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

```
import java.util.Scanner;


class Account
{
   Scanner x = new Scanner(System.in);
   String name = new String();
   int accno;
   String acct_type = new String();
   int balance;
   int deposit;
   int withdrawal;


   void create_account()
   {
      System.out.println("Enter name and accno and account type:");
      this.name = x.next();
      this.accno = x.nextInt();
      this.acct_type=x.next();
   }
}
```

```
class Cur_acct extends Account
{
   int min_balance=2000,pro;
   Cur_acct(){}

   void accept()
   {
      System.out.println("Enter amount to be deposited: ");
      deposit = x.nextInt();
      this.balance = this.balance+deposit;
   }
   void display()
   {
      System.out.println("CURRENT BALANCE:" + this.balance);
   }
   void withdraw()
   {
      if(balance<2000)
      {

         System.out.println("PENALTY TO BE IMPOSED!");
  System.out.println("Do you want to proceed?");
         pro = x.nextInt();
         if(pro == 1)
{
System.out.println("Amount to be withdrawn?");
                  this.withdrawal = x.nextInt();
this.balance = this.balance-this.withdrawal;
```

```
            System.out.println("Current balance: "+balance);
}
  else
{
System.out.println("Withdrawal revoked!");
}
        }
        else
        {
        System.out.println("Enter withdrawal amount:");
        withdrawal = x.nextInt();
        this.balance = this.balance - withdrawal;
        }
    }
}

class Sav_acct extends Account
{
    int time=0;
    Sav_acct()
    {}
    void accept()
    {
        System.out.println("Enter amount to be deposited: ");
        deposit = x.nextInt();
        this.balance = this.balance+deposit;
    }
    void display()
    {
```

```
        System.out.println("CURRENT BALANCE:" + this.balance);
    }
    void withdraw()
    {
    System.out.println("Enter withdrawal amount:");
    withdrawal = x.nextInt();
    this.balance = this.balance - withdrawal;
    }
    void interest()
    {
        System.out.println("UPDATED BALANCE!");
        this.balance = this.balance*(1+time*(5/100));
        System.out.println("BALANCE:" + this.balance);
    }
}

class BANK{
    public static void main(String[] args) {
        int choice,f=1;
        Account a = new Account();
        a.create_account();
        Scanner x = new Scanner(System.in);



        if(a.acct_type.equals("Current_account"))
        {
            Cur_acct c = new Cur_acct();
            while(f==1)
            {
```

```
        System.out.println("1.DEPOSIT  2.DISPLAY 3.WITHDRAW 4.EXIT");
        System.out.println("Enter your choice:");
        choice = x.nextInt();

        switch(choice)
        {
           case 1:
              c.accept();
                        break;

           case 2:
              c.display();
                        break;


           case 3:
              c.withdraw();
              break;

           case 4:
              f=0;
        }
     }
}
else if(a.acct_type.equals("Savings_account"))
{
    Sav_acct s = new Sav_acct();
    while(f==1)
```

```
  {
     s.time = s.time+1;
     System.out.println("1.DEPOSIT  2.DISPLAY 3.WITHDRAW 4.COMPUTE 5.EXIT");
     System.out.println("Enter your choice:");
     choice = x.nextInt();

     switch(choice)
     {
        case 1:
           s.accept();
             break;

        case 2:
           s.display();
           break;

        case 3:
           s.withdraw();
                    break;

        case 4:
           s.interest();
                    break;

        case 5:
           f=0;
     }
  }
}
```

```
    }
}
```

```
C:\Users\G Sai Madhav\Desktop\OOJ\JAVA PROGRAMS\6TH JAVA PROGRAM>javac BANK.java

C:\Users\G Sai Madhav\Desktop\OOJ\JAVA PROGRAMS\6TH JAVA PROGRAM>java BANK
Enter name and accno and account type:
VIKRANT
203
Current_account
1.DEPOSIT  2.DISPLAY 3.WITHDRAW 4.EXIT
Enter your choice:
1
Enter amount to be deposited:
50000
1.DEPOSIT  2.DISPLAY 3.WITHDRAW 4.EXIT
Enter your choice:
3
Enter withdrawal amount:
600
1.DEPOSIT  2.DISPLAY 3.WITHDRAW 4.EXIT
Enter your choice:
2
CURRENT BALANCE:49400
1.DEPOSIT  2.DISPLAY 3.WITHDRAW 4.EXIT
Enter your choice:
3
Enter withdrawal amount:
48000
1.DEPOSIT  2.DISPLAY 3.WITHDRAW 4.EXIT
Enter your choice:
2
CURRENT BALANCE:1400
1.DEPOSIT  2.DISPLAY 3.WITHDRAW 4.EXIT
Enter your choice:
3
PENALTY TO BE IMPOSED!
Do you want to proceed?
1
Amount to be withdrawn?
1200
Current balance: 200
1.DEPOSIT  2.DISPLAY 3.WITHDRAW 4.EXIT
Enter your choice:
4
```

```
Enter name and accno and account type:
VIKRANT
204
Savings_account
1.DEPOSIT  2.DISPLAY 3.WITHDRAW 4.COMPUTE 5.EXIT
Enter your choice:
1
Enter amount to be deposited:
50000
1.DEPOSIT  2.DISPLAY 3.WITHDRAW 4.COMPUTE 5.EXIT
Enter your choice:
2
CURRENT BALANCE:50000
1.DEPOSIT  2.DISPLAY 3.WITHDRAW 4.COMPUTE 5.EXIT
Enter your choice:
4
UPDATED BALANCE!
BALANCE:50000
1.DEPOSIT  2.DISPLAY 3.WITHDRAW 4.COMPUTE 5.EXIT
Enter your choice:
3
Enter withdrawal amount:
40000
1.DEPOSIT  2.DISPLAY 3.WITHDRAW 4.COMPUTE 5.EXIT
Enter your choice:
2
CURRENT BALANCE:10000
1.DEPOSIT  2.DISPLAY 3.WITHDRAW 4.COMPUTE 5.EXIT
Enter your choice:
5
```