

D. Intersecting Segments

time limit per test: 1 second

memory limit per test: 1024 megabytes

input: standard input

output: standard output

→ Submit?

Language:

GNU G++20 13.2 (64 bit, win

Choose file:

Choose File

No file chosen

Submit

Given an array of $2n$ numbers, each number from 1 to n in it occurs exactly twice. We say that the segment y intersects the segment x if exactly one occurrence of the number y is between the occurrences of the number x . Find for each segment i how many segments there are that intersect with it.

Input

The first line contains the number n ($1 \leq n \leq 10^5$), the second line contains $2n$ numbers. It is guaranteed that every number from 1 to n occurs exactly twice.

Output

Print n numbers, the i -th number is equal to the number of segments that intersect with the segment i .

Example

input	Copy
5 5 1 2 2 3 1 3 4 5 4	
output	Copy
1 0 1 1 1	

