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1BM19CS133
C2 batch

classmate
Date
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LAB PROGRAM : 5

```
import java.util.Scanner;
Class account
{
private String name;
private int accountNumber;
private String type;
public Account (String name, int accountNumber, String type)
{
this.name = name;
this.accountNumber = accountNumber;
this.type = type;
}
public void setName (String Name)
{
this.name = name;
}
public void setAccountNumber (int accountNumber)
{
this.accountNumber = accountNumber;
}
public void setType (String type)
{
this.type = type;
}
public String getName ()
{
return this.name;
}
public int getAccountNumber ()
{
```

```
return this.accountNumber;
}
public string getType():
{
return this.type;
}
}
class Curr_acct extends Account
{
private double balance;
private boolean checkBook;
private static double minBalance;
private static double serviceCharge;
public static double getServiceCharge()
{
return serviceCharge;
}
public Curr_acct(String name, int accountNumber, String type,
                 boolean checkBook)
{
super(name, accountNumber, type);
this.checkBook = checkBook;
this.balance = 0;
}
static
{
minBalance = 1000.00;
serviceCharge = 5.00;
}
public double getBalance()
{
return this.balance;
```

```
}
public void deposit (double amt)
{
this.balance += amt;
}
public int withdraw (double amt)
{
if (this.balance - amt < minBalance && this.balance - amt > 0)
{
 this.balance -= serviceCharge * 0.01* amt;
 this.balance -= amt;
 return 1;
}
if (this.balance - amt < 0)
{
 return -1;
}
 this.balance -= amt
 return 2;
}
}
class Sav-acct extends Account
{
 private double balance;
 private static double interestRate;
 public Sav-acct (String name, int accountNumber, String type)
{
super (name, accountNumber, type);
this.balance = 0;
}
Static
{
```

```
interestRate = 8.0;
}
public double getBalance()
{
 return this.balance;
}
public void deposit(double amt)
{
 this.balance += amt;
}
public int withdraw(double amt)
{
 if(this.balance - amt < 0)
 {
  return -1;
 }
 this.balance -= amt;
 return 2;
}
public double calculateInterest()
{
 double amt = (this.balance * (1.0 + (interestRate * 0.01)));
 double interest = amt - this.balance;
 this.balance = amt;
 return interest;
}
}
class BankMain
{
public static void main(String args[])
{
Scanner s = new Scanner(System.in);
```

```
System.out.println("Enter the name");
String name = s.next();
System.out.println("Enter the account number");
Int accountNumber = s.nextInt();
System.out.println("Enter the type");
System.out.println("1. Savings");
System.out.println("2. Current");
int type = s.nextInt();
if(type==2)
{
System.out.println("Do you want a check book?? Y or n");
String checkBookString = s.next();
boolean checkBook;
if(checkBookString=="Y")
 checkBook= true;
else
 checkBook = false;
Curr_acct curr_acct =new
Curr_acct(name, accountNumber, "Current", checkBook);
 int c;
 do
{
 displayMenu(false);
 c = s.nextInt();
 double amt;
 switch(c)
{
 case 1:
System.out.println("The balance in account is "+curr_acct.getBalance());
break;
 case 2:
System.out.println("Enter the amount to deposit");
```

```
amt = s.nextDouble();
curr_acct.deposit(amt);
System.out.println("The balance in account is "+curr_acct.
                                    getBalance());

break;
case 3:
System.out.println("Enter the amount to withdraw");
amt = s.nextDouble();
int exp = curr_acct.withdraw(amt);
if (exp==1)
System.out.println("An service charge of "+(curr_acct.getServiceCharge
                    *0.001*amt)+" was deducted");

else if (exp==-1)
System.out.println("Insufficient Balance");
System.out.println("The balance in account is "+curr_acct.
                                    getBalance());

break;
case 5:
break;
default:
System.out.println("Please enter valid choice");
}
}
while(ch!=5);
}
else if (type==1)
{
 Sav_acct sav_acct = new
Sav_acct(name, accountNumber, "Savings");
 int c;
 do
{
```

```
displayMenu(true);
c = s.nextInt();
double amt;
switch(c)
{
case 1:
System.out.println("The balance in account is "+sav_acct.getBalance());
break;
case 2:
System.out.println("Enter the amount to deposit");
amt = s.nextDouble();
sav_acct.deposit(amt);
System.out.println("The balance in account is "+sav_acct.getBalance());
break;
case 3;
System.out.println("Enter the amount to withdraw");
amt = s.nextDouble();
int exp = sav_acct.withdraw(amt);
if(exp==-1)
System.out.println("Insufficient Balance");
System.out.println("The balance in account is "+sav_acct.getBalance());
break;
case 4:
System.out.println("The interest amount is "+sav_acct.calculateInterest());
System.out.println("The balance in account is "+sav_acct.getBalance());
break;
case 5:
break;
default:
System.out.println("Please enter valid choice");
}
}
```

```
while (c! =5);
}
}
public static void display menu (boolean is savings Account)
{
System.out.println ("1. Check balance");
System.out.println ("2. Deposit Cash");
System.out.println ("3. Withdraw Cash");
if (is Savings Account)
System.out.println ("4. Calculate Interest");
System.out.println ("5. Exit");
System.out.println ("Enter your choice");
}
}
```

