16/11/2017 HackerRank



♠ Practice

() Compete

Jobs

Rank



Q



Points: 25 Rank: 183204



Dashboard > Data Structures > Queues > Queries with Fixed Length

Queries with Fixed Length



Problem

Submissions

Leaderboard

Discussions

Leaderboard

Editorial A

Consider an n-integer sequence, $A = \{a_0, a_1, \dots, a_{n-1}\}$. We perform a query on A by using an integer, d, to calculate the result of the following expression:

$$\min_{0 \leq i \leq n-d} (\max_{i \leq j < i+d} a_j)$$

In other words, if we let $m_i = \max(a_i, a_{i+1}, a_{i+2}, \dots, a_{i+d-1})$, then you need to calculate $\min(m_0, m_1, \dots, m_{n-d})$.

Given A and q queries (each query consists of an integer, d), print the result of each query on a new line.

Input Format

The first line consists of two space-separated integers describing the respective values of $m{n}$ and $m{q}$.

The second line consists of n space-separated integers describing the respective values of $a_0, a_1, \ldots, a_{n-1}$.

Each of the q subsequent lines contains a single integer denoting the value of d for that query.

Constraints

- $1 \le n \le 10^5$
- $0 \le a_i < 10^6$
- $1 \le q \le 100$
- $1 \le d \le n$

Output Format

For each query, print an integer denoting the query's answer on a new line. After completing all the queries, you should have printed q lines.

Sample Input 0

- 5 5 33 11 44 11 55
- 2
- 3
- 4

Sample Output 0

- 11
- 33
- 44
- 44 55

Explanation 0

16/11/2017 HackerRank

```
For d=1, the answer is \min(\max(a_0),\max(a_1),\max(a_2),\max(a_3),\max(a_4))=11 . For d=2, the answer is \min(\max(a_0,a_1),\max(a_1,a_2),\max(a_2,a_3),\max(a_3,a_4))=33 . For d=3, the answer is \min(\max(a_0,a_1,a_2),\max(a_1,a_2,a_3),\max(a_2,a_3,a_4))=44 . For d=4, the answer is \min(\max(a_0,a_1,a_2,a_3),\max(a_1,a_2,a_3,a_4))=44 . For d=5, the answer is \min(\max(a_0,a_1,a_2,a_3),\max(a_1,a_2,a_3,a_4))=55 . Sample Input 1
```

Sample Output 1

1 2 3

4

Explanation 1

For each query, the "prefix" has the least maximum value among the consecutive subsequences of the same size.

f in Submissions:2116 Max Score:50 Difficulty: Hard Rate This Challenge: ☆ ☆ ☆ ☆ ☆

```
Current Buffer (saved locally, editable)  

1 v import java.io.*;
2 import java.util.*;
3 import java.text.*;
4 import java.math.*;
5 import java.util.regex.*;
6
7 v public class Solution {
```

public static void main(String[] args) {
 /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. */
}

Line: 1 Col: 1

<u>**1**</u> <u>Upload Code as File</u> ☐ Test against custom input

Run Code

Submit Code

Join us on IRC at #hackerrank on freenode for hugs or bugs.

Contest Calendar | Blog | Scoring | Environment | FAQ | About Us | Support | Careers | Terms Of Service | Privacy Policy | Request a Feature