8). 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 class 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.

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

class account
{
String name = new String();
 int accno;
 double bal;
 Scanner s = new Scanner (System.in);
 void set()
 {
 System.out.println ("Enter customer name");
  name = s.nextLine();
 System.out.println ("Enter "+name+"'s account number");
  accno = s.nextInt();
 System.out.println ("Enter balance amount");
  bal = s.nextDouble();
  }
 void display()
{
S.O.P("Customer Name : "+name);
S.O.P ("Your account numbr : "+accno);
S.O.P ("Your account balance : "+bal);
}
 account() {}
 }

class savacct extends account
 {
   Scanner s = new Scanner (System.in);
   savacct()
   {
   S.O.P ("Cheque Facility not available");
   }
```

```
void deposit()
{
  int ch;
  double amt;
  S.O.P ("Press 1 to deposit");
  ch = S.nextInt();
  if (ch == 1)
{
 S.O.P ("Enter amount to be deposited");
  amt = S.nextDouble();
  bal = bal + amt;
}
else
S.O.P ("Invalid Input");
}
Void in()
{
S.O.P ("Enter rate of intrest");
double r = S.nextDouble();
S.O.P ("Enter number of times intrest applied
        per time period");
int n = S.nextInt();
S.O.P ("Enter number of time periods");
int t = S.nextInt();
double x = (1+(r/100));
double ci = balance * Math.pow(x,n);
S.O.P ("Intrest amount = "+ci+"\n
        Balance amount without intrest is "+bal);
bal = bal+ci;
S.O.P ("Available balance after updating is "+bal);
}
```

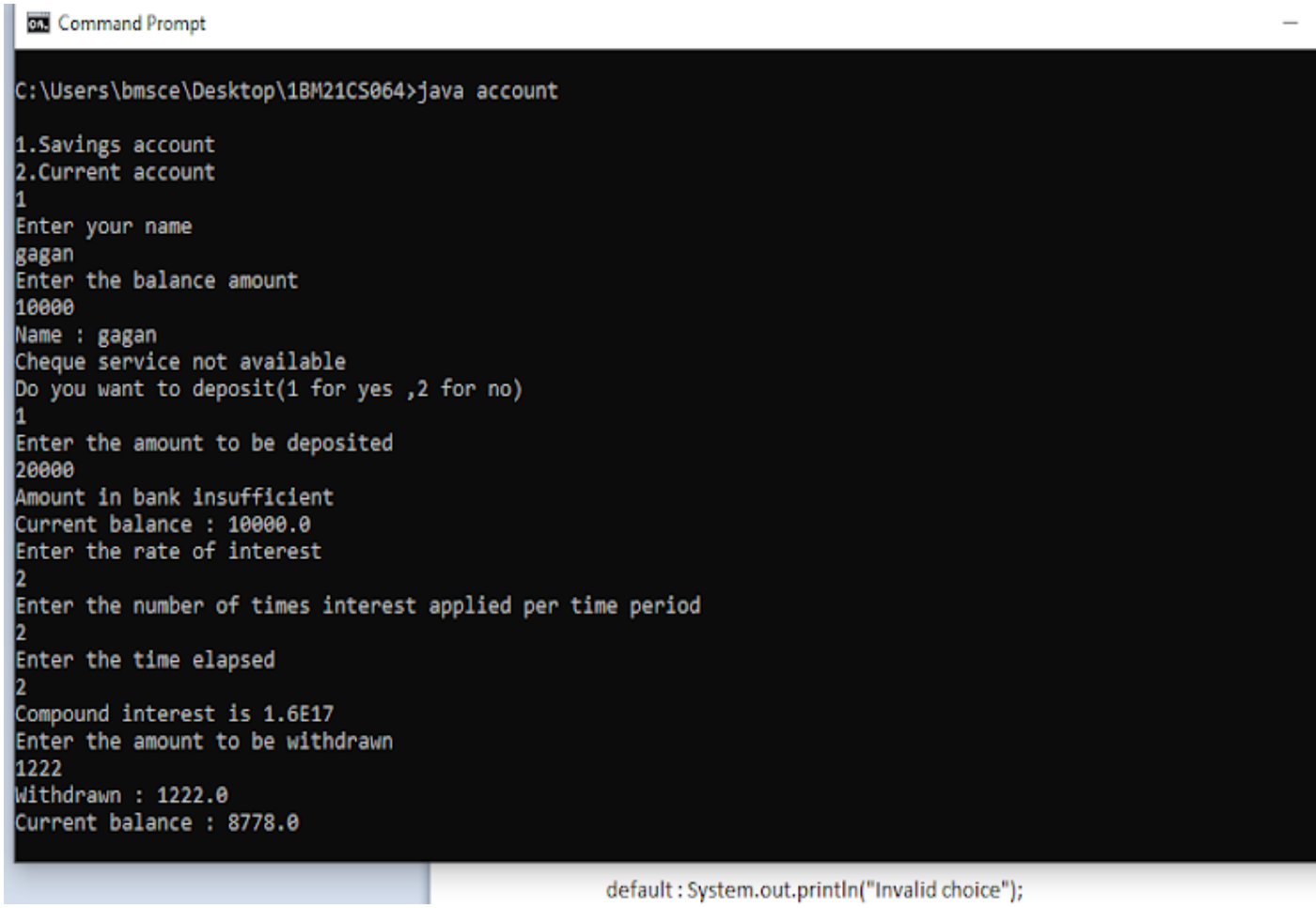
```
void wd()
{
  S.O.P ("Press 1 to withdraw amount");
   int ch = s.nextInt();
   if (ch==1)
{
  S.O.P ("Enter the amount to be withdrawn");
   double wdraw = s.nextDouble();
 if (wdraw>bal)
 { S.O.P ("Balance is less than withdrawl amt"); return;}
else
bal = bal-wdraw;
S.O.P ("Available Balance:"+bal); }
 else S.O.P ("Invalid input");
 }
}

