A Mini Project Report

On

BANKING SYSTEM

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We express our thanks to all those who contributed for the successful completion of our project work.

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INTRODUCTION

Online banking is the term used for the process by which a customer may perform banking operation remotely without visiting the Bank. Online banking, also known as virtual banking, internet banking or personal computer banking is an activity that is not new to banks or their customers. Banks have been providing their services to their customers electronically to their customers through software programs which helps the customers directly connect with the bank. In recent times, Cyber-attacks have also increased drastically which makes the customer privacy an important concern.

ABSTRACT

Banking sector is one of the fastest growing sectors and has been one of the most preferred avenues of employment. The days of running around a bank for receiving cheques and performing transactions has become a thing of the past. It has now become hassle free and just a click away. Most of the leading banks are going online which makes security the prime concern due to increasing cyber-crimes.

In our project, firstly, the user must register himself with our bank and login to his account to have access to all the functionalities we provide. After logging in successfully, he is provided with options like Deposit, Withdraw, Transfer, Display user details, Display Transaction details etc.,

This system is very convenient to all the users as we provide most of the facilities that a banking system provides to its customers. Moreover, we provide the customers the maximum security as we encrypt their personal information and store it.

OBJECTIVE

This System allows the customers to perform banking operations such as Deposit, Withdraw, Bank transfer, Display Transaction details and Transaction history.

SYSTEM REQUIREMENTS

Hardware:

- Minimum RAM required: 512 mb

- Minimum disk space required: 50 mb

- Input devices: Mouse, Keyboard

- Output devices: Monitor

Software:

- Eclipse IDE

- Windows 7 or above

- JAVA platform SE 8 or above

MODULES USED

- ❖ Customer Login
- ❖ Deposit
- ❖ Withdraw
- ❖ Transfer
- ❖ Display Customer Details
- ❖ Display Transaction Details
- ❖ Display Customer List

CLASSES USED

1. Final Class Variable_Class

    Static variables for storage.

2. Public Class banking_main

    i.   Void main()

    ii.   Void init_var()

3. Public class login

    i.   Int Existing_User(…)

    ii.   Void register_user()

    iii. String encrypt(…)

    iv.   String Decrypt(…)

4. Public class transactions

    i.   Void Deposit(…)

    ii.   Void Withdraw(…)

5. Public class transfer

    i.   Void TransferAmount(…)

6. Public class DisplayDetails

    i.   Void User_Details(…)

7. Public class DisplayTransactionDetails

    i.   Void TransactionDetails(…)

8. Public class SortedLists

CONCEPTS USED

➔ In the login module, firstly we have used the InputStreamReader class and the BufferedReader classes to accept input from the user. Then, we have also used the Threads concept to introduce delay in our program and to format the printing style. Further, we have used the StringBuilder class to generate a random userID's for our customers. For the security concern, we have encrypted the passwords of our customers using the "CipherText" algorithm. In order to facilitate the CipherText algorithm, we have used the StringBuilder class to generate a random "shift" each time a password is encrypted.

➔ In the Deposit module, Withdraw module and the Transfer module, we have used the LocalDateTime class to keep a track of the date and time of the transaction.

➔ In all the above modules, we have used the Array data structure to store the customer information throughout the program run. Also, we have used Exceptions such as IOException, InterruptedException, ClassNotFoundException, and NullPointerException to handle unexpected halts in the program.

➔ We have used the Inheritance concept by extending the Display user details module by the Display Transaction details module.

➔ In the Sorted User Lists module, we have used the TreeSet class within the Collection Framework to sort the customer details based on name(Alphabetical order) as well as the Current Balance by storing the objects in the TreeSet.

➔ All of these modules have been called in the main() method at appropriate times inside the Banking_main class.

➔ In addition to all the concepts mentioned above, we have also used the files concept which serves as a database which is updated after every run.

PROGRAM

```java
//Class Banking_main

package javac;
import java.time.*;

import java.util.*;

import java.io.*;

final class Variable_class implements Serializable

{

        static int runs = 0;

        static String name_arr[] = new String[20];

        static String phone[] = new String[20];

        static String userName_arr[] = new String[20];

        static int UID[] = new int[20];

        static int pass_shift_arr[] = new int[20];

        static String password_arr[] = new String[20];

        static int arr_cnt = 0;

        static double transaction_arr[][] = new double[20][100];

        static int transaction_arr_count[]  = new int[20];

        static LocalDateTime transaction_arr_DateTime[][] = new
LocalDateTime[20][100];

        static String transaction_arr_Str[][] = new String[20][100];
```

```java
        static double curr_bal[] = new double[20];

}


public class Banking_main implements Serializable

{

        static void init_var()throws
ClassNotFoundException,FileNotFoundException,IOException

        {

                BufferedReader read = new BufferedReader(new
FileReader("C:\\Users\\pc\\Desktop\\BANKING_DATA.txt"));

                Variable_class.runs = Integer.parseInt(read.readLine());

                System.out.println("runs : " + Variable_class.runs);

                if(Variable_class.runs == 0)

                        return;

                String nameString = read.readLine();

                StringTokenizer tok = new StringTokenizer(nameString,";");

                int i = 0;

                while(tok.hasMoreTokens())

                {

                        Variable_class.name_arr[i] = tok.nextToken();

                        i++;

                }
```

```java
String phoneString = read.readLine();

tok = new StringTokenizer(phoneString,";");

i = 0;

while(tok.hasMoreTokens())

{

        Variable_class.phone[i] = tok.nextToken();

        i++;

}

String unameString = read.readLine();

tok = new StringTokenizer(unameString,";");

i = 0;

while(tok.hasMoreTokens())

{

        Variable_class.userName_arr[i] = tok.nextToken();

        i++;

}

String uidString = read.readLine();

tok = new StringTokenizer(uidString,";");

i = 0;

while(tok.hasMoreTokens())

{

        Variable_class.UID[i] = Integer.parseInt(tok.nextToken());

        i++;
```

```
        }

        String shiftString = read.readLine();

        tok = new StringTokenizer(shiftString,";");

        i = 0;

        while(tok.hasMoreTokens())

        {

                Variable_class.pass_shift_arr[i] =
Integer.parseInt(tok.nextToken());

                i++;

        }

        String passString = read.readLine();

        tok = new StringTokenizer(passString,";");

        i = 0;

        while(tok.hasMoreTokens())

        {

                Variable_class.password_arr[i] = tok.nextToken();

                i++;

        }

        String arrcnt = read.readLine();

        StringTokenizer st = new StringTokenizer(arrcnt,";");

        Variable_class.arr_cnt = Integer.parseInt(st.nextToken());

        for(int j = 0 ; j < 20 ; j++)

        {
```

```java
                    String row_String = read.readLine();

                    int k = 0;

                    tok = new StringTokenizer(row_String,";");

                    while(tok.hasMoreTokens())

                    {

                            Variable_class.transaction_arr[j][k] =
Double.parseDouble(tok.nextToken());

                            k++;

                    }

            }


            String tranArrcountString = read.readLine();

            tok = new StringTokenizer(tranArrcountString,";");

            i = 0;

            while(tok.hasMoreTokens())

            {

                    Variable_class.transaction_arr_count[i] =
Integer.parseInt(tok.nextToken());

                    i++;

            }
            //-----------------------------------------
            //System.out.println(Variable_class.transaction_arr_count[0]);
            //-----------------------------------------
```

```java
for(int j = 0; j < Variable_class.arr_cnt ; j++)

{

        String row_String = read.readLine();

        int k = 0;

        tok = new StringTokenizer(row_String,";");

        while(tok.hasMoreTokens() && k <
Variable_class.transaction_arr_count[j])

        {

                Variable_class.transaction_arr_DateTime[j][k] =
LocalDateTime.parse(tok.nextToken());

                k++;

        }

}


int rem = 20-Variable_class.arr_cnt;

String garbageString;

for(int l = 1;l<=rem;l++)

        garbageString = read.readLine();


System.out.println(Variable_class.transaction_arr_DateTime[19][0]);


for(int j = 0 ; j < 20 ;j++)

{
```

```java
String row_String = read.readLine();

int k = 0;

tok = new StringTokenizer(row_String,";");

while(tok.hasMoreTokens() && k <
Variable_class.transaction_arr_count[j])

{

        Variable_class.transaction_arr_Str[j][k] =
tok.nextToken();

        k++;

}

}

String currbalString = read.readLine();


System.out.println(currbalString);


tok = new StringTokenizer(currbalString,";");

i = 0;

while(tok.hasMoreTokens())

{

        Variable_class.curr_bal[i] =
Double.parseDouble(tok.nextToken());

        i++;

}
```

```java
                read.close();

        }

        static void debugCode()

        {

                for(int i = 0;i<20;i++)

                {

                        //System.out.print(Variable_class.name_arr[i] + '\t');

                        //System.out.print(Variable_class.UID[i] + '\t');

                        //System.out.print(Variable_class.password_arr[i]+'\n');

                        //System.out.println(Variable_class.transaction_arr[i]);

                }

        }

        public static void main(String args[])throws IOException,
InterruptedException, ClassNotFoundException

        {

                Banking_main.init_var();

                Banking_main.debugCode();

                InputStreamReader read = new InputStreamReader(System.in);

                BufferedReader br = new BufferedReader(read);

                int login_var;

                do

                {

                        System.out.println("\n\t*****YES BANK*****\n");
```

```java
System.out.println("\t1.LOGIN\n\t2.REGISTER\n\t3.EXIT");

login_var = Integer.parseInt(br.readLine());

if(login_var == 1)

{

        int login_conf;

        System.out.println("ENTER YOUR DETAILS: ");

        System.out.println("USER ID: ");

        int user_id = Integer.parseInt(br.readLine());

        System.out.println("PASSWORD: ");

        String password = br.readLine();


        login_conf =
login.Existing_user(user_id,password);//day1

        System.out.print("AUTHENTICATING..");

        for(int j = 0;j<4;j++)

        {

                System.out.print(".");

                Thread.sleep(1000);

        }

        Thread.sleep(500);

        System.out.print("DONE!!\n");

        if(login_conf == 1)

        {
```

