



HOME TOP CATALOG CONTESTS GYM PROBLEMSET GROUPS RATING EDU API CALENDAR HELP

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PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS STANDINGS CUSTOM INVOCATION

E. Not So LIS

time limit per test: 2 s. memory limit per test: 1024 MB

Let f(b) represent the length of the longest increasing subsequence in a sequence b. In other words, f(b) is the largest integer k such that there exist indices $i_1 < i_2 < \cdots < i_k$ with $b_{i_1} < b_{i_2} < \cdots < b_{i_k}$. Specifically, we define f(b) = 0 if b is empty.

You are given an integer sequence a_1, a_2, \ldots, a_n of length n, where each element a_i has an associated weight w_i . Find a subsequence a' of a such that

and the sum of weights of the elements in a^\prime is maximized. Output the maximum possible sum of weights.

Input

The first line contains a single integer n ($1 \le n \le 100$) — the length of the sequence.

The second line contains n integers a_1,a_2,\ldots,a_n $(1\leq a_i\leq n)$ — the sequence.

The third line contains n integers w_1, w_2, \ldots, w_n ($1 \le w_i \le 10^7$) — the weights.

Output

24

Print one integer — the maximum possible sum of weights of a subsequence a^\prime satisfying $f(a^\prime) < f(a)$.

Examples

input	Сору
5 1 3 2 5 4 100 2 4 6 5	
output	Сору
111	
input	Сору
7 7 3 2 1 5 2 1 4 8 4 1 2 3 5	
output	Сору

input	Сору
4	
1 1 1 1	
1 1 1 1 4 5 1 7	
output	Сору
0	

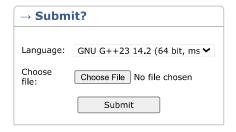


→ Languages

The following languages are only available languages for the problems from the contest

Micro1 Contest #9:

- GNU G++17 7.3.0
- GNU G++20 13.2 (64 bit, winlibs)
- GNU G++23 14.2 (64 bit, msys2)



→ Last submissions		
Submission	Time	Verdict
318231963	May/03/2025 17:43	Accepted
318220517	May/03/2025 15:53	Time limit exceeded on test 20
318220150	May/03/2025 15:48	Time limit exceeded on test 9
318192584	May/03/2025 11:03	Time limit exceeded on test 9
318192256	May/03/2025 11:00	Time limit exceeded on test 9
318190954	May/03/2025 10:48	Time limit exceeded on test 9

