ARRAY

1. Reverse the array
2. Find the maximum and minimum element in an array
3. Find the "Kth" max and min element of an array
4. Given an array which consists of only 0, 1 and 2. Sort the array without using any sorting algo.
5. Move all the negative elements to one side of the array
6. Find the Union and Intersection of the two sorted arrays.
7. Write a program to cyclically rotate an array by one.
8. find Largest sum contiguous Subarray [V. IMP]
9. Minimise the maximum difference between heights [V.IMP]
10. Minimum no. of Jumps to reach end of an array
11. find duplicate in an array of N+1 Integers
12. Merge 2 sorted arrays without using Extra space.
13. Kadane's Algo [V.V.V.V.V IMP]
14. Merge Intervals
15. Next Permutation
16. Count Inversion
17. Best time to buy and Sell stock
18. find all pairs on integer array whose sum is equal to given number
19. find common elements In 3 sorted arrays
20. Rearrange the array in alternating positive and negative items with O(1) extra space.
21. Find if there is any subarray with sum equal to 0

22. Find factorial of a large number
23. find maximum product subarray
24. Find longest coinsecutive subsequence
25. Given an array of size n and a number k, find all elements that appear more than " n/k " times.
26. Maximum profit by buying and selling a share atmost twice
27. Find whether an array is a subset of another array
28. Find the triplet that sum to a given value
29. Trapping Rain water problem
30. Chocolate Distribution problem
31. Smallest Subarray with sum greater than a given value
32. Three way partitioning of an array around a given value
33. Minimum swaps required bring elements less equal K together
34. Minimum no. of operations required to make an array palindrome
35. Median of 2 sorted arrays of equal size

MATRIX

1. Spiral traversal on a Matrix
2. Search an element in a matriix
3. Find median in a row wise sorted matrix
4. Find row with maximum no. of 1's
5. Print elements in sorted order using row-column wise sorted matrix
6. Spiral traversal on a Matrix
7. Search an element in a matriix
8. Find median in a row wise sorted matrix
9. Find row with maximum no. of 1's
10. Print elements in sorted order using row-column wise sorted matrix
11. Maximum size rectangle
12. Find a specific pair in matrix
13. Rotate matrix by 90 degrees
14. Kth smallest element in a row-column wise sorted matrix
15. Common elements in all rows of a given matrix

STRING

1. Reverse a String
2. Check whether a String is Palindrome or not
3. Find Duplicate characters in a string
4. Why strings are immutable in Java?
5. Write a Code to check whether one string is a rotation of another
6. Write a Program to check whether a string is a valid shuffle of two strings or not
7. Count and Say problem
8. Write a program to find the longest Palindrome in a string.[Longest palindromic Substring]
9. Find Longest Recurring Subsequence in String
10. Print all Subsequences of a string.
11. Print all the permutations of the given string
12. Split the Binary string into two substring with equal 0's and 1's
13. Word Wrap Problem [VERY IMP].
14. EDIT Distance [Very Imp]
15. Find next greater number with same set of digits. [Very Very IMP]
16. Balanced Parenthesis problem.[Imp]
17. Word break Problem[Very Imp]
18. Rabin Karp Algo
19. KMP Algo
20. Convert a Sentence into its equivalent mobile numeric keypad sequence.
21. Minimum number of bracket reversals needed to make an expression balanced.
22. Count All Palindromic Subsequence in a given String.

23. Count of number of given string in 2D character array
24. Search a Word in a 2D Grid of characters.
25. Boyer Moore Algorithm for Pattern Searching.
26. Converting Roman Numerals to Decimal
27. Longest Common Prefix
28. Number of flips to make binary string alternate
29. Find the first repeated word in string.
30. Minimum number of swaps for bracket balancing.
31. Find the longest common subsequence between two strings.
32. Program to generate all possible valid IP addresses from given string.
33. Write a program tofind the smallest window that contains all characters of string itse
34. Rearrange characters in a string such that no two adjacent are same
35. Minimum characters to be added at front to make string palindrome
36. Given a sequence of words, print all anagrams together
37. Find the smallest window in a string containing all characters of another string
38. Recursively remove all adjacent duplicates
39. String matching where one string contains wildcard characters
40. Function to find Number of customers who could not get a computer
41. Transform One String to Another using Minimum Number of Given Operation
42. Check if two given strings are isomorphic to each other
43. Recursively print all sentences that can be formed from list of word lists

SORTING AND SEARCHING

1. Find first and last positions of an element in a sorted array
2. Find a Fixed Point (Value equal to index) in a given array
3. Search in a rotated sorted array
4. square root of an integer
5. Maximum and minimum of an array using minimum number of comparisons
6. Optimum location of point to minimize total distance
7. Find the repeating and the missing
8. find majority element
9. Searching in an array where adjacent differ by at most k
10. find a pair with a given difference
11. find four elements that sum to a given value
12. maximum sum such that no 2 elements are adjacent
13. Count triplet with sum smaller than a given value
14. merge 2 sorted arrays
15. print all subarrays with 0 sum
16. Product array Puzzle
17. Sort array according to count of set bits
18. minimum no. of swaps required to sort the array
19. Bishu and Soldiers
20. Rasta and Kheshtak
21. Kth smallest number again

22. Find pivot element in a sorted array
23. K-th Element of Two Sorted Arrays
24. Aggressive cows
25. Book Allocation Problem
26. EKOSPOJ:
27. Job Scheduling Algo
28. Missing Number in AP
29. Smallest number with atleastn trailing zeroes infactorial
30. Painters Partition Problem:
31. ROTI-Prata SPOJ
32. DoubleHelix SPOJ
33. Subset Sums
34. Find the inversion count
35. Implement Merge-sort in-place
36. Partitioning and Sorting Arrays with Many Repeated Entries

LINKED LIST

1. Write a Program to reverse the Linked List. (Both Iterative and recursive)
2. Reverse a Linked List in group of Given Size. [Very Imp]
3. Write a program to Detect loop in a linked list.
4. Write a program to Delete loop in a linked list.
5. Find the starting point of the loop.
6. Remove Duplicates in a sorted Linked List.
7. Remove Duplicates in a Un-sorted Linked List.
8. Write a Program to Move the last element to Front in a Linked List.
9. Add "1" to a number represented as a Linked List.
10. Add two numbers represented by linked lists.
11. Intersection of two Sorted Linked List.
12. Intersection Point of two Linked Lists.
13. Merge Sort For Linked lists.[Very Important]
14. Quicksort for Linked Lists.[Very Important]
15. Find the middle Element of a linked list.
16. Check if a linked list is a circular linked list.
17. Split a Circular linked list into two halves.
18. Write a Program to check whether the Singly Linked list is a palindrome or not.
19. Deletion from a Circular Linked List.
20. Reverse a Doubly Linked list.
21. Find pairs with a given sum in a DLL.
22. Count triplets in a sorted DLL whose sum is equal to given value "X".

23. Sort a “k”sorted Doubly Linked list.[Very IMP]
24. Rotate DoublyLinked list by N nodes.
25. Rotate a Doubly Linked list in group of Given Size.[Very IMP]
26. Can we reverse a linked list in less than O(n) ?
27. Why Quicksort is preferred for. Arrays and Merge Sort for LinkedLists ?
28. Flatten a Linked List
29. Sort a LL of 0's, 1's and 2's
30. Clone a linked list with next and random pointer
31. Merge K sorted Linked list
32. Multiply 2 no. represented by LL
33. Delete nodes which have a greater value on right side
34. Segregate even and odd nodes in a Linked List
35. Program for n’th node from the end of a Linked List