Утегенов Батырхан Елембетұлы [ADS-Lab-05]: Submit a solution

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18:15:32 / **RUNNING**

A   B   C   D   E

Submit a solution for B-Rock Game

Time limit: 1 s

Real time limit: 5 s

Memory limit: 256M

Problem B: Rock Game

We have a collection of rocks, each rock has a positive integer weight.

With each turn, we choose the two **heaviest** rocks and smash them together. Suppose the stones have weights x and y with $x \leqslant y$. If $x = y$, both stones are totally destroyed. If $x \neq y$, the stone of weight x is totally destroyed, and the stone of weight y has a new weight $y - x$.

At the end, there is at most 1 stone left. Output the weight of this stone (or 0 if there are no stones left).

Input format

The first line contains integer N ($1 \leqslant N \leqslant 10^5$) - the number of stones.

The second line contains N integers a_i ($1 \leqslant a_i \leqslant 10^9$) - the weights of each stone.

Output format

Print the weight of the remaining stone, or 0 if no one left.
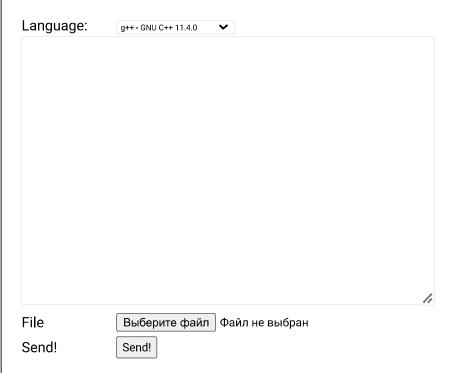
Examples

Input

```
6
2 7 4 1 8 1
```

Output

```
1
```

Notes

We combine 7 and 8 to get 1 so the array converts to [2,4,1,1,1] then, we combine 2 and 4 to get 2 so the array converts to [2,1,1,1] then, we combine 2 and 1 to get 1 so the array converts to [1,1,1] then, we combine 1 and 1 to get 0 so the array converts to [1] then that's the value of last stone.

Submit a solution

Language: g++ - GNU C++ 11.4.0 ▼

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Previous submissions of this problem

Run ID	Time	Size	Problem	Language	Result	Failed test	View source	View report

1707	1212:00:38	1825	B	g++	OK	N/A	View	View

A B C D E

ejudge 3.10.3+ (GIT 6da71ff82) (2023-08-02 06:59:26).