

# 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

[Practice here: <https://practice.geeksforgeeks.org/problems/palindrome/0> ]

- Given a string, print all palindromic partitions

[Practice 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: <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-r-elements-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/> ]