PROGRAM 5

Develop a Java program to create a class Bank that maintains two kinds of account for its customers, one called a savings account and the other a current account. The savings account provides compound interest and withdrawal facilities but no cheque book facility. The current account provides cheque book facility but no interest. Current account holders should also maintain a minimum balance and if the balance falls below this level, a service charge is imposed. Create a class Account that stores customer name, account number and type of account. From this derive the classes Cur-acct and Sav-acct to make them more specific to their requirements. Include the necessary methods in order to achieve the following tasks:

- a) Accept deposit from customer and update the balance.
- b) Display the balance.
- c) Compute and deposit interest
- d) Permit withdrawal and update the balance Check for the minimum balance, impose penalty if necessary and update the balance.

CODE:

```
import java.util.Scanner;
import java.lang.Math;
class account
        String name=new String();
        int accno;
        double bal;
        Scanner s=new Scanner(System.in);
               void set()
                        System.out.println("Enter customer name");
                        name=s.nextLine();
                        System.out.println("Enter "+name+"'s account number");
                        accno=s.nextInt();
                        System.out.println("Enter balance amount ");
                        bal=s.nextDouble();
               void display()
                        System.out.println("Customer Name:"+name);
                        System.out.println("Your account number:"+accno);
```

```
System.out.println("Your Account Balance:"+bal);
        account(){}
}
class savacct extends account
        Scanner s=new Scanner(System.in);
        savacct()
        {
                System.out.println("Cheque Facility not available ");
        }
        void deposit()
        {
                int ch;
                double amt;
                System.out.println("Press 1 to deposit ");
                ch=s.nextInt();
                if(ch==1)
                {
                         System.out.println("Enter amount to be deposited");
                         amt=s.nextDouble();
                         bal=bal+amt;
                else
                         System.out.println("Invalid Input");
        }
        void in()
        {
                System.out.println("Enter rate of interest ");
                double r=s.nextDouble();
                System.out.println("Enter number of times interest applied per time period");
                int n=s.nextInt();
                System.out.println("Enter number of time periods");
                int t=s.nextInt();
                double x=(1+(r/n));
                double ci=bal*Math.pow(x,n*t);
                System.out.println("Interest amount="+ci+" \nBalance amount without interest is"+bal);
                bal=bal+ci;
                System.out.println("Available balance after updating is"+bal);
        }
        void wd()
                System.out.println("Press 1 to withdraw ammount");
                int ch=s.nextInt();
                if(ch==1)
                {
```

```
System.out.println("Enter the amount to be withdrawn ");
                double wdraw=s.nextDouble();
                bal=bal-wdraw;
                System.out.println("Available Balance:"+bal);}
                else System.out.println("Invalid input");
        }
}
class curacct extends account
        Scanner s=new Scanner(System.in);
        curacct()
        {
                System.out.println("Cheque Facility available ");
        void deposit()
                int ch;
                double amt;
                System.out.println("Press 1 to deposit ");
                ch=s.nextInt();
                if(ch==1)
                {
                        System.out.println("Enter amount to be deposited ");
                        amt=s.nextDouble();
                        bal=bal+amt;
                }
                else
                        System.out.println("Invalid Input");
void wd()
                System.out.println("Press 1 to withdraw ammount");
                int ch=s.nextInt();
                if(ch==1)
                System.out.println("Enter the amount to be withdrawn ");
                double wdraw=s.nextDouble();
                bal=bal-wdraw;
                System.out.println("Available Balance:"+bal);}
                else System.out.println("Invalid input");
                if(bal<1000)
                {
                        System.out.println("You are running out of minimum balance \n Penalty Amount
of rs 50 has been credited as service charge for having low balance");
                        bal=bal-50;
                        System.out.println("Your Available Balance:"+bal);
```

```
}
        }
}
public class Lab5
public static void main(String xx[])
        Scanner s=new Scanner(System.in);
        int ch;
        System.out.println ("\n\n\Press\n1. if your account is savings account \n2. if your account is current
account");
        ch=s.nextInt();
        switch(ch)
        {
                case 1:
                                 savacct s1=new savacct();
                                 s1.set();
                                 s1.display();
                                 s1.deposit();
                                 s1.in();
                                 s1.wd();
                                 break;
                case 2:
                                 curacct c1=new curacct();
                                 c1.set();
                                 c1.display();
                                 c1.deposit();
                                 c1.wd();
                                 break;
                default: System.exit(0);
        }
}
}
```

