# DP PROBLEMS

1. [Longest Common Subsequence | Introduction & LCS Length](https://www.techiedelight.com/longest-common-subsequence/)
2. [Longest Common Subsequence | Finding all LCS](https://www.techiedelight.com/longest-common-subsequence-finding-lcs/)
3. [Longest Common Substring problem](https://www.techiedelight.com/longest-common-substring-problem/)
4. [Longest Palindromic Subsequence using Dynamic Programming](https://www.techiedelight.com/longest-palindromic-subsequence-using-dynamic-programming/)
5. [Longest Repeated Subsequence Problem](https://www.techiedelight.com/longest-repeated-subsequence-problem/)
6. [Implement Diff Utility](https://www.techiedelight.com/implement-diff-utility/)
7. [Shortest Common Supersequence | Introduction & SCS Length](https://www.techiedelight.com/shortest-common-supersequence-introduction-scs-length/)
8. [Shortest Common Supersequence | Finding all SCS](https://www.techiedelight.com/shortest-common-supersequence-finding-scs/)
9. [Longest Increasing Subsequence using Dynamic Programming](https://www.techiedelight.com/longest-increasing-subsequence-using-dynamic-programming/)
10. [Longest Bitonic Subsequence](https://www.techiedelight.com/longest-bitonic-subsequence/)
11. [Increasing Subsequence with Maximum Sum](https://www.techiedelight.com/increasing-subsequence-with-maximum-sum/)
12. [The Levenshtein distance (Edit distance) problem](https://www.techiedelight.com/levenshtein-distance-edit-distance-problem/)
13. [Find size of largest square sub-matrix of 1’s present in given binary matrix](https://www.techiedelight.com/find-size-largest-square-sub-matrix-1s-present-given-binary-matrix/)
14. [Matrix Chain Multiplication using Dynamic Programming](https://www.techiedelight.com/matrix-chain-multiplication/)
15. [Find the minimum cost to reach last cell of the matrix from its first cell](https://www.techiedelight.com/find-minimum-cost-reach-last-cell-matrix-first-cell/)
16. [Find longest sequence formed by adjacent numbers in the matrix](https://www.techiedelight.com/find-longest-sequence-formed-adjacent-numbers-matrix/)
17. [Count number of paths in a matrix with given cost to reach destination cell](https://www.techiedelight.com/counting-paths-on-grid-to-reach-destination-cell/)
18. [0–1 Knapsack problem](https://www.techiedelight.com/0-1-knapsack-problem/)
19. [Maximize the Value of an Expression](https://www.techiedelight.com/maximize-value-of-the-expression/)
20. [Partition problem | Dynamic Programming Solution](https://www.techiedelight.com/partition-problem/)
21. [Subset Sum Problem](https://www.techiedelight.com/subset-sum-problem/)
22. [Minimum Sum Partition Problem](https://www.techiedelight.com/minimum-sum-partition-problem/)
23. [Find all N-digit binary strings without any consecutive 1’s](https://www.techiedelight.com/find-n-digit-binary-strings-without-consecutive-1s/)
24. [Rod Cutting Problem](https://www.techiedelight.com/rot-cutting/)
25. [Maximum Product Rod Cutting](https://www.techiedelight.com/maximum-product-rod-cutting/)
26. [Coin change-making problem (unlimited supply of coins)](https://www.techiedelight.com/coin-change-making-problem-unlimited-supply-coins/)
27. [Coin Change Problem (Total number of ways to get the denomination of coins)](https://www.techiedelight.com/coin-change-problem-find-total-number-ways-get-denomination-coins/)
28. [Longest Alternating Subsequence Problem](https://www.techiedelight.com/longest-alternating-subsequence/)
29. [Count number of times a pattern appears in given string as a subsequence](https://www.techiedelight.com/count-number-times-pattern-appears-given-string-subsequence/)
30. [Collect maximum points in a matrix by satisfying given constraints](https://www.techiedelight.com/collect-maximum-points-matrix-satisfying-given-constraints/)
31. [Count total possible combinations of N-digit numbers in a mobile keypad](https://www.techiedelight.com/count-total-possible-combinations-n-digit-numbers-mobile-keypad/)
32. [Find Optimal Cost to Construct Binary Search Tree](https://www.techiedelight.com/find-optimal-cost-to-construct-binary-search-tree/)
33. [Word Break Problem | Dynamic Programming](https://www.techiedelight.com/word-break-problem/)
34. [Word Break Problem | Using Trie Data Structure](https://www.techiedelight.com/word-break-problem-using-trie/)
35. [Total possible solutions to linear equation of k variables](https://www.techiedelight.com/total-possible-solutions-linear-equation-k-variables/)
