SLIDING WINDOW MECHANISM...

video - 19

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Hard

Leetcode - 992

992. Subarrays with K Different Integers

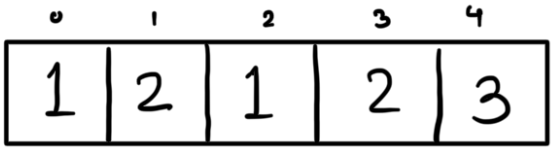
Hard | Topics | Companies

Given an integer array `nums` and an integer `k`, return *the number of* ***good subarrays*** *of* `nums`.

A **good array** is an array where the number of different integers in that array is exactly `k`.

- For example, `[1,2,3,1,2]` has `3` different integers: `1`, `2`, and `3`.

A **subarray** is a **contiguous** part of an array.

nums = 

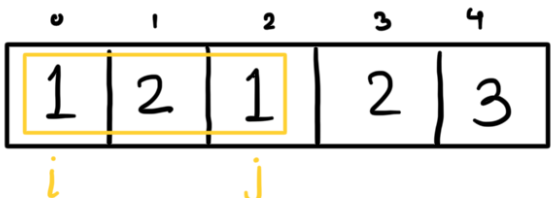
, K = 2

Output = 7

{1, 2} , {2, 1}, {1, 2} , {2, 3}

{1, 2, 1} , {2, 1, 2}, {1, 2, 1, 2}

Will this work with Khandani Sliding Window Template ??? (Standard template)



, K = 2

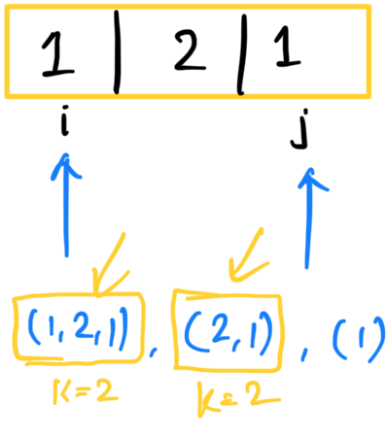
map

2	1

result = 1

(1,2) , (1,2,1)

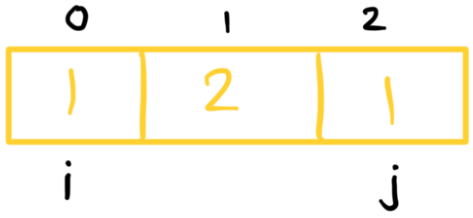
(2,1)



ending at j = (j-i+1);
= 2-0+1
= 3

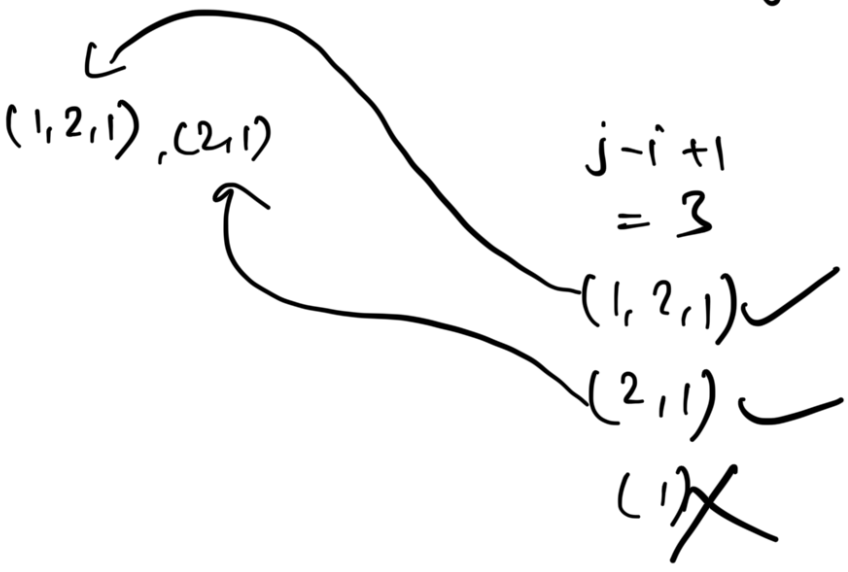
दिक्कत क्या है ??

(what's the Problem ??)

