

Bangladesh University of Professionals (BUP)



Faculty of Science and Technology
Department of Information & Communication Technology (ICT)

Course Title: Object Oriented Design and Programming-II

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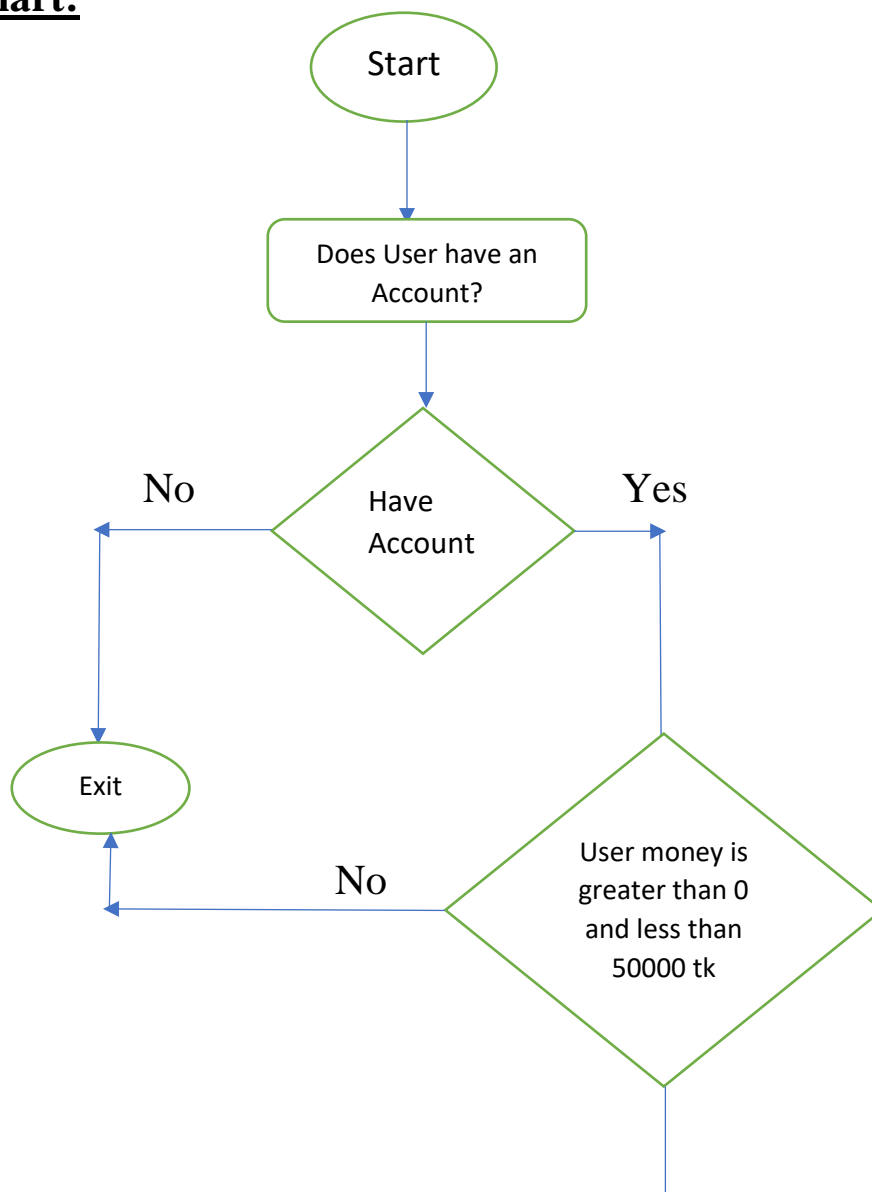
Question :

