

```
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{
```



```
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;
        }
    }
}
```



```
        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(){
```



```
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 u 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);
```



```
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("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(c!=5);
```



```
}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("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;
```



```
        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 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");
}
}
```

Command Prompt

C:\Users\sohan\Desktop\Java Programs\bank>java BankMain

Enter the name

Sohan

Enter the account number

34213

Enter the type

1.Savings

2.Current

1

1.Check balance

2.Deposit Cash

3.Withdraw Cash

4.Calculate Interest

5.Exit

Enter your choice

2

Enter the amount to deposit

59999999

The balance in account is 5.9999999E7

1.Check balance

2.Deposit Cash

3.Withdraw Cash

4.Calculate Interest

5.Exit

Enter your choice

4

The interest amount is 4799999.920000002

The balance in account is 6.479999892E7

1.Check balance

2.Deposit Cash

3.Withdraw Cash

4.Calculate Interest

5.Exit

Enter your choice

3

Enter the amount to withdraw

5000

The balance in account is 6.479499892E7

1.Check balance

2.Deposit Cash

3.Withdraw Cash

4.Calculate Interest

5.Exit

Enter your choice

5

C:\Users\sohan\Desktop\Java Programs\bank>



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15:25
07-11-2020

