



**FAZAIA BILQUIS COLLEG OF EDUCATION FOR
WOMEN PAF NUR KHAN**

OBJECT ORIENTED PROGRAMMING(OOP)

PROGRAMMING LAB: 1

FINAL SEMESTER PROJECT

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CLASS:

BSCS

SEMESTER:

2ND

SECTION:

B

SUBMITTED TO:

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BANK MANAGEMNET **SYSTEM**

PROJECT DESCRIPTION:

• **INTRODUCTION:**

The final semester project of our group is on **BANK MANAGEMENT SYSTEM /**

• **HOW IT IS MADE?**

For making this project we use different concepts of object oriented programming that are:

1. CLASSES
2. FILE HANDLING
3. FUNCTIONS
4. OBJECTS
5. LOOPS (for loop and while loop)
6. STATEMENT

• **STATEMENTS (IF, IF-ELSE, ELSE-IF)**

If statement is used to execute a statement or set of statements by checking a condition. In this project we use if-else and else-if statements mainly.

- **FUNCTIONS**

A function is a set of instructions that are designed to perform a specific task. Functions are of two types:

- Built-in Functions
- User-defined Functions

In our project we uses user defined function .the user defined in our project is

- void menu();
- void bank_management();
- void atm_management();
- void new_user();
- void already_user();
- void deposit();
- void withdrwal();
- void transfer();
- void edit();
- void del();
- void search();

• **LOOPS**

A type of control structure that repeats a statement or set of statements is known as looping structure. It is also known as iterative or repetitive structure. There are three types of loops available in C++. These are as follows:

- while loop
- do-while loop
- for loop

In our project we use **for loop, while loop**

• **CLASSES**

A collection of objects with same properties and functions is known as Class.

A class is used to define the characteristics of the objects. It is used as a model for creating different objects of same type

.

• **OBJECTS**

An **object** represents an entity in the real world such as persons, things or concept etc.

An object is identified by its name.

An object consists of the following two things:

- **Properties:** properties are the characteristics of an object.
- **Functions:** Functions are the actions that can be performed by an object.

- **FILE HANDLING**

A file is a collection of related records.

a record contains data about an entity.

A file can be used to save any type of data. Files are stored on secondary storage. The data is stored in files permanently.

