

BANK PROJECT IN C++

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//*****

//      HEADER FILE USED IN PROJECT

//*****

#include<iostream>
#include<fstream>
#include<cctype>
#include<iomanip>
using namespace std;

//*****

//      CLASS USED IN PROJECT

//*****

class account
{
    int acno;
    char name[50];
    int deposit;
    char type;
public:
    void create_account(); //function to get data from user
    void show_account() const; //function to show data on screen
    void modify(); //function to add new data
    void dep(int); //function to accept amount and add to balance amount
    void draw(int); //function to accept amount and subtract from balance amount
    void report() const; //function to show data in tabular format
    int retacno() const; //function to return account number
}
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        int retdeposit() const; //function to return balance amount
        char rettype() const; //function to return type of account
}; //class ends here

void account::create_account()
{
    cout<<"\nEnter The account No. :";
    cin>>acno;
    cout<<"\n\nEnter The Name of The account Holder : ";
    cin.ignore();
    cin.getline(name,50);
    cout<<"\nEnter Type of The account (C/S) : ";
    cin>>type;
    type=toupper(type);
    cout<<"\nEnter The Initial amount(>=500 for Saving and >=1000 for current ) : ";
    cin>>deposit;
    cout<<"\n\n\nAccount Created..";
}

void account::show_account() const
{
    cout<<"\nAccount No. : "<<acno;
    cout<<"\nAccount Holder Name : ";
    cout<<name;
    cout<<"\nType of Account : "<<type;
    cout<<"\nBalance amount : "<<deposit;
}

void account::modify()
{

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        cout<<"\nAccount No. : "<<acno;

        cout<<"\nModify Account Holder Name : ";

        cin.ignore();

        cin.getline(name,50);

        cout<<"\nModify Type of Account : ";

        cin>>type;

        type=toupper(type);

        cout<<"\nModify Balance amount : ";

        cin>>deposit;
    }

void account::dep(int x)
{
    deposit+=x;
}

void account::draw(int x)
{
    deposit-=x;
}

void account::report() const
{
    cout<<acno<<setw(10)<<" "<<name<<setw(10)<<" "<<type<<setw(6)<<deposit<<endl;
}

int account::retacno() const
{
    return acno;
}

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}

int account::retdeposit() const
{
    return deposit;
}

char account::rettype() const
{
    return type;
}

//*****
//    function declaration
//*****

void write_account(); //function to write record in binary file
void display_sp(int); //function to display account details given by user
void modify_account(int); //function to modify record of file
void delete_account(int); //function to delete record of file
void display_all(); //function to display all account details
void deposit_withdraw(int, int); // function to desposit/withdraw amount for given account
void intro(); //introductory screen function

//*****
//    THE MAIN FUNCTION OF PROGRAM
//*****

int main()
{

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char ch;

int num;

intro();

do
{
    system("cls");

    cout<<"\n\n\tMAIN MENU";

    cout<<"\n\n\t01. NEW ACCOUNT";

    cout<<"\n\n\t02. DEPOSIT AMOUNT";

    cout<<"\n\n\t03. WITHDRAW AMOUNT";

    cout<<"\n\n\t04. BALANCE ENQUIRY";

    cout<<"\n\n\t05. ALL ACCOUNT HOLDER LIST";

    cout<<"\n\n\t06. CLOSE AN ACCOUNT";

    cout<<"\n\n\t07. MODIFY AN ACCOUNT";

    cout<<"\n\n\t08. EXIT";

    cout<<"\n\n\tSelect Your Option (1-8) ";

    cin>>ch;

    system("cls");

    switch(ch)
    {
    case '1':

        write_account();

        break;

    case '2':

        cout<<"\n\n\tEnter The account No. : "; cin>>num;

        deposit_withdraw(num, 1);

        break;

    case '3':

        cout<<"\n\n\tEnter The account No. : "; cin>>num;

        deposit_withdraw(num, 2);

        break;

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        case '4':

            cout<<"\n\n\tEnter The account No. : "; cin>>num;

            display_sp(num);

            break;

        case '5':

            display_all();

            break;

        case '6':

            cout<<"\n\n\tEnter The account No. : "; cin>>num;

            delete_account(num);

            break;

        case '7':

            cout<<"\n\n\tEnter The account No. : "; cin>>num;

            modify_account(num);

            break;

        case '8':

            cout<<"\n\n\tThanks for using bank managemnt system";

            break;

        default :cout<<"\a";

    }

    cin.ignore();

    cin.get();

}while(ch!='8');

return 0;