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```java
				System.out.println("\nLOGIN
SUCCESSFUL!!\n");

				System.out.print("GETTING STARTED");

				for(int j = 0;j<7;j++)

				{

						System.out.print(".");

						Thread.sleep(1000);

				}

				Thread.sleep(500);

				System.out.print("DONE!!\n");

				int check_ctr = 1;

				do

				{

						int switch_var;

						System.out.println("\n\tAVAILABLE
OPTIONS IN OUR BANKING SYSTEMS:\n");


		System.out.println("\t1.DEPOSIT\n\t2.WITHDRAW\n\t3.TRANSFER TO
ANOTHER USER\n\t4."

										+ "DISPLAY USER
DETAILS\n\t5.DISPLAY TRANSACTION DETAILS\n\t6.DISPLAY CUSTOMER
LIST\n\t7.LOG OUT");

						switch_var =
Integer.parseInt(br.readLine());

						switch(switch_var)
```

```
{
        case 1:

                //Implementing deposit Module;

                Transactions.Deposit(user_id);

                break;

        case 2:

                //Implementing withdraw

module;

                Transactions.WithDraw(user_id);

                break;

        case 3:

                //Implementing transfer module;


        Transfer.TransferAmount(user_id);

                break;

        case 4:

                //Implementing user details

display module;


        DisplayDetails.User_Details(user_id);

                break;

        case 5:

                //Implementing transaction

details display module;
```

```java
                    DisplayTransactionDetails.Transaction_Details(user_id);

                            break;

                    case 6:

                            Sorted_Lists.main(args);

                            break;

                    case 7:

                            System.out.print("LOGGING
OUT..");

                            for(int j = 0;j<10;j++)

                            {

                                    System.out.print(".");

                                    Thread.sleep(1000);

                            }

                            Thread.sleep(2000);

                            System.out.print("DONE!!\n");

                            System.out.println("THANK
YOU FOR USING OUR SERVICES.\nLOOKING FORWARD TO HELP YOU :)");

                            check_ctr = 0;

                            break;

                    }

            }while(check_ctr > 0);

    }
```

```java
                else if(login_conf == 2)

                {

                        System.out.println("INCORRECT PASSWORD
:( \nPLEASE TRY AGAIN \n");

                        continue;

                }

                else if(login_conf == 3)

                {

                        System.out.println("USER ACCOUNT DOES
NOT EXIST :(");

                        int reg_conf;

                        System.out.println("DO YOU WANT TO
CREATE A NEW ACCOUNT?\n1.YES\t2.NO");

                        reg_conf = Integer.parseInt(br.readLine());

                        if(reg_conf == 1)

                        {

                                login.Register_user();

                        }

                        else

                        {

                                System.out.println("THANK YOU FOR
USING OUR SERVICES.\nLOOKING FORWARD TO HELP YOU :)\n");


                        }
```

```
                    }

            }

            else if(login_var == 2)

            {

                    System.out.println("HI , WELCOME TO YES BANK
:)\n");

                    login.Register_user();

                    System.out.println();

            }

            else

            {


                    System.out.println("THANK YOU!!");

                    Variable_class.runs++;

                    BufferedWriter out = new BufferedWriter(new
FileWriter("C:\\Users\\pc\\Desktop\\BANKING_DATA.txt"));

                    out.write(Integer.toString(Variable_class.runs));

                    out.newLine();

                    for(int i = 0;i<20;i++)

                    {

                            out.write(Variable_class.name_arr[i]+";");

                    }

                    out.newLine();
```

```java
for(int i = 0;i<20;i++)

{

        out.write(Variable_class.phone[i]+";");

}

out.newLine();

for(int i = 0;i<20;i++)

{

        out.write(Variable_class.userName_arr[i]+";");

}

out.newLine();

for(int i = 0;i<20;i++)

{

        out.write(Variable_class.UID[i]+";");

}

out.newLine();

for(int i = 0;i<20;i++)

{

        out.write(Variable_class.pass_shift_arr[i]+";");