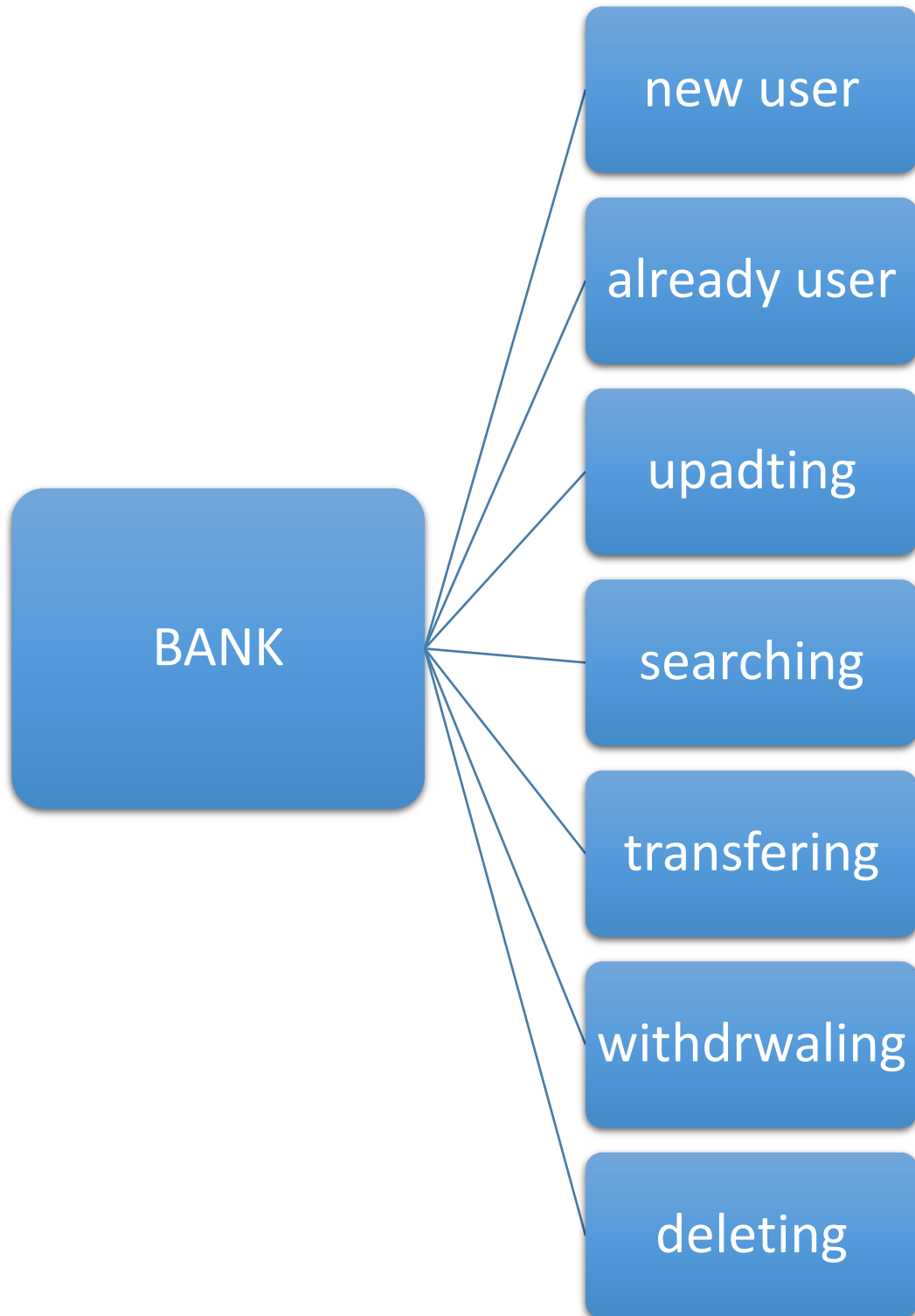
Normally, a program inputs data from user and stores it in variables. The data stored in the variables is temporary. When the program ends, all data stored in variables is also destroyed. The user has to input data again from the keyboard when the program is executed next time. The data has to be entered each time program is executed that waste the time. The user may aslo type wrong data at different times.

WHAT DOES A BANK MANAGEMENT SYSTEM DO

The Bank Management System (BMS) is a web-based application used for paying financial institutions for the services they provide to the Bureau of the Fiscal Service. BMS also provides analytical tools to review, and approve compensation, budgets, and outflows.

Bank Management Systems play a vital role in our society as they help banks to manage their operations and customer data efficiently. OOP is an approach to programming that emphasizes the use of objects, which are instances of classes, to represent data and behavior.

FLOW CHART



PROGRAM IMPLEMENTATION

CODE/PROGRAM:

```
#include<iostream>
#include<conio.h>
#include<fstream>
#include<windows.h>
using namespace std;
class Bank
{
    private:
        int pin;
        float balance;
        string id,pass,name,father_name,address,phone;
    public:
        void menu();
        void bank_management();
        void new_user();
        void already_user();
        void deposit();
```

```

void withdrwal();
void transfer();
void edit();
void del();
void search();
void show_record();

};

void Bank::menu()
{
    p:
    int choice;
    char ch1;
    string pin,pass,email;
    system("cls");
    cout<<"\n\n\t\t\t\t\t.....
WELCOME TO MENU
.....\t\t\t\t" <<endl;
    cout<<"\t\t\t\t\t 1) BANK MANAGEMENT " <<endl;

