TSOC '15 Contest 2 #1 - The Code

Time limit: 2.0s **Memory limit:** 256M

The students notice several sketchy papers on Mr. Venom's desk, each containing N $(3 \le N \le 10\,000)$ integers. "*A code!*" Tom cries. "*But how do we crack it?*" replies Alex. They then see some instructions on a sticky note on one of Mr. Benum's computer monitors:

> Why do they keep making me use these stupid codes?! Note to self: Start at the first integer i_1 on the paper, then skip ahead i_1 positions (or behind, if i_1 is negative). The integer you land on decodes to an uppercase alphabetic character $(1 = A, 2 = B, 3 = C, \ldots, 26 = Z)$. Move to the next integer i_x after the one you just decoded and skip ahead (or behind if i_x is negative) i_x spaces from there. Repeat until you (at any point) move to a 0, at which point the program should terminate immediately. Hey, at least you will always skip to a position that's actually on the page, and there will always be a number after that. Who even designed this stupid code?

Input Specification

The first line of input consists of integer N, the number of integers on the paper. The next N lines of input contain the integers on the paper in order.

Output Specification

The output is the decoded message in uppercase.

Sample Input 1

```
9
2
22
5
-2
10
12
0
9
-3
```

Sample Output 1

```
EVIL
```

Explanation of Sample Output 1

You first skip forwards by 2 from the first integer on the page. The 5 decodes to an `E`. The next number after 5 is -2, so you skip 2 backwards from there, landing on the 22 which decodes to a `V`. The next integer is a 5, so you skip forward by 5 to 9, which decodes to `I`. You then skip backward by 3 from -3, landing on a 12, which decodes to `L`. The next number is 0, so the program terminates.

Sample Input 2

```
20
9
1
4
12
4
0
3
1
5
11
-10
16
5
16
-3
14
-9
5
-14
0
```

Sample Output 2

```
KIDNAPPED
```