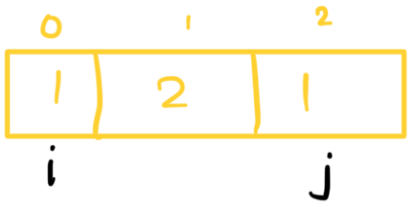


map

1→2
2→1



अब आएगा मज़ा



, K=2

map

1	2
2	1

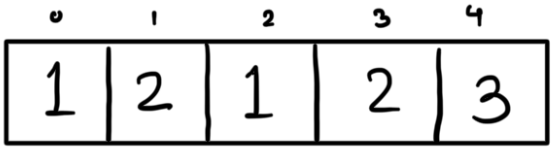
⇒ (1,2,1) = K=2 ✓

⇒ (2,1) K=2 ✓

⇒ (1) K=1 ✗

j-i+1 = 3

<=K



, K = ~~2~~ 1

~~i~~ ~~j~~ i {3}

map

3	1

Count = 1+2+3+4+2 = 12 = 12

K=2, K=1

{1}, {1,2}, {2}

(1,2,1), (2,1), (1)

(1,2,1,2), (2,1,2), (1,2), (2)

(2,3), (3)

<=K (K=2)

K=2

F

K-1 = 1

K=1

count = 1+1+1+1+1 = 5

{1} {2} {1} {2} {3}

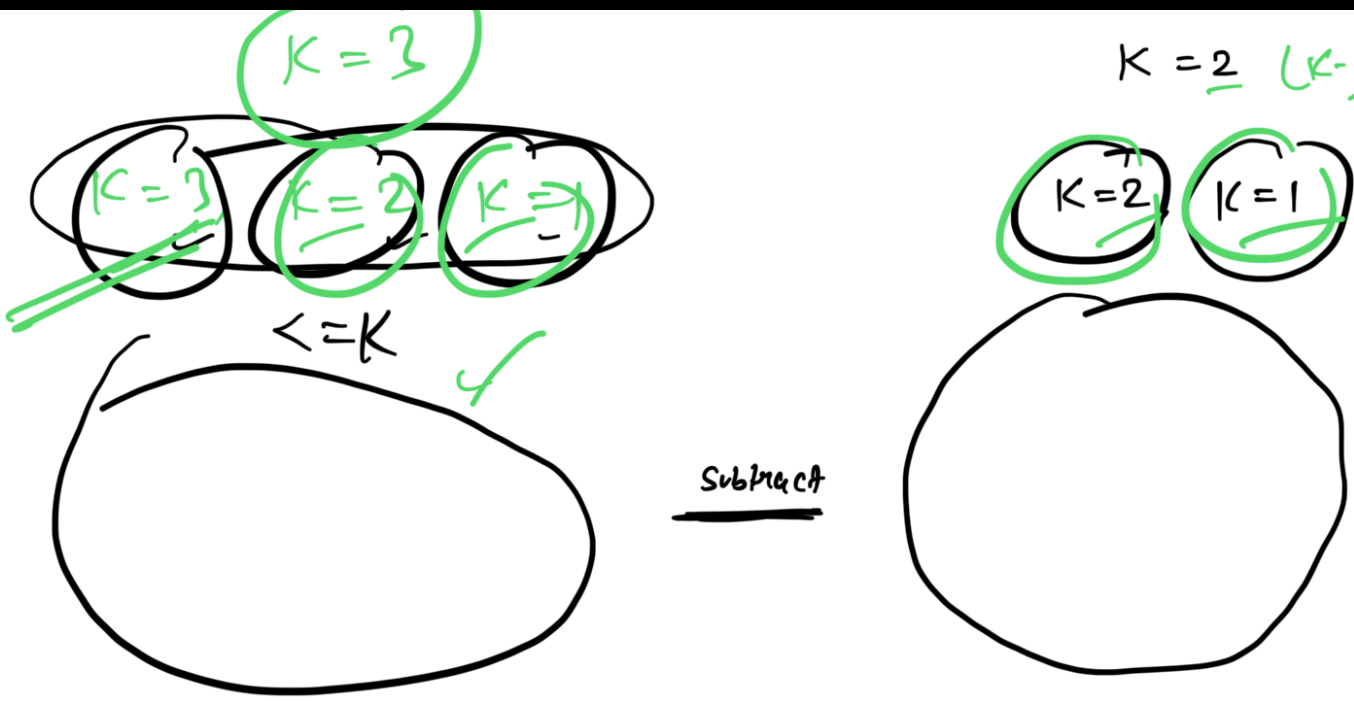
<=K

K=1

12-5 = 7

K=1

F-1



return $sw(K) - sw(K-1)$;

$\downarrow$ $O(n)$ $\qquad$ $\downarrow$ $O(n)$

T.C = $O(n)$

S.C = $O(1)$.