36. [Wildcard Pattern Matching](https://www.techiedelight.com/wildcard-pattern-matching/)
37. [Find Probability that a Person is Alive after Taking N steps on an Island](https://www.techiedelight.com/probability-alive-after-taking-n-steps-island/)
38. [Calculate sum of all elements in a sub-matrix in constant time](https://www.techiedelight.com/calculate-sum-elements-sub-matrix-constant-time/)
39. [Find Maximum Sum Submatrix in a given matrix](https://www.techiedelight.com/find-maximum-sum-submatrix-in-given-matrix/)
40. [Find Maximum Sum Submatrix present in a given matrix](https://www.techiedelight.com/find-maximum-sum-submatrix-present-given-matrix/)
41. [Find maximum sum of subsequence with no adjacent elements](https://www.techiedelight.com/maximum-sum-of-subsequence-with-no-adjacent-elements)
42. [Maximum Subarray Problem (Kadane’s algorithm)](https://www.techiedelight.com/maximum-subarray-problem-kadanes-algorithm/)
43. [Single-Source Shortest Paths — Bellman Ford Algorithm](https://www.techiedelight.com/single-source-shortest-paths-bellman-ford-algorithm/)
44. [All-Pairs Shortest Paths — Floyd Warshall Algorithm](https://www.techiedelight.com/pairs-shortest-paths-floyd-warshall-algorithm/)
45. [Pots of Gold Game using Dynamic Programming](https://www.techiedelight.com/pots-gold-game-dynamic-programming/)
46. [Find minimum cuts needed for palindromic partition of a string](https://www.techiedelight.com/find-minimum-cuts-needed-palindromic-partition-string/)
47. [Maximum Length Snake Sequence](https://www.techiedelight.com/maximum-length-snake-sequence/)
48. [3-Partition Problem](https://www.techiedelight.com/3-partition-problem/)
49. [Calculate size of the largest plus of 1’s in binary matrix](https://www.techiedelight.com/calculate-size-largest-plus-1s-binary-matrix/)
50. [Check if given string is interleaving of two other given strings](https://www.techiedelight.com/check-string-interleaving-two-given-strings/)

# Array

1. [Find pair with given sum in the array](https://www.techiedelight.com/find-pair-with-given-sum-array/)
2. [Check if subarray with 0 sum is exists or not](https://www.techiedelight.com/check-subarray-with-0-sum-exists-not/)
3. [Print all sub-arrays with 0 sum](https://www.techiedelight.com/find-sub-array-with-0-sum/)
4. [Sort binary array in linear time](https://www.techiedelight.com/sort-binary-array-linear-time/)
5. [Find a duplicate element in a limited range array](https://www.techiedelight.com/find-duplicate-element-limited-range-array/)
6. [Find maximum length sub-array having given sum](https://www.techiedelight.com/find-maximum-length-sub-array-having-given-sum/)
7. [Find maximum length sub-array having equal number of 0’s and 1’s](https://www.techiedelight.com/find-maximum-length-sub-array-equal-number-0s-1s/)
8. [Find maximum product of two integers in an array](https://www.techiedelight.com/find-maximum-product-two-integers-array/)
9. [Sort an array containing 0’s, 1’s and 2’s (Dutch National Flag Problem)](https://www.techiedelight.com/sort-array-containing-0s-1s-2s-dutch-national-flag-problem/)
10. [In place merge two sorted arrays](https://www.techiedelight.com/inplace-merge-two-sorted-arrays/)
11. [Merge two arrays by satisfying given constraints](https://www.techiedelight.com/merge-two-arrays-satisfying-given-constraints/)
12. [Find index of 0 to replace to get maximum length sequence of continuous ones](https://www.techiedelight.com/find-index-0-replaced-get-maximum-length-sequence-of-continuous-ones/)
13. [Shuffle a given array of elements (Fisher–Yates shuffle)](https://www.techiedelight.com/shuffle-given-array-elements-fisher-yates-shuffle/)
14. [Rearrange the array with alternate high and low elements](https://www.techiedelight.com/rearrange-the-array-with-alternate-high-and-low-elements/)
15. [Find equilibrium index of an array](https://www.techiedelight.com/find-equilibrium-index-array/)
16. [Find largest sub-array formed by consecutive integers](https://www.techiedelight.com/find-largest-sub-array-formed-by-consecutive-integers/)
17. [Find majority element (Boyer–Moore Majority Vote Algorithm)](https://www.techiedelight.com/find-majority-element-in-an-array-boyer-moore-majority-vote-algorithm/)
18. [Move all zeros present in the array to the end](https://www.techiedelight.com/move-zeros-present-array-end/)
