QSpiders|JSpiders|PySpiders, NOIDA

B-4, Block-B, Sector-3, Noida

Array Programming Questions by Shambhu Sir

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Q1

WAJP to swap two arrays.

Array based Programming

Q:2

Demonstrate call by value and call by reference.

Array based Programming

Q:3

For the given array of Strings, print the length of all the Strings.

Array based Programming

Q:4

For the given array of Strings, print the largest string.

Array based Programming

Q:5

For the given array of Strings, print and count all the Strings which has even number of characters.

Array based Programming

Q:6

WAJP for below requirements:

Original array:

2	5	4	3	6

resultant array:

18	15	16	17	14

Array based Programming

Q:7

Running Sum of 1d Array

Array based Programming

Q:8

Difference Between Element Sum and Digit Sum of an Array

Array based Programming

Q:9

Concatenation of Array

Array based Programming

Q:10

WAJP for below requirements:

Original array:

2	5	4	3	6

resultant array:

360	144	180	240	120

Array based Programming

Q:11

Product of Array Except Self

Array based Programming

Q:12

Max Consecutive Ones

Array based Programming

Q:13

Max consecutive 1 in any array

6	1	1	1	7	7	1	1	1	1

O/p: 4

Array based Programming

Q:14

Max consecutive n in any array

6	1	1	1	7	7	1	7	1	1

If n=7

o/p: 2

Array based Programmin

Important
Don't leave it..!!

Q:15

WAJP to swap two index values of the array.

Original array:

10	20	30	40	50	60	70

Swapped array:

10	60	30	40	50	20	70

Array based Programs

Q:16

WAJP to reverse each element of the array.

Original array:	10	20	30	40	50	60	70
Reversed array:	70	60	50	40	30	20	10

Array based Programmi

Q:17

WAJP to reverse 1st half and 2nd half elements of array.

Original array:

10	20	30	40	50	60	70

Reversed array:

40	30	20	10	70	60	50

Array based Programming

Q:18

WAJP to check array is a palindromic array or not. Return true or false accordingly.

Original array:

10	20	30	40	30	20	10

Output: true

Original array:

10	20	30	40	30	50	10

Output: false

Array based Programming

Q:19

Two Sum

Array based Programming

Q:20

WAJP to remove an element from the certain position of the array.

Original array:

10	20	30	40	50	60	70

Updated array:

10	20	40	50	60	70

Array based Programming

Q:21

WAJP to insert an element at certain position of the array.

Original array:

10	20	30	40	50	60	70

Updated array:

10	20	30	35	40	50	60	70

Array based Programmi

Q:22

WAJP to rotate each element of an array by one position in right side.

Original array:	10	20	30	40	50	60	70

Rotated array:	70	10	20	30	40	50	60

Array based Programming

Q:23

WAJP to rotate all the elements of array k position to its right.

array[] = {1,2,3,4,5,6,7} ,

k=2

Output: {6, 7, 1, 2, 3, 4, 5}

Array based Programming

Q:24

Rotate Array:

https://leetcode.com/problems/rotate-array/description/

Array based Programmi

Q:25

WAJP to rotate each element of an array by one position in left side.

Original array:

10	20	30	40	50	60	70

Rotated array:

20	30	40	50	60	70	10

Array based Programming

Q:26

WAJP to rotate all the elements of array k position to its left.

array[] = {1, 2, 3, 4, 5, 6, 7}

k = 2

Output: {3, 4, 5, 6, 7, 1, 2}

Array based Programming

Q:27

WAJP find missing element from a given array which has a missing element in a range of n.

N=7

i/p: [7, 4,3, 0, 5, 1, 6]

o/p: 2

Array based Programming

Q:28

Missing Number:

https://leetcode.com/problems/missing-number/description/

Array based Programming

Q:29

Best Time to Buy and Sell Stock

https://leetcode.com/problems/best-time-to-buy-and-sell-stock/description/

Array based Programming

Q:30

WAJP to check if an array is strictly increasing.

i/p: [2, 3, 7, 8, 9]

o/p: Array is strictly increasing

Array based Programming

Q:31

WAJP to check whether a given array is in sorted order or not.

i/p: [2, 7, 7, 8, 9]

o/p: Array is sorted

Array based Programming

Q:32

WAJP to move all zeroes of an array to the end.

i/p: [7, 0, 2, 6, 0, 4]

o/p: [7, 2, 6, 4, 0, 0]

https://leetcode.com/problems/move-zeroes/description/

Array based Programming

Q:33

WAJP the shift all 0's to left and all 1's to the right(Without Sorting).

i/p: [0, 1, 1, 0, 0, 1, 0, 0]

o/p: [0, 0, 0, 0, 0, 1, 1, 1]

Array based Programming

Q:34

For the given array of 0's, 1's and 2's

Sort the elements(Without Sorting).

i/p: [0, 2, 0, 1, 2, 1, 0, 2]

o/p: [0, 0, 0, 1, 1, 2, 2, 2]

https://leetcode.com/problems/sort-colors/description/

Array based Programming

Q:35

WAJP to print true if all the elements in two arrays are same otherwise print false.

