# WEEK 05

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.

Check for the minimum balance, impose penalty if necessary and update the balance

## ANSWER

```
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)

{
```

```java
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;

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)
```

```java
{
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 Main
{
public static void main(String args[])
{
Scanner sc=new Scanner(System.in);
int temp=1;
while(temp==1)
{
double amt=0;
System.out.println("Enter name");
```

```java
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\n\2.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)
```

```java
{
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)
{
Current c=new Current();
c.getdata(name,no,type,amt);
System.out.println("\n1.Deposit\n\2.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();

}

}

}
```

```
08-12-2022   14:33               881 Rectangle1.class
15-12-2022   14:16             1,174 Savings.class
01-12-2022   15:24               366 SGPA.class
01-12-2022   15:10             1,553 SGPA.java
01-12-2022   15:29            54,568 SGPA.WEEK2.docx
08-12-2022   14:33               239 Shape.class
01-12-2022   15:24             2,316 Student.class
08-12-2022   14:33               880 Triangle.class
07-12-2022   12:08           110,745 WEEK 5.docx
15-12-2022   14:14             2,593 week5.java
              25 File(s)        590,260 bytes
               2 Dir(s)  165,035,511,808 bytes free

C:\Users\Admin\Desktop\1BM21CS233>javac week5.java

C:\Users\Admin\Desktop\1BM21CS233>java Main
Enter name
vaibhav
Enter acc_no
234
Enter acc_type
0 for Savings
1 for Current
0
Enter balance
6000

1.Deposit
0.Withdraw
3.Interest
3
Enter time period
2
Enter no of times
3
Intertest calculated is3.4012224E25
The new balance is3.4012224E25
To continue 1 else 0
```

```
Enter name
VAIBHAV KIRAN P
Enter acc_no
456
Enter acc_type
0 for Savings
1 for Current
1
Enter balance
7890
```

```
C:\Users\Admin\Desktop\1BM21CS233>javac week5.java

C:\Users\Admin\Desktop\1BM21CS233>java Main
Enter name
vaibhav kiran p
Enter acc_no
567
Enter acc_type
0 for Savings
1 for Current
0
Enter balance
4566788

1.Deposit
0.Withdraw
3.Interest
1
Enter Amoumt
5657
4572445.0
To continue 1 else 0
```

```
Enter name
vaibhav kiran p
Enter acc_no
3546
Enter acc_type
0 for Savings
1 for Current
0
Enter balance
56890

1.Deposit
0.Withdraw
3.Interest
2
Enter Amoumt
35345
21545.0
To continue 1 else 0
```