}

out.newLine();

for(int i = 0;i<20;i++)

{

        out.write(Variable_class.password_arr[i]+";");
```

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```java
                }

                out.newLine();

                out.write(Variable_class.arr_cnt+";");

                out.newLine();

                for(int i =0;i<20;i++)

                {

                        for(int j = 0;j<100;j++)

                        {


out.write(Variable_class.transaction_arr[i][j] + ";");

                        }

                        out.newLine();

                }

                for(int i = 0;i<20;i++)

                {


out.write(Variable_class.transaction_arr_count[i]+";");

                }

                out.newLine();

                for(int i =0;i<20;i++)

                {

                        for(int j = 0;j<100;j++)

                        {
```

```java
                        out.write(Variable_class.transaction_arr_DateTime[i][j] + ";");

                            }

                            out.newLine();

                        }

                        for(int i =0;i<20;i++)

                        {

                            for(int j = 0;j<100;j++)

                            {

                        out.write(Variable_class.transaction_arr_Str[i][j] + ";");

                            }

                            out.newLine();

                        }

                        for(int i = 0;i<20;i++)

                        {

                            out.write(Variable_class.curr_bal[i]+";");

                        }

                        //out.newLine();

                        out.close();

                        System.exit(0);

                    }

            }while(true);
```

```
        }


}
//Class Login

package javac;

import java.io.BufferedReader;

import java.io.InputStreamReader;

import java.io.*;

import java.util.Arrays;

import java.util.*;

import java.util.Random;

public class login

{
        public static int Existing_user(int uid,String pass)throws IOException

        {
                int ind = -1;

                for(int i=0;i<Variable_class.UID.length;i++)

                {
                        if(Variable_class.UID[i] == uid)

                        {
                                ind = i;

                                break;

                        }
```

```java
                }

                if(ind >= 0)

                {

                        String decrypt_pass =
login.Decrypt(Variable_class.password_arr[ind],Variable_class.pass_shift_arr[ind]);

                        if(decrypt_pass.equals(pass))

                        {

                                return 1;

                        }

                        else

                        {

                                return 2;

                        }

                }

                else

                {

                        return 3;

                }

        }

        public static void Register_user()throws IOException,InterruptedException

        {

                String BUILDERSTRING = "1234567890";

                InputStreamReader read = new InputStreamReader(System.in);
```

```java
BufferedReader br1 = new BufferedReader(read);

System.out.print("PLEASE WAIT...");

for(int j = 0;j<4;j++)

{

        System.out.print(".");

        Thread.sleep(1000);

}

System.out.println();

System.out.println("ENTER YOUR DETAILS: \n");

System.out.println("ENTER YOUR NAME: ");

Variable_class.name_arr[Variable_class.arr_cnt] = br1.readLine();


System.out.println("ENTER YOUR PHONE NUMBER: ");

Variable_class.phone[Variable_class.arr_cnt] = br1.readLine();


System.out.println("SELECT YOUR USERNAME: ");

Variable_class.userName_arr[Variable_class.arr_cnt] =
br1.readLine();


StringBuilder builder = new StringBuilder();

int uid_len = 6;

while (uid_len-- != 0)

{
```

```java
                int character =
(int)(Math.random()*BUILDERSTRING.length());

                builder.append(BUILDERSTRING.charAt(character));

            }

            int uid_gen = Integer.parseInt(builder.toString());

            System.out.println("YOU USER ID IS: "+uid_gen);

            Variable_class.UID[Variable_class.arr_cnt] = uid_gen;


            System.out.println("ENTER YOUR PASSWORD: ");

            String user_pass = br1.readLine();


            Random random = new Random();

            int rand_shift = (random.nextInt(50)-25);

            //int rand_shift = 25;

            String user_pass_encrypt = login.Encrypt(user_pass,rand_shift);

            //System.out.println("create user shift:"+rand_shift);

            Variable_class.pass_shift_arr[Variable_class.arr_cnt] = rand_shift;

            Variable_class.password_arr[Variable_class.arr_cnt] =
user_pass_encrypt;

            System.out.print("PLEASE WAIT WHILE WE CREATE YOUR
ACCOUNT...");

            for(int j = 0;j<6;j++)

            {
```

```java
                System.out.print(".");

                Thread.sleep(1000);

        }

        Thread.sleep(1000);

        System.out.print("ACCOUNT CREATED SUCCESSFULLY!!\n");

        System.out.println();

        Variable_class.arr_cnt += 1;

}


public static String Encrypt(String pass,int shift)

{

        //System.out.println("Encrypt shift :" + shift);

        String Pass_encrypt = "";

        for(int i=0;i<pass.length();i++)

        {

                char alpha = pass.charAt(i);

                if(alpha >= 'a' && alpha <= 'z')

                {

                        alpha = (char)(alpha + shift);


                        if(alpha < 'a')

                        {

                                alpha = (char)(alpha-'a' +'z' +1);
```

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```
                }

                if(alpha > 'z')

                {

                        alpha = (char)(alpha + 'a' - 'z' +1);

                }

                Pass_encrypt += alpha;

        }

        else if(alpha >= 'A' && alpha <= 'Z')

        {

                alpha = (char)(alpha + shift);


                if(alpha < 'A')

                {

                        alpha = (char)(alpha-'a'+'z'+1);

                }

                if(alpha > 'Z')

                {

                        alpha = (char)(alpha + 'A' - 'Z' +1);

                }

                Pass_encrypt += alpha;

        }

        else

        {
```

```java
                                Pass_encrypt += alpha;

                }

        }

        //System.out.println(Pass_encrypt);

        return Pass_encrypt;

}


public static String Decrypt(String pass,int shift)

{

        //System.out.println("Decrypt shift :" + shift+ "decrypt pass: "+pass);

        String Pass_decrypt = "";

        for(int i = 0;i < pass.length();i++)

        {

                char alpha = pass.charAt(i);

                if(alpha >= 'a' && alpha <= 'z')

                {

                        alpha = (char)(alpha - shift);


                        if(alpha < 'a')

                        {

                                alpha = (char)(alpha - 'a' + 'z' -1);

                        }

                        else if(alpha > 'z')
```

```
            {
                    alpha = (char)(alpha + 'a' - 'z' - 1);

            }

            Pass_decrypt += alpha;

    }

    else if(alpha >= 'A' && alpha <= 'Z')

    {

            alpha = (char)(alpha - shift);


            if(alpha < 'A')

            {

                    alpha = (char)(alpha - 'A' + 'Z' - 1);

            }

            if(alpha > 'Z')

            {

                    alpha = (char)(alpha + 'A' - 'Z' - 1);

            }

            Pass_decrypt += alpha;

    }

    else

    {

            Pass_decrypt += alpha;

    }
```

```
                }

                //System.out.println(Pass_decrypt);

                return Pass_decrypt;

        }

}


//Class Transactions

package javac;

import java.io.*;

import java.time.*;

public class Transactions

{

        public static void Deposit(int uid)throws IOException,InterruptedException

        {

                InputStreamReader read = new InputStreamReader(System.in);

