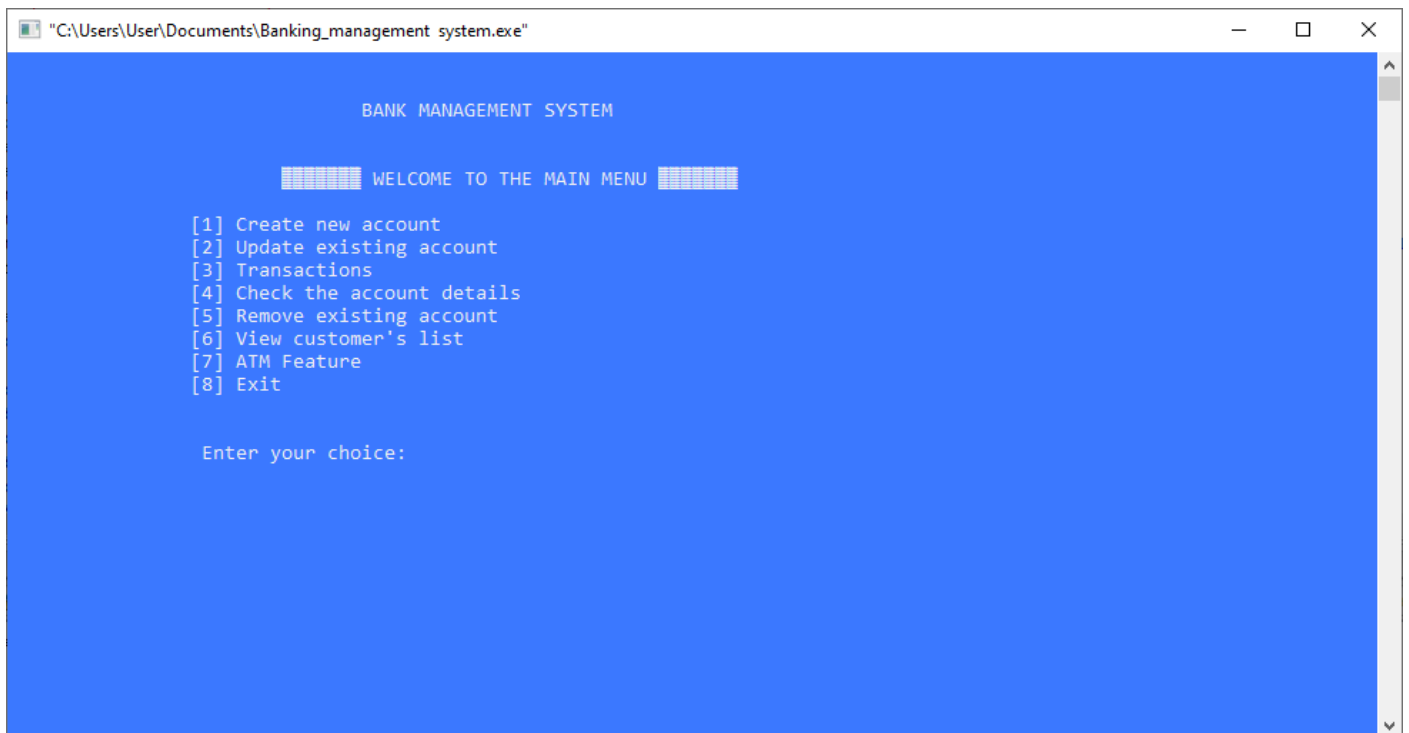