

Commonly asked array programming questions-

Basic Level

1. Find the maximum and minimum element in an array.
2. Reverse an array.
3. Find the sum of all elements in an array.
4. Check if an array is sorted (ascending/descending).
5. Find the frequency of each element in the array.
6. Remove duplicates from an array.
7. Search for an element in an array (linear search).
8. Count the number of even and odd numbers.
9. Merge two sorted arrays.
10. Shift all zeroes to the end of the array (without changing the order of non-zero elements).

♦ Intermediate Level

11. Find the second largest/smallest element in an array.
12. Rotate an array by k positions.
13. Check if two arrays are equal or not.
14. Find the common elements in two arrays.
15. Find the missing number in a sequence of 1 to N .
16. Count the number of pairs with a given sum.
17. Move all negative numbers to one side.

18. Find the majority element in an array (if exists).
19. Find the element that appears only once when all others appear twice.
20. Kadane's Algorithm – Maximum Subarray Sum.

◆ Advanced Level

21. Find subarray with a given sum (non-negative integers).
22. Longest subarray with given sum K .
23. Maximum product subarray.
24. Find the duplicate number (without modifying array).
25. Merge intervals (like meeting times).
26. Trapping Rain Water problem.
27. Find all subarrays with zero sum.
28. Rearrange array in alternating positive & negative items.
29. Next greater element for each element in array.
30. Sliding Window Maximum.

◆ Sorting & Searching Based

31. Binary search in a sorted array.
32. Find first and last occurrence of an element.
33. Find peak element.

34. Search in a rotated sorted array.
35. Count inversions in an array.
36. Sort array of 0s, 1s and 2s (Dutch National Flag problem).
37. Merge two sorted arrays without using extra space.
38. Median of two sorted arrays.
39. Find the k-th smallest element in the array.
40. Find the frequency of a number using binary search.

♦ **Miscellaneous & Company-Focused**

41. Rearrange array to form largest number.
42. Rotate matrix by 90 degrees.
43. Set matrix zeroes (Google, Amazon).
44. Pascal's Triangle rows.
45. Longest consecutive sequence (unordered array).
46. Maximum length of even-odd subarray.
47. Count number of distinct elements in every window of size k .
48. Find subarray with XOR = K .
49. Find equilibrium index of array.
50. Count smaller elements to the right.