Array based Programming

Q:36

WAJP to print and count all the prime number elements from array.

Array based Programming

Q:37

WAJP to get sum of all the prime number elements from array.

Array based Programming

Q:38

WAJP to print and count all the palindrome number elements from array.

Array based Programming

Q:39

WAJP to store first n prime numbers into array.

Array based Programming

Q:40

WAJP to store first n palindrome numbers into array.

Array based Programming

Q:41

WAJP to store n terms of Fibonacci series into an array.

Array based Programming

Important
Don't leave it..!!

Q:42

WAJP to print nth term of Fibonacci series by memoization technique.

https://leetcode.com/problems/fibonacci-number/description/

Array based Programming

Q:43

WAJP to print all the prime numbers up to n by using Sieve of Eratosthenes mechanism.

Array based Programming

Q:44

WAJP to count all prime numbers up to n.

Count Primes

Array based Programming

Q:45

WAJP to print Biggest and second biggest element of the array.

```
int[] a= {80, 80, 43, 50, 38, 63, 58, 80};
```

o/p

80

63

Array based Programming

Q:46

WAJP to print Smallest and second Smallest element of the array.

```
int[] a= {80, 80, 43, 50, 38, 63, 58, 80};
```

o/p

38

43

Array based Programming

Q:47

Third Maximum Number

https://leetcode.com/problems/third-maximum-number/description/

Array based Programming

Q:48

Kth Largest Element in an Array:

https://leetcode.com/problems/kth-largest-element-in-an-array/description/

Array based Programming

Q:49

WAJP to print the frequency of each element of the array if all given elements are in range from 0 to 100.

Array based Programming

Q:50

WAJP to print the frequency of each element of the array when elements provided are in any range.

Array based Programming

Q:51

WAJP to remove the duplicate values from the array.

Array based Programming

Q:52

WAJP to print each element of the array which has appeared only once/Unique elements in the array.

Array based Programming

Q:53

WAJP to print the element of the array which has appeared only once in the array. Given that only one element has appeared once in the array.

Array based Programming

Q:54

WAJP to print each element of the array which has appeared more than once/which has duplicate values in the array.

Array based Programming

Q:55

WAJP to print all the elements of array whose frequency are even.

Array based Programming

Q:56

WAJP to print all the elements of array whose frequency are odd.

Array based Programming

Q:57

WAJP to print the element and its frequency which has appeared for the maximum time in the array.

Array based Programming

Q:58

WAJP to return the element which has highest frequency in the array.

Array based Programming

Q:59

WAJP to print the smaller element and its frequency which has appeared for the maximum time in the array if more than one elements have maximum frequency.

Array based Programming

Q:60

WAJP to print the bigger element and its frequency which has appeared for the maximum time in the array if more than one elements have maximum frequency.

Array based Programming

Q:61

Design a method to return the index of the first non-repeating element in an array otherwise return -1 if no such element is found.

Array based Programming

Q:62

Majority Element

The majority element in an array is defined as the element that appears more than ⌊n/2⌋ times, where n is the length of the array.

In other words, it is the element that occurs most frequently and makes up more than half of the array.

Given an array of integers, the task is to find the majority element and return it. If there is no majority element, return -1.

Example 1:
Input: [3, 3, 4, 2, 4, 4, 2, 4, 4]
Output: 4

Example 3:
Input: [1, 2, 3, 4, 5]
Output: -1

Array based Programming

Q:63

Majority Element

https://leetcode.com/problems/majority-element/description/

Array based Programming

Q:64

WAJP to print true if all the elements in the array are unique otherwise false.

Array based Programming

Q:65

Single Number

https://leetcode.com/problems/single-number/description/

Array based Programming

Q:66

Single Number III

https://leetcode.com/problems/single-number-iii/description/

Array based Programming

Q:67

Single Number II

https://leetcode.com/problems/single-number-ii/description/

Array based Programming

Q:68

Find All Lonely Numbers in the Array

https://leetcode.com/problems/find-all-lonely-numbers-in-the-array/description/

Array based Programming

Q:69

Sum of Unique Elements

https://leetcode.com/problems/sum-of-unique-elements/description/

Array based Programming

Q:70

Find Pivot Index

Array based Programming

Q:71

Counting Bits – LeetCode

Array based Programming

Q:72

Number of Even and Odd Bits - LeetCode

Array based Programming

Q:73

Kth Missing Positive Number:

https://leetcode.com/problems/kth-missing-positive-number/description/

Array based Programming

Q:74

First Missing Positive:

https://leetcode.com/problems/first-missing-positive/description/

Array based Programming

Q:75

Write a java program to check whether the given number is a fascinating number or not.

https://leetcode.com/problems/check-if-the-number-is-fascinating/description/

Array based Programming

Q:76

WAJP to sort the array elements in ascending order by implementing Bubble sort algorithm.