                BufferedReader br2 = new BufferedReader(read);

                int ind = -1;

                for(int i=0;i<Variable_class.UID.length;i++)

                {

                        if(Variable_class.UID[i] == uid)

                        {

                                ind = i;
```

```
                        break;

                }

        }

        System.out.println("ENTER THE AMOUNT YOU WANT TO
DEPOSIT: ");

        double add_bal = Double.parseDouble(br2.readLine());

        int existing_vars = Variable_class.transaction_arr_count[ind];

        //System.out.println("ex:"+existing_vars);

        Variable_class.transaction_arr[ind][existing_vars] = add_bal;

        Variable_class.transaction_arr_Str[ind][existing_vars] = "Deposit";

        LocalDateTime ob = LocalDateTime.now();

        Variable_class.transaction_arr_DateTime[ind][existing_vars] = ob;

        System.out.println("PREVIOUS BALANCE: Rs."+
Variable_class.curr_bal[ind]);

        Variable_class.curr_bal[ind] += add_bal;

        System.out.print("\nPROCESSING");

        for(int j = 0;j<6;j++)

        {

                System.out.print(".");

                Thread.sleep(1000);

        }

        Thread.sleep(1000);

        System.out.print("DONE.\n");
```

```java
                System.out.println("TRANSACTION SUCCESSFUL.\n");

                System.out.println();

                System.out.println("CURRENT BALANCE:
Rs."+Variable_class.curr_bal[ind]);


                Variable_class.transaction_arr_count[ind]++;
        }
        public static void WithDraw(int uid)throws IOException,InterruptedException
        {
                InputStreamReader read = new InputStreamReader(System.in);

                BufferedReader br3 = new BufferedReader(read);

                int ind = -1;

                for(int i=0;i<Variable_class.UID.length;i++)

                {

                        if(Variable_class.UID[i] == uid)

                        {

                                ind = i;

                                break;

                        }

                }

                System.out.println("CURRENT BALANCE: Rs."+
Variable_class.curr_bal[ind]);
```

```java
/*System.out.println("Enter the amount you want to Withdraw from your account:");*/

double del_bal = 0.0;

do
{
        System.out.println("ENTER THE AMOUNT YOU WANT TO WITHDRAW: ");

        del_bal = Double.parseDouble(br3.readLine());

        if(del_bal <= Variable_class.curr_bal[ind])
        {
                break;
        }
        else
        {
                System.out.println("INSUFFICIENT BALANCE :( \nTRY AGAIN\n");

                continue;
        }
}while(true);

del_bal *= -1;

int existing_vars = Variable_class.transaction_arr_count[ind];

Variable_class.transaction_arr[ind][existing_vars] = del_bal;

Variable_class.transaction_arr_Str[ind][existing_vars] = "Withdraw";
```

```java
                LocalDateTime ob = LocalDateTime.now();

                Variable_class.transaction_arr_DateTime[ind][existing_vars] = ob;

                Variable_class.curr_bal[ind] += del_bal;

                System.out.print("PROCESSING...");

                for(int j = 0;j<6;j++)

                {

                        System.out.print(".");

                        Thread.sleep(1000);

                }

                Thread.sleep(1000);

                System.out.print("DONE.\n");

                System.out.print("TRANSACTION SUCCESSFUL :)\n");

                System.out.println();

                System.out.println("NEW BALANCE:
Rs."+Variable_class.curr_bal[ind]);

                Variable_class.transaction_arr_count[ind]++;

        }

}
//Class Transfer

package javac;

import java.io.*;

import java.time.*;

public class Transfer
```

```java
{
    public static void TransferAmount(int giver_id)throws
IOException,InterruptedException
    {
        InputStreamReader read = new InputStreamReader(System.in);

        BufferedReader br3 = new BufferedReader(read);

        int giver_ind = -1;

        for(int i=0;i<Variable_class.UID.length;i++)
        {
            if(Variable_class.UID[i] == giver_id)
            {
                giver_ind = i;

                break;
            }
        }

        int rec_ind = -1;

        do
        {
            int rec_id;

            System.out.println("ENTER THE USER ID TO WHICH YOU
WANT TO TRANSFER TO: ");

            rec_id = Integer.parseInt(br3.readLine());

            int ind1 = -1;
```

```java
for(int i=0;i<Variable_class.UID.length;i++)

{

        if(Variable_class.UID[i] == rec_id)

        {

                ind1 = i;

                break;

        }

}

if(ind1 >= 0)

{

        rec_ind = ind1;

        break;

}

else

{

        System.out.println("\tUSER ID NOT FOUND :(\n\tDO
YOU WANT TO TRY AGAIN?\n\t1.YES\t2.NO");

        int ch = Integer.parseInt(br3.readLine());

        if(ch == 1)

        {

                continue;

        }

        else
```

```
                              break;

                  }


         }while(true);

         if(rec_ind >=0)

         {

                  System.out.println("CURRENT BALANCE: Rs."+
Variable_class.curr_bal[giver_ind]);

                  double tran_amt = 0;

                  do

                  {

                           System.out.println("ENTER THE AMOUNT YOU
WANT TO TRANSFER: ");

                           tran_amt = Double.parseDouble(br3.readLine());

                           if(tran_amt <= Variable_class.curr_bal[giver_ind])

                           {

                                    break;

                           }

                           else

                           {

                                    System.out.println("INSUFFICIENT
BALANCE :(\nTRY AGAIN");

                                    continue;
```

```
                    }

            }while(true);

            int existing_vars =
Variable_class.transaction_arr_count[giver_ind];

                    Variable_class.transaction_arr[giver_ind][existing_vars] = (-
1)*tran_amt;

                    Variable_class.transaction_arr_Str[giver_ind][existing_vars] =
"TRANSFERRED Rs."+tran_amt+" TO USER: "+Variable_class.UID[rec_ind];

                    LocalDateTime ob = LocalDateTime.now();


        Variable_class.transaction_arr_DateTime[giver_ind][existing_vars] = ob;

                    Variable_class.curr_bal[giver_ind] += (-1)*tran_amt;

                    Variable_class.transaction_arr_count[giver_ind]++;



            int existing_vars1 =
Variable_class.transaction_arr_count[rec_ind];

                    Variable_class.transaction_arr[rec_ind][existing_vars1] =
tran_amt;

                    Variable_class.transaction_arr_Str[rec_ind][existing_vars1] =
"RECEIVED Rs."+tran_amt+" FROM USER: "+Variable_class.UID[giver_ind];

                    //LocalDateTime ob = LocalDateTime.now();


        Variable_class.transaction_arr_DateTime[rec_ind][existing_vars1] = ob;

                    Variable_class.curr_bal[rec_ind] += tran_amt;

                    Variable_class.transaction_arr_count[rec_ind]++;
```

```java
                    System.out.print("\nPROCESSING");

                    for(int j = 0;j<8;j++)

                    {

                            System.out.print(".");

                            Thread.sleep(1000);

                    }

                    System.out.print("DONE.\n");

                    Thread.sleep(1000);

