

#### ITMOx: I2CPx How to win coding competitions: secrets of champions

Help



- ▶ How To?
- Week 1
- ▼ Week 2

**Computational Complexity.** Linear **Data Structures** 

## 2nd Week **Problems**

due Nov 14, 2016 22:00 **CET** 

2nd Week **Problems: Training** 

2nd Week: **Editorials** 

- Week 3
- Week 4
- Week 5

Week 2 > 2nd Week Problems > Queue with Minimum

# Queue with Minimum

☐ Bookmark this page

## Queue with Minimum

2.0/2.0 points (graded)

Input file:	queuemin.in
Output file:	queuemin.out
Time limit:	2 seconds
Memory limit:	256 megabytes

Implement a queue which supports push and pop operations, and additionally a minimum query, which returns a minimum among the elements in the queue. For every minimum query, output its result.

### Input

The first line of the input file contains a single integer number N (1  $\leq$  N  $\leq$ 10<sup>6</sup>) – the number of commands. N lines follow, each line contains exactly one command. There are the following commands:

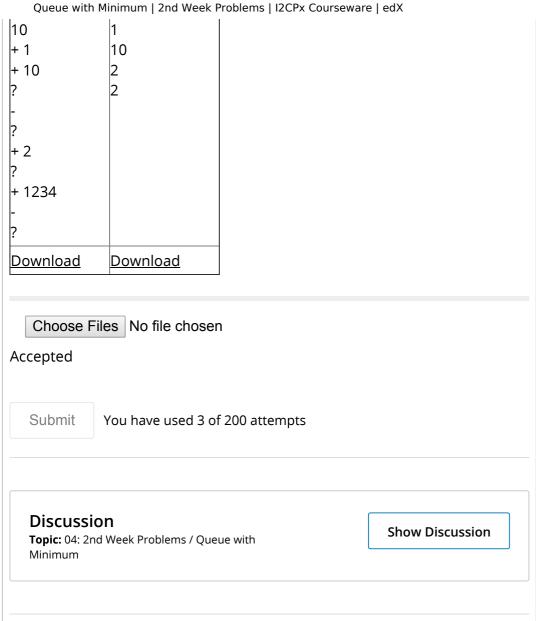
- + x: push x to the queue. Every x will be an integer such that  $|x| \le 10^9$ . The symbol + and the number will be separated by exactly one white space.
- -: pop an element from the queue. It is guaranteed that this operation will never be executed on an empty queue.
- ?: query a minimum element in the queue. It is guaranteed that this operation will never be executed on an empty queue. There will be at least one such query.

#### Output

Output the results of the minimum queries on the queue, one per line, in the order they were performed.

#### **Example**

queuemin.in	queuemin.out



© All Rights Reserved



© 2016 edX Inc. All rights reserved except where noted. EdX, Open edX and the edX and Open EdX logos are registered trademarks or trademarks of edX Inc.















