373. Find K Pairs with Smallest Sums

You are given two integer arrays nums1 and nums2 sorted in non-decreasing order and an integer k.

Define a pair (u, v) which consists of one element from the first array and one element from the second array.

Return the k pairs (u1, v1), (u2, v2), ..., (uk, vk) with the smallest sums.

Example 1:

Input: nums1 = [1,7,11], nums2 = [2,4,6], k = 3

Output: [[1,2],[1,4],[1,6]]

Explanation: *The first 3 pairs are returned from the sequence:*

[1,2],[1,4],[1,6],[7,2],[7,4],[11,2],[7,6],[11,4],[11,6]

Example 2:

Input: nums1 = [1,1,2], nums2 = [1,2,3], k = 2

Output: [[1,1],[1,1]]

Explanation: *The first 2 pairs are returned from the sequence:*

[1,1],[1,1],[1,2],[2,1],[1,2],[2,2],[1,3],[1,3],[2,3]

Constraints:

- $1 <= nums1.length, nums2.length <= 10^5$
- $-10^9 <= nums1[i], nums2[i] <= 10^9$
- nums1 and nums2 both are sorted in non-decreasing order.
- $1 <= k <= 10^4$
- $k <= nums1.length * nums2.length$