```

```

cout<<"\t\t\t\t 2) EXIT "<<endl;
cout<<"\t\t\t\t ..... ENTER YOUR CHOICE
....."<<endl;
cin>>choice;
switch(choice)
{
    case 1:
        system("cls");
        cout<<"\t\t\t\t .....LOGIN YOUR
ACCOUNT..... \t\t\t\t"<<endl;
        cout<<"\n\n\t\t. E- MAIL : \n\n\t\t";
        cin>>email;
        cout<<"\n\n\t\t. PIN CODE : \n\n\t\t";
        for(int i=1;i<=5;i++)
        {
            ch1=getch();
            pin+=ch1;
            cout<<"*"<<endl;
        }
        cout<<"\n\n\t\t. PASSWORD : \n\n\t\t";

```

```

for(int i=1;i<=5;i++)
{
    ch1=getch();
    pass +=ch1;
    cout<<"*"<<endl;
}
if (email=="aafreenzk987@gmail.com" &&
pin=="12145" && pass=="45678")
{
    bank_management();
}
else
{
    cout<<"\n\n\t\t\t\t\t.....YOUR E-MAIL ,
PIN AND PASS IS WRONG TRY AGAIN
.....\n\n\t\t\t\t\t";

}

break;

case 2:

```

```

        exit(0);
    default:
        cout<<"\t\t\t\t\t..... INVALID VALUE PLEASE
TRY AGAIN ..... \t\t\t\t\t" << endl;
    }
    getch();
    goto p;
}

void Bank::bank_management()
{
    p:
    system("cls");
    int choice;
    cout<<"\n\n\t\t\t..... BANK MANAGEMENT
SYSTEM ..... \t\t\t\t\t ";
    cout<<"\n\n\t\t\t 1. NEW USER  \t\t";
    cout<<"\n\n\t\t\t 2. ALREADY USER  ";
    cout<<"\n\n\t\t\t 3. DEPOSIT OPTION ";
    cout<<"\n\n\t\t\t 4. WITHDRWAL OPTION  ";
    cout<<"\n\n\t\t\t 5. TRANSFER OPTION  ";

```

```

cout<<"\n\n\t\t 6. SEARCH USER RECORD  ";
cout<<"\n\n\t\t 7. EDIT USER RECORD  ";
cout<<"\n\n\t\t 8. DELETE USER RECORD  ";
cout<<"\n\n\t\t 9. SHOW ALL RECORDS  ";
cout<<"\n\n\t\t 10. GO BACK ";

cout<<"\n\n\t\t\t\t ..... ENTER YOUR CHOICE : ";
cin>>choice;
switch(choice)
{
    case 1:
        new_user();
        break;
    case 2:
        already_user();
        break;
    case 3:
        deposit();
        break;
    case 4:
        withdrwal();

```

```
        break;
case 5:
    transfer();
    break;
case 6:
    search();
    break;
case 7:
edit();
    break;
case 8:
    del();
    break;
case 9:
    show_record();
    break;
case 10:
    menu();
    break;
default:
```

```
        cout<<"\n\n\t\t\t.....INVALID VALUE .....  
PLEASE TRY AGAIN ..... \t\t\t";
```

```
    }  
    getch();  
    goto p;  
}
```

```
void Bank::new_user()
```

```
{  
    p:  
    system("cls");  
    fstream file;  
    int p;  
    string n,f,pa,a,ph,i;  
    float b;  
    cout<<"\n\n\t\t\t\t\t..... ENTER NEW USER  
..... \t\t\t\t\t";  
    cout<<"\n\n\t\t 1. USER ID = ";  
    cin>>id;  
    cout<<"\n\n\t\t 2. YOUR NAME =";  
    cin>>name;
```



```

cout<<"\n\n\t\t 3. YOUR FATHER NAME =";
cin>>father_name;

cout<<"\n\n\t\t 4. YOUR ADDRESS =";
cin>>address;

cout<<"\n\n\t\t 5. ENTER YOU 5 DIGIT PIN CODE
=";

cin>>pin;

cout<<"\n\n\t\t 6. ENTER YOUR PASSWORD =";
cin>>pass;

cout<<"\n\n\t\t 7. ENETR YOUR PHONE NUMBER
=";

cin>>phone;

cout<<"\n\n\t\t 8. CURRENT BALANCE =";
cin>>balance;

file.open("BANK.txt",ios::in);
if(!file)
{
    file.open("BANK.txt",ios::app|ios::out);
    file<<" "<<id<<" "<<name<<"
"<<father_name<<" "<<address<<" "<<pin<<" "<<pass<<"
"<<phone<<" "<<balance<<"\n";

