

K-th Element of Two Sorted Arrays

Given two sorted arrays **arr1** and **arr2** of size **M** and **N** respectively and an element **K**. The task is to find the element that would be at the k'th position of the final sorted array.

Example 1:

Input:

arr1[] = {2, 3, 6, 7, 9}

arr2[] = {1, 4, 8, 10}

k = 5

Output:

6

Explanation:

The final sorted array would be -

1, 2, 3, 4, 6, 7, 8, 9, 10

The 5th element of this array is 6.

Example 2:

Input:

arr1[] = {100, 112, 256, 349, 770}

arr2[] = {72, 86, 113, 119, 265, 445, 892}

k = 7

Output:

256

Explanation:

Final sorted array is - 72, 86, 100, 112,

113, 119, 256, 265, 349, 445, 770, 892

7th element of this array is 256.

```
def kthElement(self, arr1, arr2, n, m, k):  
    i = n-1  
    j = 0  
    while i>=0 and j<m:  
        if arr1[i]>arr2[j]:  
            arr1[i],arr2[j] = arr2[j],arr1[i]  
        i = i-1  
        j = j+1  
  
    arr1.sort()  
    arr2.sort()
```

```
if k>n:  
    return arr2[k-n-1]  
else:  
    return arr1[k-1]
```