

Pre Group Leaders Assignment

Submit this assignment Before Monday 12Am Night

Push Your codes on Gitlab

Notify on the group After Completion

Language - C

As Mentioned Don't Share this Document

Array

1. Perfect Array

- Given an array of size N and you have to tell whether the array is perfect or not.
- An array is said to be perfect if it's reverse array matches the original array.
- If the array is perfect then print "PERFECT" else print "NOT PERFECT".

Input : Arr[] = {1, 2, 3, 2, 1}

Output : PERFECT

Input : arr[] = {1, 2, 3, 4, 5}

Output : NOT PERFECT

2. Count of smaller elements

- Find number of elements which are less than or equal to given element X.

Input: arr[] = {1, 2, 4, 5, 8, 10}

X = 9

Output:5

3. Maximum and Minimum

- Find the minimum and maximum elements in the array.

Input: arr[] = {3, 2, 1, 56, 10000, 167}

Output: min = 1, max = 10000

4. Search an Element in an array

- Find if the given element is present in array or not.

Input: arr[] = {1,2,3,4}

x = 3

Output: 2

Explanation:

- There is one test case with array as {1, 2, 3 4} and element to be searched as

3.

- Since 3 is present at index 2, output is 2.

5. Largest Element :

- Find the third largest element in array.

Input: arr[] = {2,4,1,3,5}

Output: 3

Input: arr[] = {10,2}

Output: -1

6. Number of occurrence

- Find the number of occurrences of X in array.

Input: arr[] = {1, 1, 2, 2, 2, 2, 3}

Output: 4

7. Kth smallest element

- Given an array arr[] and an integer K where K is smaller than size of array, the task is to find the Kth smallest element in the given array.
- It is given that all array elements are distinct.

Input: arr[] = 7 10 4 3 20 15

K = 3

Output : 7

Explanation :

- 3rd smallest element in the given array is 7.

8. Arranging an Array

- Rearrange the given array in-place such that all the negative numbers occur before positive numbers.
- (Maintain the order of all -ve and +ve numbers as given in the original array).

Input: arr[] = {-3, 3, -2, 2}

Output: -3 -2 3 2

9. Count Pair sum

- Given two sorted arrays(arr1[] and arr2[]) of size M and N of distinct elements.
- Given a value Sum.
- The problem is to count all pairs from both arrays whose sum is equal to Sum.

Input:Sum = 10

arr1[] = {1, 3, 5, 7}

arr2[] = {2, 3, 5, 8}

Output: 2

Explanation:

- The pairs are: (5, 5) and (7, 3).

10. Maximum product of two numbers

- Given an array Arr of size N with all elements greater than or equal to zero.
- Return the maximum product of two numbers possible.

Input: arr[] = {1, 4, 3, 6, 7, 0}

Output: 42

Input: arr = {1, 100, 42, 4, 23}

Output: 4200