OBSERVATION:

```
PROGRAM-5
Develop a Java program to create a class Bank that maintains two kinds of accounts called
gavings account & the current account.
import java util Scanner:
Emport java long math;
class account
  String name = new string()
Ent accno;
    double bal:
   Scanner 8: new Scanner (system-in)
       void set ()
         System out Println ("Enter austomer name"):
           name = s.nextline();
        System out Println ("Enter" + name" 's account no. "):
         acono - s. next Int ();
        System out Println (" Enter balance amount").
         bal - s next Double ();
   void display()
    System out Printin ("customer name," + name);
   System out Println ("Your account number: "+accoo);
   System. out Println ( your Account balance: "+ bal);
 account () EZ
```

```
ch = 8. next Int ():
                                                                      4 (an == 1)
                                                                       System out Println ("Enter amount to be deposited")
                                                                         ant = 8 next Double ();
                                                                         bal - bal + amt;
                                                                           System out println ("invalid Input");
                                                                    vaid in ()
                                                                    System out. Println (" Ento rate of interest");
                                                                    double r = S. next Double ();
                                                                   System out Println (Enter number of times intoust applied for time bould );
                                                                     int n = 9. next Int();
                                                                  System out Printle C"Enter number of time pounds 1):
                                                                   Int t . s . next Intl);
double X both (1+ (1/n));
double Cf anath pow (x, n+1);
                                                               roid diposit ()
                                                                  Ent ch
System out printly ("Intrust amount=" + c2 + " \n Balana amount
                                                                   double amt;
                  without entirest is "+ bal);
                                                                   system out prouth ( Pros 1 to deposit ").
                                                                   ch - s next Int () ? I am to the man and
 bal = bal + cl.
System at Printin ("Available balance after updating is "+bot"
                                                                   if (ch == 1)
                                                                    System out printle (Enter amount to be disposited ");
void wall
                                                                    amt . 9 next Double ():
                                                                    bal - bal +amt;
  System out Println ("Press 1 to withdraw amount")
  in t ch = & nextInt();
                                                                     System out println ( invalid bipilt").
    System out printer ("Enter the amount to be with drawn").
                                                                  roid wdc)
    double wodnaw . S. next Double ()
                                                                    System out Println (Press 1 to withdraw the amount ")
    bal-bal-waraw
                                                                    ent on = 8 number();
   System out printin ("Available balana: "+ bal);
                                                                    il (ch = =1)
    else
                                                                    System out. println ("Enter amount to be withdrawn");
       System out Println (" Invalid input")
                                                                     double waraw = 5. next Double ();
                                                                     bal - bal - waraw;
  class currect extends account
                                                                    System out Printin (" Available balance" + bal )
   Scanners - new Scanner (system in);
   award ()
     System out printin (" origin Facility available");
                                                                     System out println ("invalid inbut");
```

class savacet extinds account

Savacet ()

Void deposit ()

int ch; double amt

Beanner & - new Beannor (system in).

System out Println ("chique Facility not available")

System out Println (" Press 1 to deposit");

```
if (pal < 1000)
                                                                    81 diposit()
                                                                   81. in ():
 System out Printle ( you are summing out of minimum balana In a Amount of 18 50 has
                                                                   s1.wdC).
                                                                  break;
                  bun tredited as service charge for having
                                                             Case 2 !
                  tow balance");
                                                              curacit e 1 - nuo avacit ();
                                                                 c1 sutdata ();
  bal = bal - 50;
 System out Printin ("Your orailable balana" + bal)
                                                                  c1 display();
                                                                c1 abosit()
                                                                  break:
                                                               default: system exit (0),
Public class lab 5
Public static void main (string *x())
 Scanner S= new Scanner (system in)
  System out frintln ("In In Press In 1. if your account
                                                         Press
                     is bavings amount in
                                                         1. if your account is savings account
                                                        a if your account is current account
                     2. if your account is withen
                           awount");
                                                         cheque Facility not available
  on = s. nextint ();
                                                         Enter customer name
   swetch (chi)
                                                         Gamana
                                                         Enter Gamana's account number
              Savacel 31 - new savade ();
                                                          123456
               51 set();
                                                         Enta balana amount
              81. display ();
                                                          10 000
 customer Name : gamana
                                                         Enter customer name
 Your Account Number: 193456
                                                          gamana
```

```
Enter customer name

gamana

Enter gamana's account number

12.3 456

Enta balance amount

10 000

austomer name: Gamana

Yace Account number: 133466

Your Account Balana: 10000

Press 1 to diposit

1

Enter amount to be diposited

1000

Press 1 to withdraw amount

1

Ento the amount to be withdrawn

1000

A vailable Balana: 10000
```

OUTPUT:

