#### **Arrays:**

- 1. Write a java program to find duplicate elements in an array.
- 2. Write a java program to check the equality of two arrays
- 3. Write a java program to find all pairs of elements in an integer array whose sum is equal to a given number.
- 4. Write a java program to find a continuous subarray whose sum is equal to a given number.
- 5. Write a java program to find the intersection of two arrays
- Write a java program to separate zeros from non-zeros in an integer array
- 7. Write a java program to reverse an array without using an additional array
- 8. Write a java program to remove duplicate elements from an array
- 9. Write a java program to find kth largest element in unsorted array

### **String Manipulations:**

- 1. How do you reverse a given string in place
- 2. How do you print duplicate characters from a string
- 3. How do you check if two strings are anagrams of each other
- 4. How do you check if a given string is a palindrome
- 5. how to remove the duplicate character from String
- 6. Find the frequency of a given character of a string.
- 7. First Unique Character in a String
- 8. How do you find all the permutations of a string

# **Hashing:**

- 1. Largest Continuous Sequence Zero Sum
- 2. 2 sum
- 3. 4 sum
- 4. How do you find the length of the longest substring without repeating characters
- 5. Print all subarrays with 0 sum
- 6. Find whether an array is subset of another array
- 7. Given string str, How do you find the longest palindromic substring in str.

#### LinkedList:

- 1. Middle of list
- 2. Remove node from list
- 3. Remove nth node from list
- 4. Reverse list
- 5. Reverse in a range
- 6. Remove duplicate node
- 7. Remove duplicate node II (excluding repeated node)
- 8. Merge two sorted list
- 9. Check palindrome list

#### Stack and Queue:

- 1. Stack implementation (Array and linkedList)
- 2. Check balanced parentheses
- 3. Evaluated given postfix expression
- 4. Longest increasing sequence
- 5. Queue implementation (Array and LinkedList)

### **Greedy:**

- 1. Job sequence problem
- 2. Fractional knapsack
- 3. Min number of platform/meeting room problem

## **Recursion and Backtracking:**

- 1. Maze problem
- 2. N queen
- 3. M Color
- 4. Sudoku Solver

## **Dynamic Problem:**

- 1. Longest Common Subsequence
- 2. Longest Increasing Subsequence
- 3. Edit Distance
- 4. Minimum Partition

- 5. Ways to Cover a Distance
- 6. Longest Path In Matrix
- 7. Subset Sum Problem
- 8. Optimal Strategy for a Game
- 9. 0-1 Knapsack Problem
- 10. Boolean Parenthesization Problem
- 11. Shortest Common Supersequence
- 12. Matrix Chain Multiplication
- 13. Partition problem
- 14. Rod Cutting
- 15. Coin change problem
- 16. Word Break Problem
- 17. Maximal Product when Cutting Rope
- 18. Dice Throw Problem
- 19. Box Stacking
- 20. Egg Dropping Puzzle

#### Tree:

- 1. Tree implement. + InOrder + PreOrder + PostOrder
- 2. Level order traversal
- 3. Spiral order traversal
- 4. Check Two tree identical or not
- 5. tries