DQUERY - D-query

#sorting #tree

English Vietnamese

Given a sequence of n numbers a_1, a_2, ..., a_n and a number of d-queries. A d-query is a pair (i, j) ($1 \le i \le j \le n$). For each d-query (i, j), you have to return the number of distinct elements in the subsequence a_i, a_{i+1}, ..., a_j.

Input

- Line 1: n ($1 \le n \le 30000$).
- Line 2: n numbers a_1, a_2, ..., a_n ($1 \le a_i \le 10^6$).
- Line 3: q ($1 \le q \le 200000$), the number of d-queries.
- In the next q lines, each line contains 2 numbers i, j representing a d-query ($1 \le i \le j \le n$).

Output

- For each d-query (i, j), print the number of distinct elements in the subsequence a_i, a_{i+1}, ..., a_j in a single line.

Example

Input
```
5
1 1 2 1 3
3
1 5
2 4
3 5
```

Output
```
3
2
3
```

Submit solution!

hide comments

< Previous 1 2 3 4 5 6 Next >

TP: 2016-06-30 22:29:04
AC(0.30) with Bit + Sorting + (use printf,scanf). cin,cout and vectors cost me 1 TLE. AC (0.50) with MO and scanf.

Last edit: 2016-07-01 01:32:05

ahmad_gafer: 2016-06-08 04:19:20
AC with BIT+sorting , first submission :D

kliu31415: 2016-06-05 06:07:05
Mo's algorithm+slow IO is somehow faster than 2D range tree with fast IO... lol

narutorocks: 2016-05-20 06:56:26
Cheated But LEARNT A NEW ALGORITHM

proficient: 2016-05-18 15:33:07
Anyone here got AC with bitset + square root decomposition of array (not query / MO)? Couldn't get pass the time limit. My algorithm is O(Q * 2 * sqrt(N)) using bitset and square root decomposition. Tried fast IO, inlining and custom implementation of bitset, still not pass time limit

fnf: 2016-04-15 16:55:11
NEVER use a <= b in comparators. All comparators must be like a < b.

kaynaat: 2016-04-02 19:19:05
i have solved this problem with MO's algorithm. but i am unable to figure out how to do this with BIT ? can anybody help me with clear understanding as to why and how one should use BIT ?

farhad chowdhury: 2016-03-17 21:50:20
Can anyone tell me why i got ac with ".42" time where the time limit is ".227"


Arpan Mukherjee: 2016-03-03 16:16:38
One piece of advice for MO's algorithm.Don't use vector of nested pair. Use structure. Pair did cost me 15 TLEs.

prateek1985: 2016-02-29 14:23:26
Learned lot of new things but still TLE using segment trees in Java!!!

Submit solution!

Added by:	Duc
Date:	2008-10-26
Time limit:	0.227s
Source limit:	50000B
Memory limit:	1536MB
Cluster:	Cube (Intel G860)
Languages:	All except: ERL JS NODEJS PERL 6 VB.net
Resource:	© VNOI