19. [Replace each element of array with product of every other element without using / operator](https://www.techiedelight.com/replace-element-array-product-every-element-without-using-division-operator/)
20. [Find Longest Bitonic Subarray in an array](https://www.techiedelight.com/find-longest-bitonic-subarray-array/)
21. [Longest Increasing Subsequence](https://www.techiedelight.com/longest-increasing-subsequence/)
22. [Find maximum difference between two elements in the array by satisfying given constraints](https://www.techiedelight.com/find-maximum-difference-between-two-elements-array/)
23. [Maximum Sum Subarray Problem (Kadane’s Algorithm)](https://www.techiedelight.com/maximum-subarray-problem-kadanes-algorithm/)
24. [Print continuous subarray with maximum sum](https://www.techiedelight.com/print-continuous-subarray-with-maximum-sum/)
25. [Maximum Sum Circular Subarray](https://www.techiedelight.com/maximum-sum-circular-subarray/)
26. [Find all distinct combinations of given length — I](https://www.techiedelight.com/find-distinct-combinations-of-given-length/)
27. [Find all distinct combinations of given length with repetition allowed](https://www.techiedelight.com/find-distinct-combinations-given-length-repetition-allowed/)
28. [Find maximum sequence of continuous 1’s formed by replacing at-most k zeroes by ones](https://www.techiedelight.com/find-maximum-sequence-of-continuous-1s-can-formed-replacing-k-zeroes-ones/)
29. [Find minimum sum subarray of given size k](https://www.techiedelight.com/find-minimum-sum-subarray-given-size-k/)
30. [Find maximum product subarray in a given array](https://www.techiedelight.com/find-maximum-product-subarray-given-array/)
31. [Find subarray having given sum in given array of integers](https://www.techiedelight.com/find-subarray-having-given-sum-given-array/)
32. [Find the length of smallest subarray whose sum of elements is greater than the given number](https://www.techiedelight.com/length-of-smallest-subarray-with-sum-greater-number/)
33. [Find largest number possible from set of given numbers](https://www.techiedelight.com/find-largest-number-possible-set-given-numbers/)
34. [Find the smallest window in array sorting which will make the entire array sorted](https://www.techiedelight.com/smallest-window-sorting-which-make-array-sorted/)
35. [Find maximum sum path involving elements of given arrays](https://www.techiedelight.com/find-maximum-sum-path-involving-elements-given-arrays/)
36. [Maximum profit earned by buying and selling shares any number of times](https://www.techiedelight.com/maximum-profit-earned-buying-and-selling-shares/)
37. [Trapping Rain Water within given set of bars](https://www.techiedelight.com/trapping-rain-water-within-given-set-bars/)
38. [Find minimum platforms needed in the station so to avoid any delay in arrival of any train](https://www.techiedelight.com/minimum-number-of-platforms-needed-avoid-delay-arrival-train/)
39. [Decode the array constructed from another array](https://www.techiedelight.com/decode-the-array-constructed-another-array/)
40. [Sort an array using one swap](https://www.techiedelight.com/sort-array-using-one-swap/)
41. [Find Triplet with given sum in an array](https://www.techiedelight.com/find-triplet-given-with-given-sum/)
42. [Length of longest continuous sequence with same sum in given binary arrays](https://www.techiedelight.com/length-longest-continuous-sequence-same-sum-binary-arrays/)
43. [Reverse every consecutive m elements of the given subarray](https://www.techiedelight.com/reverse-every-consecutive-m-elements-given-subarray/)
44. [Maximum Product Subset Problem](https://www.techiedelight.com/maximum-product-subset-problem/)
45. [Find pairs with given difference k in the array](https://www.techiedelight.com/find-pairs-with-given-difference-array/)
46. [Find pairs with given difference k in the array | Constant space solution](https://www.techiedelight.com/find-pairs-given-difference-k-array-constant-space-solution/)
47. [4 sum problem | Quadruplets with given sum](https://www.techiedelight.com/4-sum-problem/)
48. [Print all quadruplets with given sum | 4-sum problem extended](https://www.techiedelight.com/print-all-quadruplets-with-given-sum-4-sum-problem-extended/)
49. [Quickselect Algorithm](https://www.techiedelight.com/quickselect-algorithm/)
50. [Rearrange array such that A[A[i]] is set to i for every element A[i]](https://www.techiedelight.com/rearrange-array-such-that-array-index-is-set-to-i/)
