**Count distinct elements in every window**

Submissions: [15351](https://practice.geeksforgeeks.org/problem_submissions.php?pid=700444)  Accuracy:

44.16%

   Difficulty: [Easy](https://practice.geeksforgeeks.org/Easy/1/0/)   Marks: 2

Associated Course(s): [Interview Preparation](https://practice.geeksforgeeks.org/courses/interview-preparation/)[Sudo Placement [IITs]](https://practice.geeksforgeeks.org/courses/sudo%20placement-IIT/)

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Given an array **A[]** of size **N** and an integer **K**. Your task is to complete the function **countDistinct**() which prints the count of distinct numbers in all windows of size k in the array A[].

**Input:**  
The first line of input contains an integer T denoting the number of test cases. Then T test cases follow. Each test case contains two integers N and K. Then in the next line are N space separated values of the array A[].

**Output:**  
For each test case in a new line print the space separated values denoting counts of distinct numbers in all windows of size k in the array A[].

**Constraints:**  
1 <= T <= 100  
1 <= N, K <= 100  
1 <= A[] <= 100

**Example(To be used only for expected output):**  
**Input:**  
2  
7 4  
1 2 1 3 4 2 3  
3 2  
4 1 1

**Output:**  
3 4 4 3  
2 1

**Note:**The **Input/Ouput** format and **Example** given are used for system's internal purpose, and should be used by a user for **Expected Output** only. As it is a function problem, hence a user should not read any input from stdin/console. The task is to complete the function specified, and not to write the full code.

\*\* For More Input/Output Examples Use ['Expected Output'](https://practice.geeksforgeeks.org/problems/count-distinct-elements-in-every-window/1#ExpectOP) option \*\*

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<https://practice.geeksforgeeks.org/problems/count-distinct-elements-in-every-window/1>

1. // C++ program to find substring with equal
2. // number of 0's, 1's and 2's
3. #include <bits/stdc++.h>
4. #include <stdio.h>
5. #include <iostream>
7. using namespace std;
9. void countDistinct(int A[], int k, int n)
10. {
11. //Your code here
12. int count[101];
13. for(int i =0; i<101; i++) count[i] = 0;
15. for (int i = 0; i < n && i < k; i++)
16. {
17. count[A[i]]++;
18. }
19. int dist = 0;
20. for (int i = 0; i < 101; i++)
21. {
22. if (count[i] > 0) dist++;
23. }
25. //Console.Write(dist + " ");
26. cout << dist << " ";
28. for (int i = 0; i + k < n; i++)
29. {
30. count[A[i]]--;
31. if (count[A[i]] <= 0) dist--;
33. count[A[i + k]]++;
34. if( count[A[i + k]] == 1)
35. {
36. dist++;
37. }
38. //Console.Write(dist + " ");
39. cout << dist << " ";
40. }
42. cout << endl;
44. }

47. //  driver code to test above method
48. int main()
49. {
50. int arr[] = { 1, 2, 1, 3, 4, 2, 3 };
51. int k = 4;
53. countDistinct(arr, k, 7);
55. return 0;
56. }