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IVE EVENTS

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# **September Circuits**

LIVE

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

INSTRUCTIONS PROBLEMS SUBMISSIONS LEADERBOARD ANALYTICS JUDGE

← Problems / Fredo and Large Numbers

# 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  $\mathbf{N}$  numbers , followed by  $\mathbf{Q}$  queries which he has to answer. In each query , he defines the type of the query and the number  $\mathbf{f}$  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 frequecy 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:**

$$1 < N < 10^6$$

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

$$1 \le Q \le 10^6$$

$$0 \le type \le 1$$

$$1 < f < 10^{18}$$

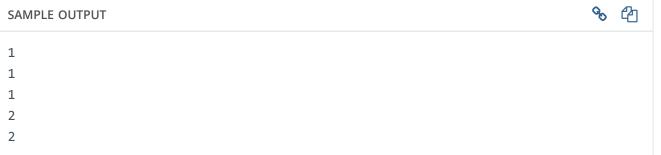






```
6
1 2 2 1 2 3
5
0 1
0 2
1 2
1 3
0 3

SAMPLE OUTPUT
```



# **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 MBSource Limit:1024 KBMarking 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

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