```

```

        file.close();
    }
    else
    {
        file>>i>>n>>f>>pa>>p>>ph>>a>>b;
        while(!file.eof())
        {
            if(i==id)
            {
                cout<<"\n\n\t\t .....USER ID ALREADY
EXIST.....";
                getch();
                goto p;
            }
            file>>i>>n>>f>>pa>>p>>ph>>a>>b;
        }
        file.close();
        file.open("BANK.txt",ios::app|ios::out);
    }

```

```

        file<<" "<<id<<" "<<name<<" "<<father_name<<"
"<<address<<" "<<pin<<" "<<pass<<" "<<phone<<"
"<<balance<<"\n\n";

        file.close();

    }

    cout<<"\n\n\t\t\t\t.....YOUR ACCOUNT HAS
BEEN CREATED .....";

}

void Bank::already_user()
{

    system("cls");

    fstream file;

    int found=0;

    string t_id;

    cout<<"\n\n\t\t\t\t....ALREADY USER
ACCOUNT....";

    file.open("BANK.txt",ios::in);

    if(!file)

    {

        cout<<"\n\n\t\t\t\t....FILE OPENING ERROR....";

```

```

    }
    else
    {
        cout<<"\n\n\t\t\t USER ID = ";
        cin>>t_id;

        file>>id>>name>>father_name>>address>>pin>>pa
ss>>phone>>balance;
        while(!file.eof())
        {
            if(t_id==id)
            {
                cout<<"\n\n\t\t\t.... ALREADY USER
ACCOUNT.... ";

                cout<<"\n\n USER ID = "<<id<<"\t PIN CODE
="<<pin<<"\t PASSWORD ="<<pass;
                found++;
            }

            file>>id>>name>>father_name>>address>>pin>>pa
ss>>phone>>balance;
        }
    }
}

```

```

        file.close();
        if(found==0)
        {
            cout<<"\n\n\t\t\t...USER ID CAN'T BE FOUND
.....";
        }
    }
}

void Bank::deposit()
{
    fstream file,file1;
    string t_id;
    int found=0;
    float dep;
    system("cls");
    cout<<"\n\n\t\t\tDEPOSIT AMOUNT OPTIONS  ";
    file.open("BANK.txt",ios::in);
    if(!file)
    {
        cout<<"\n\n\t\t\tFILE OPENING ERROR.....";
    }
}

```

```

    }
    else
    {
        cout<<"\n\n\t\t\t USER ID = ";
        cin>>t_id;
        file1.open("BANK.txt",ios::app|ios::out);
        file>>id>>name>>father_name>>address>>pin>>pa
ss>>phone>>balance;
        while(!file.eof())
        {
            if(t_id==id)
            {
                cout<<"\n\n  AMOUNT FOR DEPOSIT =";
                cin>>dep;
                balance+=dep;
                file1<<" "<<id<<" "<<name<<" "<<father_name<<"
"<<address<<" "<<pin<<" "<<pass<<" "<<phone<<"
"<<balance<<"\n\n";
                found++;
                cout<<" \n\n\t\t\t YOUR AMOUT "<<dep<<"
SUCCESSFULLY DEPOSIT ";

