Array Problems

1. Traverse an array
2. Insert an element in an array
3. Delete an element from an array
4. Copy an array
5. Add/Append element in an array
6. Search an element in an array
7. Find the maximum and minimum element in an array
8. Find the smallest number in an array
9. Find the largest number in an array
10. Find the second smallest and second largest element
11. Calculate the sum of elements
12. Calculate the average of all elements
13. Find the median of the given array
14. Reverse an array
15. Rearrange array in increasing-decreasing order
16. Replace each element by its rank in the array
17. Shuffle an array
18. Rotate array by K elements – Left / Right
19. Rotation using Block Swap Algorithm
20. Circular rotation of an array by K positions
21. Count frequency of each element
22. Counting occurrences of elements
23. Find all repeating elements
24. Find all non-repeating elements
25. Find the frequency of elements
26. Sorting elements by frequency
27. Sort an array
28. Remove duplicates from sorted array
29. Remove duplicates from unsorted array
30. Sort an array according to the order defined by another array
31. Merge two arrays
32. Find duplicates in an array
33. Find the union of two arrays
34. Find intersection of two arrays
35. Check if an array is a subset of another array
36. Finding all pairs that sum to a given value
37. Find all symmetric pairs in an array
38. Subarray with Maximum Sum (Kadane’s Algorithm)
39. Maximum product subarray
40. Finding equilibrium index of an array
41. Finding Kth largest/smallest element
42. Maximum sum in a subarray
43. Finding the Kth largest element using Heap
44. Finding subarrays with given sum or conditions (2 pointer / sliding window)
45. Check if array is sorted
46. Left rotate array by one place
47. Left rotate array by D places
48. Move all zeros to the end
49. Linear search
50. Find missing number in an array
51. Maximum consecutive 1s
52. Numbers that appear once while others appear twice
53. Longest subarray with given sum (only positive numbers)
54. Longest subarray with given sum (positive + negative numbers)
55. 2-Sum Problem
56. Sort array of 0s, 1s and 2s (Dutch National Flag problem)
57. Majority element (appearing > n/2 times)
58. Kadane’s algorithm – Maximum subarray sum
59. Print the subarray with the maximum subarray sum
60. Best time to buy and sell stock
61. Rearrange array in alternating positive and negative
62. Next permutation of array
63. Leaders in an array
64. Longest consecutive sequence in array
65. Set matrix zeros (Leetcode 73)
66. Rotate matrix by 90 degrees (in-place)
67. Print matrix in spiral order
68. Count subarrays with a given sum
69. Pascal’s Triangle
70. Majority element (> n/3 times)
71. 3-Sum Problem
72. 4-Sum Problem
73. Largest subarray with 0 sum
74. Count number of subarrays with a given XOR/sum = K
75. Merge overlapping intervals
76. Merge two sorted arrays without extra space
77. Find the repeating and missing number
78. Count inversions in an array
79. Reverse pairs (Leetcode 493)
80. Maximum product subarray