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LAB-Program 5

Q Develop a Java program to create a class Bank that maintains two kinds of account for its customers, one called savings account and the other current account. The savings account provides compound interest but no cheque book facility. The current account provides cheque book facility but no interest. Current account holders should also maintain minimum balance and if 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 Curr-acct. and Sav-acct to make them more specific to the requirements. Include required methods to do the following tasks:- Display the balance. Compute and deposit interest. Permit withdrawal and update balance. Check for minimum balance impose penalty if needed. and update balance.

CODE:
```
import java.util.Scanner;
abstract class Account{
String cName,accType;
long AccNo;
double bal;
final double minBal=1000.0;

Account(String cName, long accNo, double bal,
 String accType)
  {
```

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```
this.accNo=accNo;
this.cName = cName;
this.bal=bal
this.accType = accType;
 }
 abstract void addBal(double amt);
 abstract void dispBal();
 abstract void withBal(double amt);
}
class Curr_acct extends Account
 {
  curr_acct(String cName, long accNo, double bal)
   {
   super(cName, accNo, bal, "Current");
   System.out.println("name:"+cName+
   "\taccno:"+accNo+"\tbal:"+bal+
"\ttype:"+accType);
}
void addBal(double amt)
   {
    this.bal+=amt;
  }
void dispBal()
  {
  System.out.println("Your balance is:"+this.bal);
  }
void withBal(double amt)
     {
     if(this.bal==0||amt>this.bal)
     {
      System.out.println("withdrawal not
                       possible");
```

}

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```
else
 {
 this.bal-=amt;
 checkBal();
  }
}
void checkBal()
   {
   If(this.bal<minBal)
       {
       this.bal--=this.bal*0.02;
        }
       }
  }
class Sav-acct extends Account
         {
         Sav_acct(String cName, long accNo,double
           bal)·
        {
        super(cName,accNo,bal,"Savings");
System.out.println("name: "+cName+"\t
 accno: "+accNo+"\t bal: "+bal+"\t type:"
 +accType);

  }
void addIntr()
   {
    this.bal+=this.bal*0.07;
   }
void dispBal()
     {
     System.out.println("Your balance is"+this.bal)
     }
```

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```
void withBal (double amt)
  {
   if(this.bal==0 ||amt > this.bal)
    {
     System.out.println("withdrawal not
      possible");
    }
   else
    {
     this.bal -=amt;
    }
  }
}
class Account_test
 {
 public static void main (String [] args)
  {
  Scanner sc=new Scanner (System.in);
Double amt;
int flag=0;
while (flag ==0)
  {
 System.out.println("1: ~~Add amount~~ Current ac \n 2 : Savings 4
 displayBal \n default : exit");
  int ch = sc.nextInt();
  String nam;
 long acno;
double balan;
 switch(ch)
   {
   case 1:
    System.out.println ("Enter name, acno,
```

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```
initial balance in order:");
name=sc.next();
 acno=sc.nextLong();
 balan =sc.nextDouble();
  curr-acct c=new curr-acct(name,acno,
  balan);
 system.out.println("\n current_acct\n");
 int flag1=0;
 while (flag1 ==0)
   {
   System.out.println("1:Addamount\n2:
 display Balance \n3:withdraw \ndefault:
 exit");
 int ch1=sc.nextInt();
 ~~while (c1.~~
  switch (ch1)
     {
 case 1:
   System.out.println("enter amt to be added");
       amt=sc.nextDouble();
       c.addBal(amt);
       break;

  case2:
   c.dispBal();
   ~~break;~~

 case 3:
  System.out.println("Enter amt to be withdrawn");
      amt =sc.nextDouble();
      c.withBal(amt);
      break;
```

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```
default:
flag1 = 1;
}
}
break;
case 2:
 system.out.println("\n Savings_acct \n");
 System.out.println("Enter name, acno,
 initial balance in order:");
 nam = sc.next();
 acno = sc.nextLong();
balan = sc.nextDouble();
San_acct s = new San_acct(nam, acno,
                         balan);
int flag2 = 0;
while(flag2 == 0)
 system.out.println("1:AddBal\n2:displayBal
3: withdraw \n default: exit");
 int ch2 = sc.nextInt();
switch (ch2)
 {
case 1:
 System.out.println("enter amt to be added:");
 amt = sc.nextDouble();
 s.addBal(amt);
 break;
case 2:
 s.dispBal();
 break;
case 3:
System.out.println("enter amt to be withdraws");
amt = sc.nextDouble();
```

```
s. withBal (amt);
break;

default:
  flag2 = 1;
 }
}
break;
default:
  flag=1;
}
}
}
}
```