                    System.out.print("TRANSACTION SUCCESSFUL :)\n");

            }

}
//Class Display Details

package javac;
public class DisplayDetails
{
        public static void User_Details(int uid)
        {
                int ind = -1;
                for(int i=0;i<Variable_class.UID.length;i++)
                {
                        if(Variable_class.UID[i] == uid)
                        {
                                ind = i;
                                break;
```

```
                    }
                }
                System.out.println("\t*****USER DETAILS*****");
                System.out.println("\n\tNAME: "+Variable_class.name_arr[ind]);
                System.out.println("\tUSERNAME:
"+Variable_class.userName_arr[ind]);
                System.out.println("\tUSER ID: "+Variable_class.UID[ind]);
                System.out.println("\tPASSWORD(encrypted):
"+Variable_class.password_arr[ind]);
        }
}




//Class Display Transaction Details
package javac;
import java.io.*;
public class DisplayTransactionDetails extends DisplayDetails
{
        public static void Transaction_Details(int uid)throws
IOException,InterruptedException
        {
                int ind = -1;
                for(int i=0;i<Variable_class.UID.length;i++)
                {
                        if(Variable_class.UID[i] == uid)
                        {
                                ind = i;
                                break;
```

```java
                }
        }
        InputStreamReader read = new InputStreamReader(System.in);
        BufferedReader br4 = new BufferedReader(read);
        DisplayDetails.User_Details(uid);
        int ctr_var = 0;
        do
        {
                System.out.println("\n\tWHICH DETAILS DO YOU WANT
TO KNOW?\n");
                System.out.println("\t1.CURRENT
BALANCE\n\t2.PREVIOUS TRANSACTION\n\t3.TRANSACTION
HISTORY\n\t4.EXIT");
                int tra_var = Integer.parseInt(br4.readLine());
                if(tra_var == 1 || tra_var == 2 || tra_var == 3)
                {
                        System.out.print("RETRIEVING INFORMATION...");
                        for(int j = 0;j<6;j++)
                        {
                                System.out.print(".");
                                Thread.sleep(1000);
                        }
                        Thread.sleep(1000);
                        System.out.print("DONE.\n");
                        System.out.println();
                }
                switch(tra_var)
                {
                case 1:
                        System.out.println("CURRENT BALANCE:
Rs."+Variable_class.curr_bal[ind]);
```

```java
                        break;
                case 2:
                        int cnt = Variable_class.transaction_arr_count[ind] - 1;
                        String str =
Variable_class.transaction_arr_Str[ind][cnt];
                        if(str.contains("Deposit"))
                        {
                                System.out.println("DEPOSITED
Rs."+Variable_class.transaction_arr[ind][cnt]+"\tTRANSACTION DATE AND
TIME: "+Variable_class.transaction_arr_DateTime[ind][cnt]);
                        }
                        else if(str.contains("Withdraw"))
                        {
                                System.out.println("WITHDREW
Rs."+Variable_class.transaction_arr[ind][cnt]+"\tTRANSACTION DATE AND
TIME: "+Variable_class.transaction_arr_DateTime[ind][cnt]);
                        }
                        else
                        {

     System.out.println(Variable_class.transaction_arr_Str[ind][cnt]+"\tDate and
time: "+Variable_class.transaction_arr_DateTime[ind][cnt]);
                        }
                        break;
                case 3:
                        int count = Variable_class.transaction_arr_count[ind];
                        System.out.println("TRANSACTION HISTORY: \n");
                        for(int i = 0;i < count;i++)
                        {
                                String str2 =
Variable_class.transaction_arr_Str[ind][i];
```

```java
                    if(str2.contains("Deposit"))
                    {
                            System.out.println("DEPOSITED
Rs."+Variable_class.transaction_arr[ind][i]+"\tTRANSACTION DATE AND
TIME: "+Variable_class.transaction_arr_DateTime[ind][i]);
                    }
                    else if(str2.contains("Withdraw"))
                    {
                            System.out.println("WITHDREW
Rs."+(-1)*Variable_class.transaction_arr[ind][i]+"\tTRANSACTION DATE AND
TIME: "+Variable_class.transaction_arr_DateTime[ind][i]);
                    }
                    else
                    {

      System.out.println(Variable_class.transaction_arr_Str[ind][i]+"\tTRANSAC
TION DATE AND TIME: "+Variable_class.transaction_arr_DateTime[ind][i]);
                    }
                }
                break;
            case 4:
                ctr_var = 1;
                break;
            }
        }while(ctr_var == 0);
    }
}

//Class Sorted User Lists
package javac;
import java.util.*;
```

```java
public class Sorted_User_Lists
{
        String Name;
        int UID;
        double Bal;
        Sorted_User_Lists(String name,int Uid1,double bal)
        {
                Name = name;
                UID = Uid1;
                Bal = bal;
        }
        public String toString()
        {
                return UID + "  \t  " + Name + "  \t  " + Bal+"\n";
        }
}
class Sort_Bal implements Comparator<Sorted_User_Lists>
{
        public int compare(Sorted_User_Lists a, Sorted_User_Lists b)
        {
                double a1,b1;
                a1 = a.Bal;
                b1 = b.Bal;
                if(a1>b1)
                        return 1;
                else
                        return -1;
        }

}
class Sort_Name implements Comparator<Sorted_User_Lists>
```

```java
{
        public int compare(Sorted_User_Lists a, Sorted_User_Lists b)
        {
                String a1,b1;
                a1 = a.Name;
                b1 = b.Name;
                if(a1.compareTo(b1) > 0)
                        return 1;
                else
                        return -1;
        }

}
class Sorted_Lists
{
        public static void main(String args[])throws NullPointerException
        {
                TreeSet<Sorted_User_Lists> ts1 = new
TreeSet<Sorted_User_Lists>(new Sort_Bal());
                TreeSet<Sorted_User_Lists> ts2 = new
TreeSet<Sorted_User_Lists>(new Sort_Name());
                int Set_choice;
                Scanner sc = new Scanner(System.in);
                System.out.println("\tON WHAT BASIS DO YOU WANT TO SEE
THE DETAILS:");
                System.out.println("\t1.ALPHABETICAL ORDER\n\t2.BALANCE");
                Set_choice = sc.nextInt();
                switch(Set_choice)
                {
                case 1:
                        for(int i = 0;i<Variable_class.arr_cnt;i++)
```

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```java
                    {
                            Sorted_User_Lists ob = new
Sorted_User_Lists(Variable_class.name_arr[i],Variable_class.UID[i],Variable_class.
curr_bal[i]);

                            ts2.add(ob);

                    }
                    System.out.println("\nUSERID\tNAME\tBALANCE");
                    for(Sorted_User_Lists o : ts2)
                    {
                            System.out.print(o);
                    }
                    break;
            case 2:
                    for(int i = 0;i<Variable_class.arr_cnt;i++)
                    {
                            Sorted_User_Lists ob = new
Sorted_User_Lists(Variable_class.name_arr[i],Variable_class.UID[i],Variable_class.
curr_bal[i]);

                            ts1.add(ob);

                    }
                    System.out.println("\nUSERID\tNAME\tBALANCE");
                    for(Sorted_User_Lists o : ts1)
                    {
                            System.out.print(o);
                    }
                    break;
            default:
                    System.out.println("WRONG CHOICE!!");
                    break;
            }}
        }
```

OUTPUT OF THE PROGRAM

*****YES BANK******

1.LOGIN

2.REGISTER

3.EXIT

2

HI , WELCOME TO YES BANK :)

PLEASE WAIT.......

ENTER YOUR DETAILS:

ENTER YOUR NAME:

akash vora

ENTER YOUR PHONE NUMBER:

6578975532

SELECT YOUR USERNAME:

akash_vora

YOU USER ID IS: 979928

ENTER YOUR PASSWORD:

akash@123

PLEASE WAIT WHILE WE CREATE YOUR ACCOUNT.........ACCOUNT
CREATED SUCCESSFULLY!!

          *****YES BANK******

          1.LOGIN

          2.REGISTER

          3.EXIT

2

HI , WELCOME TO YES BANK :)

PLEASE WAIT.......

ENTER YOUR DETAILS:

ENTER YOUR NAME:

abhinith bakshi

ENTER YOUR PHONE NUMBER:

9876567897

SELECT YOUR USERNAME:

abhinith_bakshi

YOU USER ID IS: 212804

ENTER YOUR PASSWORD:

abhi_123

PLEASE WAIT WHILE WE CREATE YOUR ACCOUNT.........ACCOUNT
CREATED SUCCESSFULLY!!

*****YES BANK******

1.LOGIN

2.REGISTER

3.EXIT

2

HI , WELCOME TO YES BANK :)

PLEASE WAIT.......

ENTER YOUR DETAILS:

ENTER YOUR NAME:

nayan k

ENTER YOUR PHONE NUMBER:

6768759867

SELECT YOUR USERNAME:

123nayan

YOU USER ID IS: 405207

ENTER YOUR PASSWORD:

srinayan

PLEASE WAIT WHILE WE CREATE YOUR ACCOUNT.........ACCOUNT
CREATED SUCCESSFULLY!!

*****YES BANK******

     1.LOGIN

     2.REGISTER

     3.EXIT

2

HI , WELCOME TO YES BANK :)

PLEASE WAIT.......

ENTER YOUR DETAILS:

ENTER YOUR NAME:

rajesh r

ENTER YOUR PHONE NUMBER:

6758985645

SELECT YOUR USERNAME:

rajesh_Reddy

YOU USER ID IS: 515404

ENTER YOUR PASSWORD:

rajesh

PLEASE WAIT WHILE WE CREATE YOUR ACCOUNT.........ACCOUNT
CREATED SUCCESSFULLY!!

*****YES BANK******

1.LOGIN

2.REGISTER

3.EXIT

1

ENTER YOUR DETAILS:

USER ID:

876547

PASSWORD:

hello

AUTHENTICATING......DONE!!

USER ACCOUNT DOES NOT EXIST :(

DO YOU WANT TO CREATE A NEW ACCOUNT?

1.YES 2.NO

2

THANK YOU FOR USING OUR SERVICES.

LOOKING FORWARD TO HELP YOU :)

*****YES BANK******

1.LOGIN

2.REGISTER

3.EXIT

1

ENTER YOUR DETAILS:

USER ID:

979928

PASSWORD:

akash@123

AUTHENTICATING......DONE!!

LOGIN SUCCESSFUL!!

GETTING STARTED.......DONE!!

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

1

ENTER THE AMOUNT YOU WANT TO DEPOSIT:

100000

PREVIOUS BALANCE: Rs.0.0

PROCESSING......DONE.

TRANSACTION SUCCESSFUL.

CURRENT BALANCE: Rs.100000.0

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

1

ENTER THE AMOUNT YOU WANT TO DEPOSIT:

100000

PREVIOUS BALANCE: Rs.100000.0

PROCESSING......DONE.

TRANSACTION SUCCESSFUL.

CURRENT BALANCE: Rs.200000.0

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

2

CURRENT BALANCE: Rs.200000.0

ENTER THE AMOUNT YOU WANT TO WITHDRAW:

8657

PROCESSING.........DONE.

TRANSACTION SUCCESSFUL :)

NEW BALANCE: Rs.191343.0

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

3

ENTER THE USER ID TO WHICH YOU WANT TO TRANSFER TO:

212804

CURRENT BALANCE: Rs.191343.0

ENTER THE AMOUNT YOU WANT TO TRANSFER:

100000

PROCESSING........DONE.

TRANSACTION SUCCESSFUL :)

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

3

ENTER THE USER ID TO WHICH YOU WANT TO TRANSFER TO:

657845

USER ID NOT FOUND :(

DO YOU WANT TO TRY AGAIN?

1.YES 2.NO

1

ENTER THE USER ID TO WHICH YOU WANT TO TRANSFER TO:

672145

USER ID NOT FOUND :(

DO YOU WANT TO TRY AGAIN?

1.YES 2.NO

2

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

3

ENTER THE USER ID TO WHICH YOU WANT TO TRANSFER TO:

405207

CURRENT BALANCE: Rs.91343.0

ENTER THE AMOUNT YOU WANT TO TRANSFER:

50000

PROCESSING........DONE.

TRANSACTION SUCCESSFUL :)

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

3

ENTER THE USER ID TO WHICH YOU WANT TO TRANSFER TO:

515404

CURRENT BALANCE: Rs.41343.0

ENTER THE AMOUNT YOU WANT TO TRANSFER:

300000

INSUFFICIENT BALANCE :(

TRY AGAIN

ENTER THE AMOUNT YOU WANT TO TRANSFER:

30000

PROCESSING........DONE.

TRANSACTION SUCCESSFUL :)

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

4

*****USER DETAILS*****

NAME: akash vora

USERNAME: akash_vora

USER ID: 979928

PASSWORD(encrypted): xhxpe@123

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

5

*****USER DETAILS*****

NAME: akash vora

USERNAME: akash_vora

USER ID: 979928

PASSWORD(encrypted): xhxpe@123

WHICH DETAILS DO YOU WANT TO KNOW?

1.CURRENT BALANCE

2.PREVIOUS TRANSACTION

3.TRANSACTION HISTORY

4.EXIT

1

RETRIEVING INFORMATION.........DONE.

CURRENT BALANCE: Rs.11343.0

WHICH DETAILS DO YOU WANT TO KNOW?

1.CURRENT BALANCE

2.PREVIOUS TRANSACTION

3.TRANSACTION HISTORY

4.EXIT

2

RETRIEVING INFORMATION.........DONE.

TRANSFERRED Rs.30000.0 TO USER: 515404   Date and time: 2020-11-24T00:46:38.812708100

WHICH DETAILS DO YOU WANT TO KNOW?

1.CURRENT BALANCE

2.PREVIOUS TRANSACTION

3.TRANSACTION HISTORY

4.EXIT

3

RETRIEVING INFORMATION.........DONE.

