Online (Divide and Conquer)

Time: 35 minutes

You are given an integer array of n elements. You have to find out which sub-array in this array has the maximum sum. Sub-array is a contiguous sequence of elements of an array. For example, consider the following array: [1,2,3,4,5]
A possible sub-array is [1,2,3] or [2,3,4], but [1,2,4] is not a sub-array.

You must use a **divide and conquer** approach to solve this problem. The first line of input will have the n, number of elements in the array. The second line will have n integers. In the first line, you should return the maximum sum, and in the second line, you should return the sub array.

Intended time complexity: O(nlogn)

Sample Input
7
-3 4 -1 2 1 -5 4

Sample Output
6
4 -1 2 1