"Heaven's Light is Our Guide"

Department of Computer Science & Engineering

RAJSHAHI UNIVERSITY OF ENGINEERING & TECHNOLOGY

<u>Lab Report-03</u>

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<u>Submitted to:</u>

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TASK: Make a program to keep a record of accounts created by the banking system and show all datas before exiting.

Code:

```cpp
#include<iostream>
#include<fstream>
#include<iomanip>
#include<string>

using namespace std;

int idx=0;
int trid=0;
class user
{

    string dateofbirth;
    string name;
    long long mobileno;
    string address;
    long long NID;
    string pin;
public:
    void setdob(string dob){
    dateofbirth=dob;
    }
     void setmobileno(long long mb){
    mobileno=mb;
    }
     void setname(string nam){
    name=nam;
    }
    void setNID(long long nid){
    NID=nid;
    }
     void setpin(string pi){
    pin=pi;
    }
     void setaddress(string addr){
    address=addr;
    }
```

```cpp
    //getters

    string getdob(){
    return dateofbirth;
    }
    long long getmobileno(){
    return mobileno;
    }
    string getname(){
    return name;
    }
    long long getNID(){
    return NID;
    }
    string getpin(){
    return pin;
    }
    string getaddress(){
    return address;
    }


};
class transaction
{
    double amount;
    int type;
    double time;
    user source;
    user dest;
public:

    void setval(double amnt,user src2,user dst2)
    {
        amount=amnt;
        type=1;
        source=src2;
        dest=dst2;
    }
    void getvalsrcoftrans()
    {
        cout<<endl<<endl;
```

```cpp
        cout<<"source: "<<endl;
        cout<<"name: "<<source.getname()<<endl;
        cout<<"mobile: "<<source.getmobileno()<<endl;
        cout<<"address: "<<source.getaddress()<<endl;
        cout<<"NID: "<<source.getNID()<<endl;

    }
    void getvaldestoftrans()
    {
        cout<<endl<<endl;
        cout<<"destination: "<<endl;
        cout<<"name: "<<dest.getname()<<endl;
        cout<<"mobile: "<<dest.getmobileno()<<endl;
        cout<<"address: "<<dest.getaddress()<<endl;
        cout<<"NID: "<<dest.getNID()<<endl;

    }
};

class account
{
    double balance=0;
    user info;
    // int no=0;
public:
    void setval(string dob,string nam,long long mobile,string addr,long long
nid,string PIN)
    {
        //let initial balance be 1000 for easy transactions
        balance=1000;
        info.setdob(dob);
        info.setname(nam);
        info.setmobileno(mobile);
        info.setaddress(addr);
        info.setNID(nid);
        info.setpin(PIN);

    }
    user getinfo2()
    {
        return info;
    }
    double getbalance2()
    {
        return balance;
```

```cpp
        }
        string getdob2()
        {
            return info.getdob();

        }
        string getname2()
        {
            return info.getname();
        }
        long long getmobileno2()
        {
            return info.getmobileno();
        }
        string getaddress2()
        {
            return info.getaddress();
        }
        long long getnid2()
        {
            return info.getNID();
        }
        string getpin2()
        {
            return info.getpin();
        }

        void setbalanceinc(double amount)
        {
            balance+=amount;
        }
        void setbalancedec(double amount)
        {

            balance-=amount;

        }

};
        account acc[100];
        transaction tr[1000];
void saverecord(){
    int m=20;//m is used to maintain the gaps between coloumns
    ofstream fout("record_lab_03.txt");

    for(int j=0;j<idx;j++){
```

```cpp
        user p1=acc[j].getinfo2();
        string p=p1.getname();
        string q=p1.getaddress();
        int k=p.size();
        int l=q.size();
         cout<<acc[j].getname2()<<setw(m-
k)<<acc[j].getaddress2()<<setw(8)<<acc[j].getbalance2()<<setw(8)<<"