TRANSACTION HISTORY:

DEPOSITED Rs.100000.0   TRANSACTION DATE AND TIME: 2020-11-24T00:42:48.922205600

DEPOSITED Rs.100000.0   TRANSACTION DATE AND TIME: 2020-11-24T00:43:10.796117

WITHDREW Rs.8657.0   TRANSACTION DATE AND TIME: 2020-11-24T00:43:40.716200300

TRANSFERRED Rs.100000.0 TO USER: 212804   TRANSACTION DATE AND TIME: 2020-11-24T00:44:35.164675300

TRANSFERRED Rs.50000.0 TO USER: 405207   TRANSACTION DATE AND TIME: 2020-11-24T00:45:43.580529200

TRANSFERRED Rs.30000.0 TO USER: 515404   TRANSACTION DATE AND TIME: 2020-11-24T00:46:38.812708100

WHICH DETAILS DO YOU WANT TO KNOW?

1.CURRENT BALANCE

2.PREVIOUS TRANSACTION

3.TRANSACTION HISTORY

4.EXIT

4

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

7

LOGGING OUT............DONE!!

THANK YOU FOR USING OUR SERVICES.

LOOKING FORWARD TO HELP YOU :)

*****YES BANK******

1.LOGIN

2.REGISTER

3.EXIT

1

ENTER YOUR DETAILS:

USER ID:

212804

PASSWORD:

abhi_123

AUTHENTICATING......DONE!!

LOGIN SUCCESSFUL!!

GETTING STARTED.......DONE!!

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

5

*****USER DETAILS*****

NAME: abhinith bakshi

USERNAME: abhinith_bakshi

USER ID: 212804

PASSWORD(encrypted): xygh_123

WHICH DETAILS DO YOU WANT TO KNOW?

1.CURRENT BALANCE

2.PREVIOUS TRANSACTION

3.TRANSACTION HISTORY

4.EXIT

2

RETRIEVING INFORMATION.........DONE.

RECEIVED Rs.100000.0 FROM USER: 979928   Date and time: 2020-11-24T00:44:35.164675300

WHICH DETAILS DO YOU WANT TO KNOW?

1.CURRENT BALANCE

2.PREVIOUS TRANSACTION

3.TRANSACTION HISTORY

4.EXIT

4

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

1

ENTER THE AMOUNT YOU WANT TO DEPOSIT:

23430

PREVIOUS BALANCE: Rs.100000.0

PROCESSING......DONE.

TRANSACTION SUCCESSFUL.

CURRENT BALANCE: Rs.123430.0

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

2

CURRENT BALANCE: Rs.123430.0

ENTER THE AMOUNT YOU WANT TO WITHDRAW:

4000

PROCESSING.........DONE.

TRANSACTION SUCCESSFUL :)

NEW BALANCE: Rs.119430.0

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

3

ENTER THE USER ID TO WHICH YOU WANT TO TRANSFER TO:

979928

CURRENT BALANCE: Rs.119430.0

ENTER THE AMOUNT YOU WANT TO TRANSFER:

30000

PROCESSING........DONE.

TRANSACTION SUCCESSFUL :)

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

3

ENTER THE USER ID TO WHICH YOU WANT TO TRANSFER TO:

405207

CURRENT BALANCE: Rs.89430.0

ENTER THE AMOUNT YOU WANT TO TRANSFER:

12000

PROCESSING........DONE.

TRANSACTION SUCCESSFUL :)

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

3

ENTER THE USER ID TO WHICH YOU WANT TO TRANSFER TO:

515404

CURRENT BALANCE: Rs.77430.0

ENTER THE AMOUNT YOU WANT TO TRANSFER:

10000

PROCESSING........DONE.

TRANSACTION SUCCESSFUL :)

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

4

*****USER DETAILS*****

NAME: abhinith bakshi

USERNAME: abhinith_bakshi

USER ID: 212804

PASSWORD(encrypted): xygh_123

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

5

*****USER DETAILS*****

NAME: abhinith bakshi

USERNAME: abhinith_bakshi

USER ID: 212804

PASSWORD(encrypted): xygh_123

WHICH DETAILS DO YOU WANT TO KNOW?

1.CURRENT BALANCE

2.PREVIOUS TRANSACTION

3.TRANSACTION HISTORY

4.EXIT

1

RETRIEVING INFORMATION.........DONE.

CURRENT BALANCE: Rs.67430.0

WHICH DETAILS DO YOU WANT TO KNOW?

1.CURRENT BALANCE

2.PREVIOUS TRANSACTION

3.TRANSACTION HISTORY

4.EXIT

3

RETRIEVING INFORMATION.........DONE.

TRANSACTION HISTORY:

RECEIVED Rs.100000.0 FROM USER: 979928   TRANSACTION DATE AND TIME: 2020-11-24T00:44:35.164675300

DEPOSITED Rs.23430.0   TRANSACTION DATE AND TIME: 2020-11-24T00:50:14.637549800

WITHDREW Rs.4000.0   TRANSACTION DATE AND TIME: 2020-11-24T00:50:48.269138700

TRANSFERRED Rs.30000.0 TO USER: 979928   TRANSACTION DATE AND TIME: 2020-11-24T00:51:16.733316

TRANSFERRED Rs.12000.0 TO USER: 405207   TRANSACTION DATE AND TIME: 2020-11-24T00:52:03.309225600

TRANSFERRED Rs.10000.0 TO USER: 515404   TRANSACTION DATE AND TIME: 2020-11-24T00:52:41.149531100

WHICH DETAILS DO YOU WANT TO KNOW?

1.CURRENT BALANCE

2.PREVIOUS TRANSACTION

3.TRANSACTION HISTORY

4.EXIT

2

RETRIEVING INFORMATION.........DONE.

TRANSFERRED Rs.10000.0 TO USER: 515404   Date and time: 2020-11-24T00:52:41.149531100

WHICH DETAILS DO YOU WANT TO KNOW?

1.CURRENT BALANCE

2.PREVIOUS TRANSACTION

3.TRANSACTION HISTORY

4.EXIT

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

7

LOGGING OUT............DONE!!

THANK YOU FOR USING OUR SERVICES.

LOOKING FORWARD TO HELP YOU :)

*****YES BANK******

1.LOGIN

2.REGISTER

3.EXIT

1

ENTER YOUR DETAILS:

USER ID:

405207

PASSWORD:

srinayan

AUTHENTICATING......DONE!!

LOGIN SUCCESSFUL!!

GETTING STARTED.......DONE!!

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

3

ENTER THE USER ID TO WHICH YOU WANT TO TRANSFER TO:

979928

CURRENT BALANCE: Rs.62000.0

ENTER THE AMOUNT YOU WANT TO TRANSFER:

13450

PROCESSING........DONE.

TRANSACTION SUCCESSFUL :)

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

2

CURRENT BALANCE: Rs.48550.0

ENTER THE AMOUNT YOU WANT TO WITHDRAW:

5678

PROCESSING.........DONE.

TRANSACTION SUCCESSFUL :)

NEW BALANCE: Rs.42872.0

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

5

*****USER DETAILS*****

NAME: nayan k

USERNAME: 123nayan

USER ID: 405207

PASSWORD(encrypted): lkbgtrtg

WHICH DETAILS DO YOU WANT TO KNOW?

