SPARK
Training for successful career

Practice on Any Language – 50+ Problems

Using your favourite language

❍ C

❍ C++

❍ Python

❍ Java

❍ C#

❍ PHP

❍ Golang

❍ JavaScript

To have a good hold on your problem solving skills, you can practice a lot of problems. 50+ Array based problems.

Topics,

❶ Smallest & Largest

❷ Count of Elements

❸ Statistics

❹ Sorting

❺ Duplicates and, more.

Let's start,

❶ Smallest and, Largest

In a given array of numbers, find the,

① Smallest element

② 2nd smallest element

③ 3rd smallest element

④ k'th Smallest element

⑤ Largest element

⑥ 2nd largest element

⑦ 3rd largest element

⑧ k'th Largest element

❷ Count of Elements

In a given array of integers, find the number of,

① Odd Numbers

② Even Numbers

③ Prime Numbers

④ Perfect Squares

⑤ Perfect Cubes

❸ Statistics

In a given array of numbers, find the

① Sum of all elements

② Mean Value

③ Median Value

④ Mode Value

❹ Sort an Array

① Bubble Sort

② Selection Sort

③ Insertion Sort

④ Merge Sort

⑤ Quick Sort

⑥ Counting Sort

⑦ Radix Sort

⑧ Bucket Sort

⑨ Heap Sort

⑩ Shell Sort

❺ Duplicates

In a given array of numbers,

① Remove all instances of the given value from the array in-place

② Assume all numbers appear twice except one. Find that number.

③ Assume all numbers in a series are there except one. Find that missing number.

④ Assume all numbers in a series appears once except one which appears twice. Find that duplicate number.

⑤ Count the frequency of an element

⑥ Find duplicates.

⑦ Remove duplicates

❻ Sorted Array

In a sorted array,

① Find an element

② Find the position at which the next element will be inserted

Given a sorted array of series of integers,

① Find the missing number

② Find duplicates

③ Remove duplicates

Others,

① Merge 2 sorted arrays

② Find median of 2 sorted arrays

③ Convert a sorted array to a BST (Binary Search Tree)

❼ Various Operations

Divide,

① Divide an array in 2 equal parts

② Divide an array in k equal parts

③ Divide an array in k parts where each sub-array contains elements at k-distance

Pick/Drop,

① Return a new array by picking each kth element

② Return a new array by dropping each kth element

Merge,

① Merge 2 or, more arrays

② Merge 2 sorted arrays to form another sorted array

Reverse,

① Reverse an array

② Divide an array in k parts and reverse each

③ Create a mirror reflection of an array (reverse + merge)

Rotate/Shuffle,

① Rotate an array clockwise/anti-clockwise for k times

② Shuffle an array

Map/Group,

① Return a new array by adding/multiplying each element with some value

② Based on some classifying rule, group elements of an array and form separate arrays

❽ Bonus

① In an array of integers, return indices of 2 integers such that they add upto a given target value. (TWO SUM)

② Given an array of digits, return a new array of digits by doing plus one to the number. (PLUS ONE)