NAME: ANSHUL H. SURANA
USN: 1BM19CS020

(0-5) Develop a Java Program to create a class Bank that maintains two kinds of account for its customers, one called the savings account and the other current account. The savings account provides compound interest & withdrawal facilities but no cheque book facilities. The current account provides cheque book facility but no interest. Current account holders should also maintain a minimum balance & if the balance falls below the level, a service charge is imposed. Create a class Account that stores customer name, account number and type of account. From these derive the classes Curr-act and Sav-act to make them more specific to their requirements. Include the necessary methods in order to achieve following task

- Accept deposit from customer & update the balance. Display the balance. Compute and deposit interest. Permit withdrawal & update the balance. Check for the minimum balance, impose penalty if necessary & update the balance.

①

Anshul H. Surana

```java
import java.util.Scanner;
import java.lang.Math;

class Account
{   String name, type, accno;
    double balance;


    void deposit()
    {   Scanner get = new Scanner(System.in);
        double depo;
        System.out.println("Enter deposit:");
        depo = get.nextDouble();
        balance = balance + depo;
    }
    void withdraw()
    {   Scanner get = new Scanner(System.in);
        double withdraw;
        System.out.println("Enter the amount
                        to withdraw (<"+balance+");
        withdraw = get.nextDouble();
        balance = balance - withdraw;
        System.out.println("Balance:"+ balance);
    }
}

class Curr_acct extends Account
{   int intr = 6;
    boolean cheque = true;
    void dispblnc()
    {   System.out.println("Balance:"+balance);
    }
    void create()
    {
```

Anshul H. Surana

```java
{ Scanner get = new Scanner (System.in);
  System.out.println ("Name:");
  name = get.next();
  accno = "current";
  System.out.println ("Account No.");
  accno = get.next();
  System.out.println ("Balance:");
  balance = get.nextDouble();
}
void check()
{ System.out.println ("In Minimum Balance" +
                                    5000);
    if (balance < 5000)
    {
        System.out.println ("Penalty is
            imposed please deposit minimum"
      +(5000 - balance + 200) +" RS\nRS
                    200 Service charge");
      deposit();
      balance = balance - 200;
    }
    else
    { System.out.println ("Balance:" + balance +
                        "Safe"); }
}
}
class Sav_acct extends Account
{ double intr = 7;
    boolean cheque = false;
    void dispblnc()
{ System.out.println ("Balance:" + balance);
}
```

③

```java
void Create()
{ Scanner get = new Scanner (System.in);
  System.out.println ("Name:");
  name = get.next();
  accno = "savings";
  System.out.println ("Account No:");
  accno = get.next();
  System.out.println ("Balance:");
  balance = get.nextDouble();
}

void calcint()
{ double interest;
  Scanner get = new Scanner (System.in);
  System.out.println ("Enter time:");
  int time;
  time = get.nextInt();
  interest = balance * Math.pow(1+intr/100,
                      time) - balance;
  System.out.println ("Interest:" + interest);
  balance = balance + interest;
  System.out.println ("Balance:" + balance);
}
}

class Bank
{ public static void main (String args[])
  { Scanner get = new Scanner (System.in);
    String type;
    Sav_acct accs = new Sav_acct();
    Curr_acct accr = new Curr_acct();
    System.out.println ("Enter type of account:
                    (current / savings)");
    type = get.next();
```

(4)

Anshul H. Surana

```java
if (type.equals ("savings"))
    accs.create();
else if (type.equals ("current"))
    acct.create();

int ch;
do
{ System.out.println ("\n1. Deposit | n2. Display
                Balance \n3. Deposit Interest
        \n4. withdraw \n5. check | n6. Cheque
                    Book (under development)
                    \n7. Exit");
    ch = get.nextInt();
    switch (ch)
    { case 1:  if (type.equals ("savings"))
            accs.deposit();
        else
        acct.deposit();
        break;
    case 2:  if (type.equals ("savings"))
            accs.dispblnc();
        else
        acct.dispblnc();
        break;
    case 3: if (type.equals ("savings"))
            accs.calcint();
        else
        System.out.println("This account does
                not have this provision";
        break;
    case 4: if (type.equals ("savings"))
            accs.withdraw();
        else
```

(5)   Anshul H. Surana

```
            acct. withdraw ();
            break;
case 5:   if (type. equals ("savings"))
          System.out.println ("This account
                    does   not  have
            this   provision");
            else
                acct. check();
                break;
case 6:  if (type. equals (" savings"))
         System.out.println ("This  account
                does not have provision");
        break;
default:   if (ch != 7)
            System.out.println(" Enter valid
                                 option");
    }
while (ch != 7);
```

Anshul H. Suvara.