WEEK - 5

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 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

Code:

```java
import java.util.*;
import java.lang.*;
class Account
{
public String acc_name;
public double acc_no;
public int acc_type;
public double balance;
public void getdata(String name,double no,int type,double bal)
{

acc_name=name;
acc_no=no;
acc_type=type;
balance=bal;
}
}
class Savings extends Account
{
public void deposit(double amt)
{
balance=balance+amt;
System.out.println(balance);
}
public void withdraw(double amt)
{
balance=balance-amt;
```

```java
System.out.println(balance);
}
public void interest(int time,int no)
{
double intr=balance*(1+6/no);
intr=Math.pow(intr,(time*no));
System.out.println("Intertest calculated is"+intr);

balance=balance+intr;
System.out.println("The new balance is"+balance);
}
}
class Current extends Account
{
public void deposit(double amt)
{
balance=balance+amt;
System.out.println(balance);
}
public void withdraw(double amt)
{
balance=balance-amt;
System.out.println(balance);
check(balance);
}
public void check(double amt)
{
if(amt<10000)
{
balance =balance-500;
System.out.println("Insufficient Balance"+balance);

}
}

}
class prog
{
public static void main(String args[])
{
Scanner sc=new Scanner(System.in);
int temp=1;
while(temp==1)
{
```

```java
double amt=0;
System.out.println("Enter name");
sc.next();
String name=sc.nextLine();
System.out.println("Enter acc_no");
double no=sc.nextDouble();
System.out.println("Enter acc_type\n0 for Savings\n1 for Current");
int type=sc.nextInt();
do
{
System.out.println("Enter balance");

amt=sc.nextDouble();
}while(type==1 && amt<10000);
if(type==0)
{
Savings s=new Savings();
s.getdata(name,no,type,amt);
System.out.println("\n1. Deposit\n2. Withdraw\n3. Interest");
int temp3=sc.nextInt();
if(temp3==1)
{
System.out.println("Enter Amoumt");
double amt1=sc.nextDouble();
s.deposit(amt1);
}
else if(temp3==2)
{
System.out.println("Enter Amoumt");
double amt1=sc.nextDouble();
s.withdraw(amt1);
}
else if(temp3==3)
{
System.out.println("Enter time period");

int tp=sc.nextInt();
System.out.println("Enter no of times");
int nof=sc.nextInt();
s.interest(tp,nof);
}
}
else if(type==1)
{
```

```java
Current c=new Current();
c.getdata(name,no,type,amt);
System.out.println("\n1. Deposit\n2. Withdraw");
int temp3=sc.nextInt();
if(temp3==1)
{
System.out.println("Enter Amoumt");
double amt1=sc.nextDouble();
c.deposit(amt1);
}
else if(temp3==2)
{
System.out.println("Enter Amoumt");
double amt1=sc.nextDouble();
c.withdraw(amt1);

}

}
System.out.println("To continue 1 else 0");
temp=sc.nextInt();
}
}
}
```

Outputs:

```
C:\Users\Admin\Documents\vk>java prog
Enter name
vandan
Enter acc_no
124421
Enter acc_type
0 for Savings
1 for Current
0
Enter balance
10000

1. Deposit
2. Withdraw
3. Interest
1
Enter Amoumt
10000
20000.0
To continue 1 else 0
1
```

```
Enter name
vandan
Enter acc_no
124421
Enter acc_type
0 for Savings
1 for Current
0
Enter balance
10000

1. Deposit
2. Withdraw
3. Interest
2
Enter Amoumt
5000
5000.0
To continue 1 else 0
```

```
1
Enter name
vandan
Enter acc_no
124421
Enter acc_type
0 for Savings
1 for Current
0
Enter balance
10000

1. Deposit
2. Withdraw
3. Interest
3
Enter time period
2
Enter no of times
1
Intertest calculated is4.9E9
The new balance is4.90001E9
To continue 1 else 0
```

```
Enter name
vandan1
Enter acc_no
124421
Enter acc_type
0 for Savings
1 for Current
1
Enter balance
100000

1. Deposit
2. Withdraw
1
Enter Amoumt
100000
200000.0
To continue 1 else 0
```

```
Enter name
vandan124421
Enter acc_no
124421
Enter acc_type
0 for Savings
1 for Current
1
Enter balance
100000

1. Deposit
2. Withdraw
2
Enter Amoumt
50000
50000.0
To continue 1 else 0
```