CSE221

Class Performance Evaluation

Set A

You have two sorted lists [ascending order), X and Y.

Now, you will merge these two sorted lists and sort those again using divide and conquer algorithm. Your task is to find the Kth smallest element of the merged sorted list.

Input:

- The first line contains an integer N (1 <= N <= 10^5), denoting the length of X's sorted list. In the next line, there will be N integers separated by space.
- The third line contains another integer, M (1 <= N <= 10^5), denoting the length of Y's sorted list. In the next line, there will be M integers separated by space.
- The last line contains an integer K (1 <= K <= N+M), the smallest number you must find from the merged sorted list.

All the numbers given in the input will fit in a 32-bit signed integer.

It is guaranteed that the given lists will be in sorted order.

Output:

Find the Kth smallest element after merging the two sorted lists.

Sample Input/Output:

Sample Input 1	Sample Output 1
4 1 3 5 7 4 2 2 4 8 5	4
Sample Input 2	**Sample Output 2**
3 2 10 12 6	10

3 4 6 7 8 9 8	
Sample Input 3	Sample Output 3
4 1 2 3 4 1 10 2	2
Sample Input 4	Sample Output 4
7 2 3 8 8 10 12 14 9 1 1 4 5 6 8 13 15 16 15	15