Problem | Editorial | Submissions

K-th element of two Arrays

Difficulty: **Medium** Accuracy: **37.4%** Submissions: **308K+** Points: **4**

Given two sorted arrays **a[]** and **b[]** and an element **k**, the task is to find the element that would be at the **k**th position of the combined sorted array.

Examples :

Input: a[] = [2, 3, 6, 7, 9], b[] = [1, 4, 8, 10], k = 5
Output: 6
Explanation: The final combined sorted array would be [1, 2, 3, 4, 6, 7, 8, 9, 10]. The 5th element of this array is 6.

Input: a[] = [100, 112, 256, 349, 770], b[] = [72, 86, 113, 119, 265, 445, 892], k = 7
Output: 256
Explanation: Combined sorted array is [72, 86, 100, 112, 113, 119, 256, 265, 349, 445, 770, 892]. The 7th element of this array is 256.

Constraints:

- 1 <= a.size(), b.size() <= 10^6

Java (1.8) | Average Time: 15m | Start Timer

```
1  // } Driver Code Ends
35
36 class Solution {
37     public int kthElement(int a[], int b[], int k) {
38         int n = a.length , m = b.length;
39         int[] arr = new int[n + m];
40         int i = 0, j = 0, d = 0;
41         while(i < n && j < m){
42             if(a[i] < b[j]){
43                 arr[d++] = a[i++];
44             }
45             else{
46                 arr[d++] = b[j++];
47             }
48         }
49         while (i < n){
50             arr[d++] = a[i++];
51         }
52         while (j < m){
53             arr[d++] = b[j++];
54         }
55         return arr[k - 1];
56     }
57 }
```

Custom Input | Compile & Run | Submit