The art of security [4]

Submissions Attempted by: **133** | Solved by: **90** | Partially Solved by: **30** |

Combinatorics Greedy Medium Edit

Fatal Eagle has finally teamed up with Arjit to take on this weird army of zombies and vampires. And they are coming up with strategies to beat these guys on a roll. The simple thing they figured out is that these creatures attack everything by the method of **brute force** - i.e., the **total power they have while attacking is the sum of their individual powers.**

Bangalore City has two entrances which are located adjacent to each other. And the members of enemy's army are going to rush over to both the entrances to attack the city.

The heroes, though, know that they will be facing **N** enemies who have different individual powers from $Power_1$ to $Power_n$. The enemies attack at a particular entrance if they see a hero standing on that entrance. So basically, the heroes can manipulate an enemy into attacking one particular entrance.

All the **enemies attack one by one,** and whenever they see someone standing on one particular entrance, they run attack that particular entrance. Our heroes need to know the number of ways in which they can trick the enemies and beat them!

Fatal Eagle and Arjit have to make sure that the enemies are tricked in such a way - that the sum of the powers of enemies on the 1^{st} entrance of the city is **NEVER greater** than the 2^{nd} entrance of the city. The number of such ways possible is the number of ways in which they can defeat the enemies.

In any case, if the sum of the powers of the enemies (Brute force!) is greater than or equal to the number of ways in which they can be defeated, print "**Got no way out!**" otherwise "**We will win!**" needs to be printed.

Input format:
The first line contains an integer **N** denoting the number of enemies. On the next line, there will be **N** integers denoting the individual powers of the **N** enemies.

Output format:
On the first line of the output print two integers separated by a space, the first one denoting the number of ways in which the task can be performed, the second one denoting the total power the enemies have while attacking. In the next line of the output, you've to print the message as **We will win!** or **Got no way out!** accordingly.

Constraints:
0 <= N <= 8
0 <= $Power_i$ <= 500

Sample Input (Plaintext Link)

3

```
1 2 13
```

Sample Output (Plaintext Link)

```
15 16
Got no way out!
```

Explanation

The thing to remember is that all the enemies come one by one, and their order matters. Some of the possible ways which are valid would be:

- 1, 2 and 13 all on the 2^{nd} entrance. Final result: | 1-2-13.
- Firstly, 13 on the 2^{nd} entrance, then 2 on the 2^{nd} entrance. And then, 1 on the 1^{st} entrance. Final result: 13-2|1.
- Firstly, 13 on the 2^{nd} entrance, then 1 on the 1^{st} entrance. And then, 2 on the 2^{nd} entrance. Final result: 13-2| 1.

Time Limit: 1 sec(s) for each input file.

Memory Limit: 256 MB

Source Limit: 1024 KB

Marking Scheme: Marks are awarded if any testcase passes.

Allowed languages: C, CPP, CLOJURE, CSHARP, GO, HASKELL, JAVA, JAVASCRIPT, JAVASCRIPT_NODE, LISP, OBJECTIVEC, PASCAL, PERL, PHP, PYTHON, RUBY, R, RUST, SCALA

Problem Author: Arjit Srivastava

Problem Tester: FatalEagle

C ▼ Upload file: Choose File No file chosen Save

```c
#include <stdio.h>

int main()
{
    printf("Hello World!\n");
    return 0;
}

```

1

Submit Compile & Test Provide custom input ▶ Play Code (C)

Your Rating:

PROFILE IMPACT

Complete Profile

*Excellent profile will increase your profile discoverability and keep you on top among others.

PROBLEMS SUGGESTED FOR YOU

Flip the words
Solved by 14

Play the Base
Solved by 7

Fun With Sequences
Solved by 336

more...

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User	Result	Time	Lang
anwar ah...		1.1116	C
Koushik		1.1069	C++
Koushik		1.1064	C++
Koushik		1.1068	C++
Rohil Ra...		1.1068	C++
Rohil Ra...		1.1067	C++
Rohil Ra...		1.1064	C++

View All

TRENDING NOTES

Number Theory - III
written by Boris Sokolov

Exact String Matching Algorithms
written by Alei Reyes

Binary Indexed Tree or Fenwick Tree
written by Chandan Mittal

Small tricks in for loop
written by Rangeesh

Strings And String Functions
written by Vinay Singh

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McAfee, Part of Intel Security
3879 followers

RECOMMENDED CHALLENGES

Horlicks Hack 4 Fun
03 Sep 2015, 09:00 PM IST
Register

CODE-HUNT-2F
21 Oct 2015, 05:00 PM IST
Register

Zoomcar Ruby Challenge
23 Oct 2015, 06:00 PM IST
Register

Zomato Hiring Challenge
23 Oct 2015, 06:00 PM IST
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Diona iOS Developer Hiring Challenge
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