

Problem A

You will be given a list of numbers and a list of queries. You have to find the frequency of the queries in the list.

Input:

First line: n , a number. ($1 \leq n \leq 10^5$)

Next n lines: an integer v ($-2147483648 \leq v \leq 2147483647$), the numbers in the list

Next line: m , a number ($1 \leq m \leq 10^5$), the number of keys.

Next m lines: an integer q ($-2147483648 \leq q \leq 2147483647$), the queries.

Output:

m lines, each containing the frequencies of the queries.

Sample Case:

Input	Output
3	1
1	2
1	0
2	
3	
2	
1	
3	

Problem B

You will be given the marks of students in a particular course. Output the id of the students according to the ascending order of their marks. In case of same marks, the smaller id value will be printed.

Input:

First line: n , a number. ($1 \leq n \leq 10^5$)

Next n lines: two integers id $mark$ ($0 \leq id, mark \leq 2147483647$), the id and $mark$ of a student.

Output:

n lines, each containing the id of a student according to the order defined above.

Sample Case:

Input	Output
3	2
1 5	3
2 3	1
3 4	

Problem C

You will be given a list of integers in sorted order and a list of queries. You have to find the number of integers in the list less than or equal to the query. You may assume that the query exists in the list of integers.

Input:

First line: n , a number. ($1 \leq n \leq 10^6$)

Next n lines: an integer v ($-2147483648 \leq v \leq 2147483647$), the numbers in the list

Next line: m , a number ($1 \leq m \leq 10^5$), the number of keys.

Next m lines: an integer q ($-2147483648 \leq q \leq 2147483647$), the queries.

Output:

m lines, each containing the number of integers in the list less than or equal to the query.

Sample Case:

Input	Output
7 1 1 1 2 2 3 4 2 2 3	5 6

Problem D

Input:

First line: n , a number ($1 \leq n \leq 10$).

Output:

Each line will contain a list of space-separated digits where

- The list contains n digits.
- The digits in the list are 0-4 (inclusive)
- The odd indexed digit in the list is an odd digit
- The even indexed digit in the list is an even digit

The lists will be printed in sorted order. Example: {0, 1, 0} before {0, 1, 2}.

Sample Case:

Input	Output
2	0 1 0 3 2 1 2 3 4 1 4 3
3	0 1 0 0 1 2 0 1 4 0 3 0 0 3 2 0 3 4 2 1 0 2 1 2 2 1 4 2 3 0 2 3 2 2 3 4 4 1 0 4 1 2 4 1 4 4 3 0 4 3 2 4 3 4

