#include <iostream>

#include <vector>

Using namespace std;

Class BankSystem{

Private:

Struct Account{

String firstName;

String lastName;

Float totalBalance;

Int accountNumber;

};

Vector<Account>accounts;

Public:

Void intro(){

Cout<<”Project Name: Bank Management System”<<endl<<”Coded By: Kalim Ullah”<<endl<<”Id: CU-4889-2023”<<endl<<”Class Code: BSCS-2023D(2nd Semester)”<<endl<<”\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”<<endl;

}

Void displayOpt(){

Cout<<”1: Create An Account.”<<endl

<< “2: Show Balance.”<<endl

<< “3: Deposit Money.”<<endl

<< “4: Withdraw Money.”<<endl

<< “5: Close An Account.”<<endl;

}

Void createAccount(){

Account account;

Cout<<”Enter First Name: “;

Cin>>account.firstName;

Cout<<”Enter Last Name: “;

Cin>>account.lastName;

Cout<<”Enter Initial Amount: “;

Cin>>account.totalBalance;

Account.accountNumber = accounts.size()+1;

Accounts.push\_back(account);

Cout<<”-----------------------------------------” <<endl<<”Account Created”<<endl

<<”First Name: “<< account.firstName <<endl

<<”Last Name: “<< account.lastName <<endl

<<”Account Number: “ <<account.accountNumber<< endl

<<”Initial Amount: “ <<account.totalBalance<< endl

<<”Total Balance: “<< account.totalBalance<< endl<<”-----------------------------------------“<<endl;

}

Void showBalance(){

Int accountNumber;

Cout<<”Enter Account Number: “;

Cin>>accountNumber;

For(const auto& account:accounts){

If(account.accountNumber== accountNumber){

Cout<<”-----------------------------------------“<<endl<<”First Name: “<<account.firstName<<endl<<”Last Name: “<<account.lastName<<endl<<”Account Number: “<<account.accountNumber<<endl<< “Total Balance: “<< account.totalBalance<< endl<<”-----------------------------------------“<<endl;

Return;

}

}

Cout<<”Account not found.” <<endl;

}

Void deposit(){

Int accountNumber;

Cout<<”Enter Account Number: “;

Cin>>accountNumber;

Float amount;

Cout<<”Enter Amount: “;

Cin>>amount;

For(auto& account: accounts){

If(account.accountNumber== accountNumber){

Account.totalBalance+= amount;

Cout<<”-----------------------------------------“<<endl<<”First Name: “<<account.firstName<<endl<<”Last Name: “<<account.lastName<<endl<<”Account Number: “<<account.accountNumber<<endl<<”Amount Deposit: “<<amount<<endl<< “Total Balance: “ << account.totalBalance

<< endl<<”-----------------------------------------“<<endl;

Return;

}

}

Cout<<”Account not found.”<<endl;

}

Void withdraw(){

Int accountNumber;

Cout<<”Enter Account Number: “;

Cin>>accountNumber;

Float amount;

Cout<<”Enter Amount: “;

Cin>>amount;

For(auto& account: accounts){

If(account.accountNumber== accountNumber){

If(account.totalBalance>= amount){

Account.totalBalance-= amount;

Cout<<”-----------------------------------------“<<endl<<”First Name: “<<account.firstName<<endl<<”Last Name: “<<account.lastName<<endl<<”Account Number: “<<account.accountNumber<<endl<<”Withdraw Amount: “<<amount<<endl<< “Total Balance: “<< account.totalBalance<< endl<<”-----------------------------------------“<<endl;

}

Else{

Cout<< “Insufficient balance.”<<endl;

}

Return;

}

}

Cout<<”Account not found.” <<endl;

}

Void closeAccount(){

Int accountNumber;

Cout<<”Enter Account Number: “;

Cin>>accountNumber;

For(auto& account:accounts){

If(account.accountNumber== accountNumber){

Account.totalBalance=0;

Cout<<”-----------------------------------------“<<endl << “Account closed successfully.”<<endl<<”-----------------------------------------“<<endl;

Return;

}

}

Cout<<”Account not found.” << endl;

}

};

Int main(){

BankSystem bankSystem;

bankSystem.intro();

int choice;

do{

bankSystem.displayOpt();

cout<<”Enter Choice: “;

cin>>choice;

switch(choice){

case 1:

bankSystem.createAccount();

break;

case 2:

bankSystem.showBalance();

break;

case 3:

bankSystem.deposit();

break;

case 4:

bankSystem.withdraw();

break;

case 5:

bankSystem.closeAccount();

break;

default:

cout<<”Invalid Option”<<endl;

}

} while(choice!=10000000000);

Return 0;

}