NORTH WESTERN UNIVERSITY

LAB REPORT

Course Title   : Object Oriented Programming Laboratory

Course Code : CSE-2102

Problem No : 02

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Submitted By

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Submitted To

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PROBLEM

Each contest - there are approximately 1500 - 2000 users who participate for the 1st time and get
rated.
The Chef wanted to tell new users some tricks for their 1st contest:
● Before the contest - you don't have any rating. So even if you make a single submission - you will
become part of the contest rank list and you will get a rating.
● If you want your rating to increase - give the entire 3 hours to the contest & don't quit! If you keep trying till the end, and the more time you get, the more problems you can solve. That means
larger rating increases!
● Do not ask your friends for their code. If you copy paste their code, you will get caught during plagiarism checks and your rating will be reduced by 275 points, along with a permanent black mark on your profile.
Now to the problem:
In a contest where N new users visited the contest,
● A users just saw the problems and didn't make any submissions and hence won't get any rating.
● B users who made a submission but could not solve any problem correctly. Thus, after the
contest, they will get a rating in the range $800-1000$.
● Everyone else could correctly solve at least 1 problem. Thus, they will get a rating strictly
greater than 1000 after the contest.
You need to output the number of new users in the contest who, after the contest, will get a rating and also
the number of new users who will get a rating strictly greater than 1000.

Input Format
● Each input file contains of a single line, with three integers N, A and B - the number of new
users, the number of users who just saw the problem and didn't make any submission, and the
number of users who made a submission but could not solve any problem correctly.

Output Format
Output two integers separated by a space in a single line - the number of new users who will get a rating at the end of the contest and the number of new users who will get a rating higher than 1000.

Constraints
● $2 \le N \le 1000$
● $1 \le A \le 1000$
● $1 \le B \le 1000$
● $A+B \le N$

Sample 1:
Input
10 3 2
Output
7 5

Algorithm:

Step 1: Start

Step 2: Initialize a scanner to take input
of variable n, a, b

Step 3: Initialize a variable z and $z = n - a$

Step 4: Print z and $z - b$

Step 5: Close the scanner

Step 6: Stop.

Pseudocode:

```
scan = creat new Scanner
n = scan.nextInt()
a = scan.nextInt()
b = scan.nextInt()
int z = n-a
print (z)
print (" ")
print (z-b)
```

Source   History |◄| |▲| ▾ |■| ▾ | 🔍 🔄 🔄 🔄 🔄 | 🔶 🔶 🔶 | 🔶 🔶

```java
1
2      package binary.squad;
3
4    □ import java.util.Scanner;
5
6      public class BinarySquad {
7
8    □    public static void main(String[] args) {
9
10            Scanner in=new Scanner( source:System.in);
11            int n=in.nextInt();
12            int a=in.nextInt();
13            int b=in.nextInt();
14            int z=n-a;
15            System.out.print( 1:z);
16            System.out.print( s:" ");
17            System.out.print(z-b);
18
19
20        }
21     }
22
```

🔷 binary.squad.BinarySquad 〉 ⬤ main 〉

Output - binary squad (run) ✕

▷▷   run:
▷▷   10 3 2
       7 $BUILD SUCCESSFUL (total time: 49 seconds)
       |

Contribution of code:

Puja Ghosh

Time: About 1 hour

Contribution of pseudo code:

Saya Sarkar

Time: About 50 minutes

Contribution of algorithm:

Farjana Akhter

Time: About 30 minutes

Me and my team members solve the problem together. First I read the problem. My team members already wrote the algorithm and pseudo code. So, it was easy for me to write the code. Then I wrote the solution of the problem in java code.