}

//*****

//      function to write in file

//*****

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void write_account()
{
    account ac;

    ofstream outFile;

    outFile.open("account.dat",ios::binary|ios::app);

    ac.create_account();

    outFile.write(reinterpret_cast<char *> (&ac), sizeof(account));

    outFile.close();
}

//*****
//      function to read specific record from file
//*****

void display_sp(int n)
{
    account ac;

    bool flag=false;

    ifstream inFile;

    inFile.open("account.dat",ios::binary);

    if(!inFile)
    {
        cout<<"File could not be open !! Press any Key...";

        return;
    }

    cout<<"\nBALANCE DETAILS\n";

    while(inFile.read(reinterpret_cast<char *> (&ac), sizeof(account)))
    {
        if(ac.retacno()==n)
        {

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        ac.show_account();

        flag=true;

    }

}

inFile.close();

if(flag==false)

    cout<<"\n\nAccount number does not exist";

}

//*****

//    function to modify record of file

//*****

void modify_account(int n)

{

    bool found=false;

    account ac;

    fstream File;

    File.open("account.dat",ios::binary|ios::in|ios::out);

    if(!File)

    {

        cout<<"File could not be open !! Press any Key...";

        return;

    }

    while(!File.eof() && found==false)

    {

        File.read(reinterpret_cast<char *>(&ac), sizeof(account));

        if(ac.retacno()==n)

        {

            ac.show_account();

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        cout<<"\n\nEnter The New Details of account"<<endl;
        ac.modify();
        int pos=(-1)*static_cast<int>(sizeof(account));
        File.seekp(pos,ios::cur);
        File.write(reinterpret_cast<char *>(&ac), sizeof(account));
        cout<<"\n\n\t Record Updated";
        found=true;
    }
}
File.close();
if(found==false)
    cout<<"\n\n Record Not Found ";
}

//*****
//    function to delete record of file
//*****

void delete_account(int n)
{
    account ac;
    ifstream inFile;
    ofstream outFile;
    inFile.open("account.dat",ios::binary);
    if(!inFile)
    {
        cout<<"File could not be open !! Press any Key...";
        return;
    }
    outFile.open("Temp.dat",ios::binary);

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inFile.seekg(0,ios::beg);
while(inFile.read(reinterpret_cast<char *> (&ac), sizeof(account)))
{
    if(ac.retacno()!=n)
    {
        outFile.write(reinterpret_cast<char *> (&ac), sizeof(account));
    }
}
inFile.close();
outFile.close();
remove("account.dat");
rename("Temp.dat","account.dat");
cout<<"\n\n\tRecord Deleted ..";
}

//*****
//    function to display all accounts deposit list
//*****

void display_all()
{
    account ac;
    ifstream inFile;
    inFile.open("account.dat",ios::binary);
    if(!inFile)
    {
        cout<<"File could not be open !! Press any Key...";
        return;
    }
    cout<<"\n\n\t\tACCOUNT HOLDER LIST\n\n";
    cout<<"=====\\n";

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        cout<<"A/c no.   NAME       Type Balance\n";

        cout<<"=====\\n";

        while(inFile.read(reinterpret_cast<char *> (&ac), sizeof(account)))

        {

            ac.report();

        }

        inFile.close();
    }

//*****

//      function to deposit and withdraw amounts

//*****

void deposit_withdraw(int n, int option)
{

    int amt;

    bool found=false;

    account ac;

    fstream File;

    File.open("account.dat", ios::binary|ios::in|ios::out);

    if(!File)

    {

        cout<<"File could not be open !! Press any Key...";

        return;

    }

    while(!File.eof() && found==false)

    {

        File.read(reinterpret_cast<char *> (&ac), sizeof(account));

        if(ac.retacno()==n)

        {

            ac.show_account();

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        if(option==1)
        {
            cout<<"\n\n\tTO DEPOSITE AMOUNT ";
            cout<<"\n\nEnter The amount to be deposited";
            cin>>amt;
            ac.dep(amt);
        }
        if(option==2)
        {
            cout<<"\n\n\tTO WITHDRAW AMOUNT ";
            cout<<"\n\nEnter The amount to be withdraw";
            cin>>amt;
            int bal=ac.retdeposit()-amt;
            if((bal<500 && ac.rettype()=='S') || (bal<1000 && ac.rettype()=='C'))
                cout<<"Insufficiency balance";
            else
                ac.draw(amt);
        }
        int pos=(-1)*static_cast<int>(sizeof(ac));
        File.seekp(pos,ios::cur);
        File.write(reinterpret_cast<char *>(&ac), sizeof(account));
        cout<<"\n\n\t Record Updated";
        found=true;
    }
}

File.close();
if(found==false)
    cout<<"\n\n Record Not Found ";
}

```

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//*****

//      INTRODUCTION FUNCTION

//*****

void intro()
{
    cout<<"\n\n\n\t BANK";
    cout<<"\n\n\tMANAGEMENT";
    cout<<"\n\n\t SYSTEM";
    cout<<"\n\n\nMADE BY : your name";
    cout<<"\n\nSCHOOL : your school name";
    cin.get();
}

//*****

//                      END OF PROJECT

//*****
```