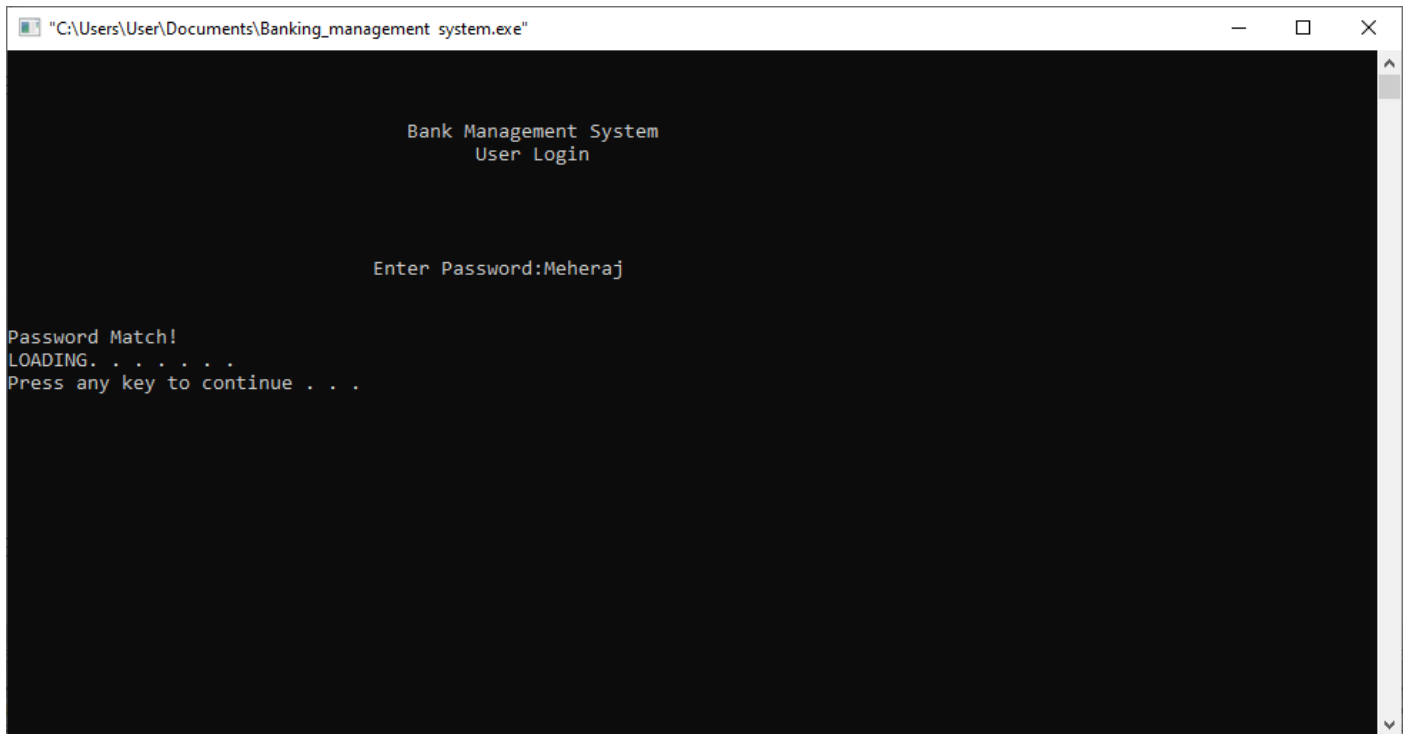
Figure 1 & 2: Main Menu interface

