**TOPIC WISE BASICS AND QUESTIONS**

**Recursion And Backtracking: -**

1. Basic started of recursion
   1. Basics
      1. PrintIncreasing, PrintDecreasing, Print IncreasingDecreasing,

Factorial, ReverseNumber, SumOfNumber, PowerLinear, PowerLog.

* 1. Recursion in array
     1. DisplayArray, DisplayReverse, MaximumElement, Minimum Element, FindElement, FirstIndex, LastIndex, AllIndices, ReverseAnArray, IsArrayPalindrome
  2. Recursion In String
     1. DisplayString, ReverseString, FindCharacterInString, IsStringPalindrome, StringToNumber, SumOfString
  3. Recursion on the way up
     1. PrintSubsequence, PrintNokiaKeypad, PrintStairsPath
  4. Recursion in ArrayList
     1. GetSubsequence, GetNokiaKeypad, GetStairsPath

1. Recursion in 2-d Array using simple recursion
   1. Maze Path
      1. Print MazePath in horizontal, vertical, diagonal direction
      2. Get MazePath in horizontal, vertical, diagonal direction
   2. Maze Path Jumps
      1. Print MazePathJumps in horizontal, vertical, diagonal direction
      2. Get MazePathJumps in horizontal, vertical, diagonal direction
   3. Flood Fill
      1. Print FloodFill in up, down, left, right direction
      2. Print FloodFillMulti in up, down, left, right direction
      3. Get FloodFill in up, down, left, right direction
      4. Get FloodFillMulti in up, down, left, right direction
   4. Maximum Minimum Path
      1. Maximum Range Path In maze
      2. Minimum Range Path in Maze
2. Recursion in 2-d Array using direction theory
   1. Maze Path
      1. Print MazePath in horizontal, vertical, diagonal direction
      2. Get MazePath in horizontal, vertical, diagonal direction
   2. Maze Path Jumps
      1. Print MazePathJumps in horizontal, vertical, diagonal direction
      2. Get MazePathJumps in horizontal, vertical, diagonal direction
   3. Flood Fill
      1. Print FloodFill in up, down, left, right direction
      2. Print FloodFillMulti in up, down, left, right direction
      3. Get FloodFill in up, down, left, right direction
      4. Get FloodFillMulti in up, down, left, right direction
   4. Maximum Minimum Path
      1. Maximum Range Path In maze
      2. Minimum Range Path in Maze
3. Recursion Trees
   1. Coin change permutations
      1. Coin Permutations with infinite supply
      2. Coin Permutations with infinite supply using subsequence
      3. Coin Permutations with single coin supply
      4. Coin Permutations with single coin supply using subsequence
   2. Coin Change combinations
      1. Coin combinations with infinite supply
      2. Coin combinations with infinite supply using subsequence
      3. Coin combinations with single coin supply
      4. Coin combinations with single coin supply using subsequence
   3. 1-d Queen Placing
      1. Print Permutations of 1-d queen placing
      2. Print Permutations of 1-d queen placing using subsequence
      3. Print Combinations of 1-d queen placing
      4. Print Combinations of 1-d queen placing using subsequence
   4. 2-d Queen Placing
      1. Print Permutations of 2-d queen placing
      2. Print Permutations of 2-d queen placing using subsequence
      3. Print Combinations of 2-d queen placing
      4. Print Combinations of 2-d queen placing using subsequence
4. N- Queen
   1. Print Permutations of placing N-Queen such that no one can kill each other.
   2. Print Permutations of placing N-Queen such that no one can kill each other using subsequence
   3. Print Combinations of placing N-Queen such that no one can kill each other.
   4. Print Combinations of placing N-Queen such that no one can kill each other using subsequence
   5. Print Combinations of placing N-Queen such that no one can kill each other using recursion
   6. Print Combinations of placing N-Queen such that no one can kill each other using shadow technique.
5. Medium Recursion
   1. Subsets Problem
   2. Two Subsets Problem
   3. Print Permutations
      1. In String
      2. In Array
6. Advance Recursion
   1. Solve Sudoku
   2. Is Valid Sudoku
   3. Cross word puzzle
   4. K-night tour
7. Pepcoding Level 1 questions
8. Pepcoding Level 2 questions
9. LeetCode Questions
10. Geeks for geeks questions
11. Hacker rank questions