# ARRAY DSA Questions EASY

| | COMPANY | QUESTION NAME | APPROACH | GFG | LEETCODE | NOTES |
|---|---|---|---|---|---|---|
| 1 | *Infosys, Oracle, Wipro, Morgan Stanley* | Largest Element in Array<br>TC: O(n) SC : O(1) | | GFG | | If n is not initialized, u r using the size of the vector &arr, you must explicitly initialize `int n = arr.size();` |
| 2 | *SAP Labs,Rockstand* | Second Largest elem in array without sorting<br>TC: O(n) SC : O(1) | | GFG | | Visible array→ `arr[0]`. Invisible data→ `INT_MIN`<br>`Can't trust the data→ INT_MAX`<br>`INT_MIN → start with the worst max`<br>`INT_MAX → start with the worst min` |
| 3 | | Check if array is sorted<br>TC: O(n) SC : O(1) | | GFG | | |
| 4 | *Zoho, Morgan Stanley, Microsoft, Samsung, Google, Wipro, Xome* | Remove Duplicates Sorted Array<br><br>TC: O(n) SC : O(1) | *2 pointers* | GFG | LEETCODE | |
| 5 | | Intersection of two sorted arrays<br>TC: O(n1 +n2)<br>SC :O(n1+n2) WC<br>Intersection of two unsorted arrays (LC) | *2 pointers* | GFG | LEETCODE | Intersection of two unsorted arrays (LC)<br>We used unordered map |
| 6 | *Flipkart, Morgan Stanley, Accolite, D-E-Shaw, OlaCabs, Pay, Visa, Intuit, Adobe, CISCO, Qualcomm TCS* | Missing number | *XOR* | GFG | LEETCODE | *Range Type: `1 to n` (like GFG)*<br>*→ XOR loop range: from 1 to n-1*<br>*→ ✅ Yes, you need to add `xor1 ^= n` outside the loop to include the last number.*<br><br>*Range Type: `0 to n` (like Leetcode)*<br>*→ XOR loop range: from 0 to n*<br>*→ ❌ No extra step needed — the loop already covers the full range.* |
| 7 | *Amazon, Google ,META* | Max Consecutive 1's | | | LEETCODE | |
| 8 | *Amazon* | Single Number | | GFG | LEETCODE | |
| 9 | *Zoho, Flipkart, Morgan Stanley, Accolite, Amazon, Microsoft, FactSet, Hike, Adobe, Google, Wipro, SAP Labs, CarWale* | Two Sum<br>- Pair with Given Sum | *2 pointers, HASHMAP* | GFG | LEETCODE | ***HashMAP -->*** Return True/False OR Return Indices<br>TC: O(NlogN) MAP<br>O(N) UMAP(B/A)<br>O(N^2) worst<br>SC: O(N)<br><br>***2 POINTERS*** →Return True/False<br>TC: O(N) + O(NlogN) sorting<br>SC: O(N) |
| | | Valid Anagram | | GFG | LEETCODE | |
| | | Find All Numbers Disappeared in an Array | | GFG | LEETCODE | |
| | | Convert 1D Array Into 2D Array | | GFG | LEETCODE | |
| | | | | GFG | LEETCODE | |

# MEDIUM

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|---|---|---|---|---|---|---|
| 1 | | Rotate Array by One (clockwise direction/right)<br>TC: O(n) SC : O(1) | | | . | Whenever they say rotate left/right, look at the key elem that moves, either first/last & shift accordingly.<br>Right Rotation by 1→**last element** (`arr[n-1]`)<br>Left Rotation by 1→**first element** (`arr[0]`)<br>Dont focus on shifting all elements |
| 2 | *Amazon, Microsoft, MAQ Software* | Rotate the array to the left (counter-clockwise)<br><br>rotate the array to the right | | GFG | LEETCODE | **Left = F-R-A** → First–Rest–All<br>**Right = A-F-R** → All–First–Rest |
| 3 | *Paytm,Amazon Microsoft, Samsung, SAP Labs, Linkedin, Bloomberg* | Move All Zeroes to End<br>TC: O(n) SC : O(1) | *2 pointers* | GFG | LEETCODE | |
| 4 | *Amazon* | Union of 2 Sorted Arrays<br>TC: O(n1 +n2)<br>SC :O(n1+n2) WC | *2 pointers* | GFG | | |
| 5. | *Paytm, Flipkart, Morgan Stanley, Amazon, Microsoft, OYO Rooms, Samsung, Snapdeal, Hike, MakeMyTrip, Ola Cabs, Walmart, MAQ Software, Adobe, Yatra.com, SAP Labs, Qualcomm* | Sort 0s, 1s and 2s | *Dutch National flag algo* | GFG | LEETCODE | |
| 6 | *Amazon* | Longest Subarray with Sum K | *2 pointers, HASHMAP* | GFG | | ***HashMAP → FOR +VE, -VE AND 0'S***<br>TC: O(NlogN) MAP<br>O(N) UMAP(B/A)<br>O(N^2) worst<br>SC: O(N)<br><br>***2 POINTERS*** → FOR POSITIVE NUMS IN ARRAY<br>TC: O(2N)<br>SC: O(1) |
| 7 | *Flipkart, Accolite, Amazon, Microsoft, D-E-Shaw, Google, Nagarro, Atlassian* | Majority Element<br>TC: O(n) + (O(n)--> only where maynot condition occurs)<br>SC : O(1) | *Moore's Voting algo* | GFG | LEETCODE | |
| | | Group Anagrams | | | | |
| | | Top K Frequent Elements | | GFG | LEETCODE | |
| | | Encode and Decode Strings | | GFG | LEETCODE | |
| | | Product of Array Except Self | | GFG | LEETCODE | |
| | | Find the Duplicate Number | | GFG | LEETCODE | |
| | | Find All Duplicates in an Array | | | | |

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| | | Set Matrix Zeroes | | | | |
| | | Spiral Matrix | | | | |
| | | Rotate Image | | | | |
| | | Valid Sudoku | | | | |
| | | Factor Combinations | | | | |
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