CSE431/531 (Fall 2021) Project 1
Due date: Oct 28, 2021

You need to implement the min-heap. You can use C++, Java or Python to implement the algorithm.

Input You need to read from the standard input (i.e, the console). Each line gives one operation to the heap, and it can be one of the following two cases:

- A x. x is an integer between 0 and 10^9. This line corresponds to the operation that adds x to the heap.

- E. This line corresponds to the extract-min operation, which returns and removes the smallest integer in the heap.

Output You need to output to the console. For each extract-min operation, output the minimum integer in the heap.

You may assume that when extract-min is called, there is at least one integer in the heap. The input contains at most 200000 lines, and you can assume it does not contain errors.

Sample input	Output for sample input
A 300	300
E	200
A 200	100
A 600	500
A 500	600
E	
A 100	
E	
E	
E	