When the program is executed, the user will be directed to the main menu interface. The program is introduced with a few lines of texts. Then four selections are made for the user as the user can choose to reserve, cancel, display or exit the program.
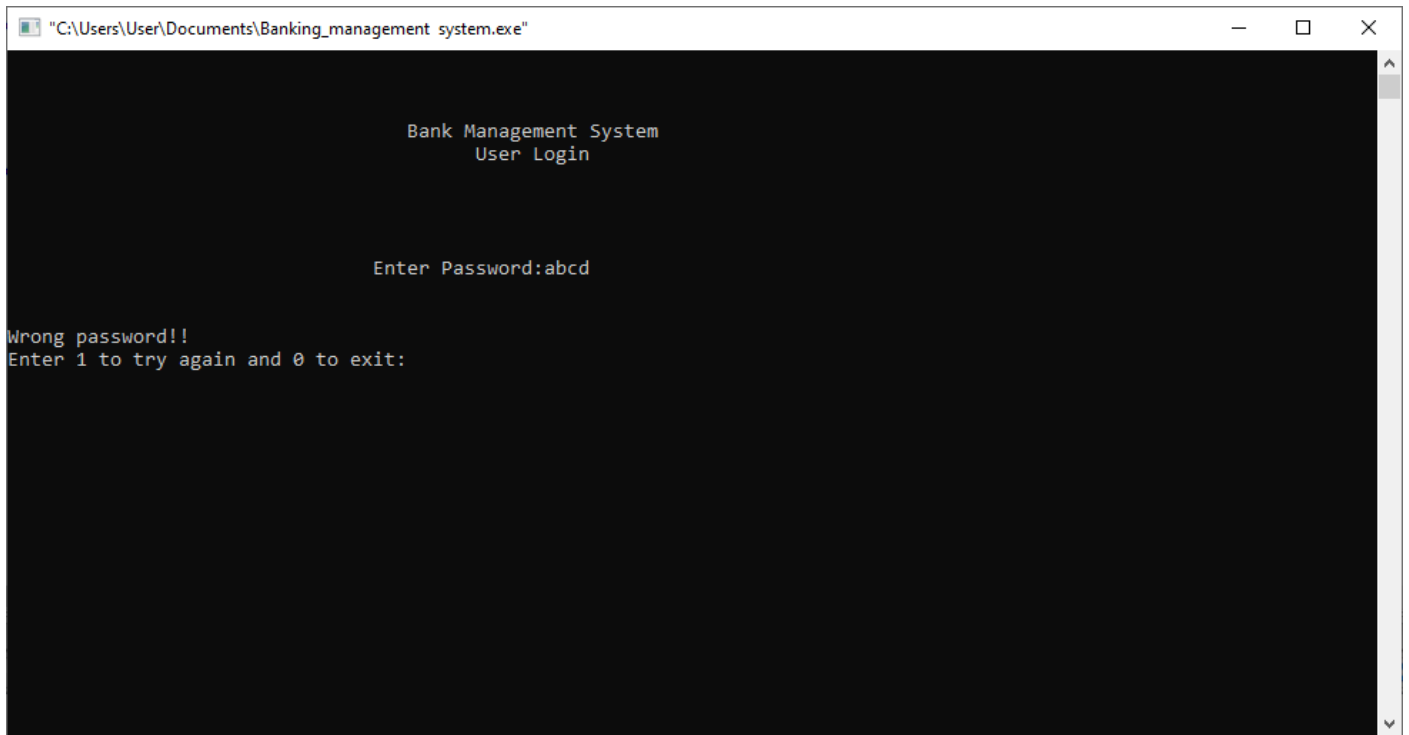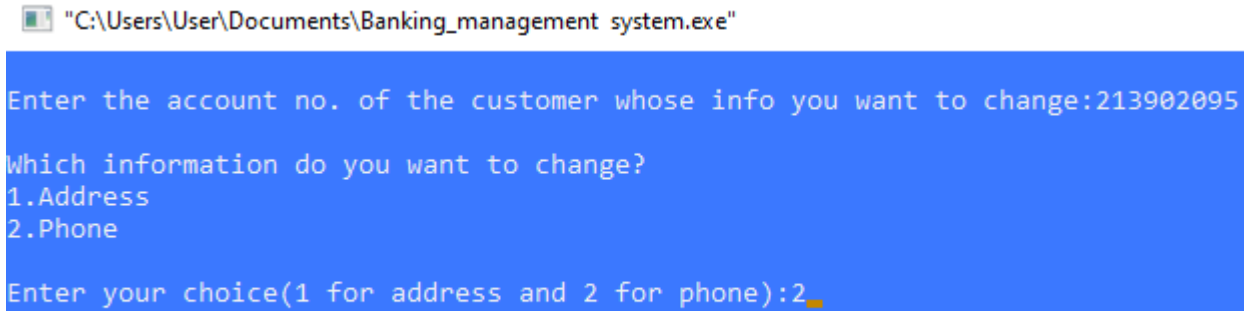
Figure 3: Invalid value entered (main menu)