51. [Print all Triplets that forms Arithmetic Progression](https://www.techiedelight.com/print-triplets-forms-arithmetic-progression/)
52. [Print all Triplets that forms Geometric Progression](https://www.techiedelight.com/print-triplets-forms-geometric-progression/)
53. [Print all combination of numbers from 1 to n having sum n](https://www.techiedelight.com/print-all-combination-numbers-from-1-to-n/)
54. [Replace each element of the array by its corresponding rank in the array](https://www.techiedelight.com/replace-each-element-corresponding-rank-array/)
55. [Print all Triplets in an array with sum less than or equal to given number](https://www.techiedelight.com/print-triplets-array-sum-less-equal-given-number/)
56. [Group elements of an array based on their first occurrence](https://www.techiedelight.com/group-elements-array-based-first-occurrence/)
57. [Find minimum difference between index of two given elements present in the array](https://www.techiedelight.com/find-minimum-difference-index-two-given-elements-present-array/)
58. [Find maximum absolute difference between sum of two non-overlapping sub-arrays](https://www.techiedelight.com/find-maximum-absolute-difference-subarrays/)
59. [Find all Symmetric Pairs in an Array of Pairs](https://www.techiedelight.com/find-symmetric-pairs-array-pairs/)
60. [Partition an array into two sub-arrays with the same sum](https://www.techiedelight.com/partition-array-into-two-sub-arrays-with-same-sum/)
61. [Find count of distinct elements in every sub-array of size k](https://www.techiedelight.com/count-distinct-elements-every-sub-array-size-k-array/)
62. [Find two numbers with maximum sum formed by array digits](https://www.techiedelight.com/find-two-numbers-maximum-sum-array-digits/)
63. [Print all sub-arrays of an array having distinct elements](https://www.techiedelight.com/print-sub-arrays-array-distinct-elements/)
64. [Find a Triplet having Maximum Product in an Array](https://www.techiedelight.com/find-triplet-maximum-product-array/)
65. [Find Minimum Index of Repeating Element in an Array](https://www.techiedelight.com/find-minimum-index-repeating-element-array/)
66. [Generate random input from an array according to given probabilities](https://www.techiedelight.com/generate-random-input-array-according-given-probabilities/)
67. [Find pair in an array having minimum absolute sum](https://www.techiedelight.com/find-pair-array-minimum-absolute-sum/)
68. [Find Index of Maximum Occurring Element with Equal Probability](https://www.techiedelight.com/find-index-maximum-occurring-element-equal-probability/)
69. [Check if an Array is Formed by Consecutive Integers](https://www.techiedelight.com/check-array-formed-consecutive-integers/)
70. [Find two non-overlapping pairs having same sum in an array](https://www.techiedelight.com/find-two-non-overlapping-pairs-sum-array/)
71. [Add elements of two arrays into a new array](https://www.techiedelight.com/add-elements-two-arrays/)
72. [Find Minimum Product among all Combinations of Triplets in an Array](https://www.techiedelight.com/find-minimum-product-triplets-array/)
73. [Replace every element of an array with the least greater element on its right](https://www.techiedelight.com/replace-every-element-array-least-greater-element-right/)
74. [Find all odd occurring elements in an array having limited range of elements](https://www.techiedelight.com/find-odd-occurring-elements-array/)
75. [Count the distinct absolute values in the sorted array](https://www.techiedelight.com/count-distinct-absolute-values-sorted-array/)
76. [Print all combinations of positive integers in increasing order that sum to a given number](https://www.techiedelight.com/print-combinations-integers-sum-given-number/)
77. [Find all distinct combinations of given length — II](https://www.techiedelight.com/find-distinct-combinations-given-length-2/)
78. [Find subarrays with given sum in an array](https://www.techiedelight.com/find-subarrays-given-sum-array/)
79. [Find the surpasser count for each element of an array](https://www.techiedelight.com/surpasser-count-each-element-array/)
80. [Find maximum length sequence of continuous ones (Using Sliding Window)](https://www.techiedelight.com/find-maximum-length-sequence-continuous-ones-sliding-window/)
81. [Find maximum length sequence of continuous ones](https://www.techiedelight.com/find-maximum-length-sequence-continuous-ones/)