BankMain - Notepad

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```
import java.util.Scanner;
class Account{
    private String name;
    private int accountNumber;
    private String type;
    public Account(String name,int accountNumber,String type){
        this.name=name;
        this.accountNumber=accountNumber;
        this.type=type;
    }
    public void setName(String name){
        this.name=name;
    }
    public void setAccountNumber(int accountNumber){
        this.accountNumber=accountNumber;
    }
    public void setType(String type){
        this.type=type;
    }
    public String getName(){
        return this.name;
    }
    public int getAccountNumber(){
        return this.accountNumber;
    }
    public String getType(){
        return this.type;
    }
}
class Curr_acct extends Account{
    private double balance;
    private boolean checkBook;
    private static double minBalance;
    private static double serviceCharge;
    public static double getServiceCharge(){
        return serviceCharge;
```

```
    }
    public Curr_acct(String name,int accountNumber,String type,boolean checkBook){
        super(name,accountNumber,type);
        this.checkBook=checkBook;
        this.balance=0;
    }
    static{
        minBalance=1000.00;
        serviceCharge=5.00;
    }
    public double getBalance(){
        return this.balance;
    }
    public void deposit(double amt){
        this.balance+=amt;
    }
    public int withdraw(double amt){
        if(this.balance-amt<minBalance && this.balance-amt>0){
            this.balance-=serviceCharge*0.01*amt;
            this.balance-=amt;
            return 1;
        }if(this.balance-amt<0){
            return -1;
        }
        this.balance-=amt;
        return 2;
    }
}
class Sav_acct extends Account{
    private double balance;
    private static double interestRate;
    public Sav_acct(String name,int accountNumber,String type){
        super(name,accountNumber,type);
        this.balance=0;
    }
    static{
```

```
        interestRate=8.0;
    }
    public double getBalance(){
        return this.balance;
    }
    public void deposit(double amt){
        this.balance+=amt;
    }
    public int withdraw(double amt){
        if(this.balance-amt<0){
            return -1;
        }
        this.balance-=amt;
        return 2;
    }
    public double calculateInterest(){
        double amt=(this.balance*(1.0+(interestRate*0.01)));
        double interest=amt-this.balance;
        this.balance=amt;
        return interest;
    }

lass BankMain{
    public static void main(String args[]){
        Scanner s=new Scanner(System.in);
        System.out.println("Enter the name");
        String name=s.next();
        System.out.println("ENter the account number");
        int accountNumber=s.nextInt();
        System.out.println("Enter the type");
        System.out.println("1.Savings");
        System.out.println("2.Current");
        int type=s.nextInt();
        if(type==2){
            System.out.println("Do u want a check book ?? y or n");
            String checkBookString=s.next();
```

```
String checkBookString=s.next();
boolean checkBook;
if(checkBookString=="y")
    checkBook=true;
else
    checkBook=false;
Curr_acct curr_acct=new Curr_acct(name,accountNumber,"Current",checkBook);
int c;
do{
    displayMenu(false);
    c=s.nextInt();
    double amt;
    switch(c){
        case 1:
            System.out.println("The balance in account is "+curr_acct.getBalance());
            break;
        case 2:
            System.out.println("Enter the amount to deposit");
            amt=s.nextDouble();
            curr_acct.deposit(amt);
            System.out.println("The balance in account is "+curr_acct.getBalance());
            break;
        case 3:
            System.out.println("Enter the amount to withdraw");
            amt=s.nextDouble();
            int exp=curr_acct.withdraw(amt);
            if(exp==1)
                System.out.println("An service charge of "+(Curr_acct.getServiceCharge()*0.01*amt)+" was deducted");
            else if(exp==-1)
                System.out.println("Insufficent Balance");
            System.out.println("The balance in account is "+curr_acct.getBalance());
            break;
        case 5:
            break;
        default:
            System.out.println("Please enter valid choice");
```

BankMain - Notepad

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```
            }
        }while(c!=5);
    }else if(type==1){
        Sav_acct sav_acct=new Sav_acct(name,accountNumber,"Savings");
        int c;
        do{
            displayMenu(true);
            c=s.nextInt();
            double amt;
            switch(c){
                case 1:
                    System.out.println("The balance in account is "+sav_acct.getBalance());
                    break;
                case 2:
                    System.out.println("Enter the amount to deposit");
                    amt=s.nextDouble();
                    sav_acct.deposit(amt);
                    System.out.println("The balance in account is "+sav_acct.getBalance());
                    break;
                case 3:
                    System.out.println("Enter the amount to withdraw");
                    amt=s.nextDouble();
                    int exp=sav_acct.withdraw(amt);
                    if(exp==-1)
                        System.out.println("Insufficent Balance");
                    System.out.println("The balance in account is "+sav_acct.getBalance());
                    break;
                case 4:
                    System.out.println("The interest amount is "+sav_acct.calculateInterest());
                    System.out.println("The balance in account is "+sav_acct.getBalance());
                    break;
                case 5:
                    break;
                default:
                    System.out.println("Please enter valid choice");
            }
```

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```
            }
        }while(c!=5);
    }
}
public static void displayMenu(boolean isSavingsAccount){
    System.out.println("1.Check balance");
    System.out.println("2.Deposit Cash");
    System.out.println("3.Withdraw Cash");
    if(isSavingsAccount)
        System.out.println("4.Calculate Interest");
    System.out.println("5.Exit");
    System.out.println("Enter your choice");
}
}
```