```

```

    }
    else
    {
        file1<<" "<<id<<" "<<name<<"
"<<father_name<<" "<<address<<" "<<pin<<"
"<<pass<<" "<<phone<<" "<<balance<<"\n\n";
    }

    file>>id>>name>>father_name>>address>>pin>>pa
ss>>phone>>balance;
}
file.close();
file1.close();
remove("BANK.txt");
rename("BANK1.txt","BANK.txt");
if(found==0)
{
    cout<<"\n\n\t\t\t....USER ID CAN'T BE FOUND
.....";
}
}

```

```

}
void Bank::withdrwal()
{
    fstream file,file1;
    string t_id;
    int found=0;
    float with;
    system("cls");
    cout<<"\n\n\t\t\t WITHDRWAL AMOUNT
OPTIONS  ";
    file.open("BANK.txt",ios::in);
    if(!file)
    {
        cout<<"\n\n\t\t\t FILE OPENING ERROR.....";
    }
    else
    {
        cout<<"\n\n\t\t\t USER ID = ";
        cin>>t_id;
        file1.open("BANK1.txt",ios::app|ios::out);
    }
}

```



```

        file>>id>>name>>father_name>>address>>pin>>pa
ss>>phone>>balance;
        while(!file.eof())
        {
            if(t_id==id)
            {
                cout<<"\n\n AMOUNT FOR withdrwal =";
                cin>>with;
                if (with<= balance)
                {
                    balance-=with;

                    file1<<" "<<id<<" "<<name<<" "<<father_name<<"
"<<address<<" "<<pin<<" "<<pass<<" "<<phone<<"
"<<balance<<"\n\n";

                    cout<<" \n\n\t\t\t YOUR AMOUT "<<with<<"
SUCCESSFULLY Withdrwal ";

                }
                else
                {
                    cout<<"\n\n\t\t\t YOUR CURRENT
BALANCE"<<balance<<" IS LESS ...";

```

```

        file1<<" "<<id<<" "<<name<<"
"<<father_name<<" "<<address<<" "<<pin<<"
"<<pass<<" "<<phone<<" "<<balance<<"\n\n";
    }

```

```

        found++;
    }

```

```

else

```

```

{

```

```

        file1<<" "<<id<<" "<<name<<"
"<<father_name<<" "<<address<<" "<<pin<<"
"<<pass<<" "<<phone<<" "<<balance<<"\n\n";
    }

```

```

        file>>id>>name>>father_name>>address>>pin>>pa
ss>>phone>>balance;
    }

```

```

}

```

```

file.close();

```

```

file1.close();

```

```

remove("BANK.txt");

```

```

rename("BANK1.txt","BANK.txt");

```

```

if(found==0)

```

```

        {
            cout<<"\n\n\t\t\t...USER ID CAN'T BE FOUND
.....";
        }
    }
}

void Bank::transfer()
{
    fstream file,file1;
    string s_id,r_id;
    float amount;
    int found=0;

    system("cls");
    cout<<"\n\n\t\t\tPAYEMENT TRANSFER OPTION
";
    file.open("BANK.txt",ios::in);
    if(!file)
    {
        cout<<"\n\n\t\t\tFILE OPENING ERROR.....";
    }
}

```

```

else
{
    cout<<"\n\n\t\t\t ENTER  SENDER USER ID
FOR TRANSACTION ";
    cin>>s_id;
    cout<<"\n\n\t\t\t ENTER RECEIVER USER ID
FOR TRANSACTION";
    cin>>r_id;
    cout<<"\n\n\t\t\t ENTER THE TRANSACTION
AMOUNT ";
    cin>>amount;
    file1.open("BANK1.txt",ios::app|ios::out);

    file>>id>>name>>father_name>>address>>pin>>pa
ss>>phone>>balance;
    while(!file.eof())
    {
        if(s_id==id&& amount>=balance)
        {
            found++;
        }
    }
}

