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

Submit a solution for A-Optimizing Program

Time limit:	2 s
Real time limit:	5 s
Memory limit:	256M

Problem A: Optimizing Program

The ICPC finals will be held soon, so Yergeldi and his team needs your help. While they were preparing for the competition, they faced an inte task. You have a list of length N which consists of arrays of different lengths. You have one single operation, you can take any two arrays and them into one, the cost of the operation is equal to the sum of their lengths. As a result, you will have a list of N - 1 arrays. The process repea there is only one final array left. Find out for what minimum cost it is possible to combine all arrays.

Input format

The first line contains an integer n ($1 \leqslant n \leqslant 2 \cdot 10^5$), the size of the list a. The next line contains n positive integers a_1, a_2, ..., a_n ($1 \leqslant a_i \leqslant$ representing the sizes of arrays in the list a.

Output format

Print a single integer - the minimum cost of operations.

Examples

Input

```
4
6 5 3 9
```

Output

```
45
```

Input

```
10
42 18 63 26 19 15 11 29 26 24
```

Output

```
869
```

Notes

Explanation for the first test case:

[6, 5, 3, 9] –> First, merge arrays of lengths 5 and 3 that will cost 8.

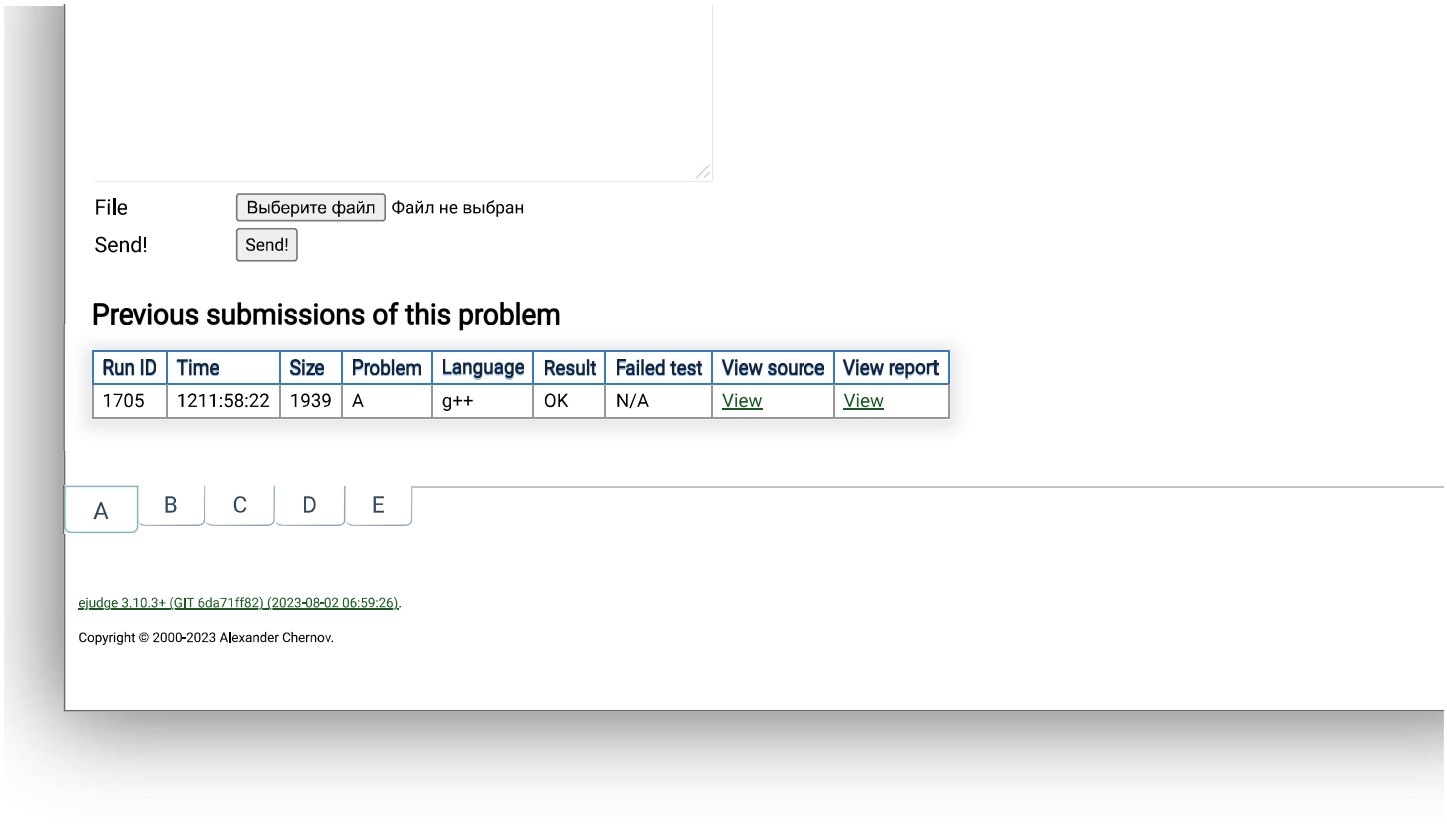
[6, 8, 9] –> Next, merge arrys of lengths 6 and 8 that will cost 14.

[14, 9] –> Finally, merge the remaining two arrays that will cost 23.

Therefore, the total cost for merging all arrays is 8 + 14 + 23 = 45.

Submit a solution

Language: g++ - GNU C++ 11.4.0



File Выберите файл Файл не выбран

Send! Send!

Previous submissions of this problem

Run ID	Time	Size	Problem	Language	Result	Failed test	View source	View report
1705	1211:58:22	1939	A	g++	OK	N/A	View	View

A B C D E

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