

## Assignment

### Question-1

Given an integer K and an array of integers arr, the task is to find the maximum element from the array and after every retrieval the number will get decremented by 1. Repeat these steps exactly K number of times and print the sum of all the values retrieved in the end.

Input: K = 3, arr[] = {2, 3, 5, 4}

Output: 13

For K = 1, current maximum is 5 (Sum = 5 and arr[] = {2, 3, 4, 4})

For K = 2, current maximum is 4 (Sum = 5 + 4 = 9 and arr[] = {2, 3, 3, 4})

For K = 3, current maximum is 4 (Sum = 9 + 4 = 13 and arr[] = {2, 3, 3, 3})

Hence, the result is 13

### Question-2

Given an array a, your task is to convert it into a non-increasing form such that we can either increment or decrement the array value by 1 in minimum changes possible.

Input : a[] = {3, 1, 5, 1}

Output : 4

We need to decrease 5 to 1 to make array sorted in non-increasing order.

Input : a[] = {1, 5, 5, 5}

Output : 4

We need to increase 1 to 5.