Problem 6: Given **two sorted arrays** of size **m** and **n** respectively, youare tasked with finding the element that would be at the **kth position** of the **final sorted array**.

```
def find_kth_element(array1, array2, k):
    m, n = len(array1), len(array2)
    i, j = 0, 0
    count = 0

    while i < m and j < n:
        if array1[i] <= array2[j]:
            current_element = array1[i]
            i += 1
        else:
            current_element = array2[j]
            j += 1

        count += 1
        if count == k:
            return current_element

    while i < m:
        count += 1
        if count == k:
            return array1[i]
        i += 1
    while j < n:
        count += 1
        if count == k:
            return array2[j]
        j += 1

    return "Error: k exceeds the total number of elements."
```

array1 = [2, 3, 6, 7, 9]

array2 = [1, 4, 8, 10]

k = 5

result = find_kth_element(array1, array2, k)

print(result)