"<<acc[j].getdob2()<<setw(8)<<acc[j].getmobileno2()<<setw(8)<<acc[j].getnid2()<<s
etw(m-l)<<acc[j].getpin2()<<endl;
        fout<<acc[j].getname2()<<setw(m-
k)<<acc[j].getaddress2()<<setw(8)<<acc[j].getbalance2()<<setw(8)<<"
"<<acc[j].getdob2()<<setw(8)<<acc[j].getmobileno2()<<setw(8)<<acc[j].getnid2()<<s
etw(m-l)<<acc[j].getpin2()<<endl;
    }


}
void getrecord(){

    string dateofbirth3;
    string name3;
    long long mobileno3;
    string address3;
    long long NID3;
    string pin3;
    int balance3;
    ifstream fin("record_lab_03.txt");


    while(fin>>name3>>address3>>balance3>>dateofbirth3>>mobileno3>>NID3>>pin3){
        acc[idx].setbalanceinc(balance3);
        acc[idx].setval(dateofbirth3,name3,mobileno3,address3,NID3,pin3);
        idx++;
    }


}
int main()
{
    getrecord();

    while(1)
    {
        int choice;
        cout<<"Menu: \n1.Create account\n 2.Send money\n0.Exit"<<endl;
```

```cpp
        cout<<"Enter your choice: ";

        cin>>choice;

        string dateofbirth2;
        string name2;
        long long mobileno2;
        string address2;
        long long NID2;
        string pin2;
        int tru=0;

        if(choice==0)
        {
            saverecord();
            cout<<"Thank you"<<endl;
            break;
        }

        switch(choice)
        {
        case 1:
            cout<<endl;
            //create an account
            cout<<"TO create an account:"<<endl;
            cout<<"Enter your name: ";
            cin>>name2;
            cout<<"Enter your date of birth: ";
            cin>>dateofbirth2;
            cout<<"Enter your mobile no: ";
            cin>>mobileno2;
            cout<<"Enter your address: ";
            cin>>address2;
            cout<<"Enter your NID: ";
            cin>>NID2;
            cout<<"Enter your PIN: ";
            cin>>pin2;

            acc[idx].setval(dateofbirth2,name2,mobileno2,address2,NID2,pin2);
            cout<<"Your infos: "<<endl;
            cout<<"Your name: "<<acc[idx].getname2()<<endl;
            cout<<"Your balance: "<<acc[idx].getbalance2()<<endl;
            cout<<"Your address: "<<acc[idx].getaddress2()<<endl;

            cout<<"Your mobile no: "<<acc[idx].getmobileno2()<<endl;
```

```cpp
                    cout<<"Your nid: "<<acc[idx].getnid2()<<endl;

                idx++;

                break;

        case 2:
            //send money
            cout<<endl;
            long long phoneno;
            cout<<"Enter your mobile no: ";
            cin>>phoneno;

            for(int i=0; i<100; i++)
            {
                if(acc[i].getmobileno2()==phoneno)
                {
                    tru=1;
                    string pass;
                    cout<<"Enter your pin: ";
                    cin>>pass;
                    if(pass==acc[i].getpin2())
                    {

                        cout<<"your infos before transaction : "<<endl;
                        cout<<"Your name: "<<acc[i].getname2()<<endl;

                        cout<<"Your mobile no: "<<acc[i].getmobileno2()<<endl;
                        cout<<"Your balance: "<<acc[i].getbalance2()<<endl;

                        cout<<endl;

                        long long mob;
                        cout<<"Enter the mobile no u want to transfer the money:
";
                        cin>>mob;
                        int src,dst=-1;
                        for(int j=0; j<100; j++)
                        {
                            if(mob==acc[j].getmobileno2())
                            {
                                src=i;
                                dst=j;
                                break;
                            }
                        }
```

```cpp
                }
                if(dst==-1)
                {
                    cout<<"Enter the phone no of a valid account"<<endl;
                }
                else