. If the user accidentally enters an invalid input, an interface will be shown to notify the user to choose again and it notify the user again to enter from 1-4.
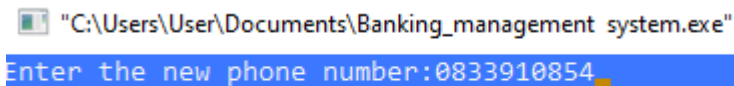
Figure 4: Open new account
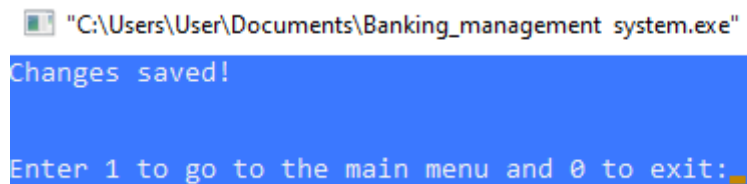
The program is asking the user to enter passport number, name, and the email address to reserve a seat for the user and the seat cannot be book for anyone else.
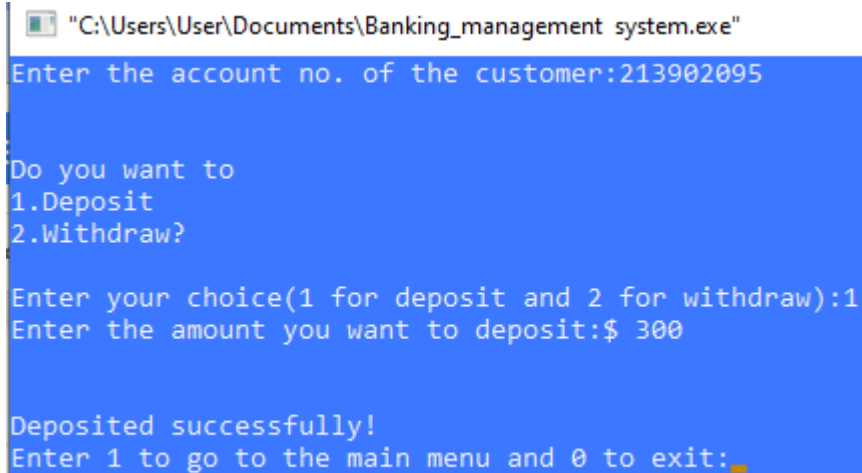
Figure 5 , 6 & 7: Account updated
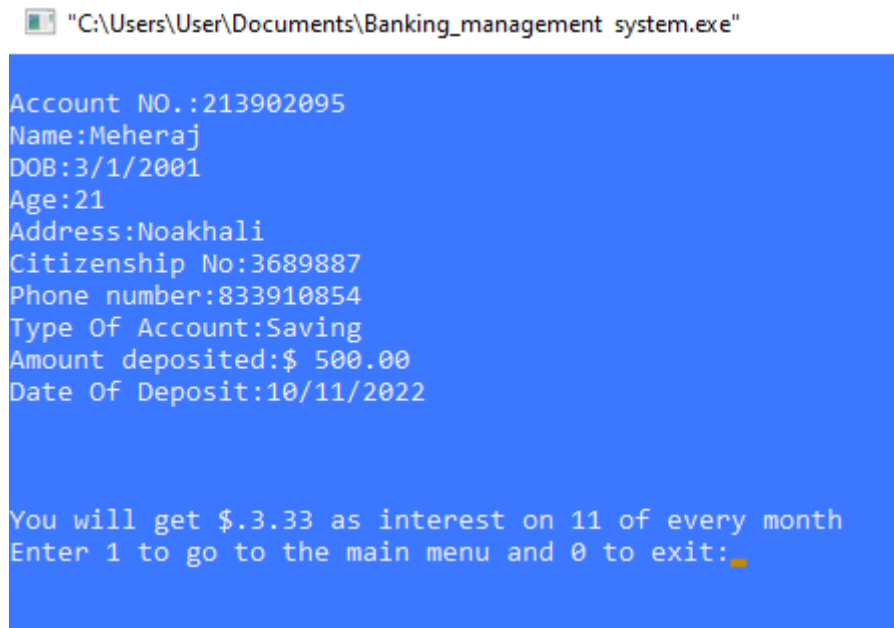
As shown in the interface the seat reservation has been booked successfully, after the user has entered the details.

