

POSSIBLE ARRAY & MATRIX PROBLEMS

Easy & Average Problems:

- 1) Count of common factors of n numbers.
- 2) maximum and minimum among k integers in an array
- 3) longest bitonic subsequence
- 4) check for sorted array
- 5) sort array based on factor count, 1's count in binary representation
- 6) Path with maximum sum in a matrix
- 7) sort array based on element occurrence
- 8) array leaders
- 9) find arr2 is a mirror of arr1
- 10) rearrange +ve and -ve integers alternately (in-place swap)
- 11) spiral matrix – clockwise, anticlockwise.
- 12) find missing integer in the array
- 13) maximum repeated integer
- 14) sort matrix rows based on its equivalent binary values
- 15) add adjacent till single value – INFYEQ program
- 16) matrix with odd elements on top column, right column, left column, bottom column.
- 17) find word in the matrix – CODEING MAFIA question
- 18) Count of Triplets sum
- 19) Minimum swaps to form array – ascending & descending
- 20) minimum sum subarray
- 21) maximum sum subarray- using KADANE's algorithm
- 22) Flood Fill algorithm
- 23) sum of digits concatenated
- 24) matrix containing at least 1 repeating 2X2 submatrix.
- 25) count of integers at kth position
- 26) sliding window sum
- 27) quadrant with maximum odd integers, minimum odd integers.

- 28) search small submatrix in big matrix
- 29) integer and position – odd/even
- 30) Arrays – sorted in descending or not
- 31) position of minimum and maximum integers in an array
- 32) matrix row and column – zero
- 33) print kth element in the diagonals
- 34) print all possible top left-bottom right diagonals
- 35) print all possible top right- bottom left diagonals
- 36) zig-zag pattern printing in a matrix
- 37) in-place reverse array first and last k digits.
- 38) find the kth largest element in an array
- 39) in-place sort ODD/EVEN numbers in an array
- 40) sort array using stack
- 41) sort a stack – ascending & descending order
- 42) sort based on 0's count in binary representation
- 43) matrix rotation – K degrees, 90 degrees clockwise, 90 degrees anti-clockwise
- 44) matrix elements surrounded by k
- 45) reverse alternate k integers
- 46) all the boundary integers as k
- 47) maximum number of 1's in a row, 1's in a column, 0's in a row, 0's in a column
- 48) first K integer sorting
- 49) sum of subarray equal to k
- 50) replace with next immediate smallest value to left, right
- 51) kxk submatrix with all same elements
- 52) size of submatrix with all 1's, all 0's
- 53) maximum row sum and col sum from a linear array input (AMAZON question)
- 54) swap zero and surrounding sum
- 55) Array – left and right cycle sum
- 56) rotate array based on queries
- 57) matrix – maximum layer sum
- 58) subset- sorted in ascending or descending

- 59) find common elements in all rows, all columns
- 60) submatrix with same diagonal elements, same border elements
- 61) matrix – inverted L and reverse L pattern
- 62) array left rotation L times and right rotation R times
- 63) swap even integer pairs
- 64) find and replace matrix2 in matrix 1
- 65) count of diagonals having same elements
- 66) count of diagonals having K odd elements, K even elements, only vowels, only consonants
- 67) triangle with same k numbers in a matrix
- 68) matrix – four quadrants with inner diamond
- 69) Array consecutive sum formed by any of the divided groups
- 70) check if a queue can be formed using stack
- 71) get final sequence after performing n operations in an array
- 72) interlaced even and odd
- 73) recursive addition until array becomes single digit
- 74) integers with at-least 2 repeating digits in the given range
- 75) find HCF of n numbers
- 76) prime factors of integers in an array
- 77) Integer – count pair sum count equal to n
- 78) prime numbers – sieve of Eratosthenes
- 79) maximum sum – non adjacent elements in DP
- 80) maximum sum of sub-array in DP
- 81) Collect maximum points in a matrix (from 0,0 and from start index)
- 82) minimum sum path, maximum sum path from top left to bottom right in a matrix
- 83) remove duplicates from a sorted array using constant space
- 84) box – alternate left and right
- 85) Bin Packing Problem
- 86) Rat in the Maze
- 87) Knight and Pawn movements in a matrix
- 88) N queen problem
- 89) solve Sudoku

- 90) find island count in a matrix
- 91) sort border elements in a matrix, corner elements
- 92) find symmetric pairs in an array
- 93) Validate Sudoku
- 94) maximum size sub-matrix with X as corner elements
- 95) maximum and minimum sum kxk sub-matrix
- 96) sort messages in chronological order, lexicographic order
- 97) stock buys and sell – maximum & minimum profit
- 98) sort values based on weight
- 99) rotate corners in a matrix X times
- 100) form largest possible odd/even number, smallest possible odd/even number from array elements
- 101) next greater element in an array
- 102) print possible L shaped palindromes in a matrix
- 103) rotate matrix – layers alternately
- 104) replace row and column matrix
- 105) largest square sub-matrix with X as middle element
- 106) replace diagonals with greater sum (QUBERCOM question)
- 107) Rook and Pawn movement in a chessboard
- 108) matrix – palindrome each row and column
- 109) sort rows - based in even/odd number of count in each row/column
- 110) count pairs with sum equal to N
- 111) war field – largest battalion (recursion)
- 112) count possible sub-arrays with at-least one element greater than k
- 113) vendor – max profit(DP)
- 114) rotate matrix – X degrees
- 115) minimum and maximum sum sub-array with size K
- 116) matrix – average of maximum row and col elements
- 117) sort rows – based on last integer, columns based on last integer
- 118) alternate min and max length words in an array
- 119) all digits – pairs count

- 120) find missing digits in every 3X3 sub-matrix
- 121) matrix – print elements in the given path
- 122) Array implementation using stack & queue
- 123) find intersection of two sorted arrays
- 124) Kth smallest, kth largest element in an unsorted array
- 125) find common elements in 3 sorted arrays
- 126) merge sorted arrays
- 127) sub-array with largest product of both positive and negative integers
- 128) length of longest consecutive sequence in array of integers
- 129) minimum value in a rotated sorted array

130) to be continued

- **Prepared by:**
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