class curacct extends acount
{
Scanner s = new Scanner (System.in);
 curacct()
{
 S.O.P ("Cheque facility available");
 }
void deposit()
{
   int ch;
  double amt;
  S.O.P ("Press 1 to deposit");
   ch = s.nextInt();
  if (ch==1)
{
  S.O.P ("Enter amount to be deposited");
   amt = s.nextDouble();
    bal = bal+amt;
```

```
else
S.O.P ("Invalid Input");
}
Void wd()
{
S.O.P ("Press 1 to withdraw amount");
int ch = s.nextInt();
if (ch==1)
{
S.O.P ("Enter the amount to be
withdrawn: ");
double wdraw = s.nextDouble();
bal = bal - wdraw;
S.O.P ("Available balance:" +bal); }
else
S.O.P ("Invalid input");
if (bal < 1000)
{
S.O.P ("Balance below minimum amount, In
A penalty of 50Rs has been credited");
bal = bal - 50;
S.O.P ("Your available balance:" +bal);
}
}
}
public class Lab5
{
psvm (String **CJ)
{
Scanner s = new Scanner
```

```
int ch;
S.O.P (
ch = s. nex
switch (
{
case 1:
savacct
A. set
A. disp
A. dep
A. in
A. wo
break;
case 2:
wdra
C1.
C1.
C1
}
}
}
```

```
int ch;
S.O.P (" Enter your account type:
        1. Savings account \n 2. Current account");
ch = S. nextInt();
switch (ch)
{
case 1:
SavAcct S1 = new SavAcct ();
 S1. set ();
 S1. display ();
 S1. deposit ();
 S1. in ();
 S1. wd ();
 break;
case 2:
CurAct C1 = new CurAct ();
 C1. set ();
 C1. display ();
 C1. wd ();
 break;
default : System. exit(0);
 }
}
}
```




```
default : System.out.println("Invalid choice");
```