                {
                    double monet;
                    cout<<"Enter amount of transaction: ";
                    cin>>monet;
                    if(acc[src].getbalance2()>=monet)
                    {

                        acc[src].setbalancedec(monet);
                        acc[dst].setbalanceinc(monet);

                        tr[trid].setval(monet,acc[src].getinfo2(),acc[dst].getinfo2());
                        tr[trid].getvalsrcoftrans();
                        tr[trid].getvaldestoftrans();

                        cout<<monet<<"TK has been sent from "<<acc[src].getmobileno2()<<"to : "<<acc[dst].getmobileno2()<<endl;

                        trid++;
                    }

                    else
                    {
                        cout<<"Not enough money to transfer"<<endl;
                    }

                }

                cout<<"your infos after transaction : "<<endl;
                cout<<"Your name: "<<acc[i].getname2()<<endl;
                cout<<"Your mobile no: "<<acc[i].getmobileno2()<<endl;
                cout<<"Your balance: "<<acc[i].getbalance2()<<endl;

            }
            else
            {
                cout<<"Invalid pin"<<endl;

            }
```

```
            }
        }
        if(tru==0)
        {
            cout<<"No account for such mobile no"<<endl;
        }

        break;

    default:
        cout<<"choose a valid choice"<<endl;
    }
}
return 0;
}
```
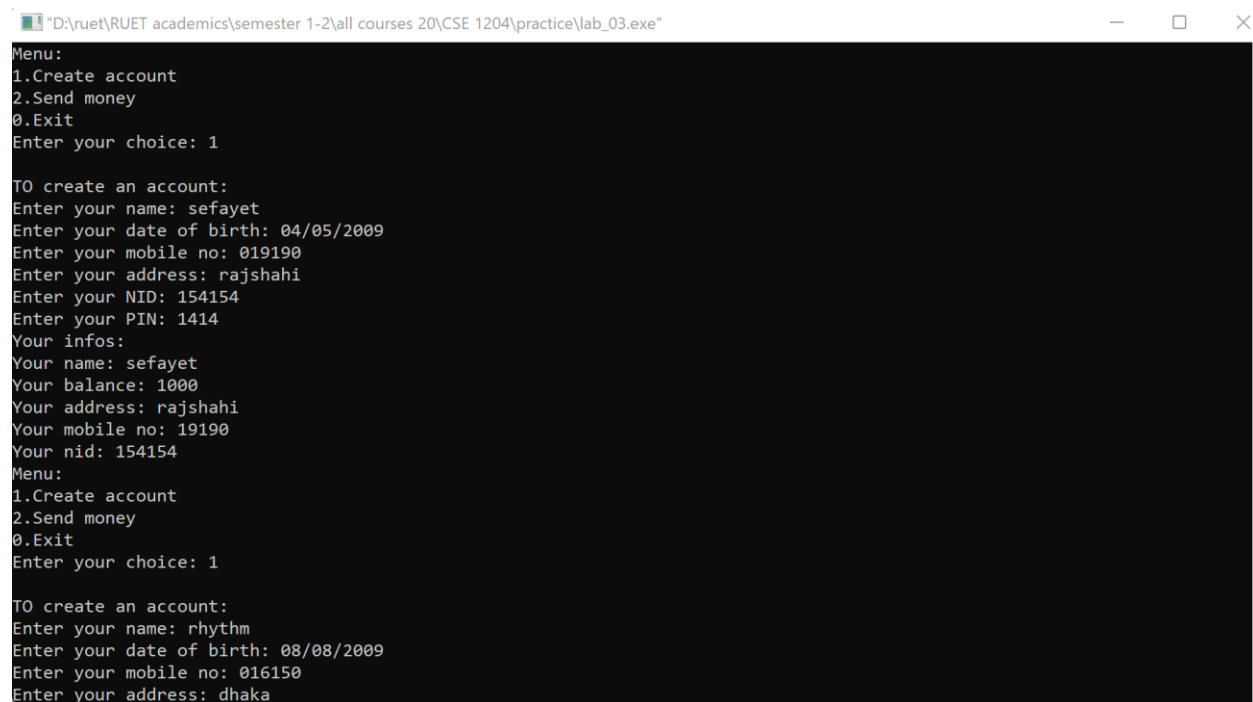
OUTPUT:

```
"D:\ruet\RUET academics\semester 1-2\all courses 20\CSE 1204\practice\lab_03.exe"
Menu:
1.Create account
2.Send money
0.Exit
Enter your choice: 1

TO create an account:
Enter your name: sefayet
Enter your date of birth: 04/05/2009
Enter your mobile no: 019190
Enter your address: rajshahi
Enter your NID: 154154
Enter your PIN: 1414
Your infos:
Your name: sefayet
Your balance: 1000
Your address: rajshahi
Your mobile no: 19190
Your nid: 154154
Menu:
1.Create account
2.Send money
0.Exit
Enter your choice: 1

TO create an account:
Enter your name: rhythm
Enter your date of birth: 08/08/2009
Enter your mobile no: 016150
Enter your address: dhaka
```

```
Enter your NID: 165165
Enter your PIN: 1515
Your infos:
Your name: rhythm
Your balance: 1000
Your address: dhaka
Your mobile no: 16150
Your nid: 165165
Menu:
1.Create account
2.Send money
0.Exit
Enter your choice: 1

TO create an account:
Enter your name: rifat
Enter your date of birth: 06.06.2007
Enter your mobile no: 018180
Enter your address: rangpur
Enter your NID: 450450
Enter your PIN: 4545
Your infos:
Your name: rifat
Your balance: 1000
Your address: rangpur
Your mobile no: 18180
Your nid: 450450
Menu:
1.Create account
2.Send money
```

```
Enter your name: rifat
Enter your date of birth: 06.06.2007
Enter your mobile no: 018180
Enter your address: rangpur
Enter your NID: 450450
Enter your PIN: 4545
Your infos:
Your name: rifat
Your balance: 1000
Your address: rangpur
Your mobile no: 18180
Your nid: 450450
Menu:
1.Create account
2.Send money
0.Exit
Enter your choice: 0
sefayet     rajshahi    1000        04/05/2009   19190  154154       1414
rhythm         dhaka    1000        08/08/2009   16150  165165       1515
rifat        rangpur    1000        06.06.2007   18180  450450       4545
Thank you

Process returned 0 (0x0)   execution time : 101.320 s
Press any key to continue.
```

After restarting the program:

```
 "D:\ruet\RUET academics\semester 1-2\all courses 20\CSE 1204\practice\lab_03.exe"

Menu:
1.Create account
2.Send money
0.Exit
Enter your choice: 0
sefayet     rajshahi    1000        04/05/2009   19190  154154        1414
rhythm        dhaka     1000        08/08/2009   16150  165165        1515
rifat       rangpur     1000        06.06.2007   18180  450450        4545
Thank you

Process returned 0 (0x0)   execution time : 1.157 s
Press any key to continue.
```

So all records remain saved….