

QSpiders | JSpiders | PySpiders, NOIDA

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

Array Programming Questions by Shambhu Sir



@javac_java

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Q1

Print biggest element , smallest elements and their difference from the given array.

Array based Programming

Q:2

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

Array based Programming

Q:3

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

Array based Programming

Q:4

WAJP for below requirements:

**Important
Don't leave it..!!**

Original array:

| | | | | |
|---|---|---|---|---|
| 2 | 5 | 4 | 3 | 6 |
|---|---|---|---|---|

resultant array:

| | | | | |
|----|----|----|----|----|
| 18 | 15 | 16 | 17 | 14 |
|----|----|----|----|----|

Array based Programming

Q:5

WAP for below requirements:

Original array:

| | | | | |
|---|---|---|---|---|
| 2 | 5 | 4 | 3 | 6 |
|---|---|---|---|---|

resultant array:

| | | | | |
|-----|-----|-----|-----|-----|
| 360 | 144 | 180 | 240 | 120 |
|-----|-----|-----|-----|-----|

Array based Programming

Q:6

Concatenation of Array

Important
Don't leave it..!!

Array based Programming

Q:7

Max Consecutive Ones

Important
Don't leave it..!!

Array based Programming

Q:8

Max consecutive 1 in any array

**Important
Don't leave it..!!**

Array based Programming

Q:9

Max consecutive n in any array

Important
Don't leave it..!!

Array based Programming

Important
Don't leave it..!!

Q:10

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 Program

Important
Don't leave it..!!

Q:11

WAP 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 Programming

Important
Don't leave it..!!

Q:12

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:13

WAP 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

Important
Don't leave it...!!

Array based Programming

Q:14

Running Sum of 1d Array

**Important
Don't leave it..!!**

Array based Programming

Q:15

Two Sum

**Important
Don't leave it..!!**

Array based Programming

Q:16

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 |
|----|----|----|----|----|----|

**Important
Don't leave it..!!**

Array based Program

Important
Don't leave it..!!

Q:17

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 Programming

Important
Don't leave it..!!

Q:18

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:19

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}

**Important
Don't leave it..!!**

Array based Programming

Q:20

Rotate Array:

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

**Important
Don't leave it..!!**

Array based Programming

Important
Don't leave it..!!

Q:21

WAP 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:22

WJJP 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}

Important
Don't leave it..!!

Array based Programming

Q:23

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:24

Missing Number:

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

Array based Programming

Q:25

Best Time to Buy and Sell Stock

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

Array based Programming

Q:26

WAJP to check if an array is strictly increasing.

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

o/p: Array is strictly increasing

**Important
Don't leave it..!!**

Array based Programming

Q:27

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

**Important
Don't leave it..!!**

Array based Programming

Q:28

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:29

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]

**Important
Don't leave it..!!**

Array based Programming

Q:30

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/>

**Important
Don't leave it..!!**

Array based Programming

Q:31

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

Array based Programming

Q:32

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

Array based Programming

Q:33

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

Array based Programming

Q:34

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

Array based Programming

Q:35

WAJP to store first n prime numbers into array.

**Important
Don't leave it..!!**

Array based Programming

Q:36

WAJP to store first n palindrome numbers into array.

Array based Programming

Q:37

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

**Important
Don't leave it..!!**

Array based Programming

Important
Don't leave it..!!

Q:38

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

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

Array based Programming

Q:39

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

**Important
Don't leave it..!!**

Array based Programming

Q:40

WAP to count all prime numbers up to n.

Count Primes

**Important
Don't leave it..!!**

Array based Programming

Q:41

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

**Important
Don't leave it..!!**

Array based Programming

Q:42

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

**Important
Don't leave it..!!**

Array based Programming

Q:43

Third Maximum Number

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

Array based Programming

Q:44

Kth Largest Element in an Array:

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

Array based Programming

Q:45

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

**Important
Don't leave it..!!**

Array based Programming

Q:46

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

**Important
Don't leave it..!!**

Array based Programming

Q:47

WAJP to remove the duplicate values from the array.

**Important
Don't leave it..!!**

Array based Programming

Q:48

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

**Important
Don't leave it..!!**

Array based Programming

Q:49

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.

**Important
Don't leave it..!!**

Array based Programming

Q:50

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

**Important
Don't leave it..!!**

Array based Programming

Q:51

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

Array based Programming

Q:52

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

Array based Programming

Q:53

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

**Important
Don't leave it..!!**

Array based Programming

Q:54

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:55

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:56

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.

**Important
Don't leave it..!!**

Array based Programming

Q:57 Majority Element

The majority element in an array is defined as the element that appears more than $\lfloor n/2 \rfloor$ 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:58

Majority Element

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

Array based Programming

Q:59

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

**Important
Don't leave it..!!**

Array based Programming

Q:60

Single Number

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

Array based Programming

Q:61

Single Number III

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

Array based Programming

Q:62

Single Number II

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

Array based Programming

Q:63

Find All Lonely Numbers in the Array

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

Array based Programming

Q:64

Sum of Unique Elements

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

Array based Programming

Q:65

Find Pivot Index

Array based Programming

Q:66

Counting Bits – LeetCode

Array based Programming

Q:67

Number of Even and Odd Bits - LeetCode

Array based Programming

Q:68

Kth Missing Positive Number:

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

Array based Programming

Q:69

First Missing Positive:

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

Array based Programming

Q:70

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:71

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

**Important
Don't leave it..!!**

Array based Programming

Q:72

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

**Important
Don't leave it..!!**

Array based Programming

Q:73

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

**Important
Don't leave it..!!**

Array based Programming

Q:74

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:75

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}

**Important
Don't leave it..!!**

Array based Programming

Q:76

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}

Important
Don't leave it..!!

Array based Programming

Q:77

Merge Sorted Array

**Important
Don't leave it..!!**

Array based Programming

Q:78

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

**Important
Don't leave it..!!**

Array based Programming

Q:79

Implement Merge Sort:

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

**Important
Don't leave it..!!**

Array based Programming

Q:80

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

**Important
Don't leave it..!!**

Array based Programming

Q:81

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

**Important
Don't leave it...!!**

Array based Programming

Q:82

Squares of a Sorted Array

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

**Important
Don't leave it..!!**

Array based Programming

Q:83

WAJP to sort the array elements in descending order.

**Important
Don't leave it..!!**

Array based Programming

Important
Don't leave it..!!

Q:84

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:85

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:86

Implement linear search algorithm.

**Important
Don't leave it..!!**

Array based Programming

Q:87

Implement binary search algorithm.

**Important
Don't leave it..!!**

Array based Programming

Q:88

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>

**Important
Don't leave it...!!**

Array based Programming

Q:89

Find First and Last Position of Element in Sorted
Array

**Important
Don't leave it..!!**

Array based Programming

Q:90

Sqrt(x)

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

Important
Don't leave it..!!

Array based Programming

Q:91

Valid Perfect Square

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

**Important
Don't leave it..!!**

Array based Programming

Q:92

Single Element in a Sorted Array

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

Array based Programming

Q:93

First Missing Positive

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

Array based Programming

Q:94

Given a **bitonic sequence** of n distinct elements, and an integer x .
WAP 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:95

Find Peak Element

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

Array based Programming

Q:96

Peak Index in a Mountain Array

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

Array based Programming

Q:97

Stone Game