



Liars



Problem

Submissions

Leaderboard

Discussions

You have **N** soldiers numbered from 1 to N. Each of your soldiers is either a liar or a truthful person. You have **M** sets of information about them. Each set of information tells you the number of liars among a certain range of your soldiers. Let **L** be the total number of your liar soldiers. Since you can't find the exact value of L, you want to find the minimum and maximum value of L.

Input Format

- The first line of the input contains two integers **N** and **M**.
- Each of next **M** lines contains three integers:
A B C where the set of soldiers numbered as {A, A+1, A+2, ..., B}, exactly C of them are liars. ($1 \leq A_i \leq B_i \leq n$) and ($0 \leq C_i \leq B_i - A_i$).

Note: **N** and **M** are not more than 101, and it is guaranteed the given informations is satisfiable.

Output Format

Print two integers Lmin and Lmax to the output.

Sample Input #1

```
3 2
1 2 1
2 3 1
```

Sample Output #1

```
1 2
```

Sample Input #2

```
20 11
3 8 4
1 9 6
1 13 9
5 11 5
4 19 12
8 13 5
4 8 4
7 9 2
10 13 3
7 16 7
14 19 4
```

Sample Output #2

```
13 14
```

Explanation

In the first input, the initial line is "3 2", i.e. that there are 3 soldiers and we have 2 sets of information. The next line says there is one liar in the set of

soldiers {1, 2}. The final line says there is one liar in the set {2,3}. There are two possibilities for this scenario: Soldiers number 1 and 3 are liars or soldier number 2 is liar.

So the minimum number of liars is 1 and maximum number of liars is 2. Hence the answer, 1 2.

[f](#) [t](#) [in](#)Submissions: [450](#)

Max Score: 85

Difficulty: Advanced

Rate This Challenge:

☆☆☆☆☆

[More](#)Current Buffer (saved locally, editable)  Java 7 

```
1  /* Write your java code here. Input is from STDIN and output to STDOUT. Please refer FAQ for more details.
2  The classname is Solution.
3  /** Sample program illustrating input and output */
4
5  import java.util.*;
6
7  class Solution{
8      public static void main( String args[] ){
9
10     // helpers for input/output
11
12         Scanner in = new Scanner(System.in);
13
14         int N, M;
15         N = in.nextInt();
16         M = in.nextInt();
17
18         int A[] = new int[M];
19         int B[] = new int[M];
20         int C[] = new int[M];
21         for(int i=0; i<M; i++){
22             A[i] = in.nextInt();
23             B[i] = in.nextInt();
24             C[i] = in.nextInt();
25         }
26
27         int result1 = 0, result2 = 0;
28         System.out.println( result1 + " " + result2 );
29
30     }
31 }
32
```

Line: 1 Col: 1

 [Upload Code as File](#) ☐ Test against custom input[Run Code](#)[Submit Code](#)

Join us on IRC at [#hackerrank](#) on freenode for hugs or bugs.

[Contest Calendar](#) | [Blog](#) | [Scoring](#) | [Environment](#) | [FAQ](#) | [About Us](#) | [Support](#) | [Careers](#) | [Terms Of Service](#) | [Privacy Policy](#) | [Request a Feature](#)