

PROJECT REPORT ON

BANK MANAGEMENT SYSTEM

Submitted in partial fulfillment for the requirement

for the award of the Degree of

Bachelor of Technology



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Submitted to:

Mr. Ashish Semwal

Submitted by:

Archana Bharti &

Hemant Himansu

B.Tech.(C.S.E. IVth Sem)

Department of Computer Science and Engineering

School of Engineering and Technology

HEMWATI NANDAN BAHUGUNA GARHWAL UNIVERSITY

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CERTIFICATE

This is to certify that this report entitled “Bank Management System” submitted in partial fulfillment of the degree of Bachelor Of Technology (B.Tech.) in Computer Science Engineering to the department of computer science and engineering , school of engineering and technology H.N.B. Garhwal University ,Srinagar ,Uttarakhand done by Archana Bharti and Hemant Himansu ,is an authentic work carried out by them under my guidance. The matter embodied in this project work has not been submitted earlier for award of any degree or diploma to the best of my knowledge and belief

SELF CERTIFICATE

This is to certify that the report entitled **Bank Management System** is done by us is an authentic work carried out for the partial fulfillment of the requirement for the award of the degree of Bachelor of Technology (B.Tech.) in Computer Science Engineering under the guidance of Mr. Ashish Semwal sir. The matter embodied in the project has not been submitted earlier for award of any degree or diploma to the best of my knowledge and belief.

Archana Bharti & Hemant Himansu

(2018-2022)

PREFACE

For efficient and quality improvement of an educational institute, feedback plays a key role in it. With a proper feedback mechanism in place, the growth rate of an institute shows an upward movement. The feedback mechanism helps in catering the weaknesses and further strengthening the strengths. The SWOT analysis of an institute can be done by ensuring a strong feedback system is in place. For a large institute, it is impossible to manually manage a proper feedback system.

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Abstract

The purpose of this project is in partial fulfilment of the requirements of customer using the online banking for payment. The Design and development of this Bank Management system provides a more secured approach in managing bank customer's information which strengthens the relationships between banks and their customers by providing the right solutions that uses a multi- level security to improve customer satisfaction. The programming language used to develop this project is C++.

The Domain "Bank Management System" keeps the day by day tally record as a complete banking interface. It can keep the information of Account type, Deposit, Withdrawal, Balance Inquiry, Modify the existing account, all account holders, Close an account.

Introduction

Online banking (Internet banking or E-banking) allows customers of a financial institution to conduct financial transactions on a secured website operated by the institution, which can be our tail bank, virtual bank, credit union or building society.

Online banking is an umbrella term for the process by which a customer may perform banking transactions electronically without visiting a brick-and-mortar institution. The following term shall refer to one form or another of online banking: personal computer (PC) banking, Internet banking, virtual banking, online banking, home banking, remote electronic banking, and phone bank. PC banking and Internet or online banking is the most frequently used designations. It should be noted, however, that the terms used to describe the various types of online banking are often used interchangeably. Online banking is an activity that is not new to banks or their customers. Banks have been providing their services to customers electronically for years through software programs. These software programs allowed the users personal computer to dial up the bank directly. In the past however, banks have been very reluctant to provide their customers with banking via the Internet due to security concerns.

This software will be provided as a tool to the bank. The bank has been working for Accounts information, Withdrawal (through Cash/Cheque). Deposit amount. In this Software you can keep record for daily Banking transactions. The objective is to prepare a software or application, which could maintain data & provide a user-friendly interface for retrieving customer related details just in few seconds, with 100% accuracy. Software is completely computerized, so it is not time-consuming process. No paper work required & can be implemented further. The application should also facilitate the addition of new Customer account, deletion of account & modification of existing customer account, to show the type of account, show all account holders list & any account should be opened with minimum 1000 INR for current account and 500 INR for a saving account etc.

Project Objective:

The main objective of this package are:

- To allow user create new account

- Deposit money in the account
- Withdraw money from the account
- To check account balance
- To view list of all account holders
- To close an existing account
- To modify an existing account

Project Benefits:

Some benefits are:

- Access to privilege banking zone
- Reduces clerical work
- Anywhere Banking with higher limits
- Facility to link with current account
- Helps to keep record of daily Banking transaction
- Helps customer to escape the long in-office procedures
- Provide greater speed & reduced time consumption.

Methodology-

Concepts of C++ used in the project are:

1. Header files
2. Class
3. Member function
const Member functions
4. Function
Declaration, Definition and Calling
5. Switch statement
6. File management

System Requirements

Hardware Requirements:

Hardware is a set of physical components, which performs the functions of applying appropriate, predefined instructions. In other words, one can say that electronic and mechanical parts of computer constitute hardware. This project is built on a one of the basic programming languages, C++. It can run on all popular microcomputers.

