After Ivancho calculated the results of the elections, he decided to rest. He went to his friend Goshko’s house and they started to play the following game – players are given n heaps of balls. There is an odd number of balls in each heap. Players alternate turns. In each turn player chooses an arbitrary heap and divides it into three non-empty heaps so as there is again an odd number of nuts in each heap. The player who cannot make a move loses.

Ivancho, of course, starts first. Your task is to determine the winner if both players play optimally.

**Input**

If the first line of the file game.in there is an odd integer **N**. N lines follow, each of them contains an odd integer ai – the number of balls in the i-th heap at the beginning of the game.

**Output**

In the output file game.out print “Ivancho” (without quotes) if Ivancho wins. Otherwise print “Goshko”.

**Constraints**

1 ≤ *N* ≤ 1000

1 ≤ ai ≤ 100000

**Time Limit: 1.0 sec**

**Memory limit: 256 MB**

**Example test**

|  |  |
| --- | --- |
| **Input (game.in)** | **Output (game.out)** |
| 1  3 | Ivancho |
| 5  555  121  5  13  1 | Ivancho |