

Smallest Distinct Window

Given a string, find the smallest window (substring) which contains all distinct characters of the given input string.

Sample Inputs

aabcbcbdbcaaadaaaa

Sample Outputs

dbcaa

Explanation : The smallest window is "dbca" as it contains all the distinct letters from input string. Similarly for the second case the answer should be 'a'.

Solution: smallestDistinctWindow.cpp

Sliding Window Maximum

Given an array of integers and an integer K, return a vector containing maximum for each and every contiguous subarray of size k.

Constraints:

$-10000 \leq A[i] \leq 10000$, where $0 < i < \text{size of array}$

$K > 0$

Sample Input

K = 3
input = {1, 2, 3, 1, 4, 5, 2, 3, 6}

Sample Output

output = {3, 3, 4, 5, 5, 5, 6}

Explanation

Maximum of 1, 2, 3 is 3

Maximum of 2, 3, 1 is 3

Maximum of 3, 1, 4 is 4

Maximum of 1, 4, 5 is 5

Maximum of 4, 5, 2 is 5

Maximum of 5, 2, 3 is 5

Maximum of 2, 3, 6 is 6

Solution: slidingWindowMax.cpp

Count Subarrays with Target Sum

Given an unsorted array of integers, find the number of subarrays having sum exactly equal to a given number k.

Sample Input

arr = {10, 2, -2, -20, 10} K = -10

Sample Output

3

Explanation

$10 + 2 - 2 + -20 = 10$

$-20 + 10 = -10$

$2 + -2 + -20 + 10 = -10$

Expected Complexity

Linear

Solution: subarrayTargetSum.cpp