The following is the minimum hardware specification to use this package:

- Pentium-III processor
- 128GB RAM

Software Requirements:

The software is a set of procedures of coded information or a program which when fed into the computer hardware, enables the computer to perform the various tasks. Software is like a current inside the wire, which cannot be seen but its effect can be felt.

The following is the minimum software requirement for this package:

- Operating System- Windows NT and all later release
- Application Software- Dev C++ or any other C++ supported compiler
- Editor- Dev C++ or any other C++ supported editor

Source Code

```
//*****

//          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
    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\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()
{
    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;
}

```

```

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()
{
    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;
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

//*****

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)
            {
                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();
        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);
    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";
    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();
            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 ";
}

```

```

//*****

//      INTRODUCTION FUNCTION

//*****

void intro()
{
    cout<<"\n\n\t BANK";
    cout<<"\n\n\tMANAGEMENT";
    cout<<"\n\n\t SYSTEM";
    cout<<"\n\n\nMADE BY : Archana Bharti and Hemant Himanshu";
    cout<<"\n\n      B.Tech C.S.E(4th Sem)";
    cin.get();
}

//*****

//      END OF PROJECT

//*****

```

Source Code Description

The source code includes four header files namely **iostream**, **fstream**, **cctype**, **io manip**

It has a public class named **account** with four data members namely **acno**, **name**, **deposit**, **type** and nine member functions mentioned below:

- **create_account()**- This member function gets data from the user and creates a new account for the user.
- **show_account()**- This member function show the detail of existing account by its account number. This is a const member function
- **modify()**- This member function is used to modify details like account holder name and account type of existing account.
- **dep()**- This member function is used to deposit money in an existing account.
- **draw()**- This member function is used to withdraw money from the bank account.
- **report()**- This member function is used to get account such as account number, account holder name, account type and balance in tabular format. This is a const member function.
- **retacno()**- This member function is used to return account number of a user. This is a const member function
- **retdeposit()**- This member function is used to return balance of a account. This is a const member function
- **rettype()**- This member function is used to return account type of a account. This is a const member function

The member functions are defined outside the class definition using the scope resolution :: operator. **show_account()**, **report()**, **retacno()**, **retdeposit()**, **rettype()** const member function and will never modifies data members in an object.

There are seven functions in the code as listed below:

- **write_account()**- This function is used to write record in binary file.
- **display_sp(int)**- This function is used to display account details given by the user.
- **modify_account(int)**- This function is used to modify a record of file.
- **delete_account(int)**- This function is used to delete a record from file.

- **display_all()**- This function is used to display details of all the accounts in bank in a tabular format
- **deposit_withdraw(int, int)**- This function is used to do deposit or withdraw money from a given account.
- **intro()**- This function is used to print the introduction interface of the project.

A switch statement has been used to provide Main Menu selection control.

```

      BANK
      MANAGEMENT
      SYSTEM

MADE BY : Archana Bharti and Hemant Himanshu
      B.Tech C.S.E(4th Sem) _

```

Introductory interface

```

MAIN MENU
01. NEW ACCOUNT
02. DEPOSIT AMOUNT
03. WITHDRAW AMOUNT
04. BALANCE ENQUIRY
05. ALL ACCOUNT HOLDER LIST
06. CLOSE AN ACCOUNT
07. MODIFY AN ACCOUNT
08. EXIT
Select Your Option (1-8) _

```

Main Menu

Project Limitations

- Can generate a better graphic based interface for the package.
- Link with database for better data management.
- Universal bankers may be tempted to take excessive risks.
- Banks may deploy their own assets in securities with consequent risk to commercial and savings deposits.
- Vulnerable to high risks due to investment banking activities coupled with focus on commercial banking activities.
- Unsound loans may be made in order to shore up the price of securities or the financial position of companies in which a bank had invested its own assets.

Future Scope of the Project

Banking activities are considered to be the life blood of the national Economy. Without banking services, trading and business activities cannot be carried on smoothly. Banks are the distributors and protectors of liquid capital which is of vital significance to a developing country.

Efficient administration of the banking system helps in the economic Growth of the nation. Banking is useful to trade and commerce.

This project can be handled in future by doing various modifications like:

- We can go further for Online Banking.
- We can establish and start various Branches and available help centers for Account Holder's Queries.
- We can also deal through internet by creating web pages and a banking website for internet dealing.
- To attract Account Holder's, we can offer various offers during festivals months.
- We can also deal in various types of Banking Transactions.
- To have more and more customer satisfaction we will emphasize more and more on our dealings.

References

- Object Oriented Programming with E.Balagurusamy Fourth edition
- <https://nptel.ac.in/noc/courses/noc20/SEM2/noc20-cs57/>
- <https://www.geeksforgeeks.org/cpp-tutorial/>
- <https://www.w3schools.com/cpp/>
- <https://www.tutorialspoint.com/cplusplus/index.htm>
- <https://www.youtube.com/watch?v=vLnPwxZdW4Y>