82. [Find index that divides an array into two non-empty subarrays of equal sum](https://www.techiedelight.com/find-index-that-divides-array-non-empty-subarrays-equal-sum/)
83. [Calculate frequency of all elements present in an array of specified range](https://www.techiedelight.com/calculate-frequency-elements-present-array-specified-range/)
84. [Rearrange the array such that it contains positive and negative numbers at alternate positions](https://www.techiedelight.com/rearrange-array-positive-negative-numbers-alternate-positions/)
85. [Find a sorted triplet in the given array](https://www.techiedelight.com/find-sorted-triplet-array/)
86. [Shuffle an array according to the given order of elements](https://www.techiedelight.com/shuffle-array-according-to-given-order/)
87. [Count number of strictly increasing sub-arrays in an array](https://www.techiedelight.com/count-strictly-increasing-sub-arrays/)
88. [Find duplicates within given range k in an array](https://www.techiedelight.com/find-duplicates-within-given-range-array/)
89. [Longest Alternating Subarray Problem](https://www.techiedelight.com/longest-alternating-subarray-problem/)
90. [Find minimum range with at-least one element from each of the given arrays](https://www.techiedelight.com/find-minimum-range-given-arrays/)
91. [Find longest subsequence formed by consecutive integers](https://www.techiedelight.com/find-longest-subsequence-formed-by-consecutive-integers/)
92. [Find all elements in an array that are greater than all elements present to their right](https://www.techiedelight.com/find-elements-array-greater-than-elements-right/)
93. [Find missing number in array without using extra space](https://www.techiedelight.com/find-missing-number-array-without-extra-space/)
94. [Determine index of an element in given array which satisfies given constraints](https://www.techiedelight.com/determine-index-element-array/)
95. [Find minimum moves required for converting a given array to an array of zeroes](https://www.techiedelight.com/find-minimum-moves-required-converting-array/)
96. [Left rotate an array](https://www.techiedelight.com/left-rotate-array-c/)
97. [Right rotate an array k times](https://www.techiedelight.com/right-rotate-an-array-k-times/)
98. [Find maximum profit earned from at most two stock transactions](https://www.techiedelight.com/find-maximum-profit-earned-from-at-most-two-stock-transactions/)
99. [Find Frequency of each element in a sorted array containing duplicates](https://www.techiedelight.com/find-frequency-element-sorted-array-containing-duplicates/)
100. [Find Minimum and Maximum element in an array using minimum comparisons](https://www.techiedelight.com/find-minimum-maximum-element-array-using-minimum-comparisons/)
101. [Difference between Subarray, Subsequence and Subset](https://www.techiedelight.com/difference-between-subarray-subsequence-subset/)
102. [Find odd occurring element in an array in single traversal](https://www.techiedelight.com/find-odd-occurring-element-array-single-traversal/)
103. [Find odd occurring element in logarithmic time](https://www.techiedelight.com/find-odd-occurring-element-logn-time/)
104. [Find two odd occurring elements in an array without using any extra space](https://www.techiedelight.com/find-two-odd-occurring-element-array-without-extra-space/)
105. [Check if given array represents min heap or not](https://www.techiedelight.com/check-given-array-represents-min-heap-not/)
106. [Find K’th smallest element in an array](https://www.techiedelight.com/find-kth-smallest-element-array/)
107. [Find K’th largest element in an array](https://www.techiedelight.com/find-kth-largest-element-array/)
108. [Sort a K-Sorted Array](https://www.techiedelight.com/sort-k-sorted-array/)
109. [Merge M sorted lists of variable length](https://www.techiedelight.com/merge-m-sorted-lists-variable-length/)
110. [Find smallest range with at-least one element from each of the given lists](https://www.techiedelight.com/find-smallest-range-least-one-element-given-lists/)
111. [Merge M sorted lists each containing N elements](https://www.techiedelight.com/merge-m-sorted-lists-containing-n-elements/)
112. [Find maximum sum of subsequence with no adjacent elements](https://www.techiedelight.com/maximum-sum-of-subsequence-with-no-adjacent-elements/)
