Introduction to Algorithms, Fall, 2023 Homework 0

Problem B A Sorting Problem

Time limit: 1 second

Memory limit: 2048 megabytes

Problem Description

Given an array of n positive integers, sort the array in ascending order.

Input Format

The first line of the input contains an integer n denoting the length of the array. The second line of the input contains n space-separated integers a_1, a_2, \ldots, a_n denoting the array to be sorted.

Output Format

Output the sorted array in one line. Place exactly one space between the elements.

Technical Specification

- $1 \le n \le 10^5$
- $1 \le a_i \le 10^9 \text{ for } i = 1, 2, \dots, n$

Sample Input 1

5 2 4 5 1 3

Sample Output 1

1 2 3 4 5

Hint

You can use the 'std::sort' function in the C++ Standard Library. You can also try to implement sorting algorithms like Merge Sort, Heap Sort or (randomized) Quick Sort on your own.