1.CURRENT BALANCE

2.PREVIOUS TRANSACTION

3.TRANSACTION HISTORY

4.EXIT

1

RETRIEVING INFORMATION.........DONE.

CURRENT BALANCE: Rs.42872.0

WHICH DETAILS DO YOU WANT TO KNOW?

1.CURRENT BALANCE

2.PREVIOUS TRANSACTION

3.TRANSACTION HISTORY

4.EXIT

3

RETRIEVING INFORMATION.........DONE.

TRANSACTION HISTORY:

RECEIVED Rs.50000.0 FROM USER: 979928 TRANSACTION DATE AND
TIME: 2020-11-24T00:45:43.580529200

RECEIVED Rs.12000.0 FROM USER: 212804 TRANSACTION DATE AND
TIME: 2020-11-24T00:52:03.309225600

TRANSFERRED Rs.13450.0 TO USER: 979928 TRANSACTION DATE AND
TIME: 2020-11-24T00:55:08.430592800

WITHDREW Rs.5678.0   TRANSACTION DATE AND TIME: 2020-11-24T00:55:26.942042

WHICH DETAILS DO YOU WANT TO KNOW?

1.CURRENT BALANCE

2.PREVIOUS TRANSACTION

3.TRANSACTION HISTORY

4.EXIT

4

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

7

LOGGING OUT...........DONE!!

THANK YOU FOR USING OUR SERVICES.

LOOKING FORWARD TO HELP YOU :)

*****YES BANK******

1.LOGIN

2.REGISTER

3.EXIT

1

ENTER YOUR DETAILS:

USER ID:

515404

PASSWORD:

rajesh

AUTHENTICATING......DONE!!

LOGIN SUCCESSFUL!!

GETTING STARTED.......DONE!!

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

5

*****USER DETAILS*****

NAME: rajesh r

USERNAME: rajesh_Reddy

USER ID: 515404

PASSWORD(encrypted): qzidrg

WHICH DETAILS DO YOU WANT TO KNOW?

1.CURRENT BALANCE

2.PREVIOUS TRANSACTION

3.TRANSACTION HISTORY

4.EXIT

3

RETRIEVING INFORMATION.........DONE.

TRANSACTION HISTORY:

RECEIVED Rs.30000.0 FROM USER: 979928   TRANSACTION DATE AND TIME: 2020-11-24T00:46:38.812708100

RECEIVED Rs.10000.0 FROM USER: 212804   TRANSACTION DATE AND TIME: 2020-11-24T00:52:41.149531100

WHICH DETAILS DO YOU WANT TO KNOW?

1.CURRENT BALANCE

2.PREVIOUS TRANSACTION

3.TRANSACTION HISTORY

4.EXIT

4

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

7

LOGGING OUT...........DONE!!

THANK YOU FOR USING OUR SERVICES.

LOOKING FORWARD TO HELP YOU :)

*****YES BANK******

1.LOGIN

2.REGISTER

3.EXIT

1

ENTER YOUR DETAILS:

USER ID:

979928

PASSWORD:

akash@123

AUTHENTICATING......DONE!!

LOGIN SUCCESSFUL!!

GETTING STARTED.......DONE!!

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

5

*****USER DETAILS*****

NAME: akash vora

USERNAME: akash_vora

USER ID: 979928

PASSWORD(encrypted): xhxpe@123

WHICH DETAILS DO YOU WANT TO KNOW?

1.CURRENT BALANCE

2.PREVIOUS TRANSACTION

3.TRANSACTION HISTORY

4.EXIT

2

RETRIEVING INFORMATION.........DONE.

RECEIVED Rs.13450.0 FROM USER: 405207   Date and time: 2020-11-24T00:55:08.430592800

WHICH DETAILS DO YOU WANT TO KNOW?

1.CURRENT BALANCE

2.PREVIOUS TRANSACTION

3.TRANSACTION HISTORY

4.EXIT

3

RETRIEVING INFORMATION.........DONE.

TRANSACTION HISTORY:

DEPOSITED Rs.100000.0   TRANSACTION DATE AND TIME: 2020-11-24T00:42:48.922205600

DEPOSITED Rs.100000.0   TRANSACTION DATE AND TIME: 2020-11-24T00:43:10.796117

WITHDREW Rs.8657.0   TRANSACTION DATE AND TIME: 2020-11-24T00:43:40.716200300

TRANSFERRED Rs.100000.0 TO USER: 212804   TRANSACTION DATE AND TIME: 2020-11-24T00:44:35.164675300

TRANSFERRED Rs.50000.0 TO USER: 405207   TRANSACTION DATE AND TIME: 2020-11-24T00:45:43.580529200

TRANSFERRED Rs.30000.0 TO USER: 515404   TRANSACTION DATE AND TIME: 2020-11-24T00:46:38.812708100

RECEIVED Rs.30000.0 FROM USER: 212804   TRANSACTION DATE AND TIME: 2020-11-24T00:51:16.733316

RECEIVED Rs.13450.0 FROM USER: 405207   TRANSACTION DATE AND TIME: 2020-11-24T00:55:08.430592800

WHICH DETAILS DO YOU WANT TO KNOW?

1.CURRENT BALANCE

2.PREVIOUS TRANSACTION

3.TRANSACTION HISTORY

4.EXIT

4

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

6

ON WHAT BASIS DO YOU WANT TO SEE THE DETAILS:

1.ALPHABETICAL ORDER

2.BALANCE

1

USERID	NAME	BALANCE
212804	abhinith bakshi	67430.0
979928	akash vora	54793.0
405207	nayan k	42872.0
515404	rajesh r	40000.0

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

6

ON WHAT BASIS DO YOU WANT TO SEE THE DETAILS:

1.ALPHABETICAL ORDER

2.BALANCE

2

USERID	NAME	BALANCE
515404	rajesh r	40000.0
405207	nayan k	42872.0
979928	akash vora	54793.0
212804	abhinith bakshi	67430.0

AVAILABLE OPTIONS IN OUR BANKING SYSTEMS:

1.DEPOSIT

2.WITHDRAW

3.TRANSFER TO ANOTHER USER

4.DISPLAY USER DETAILS

5.DISPLAY TRANSACTION DETAILS

6.DISPLAY CUSTOMER LIST

7.LOG OUT

7

LOGGING OUT...........DONE!!

THANK YOU FOR USING OUR SERVICES.

LOOKING FORWARD TO HELP YOU :)

    *****YES BANK******

    1.LOGIN

    2.REGISTER

    3.EXIT

3

THANK YOU!!

FUTURE WORK

We would like to extend this project by adding real time data storage applications using an online Database service such as MySQL.

REFERENCES

- Java: The Complete Reference 7th Edition by Herbert Schildt
- **https://www.geeksforgeeks.com**
- **https://www.javatpoint.com**
- https://docs.oracle.com/javase/tutorial/
- https://www.slideshare.net/
- https://stackoverflow.com/