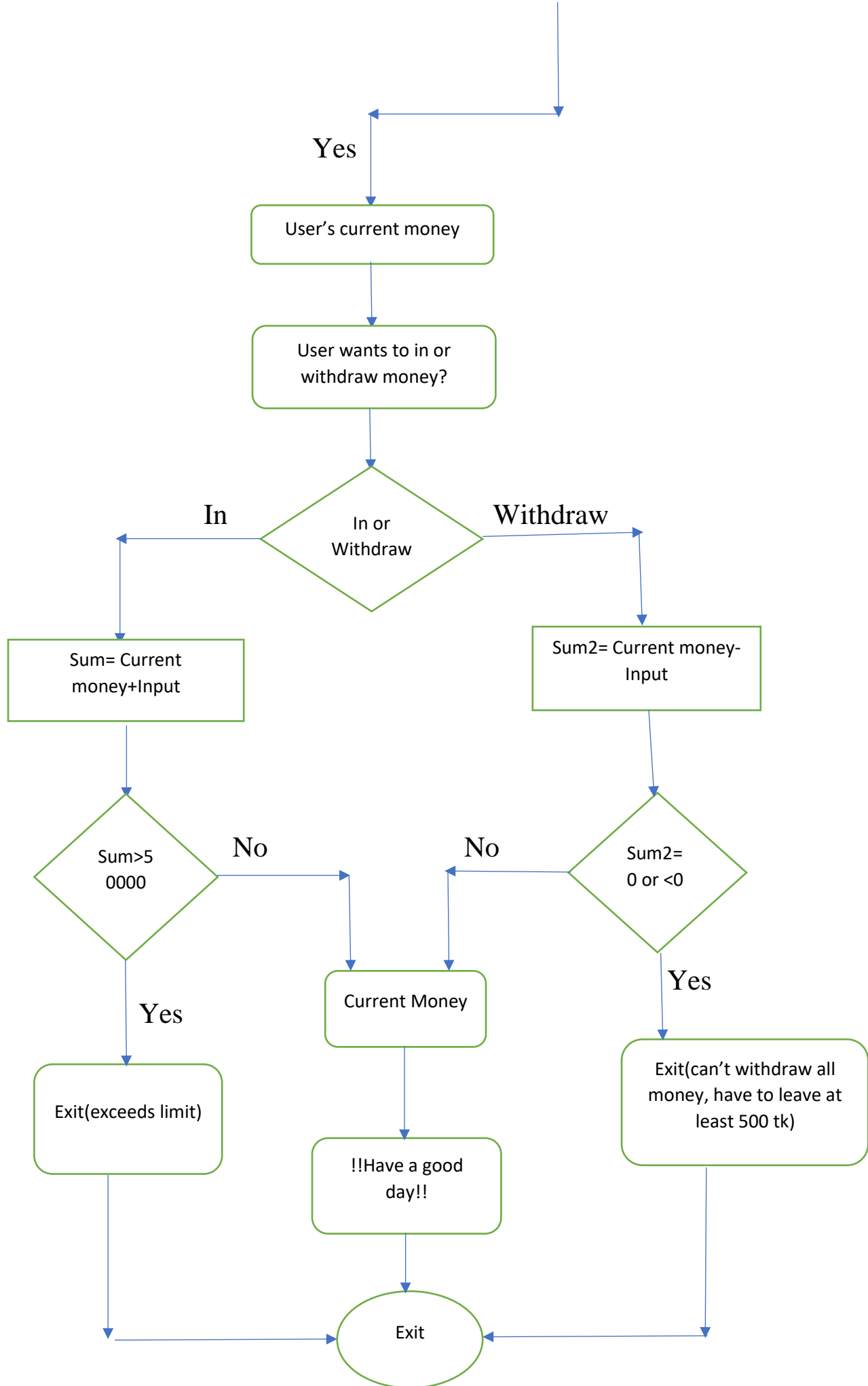
Create a project, where there will be more than one user define exceptions and they will be handled in the code.

An overview of the project:

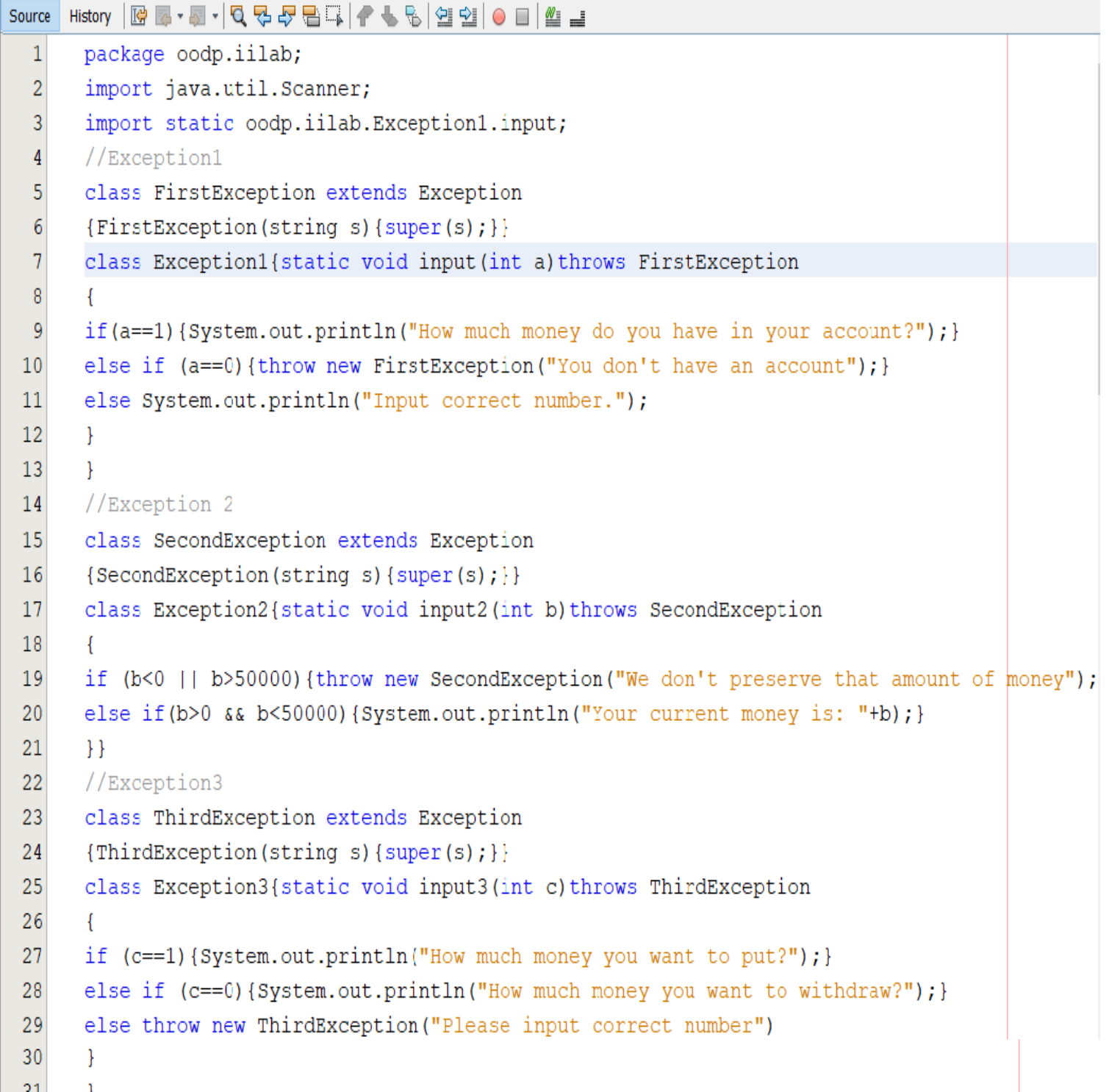
This project is about an ATM Bank. In an ATM bank, there can occurred several types of exceptions like limit crossing in the capability of the ATM bank, whether the user has an account or not, withdrawing money which can go against the ATM rule or inputting money which can be go above the capability of the atm machine. In this project there has been used 5 user define exception.

Flow Chart:





Source Code:



```
1 package oodp.iilab;
2 import java.util.Scanner;
3 import static oodp.iilab.Exception1.input;
4 //Exception1
5 class FirstException extends Exception
6 {FirstException(string s){super(s);}}
7 class Exception1{static void input(int a)throws FirstException
8 {
9 if(a==1){System.out.println("How much money do you have in your account?");}
10 else if (a==0){throw new FirstException("You don't have an account");}
11 else System.out.println("Input correct number.");
12 }
13 }
14 //Exception 2
15 class SecondException extends Exception
16 {SecondException(string s){super(s);}}
17 class Exception2{static void input2(int b)throws SecondException
18 {
19 if (b<0 || b>50000){throw new SecondException("We don't preserve that amount of money");}
20 else if(b>0 && b<50000){System.out.println("Your current money is: "+b);}
21 }}
22 //Exception3
23 class ThirdException extends Exception
24 {ThirdException(string s){super(s);}}
25 class Exception3{static void input3(int c)throws ThirdException
26 {
27 if (c==1){System.out.println("How much money you want to put?");}
28 else if (c==0){System.out.println("How much money you want to withdraw?");}
29 else throw new ThirdException("Please input correct number")
30 }
31 }
```

```

31     }
32     //Exception4
33     class FourthException extends Exception
34     {FourthException(string s){super(s);}}
35     class Exception4{static void input4(int d)throws FourthException
36     {
37         if(d>50000){throw new FourthException("Exceeds the bank capability");}
38         else if(d>0 && d<50000){System.out.println("Your current money is: "+d);}
39     }
40     }
41     //Exception5
42     class Exception5{static void input5(int e)throws FourthException
43     {
44         if(e<0 || e==0){throw new FourthException(
45             "You can't withdraw all money, you have to have at least 500tk")}
46         else if(e>0){System.out.println("Your current money is: "+e);}
47     }
48     }
49

