

05 : 21 : 29 : 38
DAY HRS MIN SEC

September Circuits

LIVE

Sep 16, 2016, 09:00 PM IST - Sep 24, 2016, 09:00 PM IST

3
LIVE EVENTS

INSTRUCTIONS

PROBLEMS

SUBMISSIONS

LEADERBOARD

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Fredo and Large Numbers

Max. Marks: 100

Fredo is pretty good at dealing large numbers. So, once his friend Zeus gave him an array of N numbers , followed by Q queries which he has to answer. In each query , he defines the type of the query and the number f for which Fredo has to answer. Each query is of the following two types:

Type 0: For this query, Fredo has to answer the first number in the array (starting from index 0) such that its frequency is atleast equal to f .

Type 1: For this query, Fredo has to answer the first number in the array such that frequency is exactly equal to f .

Now, Fredo answers all his queries but now Zeus imagines how he should verify them . So, he asks you to write a code for the same.

Note: If there is no number which is the answer to the query, output 0.

Use fast I/O.

Input :

The first line of the input contains N , the size of the array

The next line contains N space separated integers.

The next line contains Q , denoting the number of queries.

Then follow Q lines, each line having two integers type and f , denoting the type of query and the frequency for which you have to answer the query.

Output:

You have to print the answer for each query in a separate line.

Input Constraints:

$$1 \leq N \leq 10^6$$

$$1 \leq A[i] \leq 10^{18}$$

$$1 \leq Q \leq 10^6$$

$$0 \leq type \leq 1$$

$$1 \leq f \leq 10^{18}$$

SAMPLE INPUT



```
6
1 2 2 1 2 3
5
0 1
0 2
1 2
1 3
0 3
```

SAMPLE OUTPUT



```
1
1
1
2
2
```

Explanation

Query 1: 1 is the first number from left with frequency atleast 1.

Query 2: 1 is the first number from left with frequency atleast 2.

Query 3: 1 is the first number from left with frequency exactly 2.

Query 4: 2 is the first number from left with frequency exactly 3.

Query 5: 2 is the first number from left with frequency atleast 3.

Time Limit: 1.0 sec(s) for each input file.

Memory Limit: 256 MB

Source Limit: 1024 KB

Marking Scheme: Marks are awarded if any testcase passes.

Allowed Languages: C, CPP, CLOJURE, CSHARP, D, ERLANG, FSHARP, GO, GROOVY, HASKELL, JAVA, JAVA8, JAVASCRIPT, JAVASCRIPT_NODE, LISP, LISP_SBCL, LUA, OBJECTIVEC, OCAML, OCTAVE, PASCAL, PERL, PHP, PYTHON, PYTHON3, R, RACKET, RUBY, RUST, SCALA, SWIFT, VB

CODE EDITOR

☹ Our compiler wanted to be here!

But the mobile is too cramped for it to load. It says it would be more comfortable on the web.

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