# 689. Maximum Sum of 3 Non-Overlapping Subarrays

# Description

Given an integer array nums and an integer k, find three non-overlapping subarrays of length k with maximum sum and return them.

Return the result as a list of indices representing the starting position of each interval (0-indexed). If there are multiple answers, return the lexicographically smallest one.

## Example 1:

```
Input: nums = [1,2,1,2,6,7,5,1], k = 2
Output: [0,3,5]
Explanation: Subarrays [1, 2], [2, 6], [7, 5] correspond to the starting indices [0, 3, 5].
We could have also taken [2, 1], but an answer of [1, 3, 5] would be lexicographically larger.
```

### **Example 2:**

```
Input: nums = [1,2,1,2,1,2,1], k = 2
Output: [0,2,4]
```

### **Constraints:**

- 1 <= nums.length <= 2 \* 10 4
- $1 \le nums[i] < 2^{16}$
- 1 <= k <= floor(nums.length / 3)