```

```

49
50     public class AtmBank {
51         public static void main(String[] args) {
52             Scanner obj1= new Scanner(System.in);
53             System.out.println("Select options: ");
54             System.out.println("If you have an Account input 1");
55             System.out.println("If you don't have an account input 0");
56             System.out.print("Your input: ");
57             int in1= obj1.nextInt();
58             try{input(in1);}
59             catch(Exception m){System.out.println(
60                 "Exception occurred:You don't have an account, creat one first ");
61                 System.exit(0);}
62
63             System.out.print("Your input: ");
64             int in2= obj1.nextInt();
65             Exception2 obj2= new Exception2();
66             try{obj2.input2(in2);}
67             catch(Exception n){System.out.println(
68                 "Exception occurred: We don't preserve that amount of money");
69                 System.exit(0);}
70         }

```

```

71
72     System.out.println("If you want to input money type 1");
73     System.out.println("If you want to withdraw money type 0");
74     System.out.print("Your input: ");
75     int in3= obj1.nextInt();
76     Exception3 obj3= new Exception3();
77     try{obj3.input3(in3);}
78     catch(Exception o){System.out.println(
79         "Exception Occured: Please input correct number");}
80
81     System.out.print("Your input: ");
82     if(in3==1){
83         int in4= obj1.nextInt();
84         int sum=in2+in4;
85         Exception4 obj4= new Exception4();
86         try{obj4.input4(sum);}
87         catch(Exception p){System.out.println(
88             "Exception occured:Exceeds the bank capability(50000)");}}
89     else if(in3==0){
90         int in5= obj1.nextInt();
91         int sum2= in2-in5;
92         Exception5 obj5= new Exception5();
93         try{obj5.input5(sum2);}
94         catch(Exception q){System.out.println(
95             "Exception Occured: You can't withdraw all your money.You have to leave 500tk
96         )
97         System.out.println("!!Have a good day!!");
98     }}
99
100

```

Outputs:

No.1: All things are correctly inputed

```
Output - OODP-II Lab (run) X
run:
Select options:
If you have an Account input 1
If you don't have an account input 0
Your input: 1
How much money do you have in your account?
Your input: 25000
Your current money is: 25000
If you want to input money type 1
If you want to withdraw money type 0
Your input: 1
How much money you want to put?
Your input: 10000
Your current money is: 35000
!!Have a good day!!
BUILD SUCCESSFUL (total time: 32 seconds)
|
```

No. 2: Don't have an account

```
Output - OODP-II Lab (run) X
run:
Select options:
If you have an Account input 1
If you don't have an account input 0
Your input: 0
Exception occurred: You don't have an account, creat one first
BUILD SUCCESSFUL (total time: 5 seconds)
|
```

No. 3: Exceeds the capability

```
Output - OODP-II Lab (run) X
run:
Select options:
If you have an Account input 1
If you don't have an account input 0
Your input: 1
How much money do you have in your account?
Your input: 65000
Exception occurred: We don't preserve that amount of money
BUILD SUCCESSFUL (total time: 22 seconds)
```

No. 4: If inputed wrong

```
Output - OODP-IIILab (run) X
run:
Select options:
If you have an Account input 1
If you don't have an account input 0
Your input: 1
How much money do you have in your account?
Your input: 10000
Your current money is: 10000
If you want to input money type 1
If you want to withdraw money type 0
Your input: 3
Exception Occured: Please input correct number
Your input: !!Have a good day!!
BUILD SUCCESSFUL (total time: 8 seconds)
|
```

No. 5: If summed money is over 50000

```
Output - OODP-IIILab (run) X
run:
Select options:
If you have an Account input 1
If you don't have an account input 0
Your input: 1
How much money do you have in your account?
Your input: 30000
Your current money is: 30000
If you want to input money type 1
If you want to withdraw money type 0
Your input: 1
How much money you want to put?
Your input: 21000
Exception occured:Exceeds the bank capability(50000)
!!Have a good day!!
BUILD SUCCESSFUL (total time: 15 seconds)
|
```

No. 6: If summed money is less than 0 or 0

```
Output - OODP-IIILab (run) X
run:
Select options:
If you have an Account input 1
If you don't have an account input 0
Your input: 1
How much money do you have in your account?
Your input: 50000
If you want to input money type 1
If you want to withdraw money type 0
Your input: 0
How much money you want to withdraw?
Your input: 50000
Exception Occured: You can't withdraw all your money.You have to leave 500tk
!!Have a good day!!
BUILD SUCCESSFUL (total time: 13 seconds)
```