Recursion and Backtracking Questions:

• Reverse a string using recursion

[Practice here: https://www.geeksforgeeks.org/reverse-a-string-using-recursion/]

• Reverse a Stack using recursion

[Practice here: https://www.geeksforgeeks.org/reverse-a-stack-using-recursion/]

Check if a number is Palindrome or not

ractice here: https://practice.geeksforgeeks.org/problems/palindrome/0

- Given a string, print all palindromic partitions [ractice here: https://www.geeksforgeeks.org/given-a-string-print-all-possible-palindromic-partition/]
- Generate all binary strings without consecutive 1's [Practice here: https://www.geeksforgeeks.org/generate-binary-strings-without-consecutive-1s/]
- All possible binary numbers of length n with equal sum in both halves [Practice here: https://www.geeksforgeeks.org/all-possible-binary-numbers-of-length-n-with-equal-sum-in-both-halves/]
 - Combinations in a String of Digits

[Practice here: https://www.geeksforgeeks.org/combinations-string-digits/]

- Count consonants in a string (Iterative and recursive methods) [Practice here: https://www.geeksforgeeks.org/count-consonants-string-iterative-recursive-methods/]
- Program for length of a string using recursion [Practice here: https://www.geeksforgeeks.org/program-for-length-of-a-string-using-recursion/]
 - Program for length of a string using recursionFirst uppercase letter in a string (Iterative and Recursive)

 $[Practice\ here: \underline{https://www.geeksforgeeks.org/first-uppercase-letter-in-a-string-iterative-and-recursive/\]$

• Power Set in Lexicographic order

[Practice here: https://www.geeksforgeeks.org/powet-set-lexicographic-order/]

- Print all possible combinations of r elements in a given array of size n [Practice here: https://www.geeksforgeeks.org/print-all-possible-combinations-of-relements-in-a-given-array-of-size-n/]
- Print all increasing sequences of length k from first n natural numbers [Practice here: https://www.geeksforgeeks.org/print-increasing-sequences-length-k-first-n-natural-numbers/]
- Program to find the minimum (or maximum) element of an array [Practice here: https://www.geeksforgeeks.org/program-find-minimum-maximum-element-array/]
- Recursive function to delete k-th node from linked list [Practice here: https://www.geeksforgeeks.org/recursive-function-delete-k-th-node-linked-list/]
- Reverse a Doubly linked list using recursion [Practice here: https://www.geeksforgeeks.org/reverse-doubly-linked-list-using-recursion/]
- Find middle of singly linked list Recursively [Practice here: https://www.geeksforgeeks.org/find-middle-singly-linked-list-recursively/]
- Print all leaf nodes of a Binary Tree from left to right [Practice here: https://www.geeksforgeeks.org/print-leaf-nodes-left-right-binary-tree/]
 - Recursive Insertion Sort

[Practice here: https://www.geeksforgeeks.org/recursive-insertion-sort/]

- Print a pattern without using any loop
 [Practice here: https://practice.geeksforgeeks.org/problems/print-pattern/0]
- Print sums of all subsets of a given set [Practice here: https://practice.geeksforgeeks.org/problems/subset-sums/0]
- Count ways to express a number as sum of powers

 [Practice here: https://www.geeksforgeeks.org/count-ways-express-number-sum-powers/]

Print N-bit binary numbers having more 1's than 0's in all prefixes
 [Practice here: https://www.geeksforgeeks.org/print-n-bit-binary-numbers-1s-0s-prefixes/]

• Binary to Gray code using recursion

[Practice here: https://www.geeksforgeeks.org/program-convert-binary-code-equivalent-gray-code-using-recursion/]

Product of 2 Numbers using Recursion

[Practice here: https://www.geeksforgeeks.org/product-2-numbers-using-recursion/]

Print all combinations of factors (Ways to factorize)

[Practice here: https://www.geeksforgeeks.org/print-combinations-factors-ways-factorize/]

Program for Chocolate and Wrapper Puzzle

[Practice here: https://www.geeksforgeeks.org/program-chocolate-wrapper-puzzle/]

Minimum steps to reach a destination

[Practice here: https://practice.geeksforgeeks.org/problems/minimum-number-of-steps-to-reach-a-given-number/0]

Identify all Grand-Parent Nodes of each Node in a Map

[Practice here: https://www.geeksforgeeks.org/identify-all-grand-parent-nodes-of-each-node-in-a-map/]

• Print all subsequences of a string

[Practice here: https://www.geeksforgeeks.org/print-subsequences-string/]

- Write a program to print all permutations of a given string [Practice here: https://practice.geeksforgeeks.org/problems/permutations-of-a-given-string/0]
- Find Maximum number possible by doing at-most K swaps [Practice here: https://practice.geeksforgeeks.org/problems/largest-number-in-k-swaps/0]
 - Print all possible words from phone digits

[Practice here: https://www.geeksforgeeks.org/find-possible-words-phone-digits/]

Backtracking Problems:

• Rat in a maze Problem

[Practice here: https://practice.geeksforgeeks.org/problems/rat-in-a-maze-problem/1

• Printing all solutions in N-Queen Problem [Practice here: https://www.geeksforgeeks.org/printing-solutions-n-queen-problem/]

Word Break Problem using Backtracking

[Practice here: https://www.geeksforgeeks.org/word-break-problem-using-backtracking/]

Remove Invalid Parentheses

[Practice here: https://www.geeksforgeeks.org/remove-invalid-parentheses/]

- Match a pattern and String without using regular expressions [Practice here: https://www.geeksforgeeks.org/match-a-pattern-and-string-without-using-regular-expressions/]
- Find paths from corner cell to middle cell in maze [Practice here: https://www.geeksforgeeks.org/find-paths-from-corner-cell-to-middle-cell-in-maze/]
 - Sudoku Solver

[Practice here: https://practice.geeksforgeeks.org/problems/solve-the-sudoku/0]

• m Coloring Problem

[Practice here: https://practice.geeksforgeeks.org/problems/m-coloring-problem/0]

Hamiltonian Cycle

[Practice here: https://practice.geeksforgeeks.org/problems/hamiltonian-path/0]

Find if there is a path of more than k length from a source

[Practice here: https://www.geeksforgeeks.org/find-if-there-is-a-path-of-more-than-k-length-from-a-source/]

• Find shortest safe route in a path with landmines

[Practice here: https://www.geeksforgeeks.org/find-shortest-safe-route-in-a-path-with-landmines/]

• Partition of a set into K subsets with equal sum

[Practice here: https://practice.geeksforgeeks.org/problems/partition-array-to-k-subsets/1]

• Longest Possible Route in a Matrix with Hurdles

[Practice here: https://www.geeksforgeeks.org/longest-possible-route-in-a-matrix-with-hurdles/]

Print all palindromic partitions of a string

[Practice here: https://www.geeksforgeeks.org/print-palindromic-partitions-string/]

- Print all possible paths from top left to bottom right of a mXn matrix [Practice here: https://www.geeksforgeeks.org/print-all-possible-paths-from-top-left-to-bottom-right-of-a-mxn-matrix/]
 - Subset Sum Problem

[Practice here: https://practice.geeksforgeeks.org/problems/subset-sum-problem/0]

• The Knight's tour problem

[Practice here: https://www.geeksforgeeks.org/the-knights-tour-problem-backtracking-1/]

Warnsdorff's algorithm for Knight's tour problem

[Practice here: https://www.geeksforgeeks.org/warnsdorffs-algorithm-knights-tour-problem/]

• Tug of War

[Practice here: https://www.geeksforgeeks.org/tug-of-war/]