

SPOJ Problem Set (classical)

2021. Moving Pebbles

Problem code: PEBBMOV

A Game of Moving Pebbles

Problem

Two players play the following game. At the beginning of the game they start with n ($1 \leq n \leq 100000$) piles of stones. At each step of the game, the player chooses a pile and remove at least one stone from this pile and move zero or more stones from this pile to any other pile that still has stones. A player loses if he has no more possible moves. Given the initial piles, determine who wins: the first player, or the second player, if both play perfectly.

The Input

Each line of input has integers $0 < n \leq 100000$, followed by n positive integers denoting the initial piles.

The Output

For each line of input, output "first player" if first player can force a win, or "second player", if the second player can force a win.

Sample Input

```
3 2 1 3
```

Sample Output

```
first player
```

Problemsetter --- Chen, Jiahong

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Time limit: 5s

Source limit:50000B

Languages: All