

## Problem A

In this problem, you need to implement a queue using a singly linked list.

You must use the template named "*template\_a.cpp*" stored in the template folder.

Input:

First line:  $n$ , a number. ( $1 \leq n \leq 10^6$ )

Next  $n$  lines:  $v$ , an integer ( $-1000 \leq v \leq 1000$ ). Enqueue  $v$  to the queue.

Output:

$n$  lines, each containing the values obtained by dequeuing the queue.

Sample Case:

Input	Output
5	1
1	2
2	3
3	4
4	5
5	6
6	

## Problem B

In this problem, you need to sort the items in a queue in ascending order.

You must use the template named "*template\_b.cpp*" stored in the template folder.

Input:

First line:  $n$ , a number ( $1 \leq n \leq 10^6$ ).

Next  $n$  lines:  $v_i$ , a integer ( $-1000 \leq v_i \leq 1000$ ).

Output:

Each line will contain the values obtained by dequeuing the sorted queue.

Sample Case:

Input	Output
5	1
1	2
3	3
2	4
5	5
4	

## Problem C

In this problem, you will have to sort given numbers.

Sample Case:

Input:

First line:  $n$ , a number ( $1 \leq n \leq 10^3$ ).

Next  $n$  lines:  $v_i$ , a number ( $-1.0 < v_i < 1.0$ ). Here the maximum precision for a given number will be upto four digits.

Output:

Each line will contain the values in ascending order.

Input	Output
3 0.4458 -0.6651 0.2222	-0.6651 0.2222 0.4458
3 0.919 -0.4651 0.4534	-0.4651 0.4534 0.919

## Problem D

In this problem, you will be given  $n$  numbers. There is a window of size  $k$  which is moving from left to right. You will have to report the sum of the windows.

Input:

First line:  $n$ , a number ( $1 \leq n \leq 10^6$ ).

Second line:  $k$ , a number ( $1 \leq k \leq n$ ).

Next  $n$  lines:  $v_i$ , a number ( $-1000 \leq v_i \leq 1000$ ).

Output:

Each line will contain the sum of the windows from left to right.

Sample Case:

Input	Output
5 2 1 2 3 4 5	3 5 7 9
<b>Explanation:</b> Here the window size is 2. The leftmost window contains 1 and 2. The sum is 3. Hence, 3 goes to output.  In the next step, the window shifts to right and the items are 2 and 3. The sum is 5.	