Array based Programming

Q:77

WAJP to sort the array elements in ascending order by implementing Selection sort algorithm

Array based Programming

Q:78

WAJP to sort the array elements in ascending order by implementing Insertion sort algorithm

Array based Programming

Q:79

WAJP to merge two arrays into a single array.

i/p:

arr1 = {1, 3, 5}

arr2 = {2, 4, 6, 8, 10}

merged: {1, 3, 5, 2, 4, 6, 8, 10}

Array based Programming

Q:80

WAJP to zigzag merge two arrays into a single array.

i/p:

arr1 = {20, 30, 50}

arr2 = {2, 4, 6, 8, 10}

merged: {20, 2, 30, 4, 50, 6, 8, 10}

Array based Programming

Q:81

Merge two sorted array in sorted manner.

i/p:

arr1 = {20, 30, 50, 60}

arr2 = {2, 28, 32, 35, 42}

merged: {2, 20, 28, 30, 32, 35, 42, 50, 60}

Array based Programming

Q:82

Merge Sorted Array

Array based Programming

Q:83

WAJP to sort the array elements in ascending order by implementing Merge sort algorithm

Array based Programming

Q:84

Implement Merge Sort:

https://leetcode.com/problems/sort-an-array/description/

Array based Programming

Q:85

WAJP to sort the array elements in ascending order by implementing Quick sort algorithm

Array based Programming

Q:86

WAJP to sort the array elements in ascending order by implementing Heap sort algorithm

Array based Programming

Q:87

Squares of a Sorted Array

https://leetcode.com/problems/squares-of-a-sorted-array/description/

Array based Programming

Q:88

WAJP to sort the array elements in descending order.

Array based Programming

Important
Don't leave it..!!

Q:89

Problem Statement: In an IT company there are n number of Employees , they are asked to stand in ascending order according to their heights. But some employees are not currently standing in their correct position.

Your task is to find how many employees are there who are not standing in their correct positions.

Example

height=[1,2,1,3,3,4,3]

The 4 employees at indexes 1,2,5 and 6 are not in the right positions. The correct positions are (1,1,2,3,3,3,4).

Return 4.

Array based Programming

Q:90

WAJP to print first half of the array elements in ascending order and second half of the elements in descending order.

i/p: [25, 34, 12, 45, 23, 28]

o/p: [12, 25, 34, 45, 28, 23]

Array based Programming

Q:91

Implement linear search algorithm.

Array based Programming

Q:92

Implement binary search algorithm.

Array based Programming

Q:93

Search an element in a sorted array and return the index where it is found. If the element is not found then return the index where it will fit in the array.

https://leetcode.com/problems/search-insert-position/description/?envType=problem-list-v2

Array based Programming

Q:94

Find First and Last Position of Element in Sorted Array

Array based Programming

Q:95

Sqrt(x)

https://leetcode.com/problems/sqrtx/description/

Array based Programming

Q:96

Valid Perfect Square

https://leetcode.com/problems/valid-perfect-square/description/

Array based Programming

Q:97

Single Element in a Sorted Array

https://leetcode.com/problems/single-element-in-a-sorted-array/description/

Array based Programming

Q:98

First Missing Positive

https://leetcode.com/problems/first-missing-positive/description/

Array based Programming

Q:99

Given a bitonic sequence of n distinct elements, and an integer x. WAJP to find given element index in the bitonic sequence in O(log n) time.

*A **Bitonic Sequence** is a sequence of numbers that is first strictly increasing then after a point decreasing.*

- ***Input : arr[] = {8 ,12 18, 20, 17, 5, 1}, key = 20***
  Output : Found at index 3
- ***Input : arr[] = {5, 6, 7, 8, 9, 10, 3, 2, 1}, key = 30***
  Output : Not Found

Array based Programming

Q:100

Find Peak Element

https://leetcode.com/problems/find-peak-element/description/

Array based Programming

Q:101

Peak Index in a Mountain Array

https://leetcode.com/problems/peak-index-in-a-mountain-array/description/

Array based Programming

Q:10

2

Stone Game

Array based Programming

Q:103

11. Container With Most Water

Array based Programming

Q:104

42. Trapping Rain Water

Array based Programming

Q:105

53. Maximum Subarray

Array based Programming

Q:106

238. Product of Array Except Self

Array based Programming

Q:107

15. 3Sum