```

```
        else if (r_id==id)
        {
            found++;
        }
```

```
        file>>id>>name>>father_name>>address>>pin>>pa
ss>>phone>>balance;
    }
```

```
    file.close();
```

```
    if(found==2)
```

```
    {
```

```
        file.open("BANK.txt",ios::in);
```

```
        file1.open("BANK1.txt",ios::app|ios::out);
```

```
        file>>id>>name>>father_name>>address>>pin>>pa
ss>>phone>>balance;
```

```
        while(!file.eof())
```

```
        {
```

```
            if(s_id==id)
```

```
            {
```

```

        balance-=amount;

        file1<<" "<<id<<" "<<name<<"
"<<father_name<<" "<<address<<" "<<pin<<"
"<<pass<<" "<<phone<<" "<<balance<<"\n\n";
    }

    else if(r_id==id)
    {

        balance+=amount;

        file1<<" "<<id<<" "<<name<<"
"<<father_name<<" "<<address<<" "<<pin<<"
"<<pass<<" "<<phone<<" "<<balance<<"\n\n";
    }

    else
    {

        file1<<" "<<id<<" "<<name<<"
"<<father_name<<" "<<address<<" "<<pin<<"
"<<pass<<" "<<phone<<" "<<balance<<"\n\n";
    }

```

```

    file>>id>>name>>father_name>>address>>pin>>pa
ss>>phone>>balance;

```

```

    }
    file.close();
    file1.close();
    remove("BANK.txt");
    rename("BANK1.txt","BANK.txt");
}

else
{
    cout<<"\n\n\t\t\t BOTH TRANSACTION USER
IDS & BALANCE INVALID....";
}
}
}

void Bank::edit()
{
    system("cls");
    fstream file,file1;
    int found=0;
    string t_id,id,p,n,f,a,ph;;
    int pi;

```

```

float balance;
cout<<"\n\n\t\t\t\t\t EDIT USER RECORD ";
file.open("BANK.txt",ios::in);
if(!file)
{
    cout<<"\n\n\t\t\t\t\t FILE OPENING EROOR....";
}
else
{
    cout<<"\n\n\t\t\t\t\t USER ID :";
    cin>>t_id;
    file1.open("BANK1.txt",ios::app|ios::out);
    file>>id>>name>>father_name>>address>>pin>>pa
ss>>balance;
    while(!file.eof())
    {
        if(t_id==id)
        {
            system("cls");
            cout<<"\n\n\t\t\t\t\t 2. YOUR NAME =";

```



```

cin>>n;
cout<<"\n\n\t\t 3. YOUR FATHER NAME =";
cin>>f;
cout<<"\n\n\t\t 4. YOUR ADDRESS =";
cin>>a;
cout<<"\n\n\t\t 5. ENTER YOU 5 DIGIT PIN CODE
=";
cin>>pi;
cout<<"\n\n\t\t 6. ENTER YOUR PASSWORD =";
cin>>p;
cout<<"\n\n\t\t 7. ENETR YOUR PHONE NUMBER
=";
cin>>ph;
cout<<"\n\n\t\t\t YOUR RECORD HAVE BEEN
SUCCESFULLY UPDATED ";
file1<<"
"<<id<<" "<<n<<" "<<f<<" "<<a<<" "<<pi<<" "<<p<<"
"<<ph<<" "<<balance<<"\n\n";
found++;
}
else
{

```

```

        file1<<" "<<id<<" "<<name<<"
"<<father_name<<" "<<address<<" "<<pin<<"
"<<pass<<" "<<phone<<" "<<balance<<"\n\n";
    }

```

```

        file>>id>>name>>father_name>>address>>pin>>pa
ss>>balance;
    }

```

```

    file.close();

```

```

    file1.close();

```

```

    remove("BANK.txt");

```

```

    rename("BANK1.txt","BANK.txt");

```

```

    if(found==0)

