Liars

HackerRank

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 <= Ai <= Bi <= n) and (0 <= Ci <= Bi-Ai).

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.