Figure 8: Transaction

After registering 15 users in the system now the flight supposed to be full and cannot except anymore.
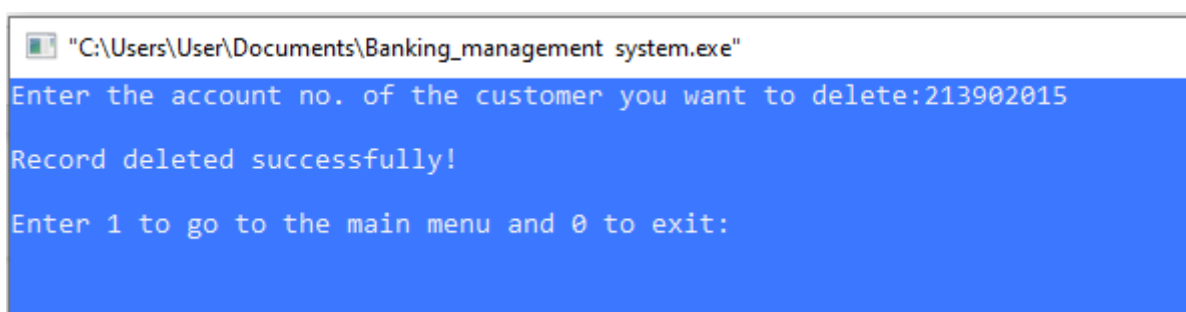
Figure 9: Check the account details

The system will pop out to notify the user that there's no seat available, the flight contains only 15 seat after that it is displaying it is full sorry we cannot register anymore.

Figure 9: cancel function

After the passenger entered 3 and want to cancel the record, after that, the program requires the user to enter which passport number to delete it. For example, that mufti registered the seat in the flight and he wants to cancel it.

Figure 10: Remove account

The system asking mufti to enter his passport number to cancel it from the system without any problems and in efficient way. After mufti entered his passport number the system pop in your record has been deleted from the system.

Figure 11: View Customer list

If mufti entered the wrong passport number by mistake the system pop in hey ahmed passport number is wrong, please check your passport number and enter it again.
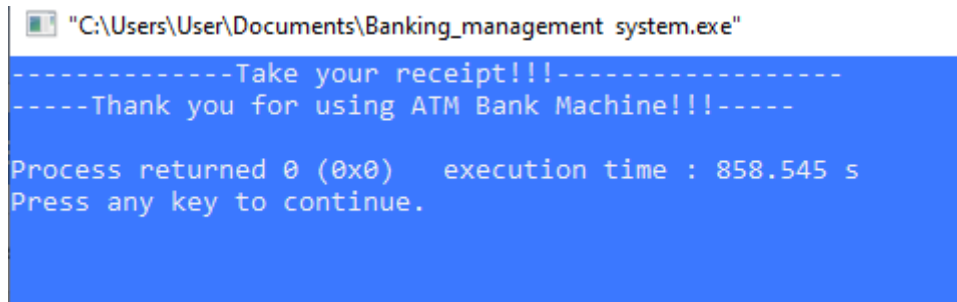
Figure 12: Atm Feature

The interface is displaying all the users record that now you have two seats ahmed with his details and mufti with his details as well. There's line between the users to make it clear to read and do not misunderstand it.

Figure 13: For receipt

Chapter 3

Conclusion

Learning Outcome

This program will provide the transaction happening inside the process automatically.   Al information will be updated by using the information stored in the system and after performing all the tasks the program will end.

References

1.Banking management System