```

```

        cout<<"\n\n\t\t\t USER ID CAN'T FOUND....";

```

```

    }

```

```

}

```

```

void Bank::del()

```

```

{

```

```

    system("cls");

```

```

    fstream file,file1;

```

```
int found=0;
string t_id;
int pi;
float balance;
cout<<"\n\n\t\t\t EDIT USER RECORD ";
file.open("BANK.txt",ios::in);
if(!file)
{
    cout<<"\n\n\t\t\t FILE OPENING EROOR....";
}
else
{
    cout<<"\n\n\t\t\t USER ID :";
    cin>>t_id;
    file1.open("BANK1.txt",ios::app|ios::out);
    file>>id>>name>>father_name>>address>>pin>>pa
ss>>balance;
    while(!file.eof())
    {
        if(t_id==id)
```

```

{
    system("cls");

    cout<<"\n\n\t\t\t YOUR RECORD HAVE BEEN
SUCCESFULLY DELETED ";
    found++;

}
else
{
    file1<<" "<<id<<" "<<name<<"
"<<father_name<<" "<<address<<" "<<pin<<"
"<<pass<<" "<<phone<<" "<<balance<<"\n\n";
}

    file>>id>>name>>father_name>>address>>pin>>pa
ss>>balance;
}
file.close();
file1.close();

```

```

remove("BANK.txt");
    rename("BANK1.txt","BANK.txt");
if(found==0)
    cout<<"\n\n\t\t\t USER ID CAN'T FOUND....";
    }
}
void Bank::search()
{

system ("cIs");
fstream file;
string t_id;
int found=0;
file.open("BANK.txt",ios::in);
if(!file)
{
    cout<<"\n\n\t\t\t File opening Error...";
}
else
{

```

```

cout<<"\n\n user id : ";
cin>>t_id;
    while (! file.eof())
    {
        if(t_id == id)
        {
            system( "cls" ) ;
            cout<<"\n\n\t\t\t SEARCH USER DATA ....";
            cout<<"\n\n\n\t\t\t USER ID "<<id<<" \t NAME
"<<name<<"\t FATHER NAME "<<father_name;
            cout<<"\n \t ADDRESS = "<<address<<"\t PIN
"<<pin<<" \t PASSWORD "<<pass;
            cout<<" phone no. "<<phone<<" current balance :
"<<balance;
            found++;
        }
    }
    file>>id>>name>>father_name>>address>>pin>>pass
>>phone>>balance;
}
file.close();

```

```

if (found==0);
cout<<" USER ID CANNOT FOUND .....";
}
void Bank::show_record()
{
    system("cls");
    fstream file;
    int found =0;
    cout<<"\n\n\t\t\t SHOW ALL USERS RECORDS
...";
    file.open("BANK.txt",ios::in);
    if(!file)
    {
        cout<<"\n\n\t\t\t File opening Error...";
    }
    else
    {

        file>>id>>name>>father_name>>address>>pin>>pa
ss>>balance;

```

```

while(!file.eof())
{
    cout<<"\n\n\nUSER ID ="<<id<<endl;
    cout<<"\n NAME ="<<name;
    cout<<"\n FATHER NAME ="<<father_name;
    cout<<"\n ADDRESS ="<<address;
    cout<<"\n PIN ="<<pin;
    cout<<"\nPASSWORD ="<<pass;
    cout<<"\n PHONE NUMBER ="<<phone;
    cout<<"\n BALANCE ="<<balance;
    cout<<"\n\n=====
=====
";

    file>>id>>name>>father_name>>address>>pin>>pa
ss>>balance;
    found ++;
}
file.close();
remove("BANK.txt");
rename("BANK1.txt","BANK.txt");

```



```
    if(found==0)
        cout<<"\n\n\t\t\t USER ID CAN'T FOUND....";
    }
}

int main()
{
    Bank b1;
    b1.menu();
    b1.bank_management();
}
```