113. [Find ways to calculate a target from elements of specified array](https://www.techiedelight.com/find-ways-calculate-target-elements-array/)
114. [Sort elements by their frequency and Index](https://www.techiedelight.com/sort-elements-by-their-frequency-and-index/)
115. [Sort an array based on order defined by another array](https://www.techiedelight.com/custom-sort-sort-elements-array-order-elements-defined-second-array/)
116. [Inversion Count of an array](https://www.techiedelight.com/inversion-count-array/)
117. [Segregate positive and negative integers in linear time](https://www.techiedelight.com/positive-and-negative-integers-segregate/)
118. [Find number of rotations in a circularly sorted array](https://www.techiedelight.com/find-number-rotations-circularly-sorted-array/)
119. [Search an element in a circular sorted array](https://www.techiedelight.com/search-element-circular-sorted-array/)
120. [Find first or last occurrence of a given number in a sorted array](https://www.techiedelight.com/find-first-or-last-occurrence-of-a-given-number-sorted-array/)
121. [Count occurrences of a number in a sorted array with duplicates](https://www.techiedelight.com/count-occurrences-number-sorted-array-duplicates/)
122. [Find smallest missing element from a sorted array](https://www.techiedelight.com/find-smallest-missing-element-sorted-array/)
123. [Find Floor and Ceil of a number in a sorted array](https://www.techiedelight.com/find-floor-ceil-number-sorted-array/)
124. [Search in a nearly sorted array in logarithmic time](https://www.techiedelight.com/search-nearly-sorted-array-ologn-time/)
125. [Find number of 1’s in a sorted binary array](https://www.techiedelight.com/find-number-1s-sorted-binary-array/)
126. [Find Missing Term in a Sequence in Logarithmic time](https://www.techiedelight.com/find-missing-term-sequence-ologn-time/)
127. [Find missing number and duplicate elements in an array](https://www.techiedelight.com/find-missing-number-duplicate-elements-array/)
128. [Find the peak element in an array](https://www.techiedelight.com/find-peak-element-array/)
129. [Find Floor and Ceil of a number in a sorted array (Recursive solution)](https://www.techiedelight.com/find-floor-ceil-number-sorted-array-recursive/)
130. [Print all distinct subsets of a given set](https://www.techiedelight.com/print-distinct-subsets-given-set/)
131. [Find two duplicate elements in a limited range array (using XOR)](https://www.techiedelight.com/find-two-duplicate-elements-limited-range-array-using-xor/)
132. [Combinations of words formed by replacing given numbers with corresponding alphabets](https://www.techiedelight.com/combinations-of-words-formed-replacing-given-numbers-corresponding-english-alphabet/)
133. [0–1 Knapsack Problem](https://www.techiedelight.com/0-1-knapsack-problem/)
134. [Subset sum Problem](https://www.techiedelight.com/subset-sum-problem/)
135. [Partition Problem](https://www.techiedelight.com/partition-problem/)
136. [3-Partition Problem](https://www.techiedelight.com/3-partition-problem/)
137. [3-partition problem extended | Print all partitions](https://www.techiedelight.com/3-partition-problem-extended-print-all-partitions/)
138. [K-Partition Problem | Printing all Partitions](https://www.techiedelight.com/k-partition-problem-print-all-subsets/)
139. [Minimum Sum Partition Problem](https://www.techiedelight.com/minimum-sum-partition-problem/)
140. [Rod Cutting](https://www.techiedelight.com/rot-cutting/)
141. [Longest Alternating Subsequence Problem](https://www.techiedelight.com/longest-alternating-subsequence/)
142. [Coin change-making problem (unlimited supply of coins)](https://www.techiedelight.com/coin-change-making-problem-unlimited-supply-coins/)
143. [Coin Change Problem — Find total number of ways to get the denomination of coins](https://www.techiedelight.com/coin-change-problem-find-total-number-ways-get-denomination-coins/)
144. [Find maximum profit earned from at most K stock transactions](https://www.techiedelight.com/find-maximum-profit-earned-at-most-k-stock-transactions/)

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# Backtracking

1. [Print all possible solutions to N Queens Problem](https://www.techiedelight.com/print-possible-solutions-n-queens-problem/)
2. [Print all Possible Knight’s Tours in a chessboard](https://www.techiedelight.com/print-possible-knights-tours-chessboard/)
3. [Find Shortest Path in Maze](https://www.techiedelight.com/find-shortest-path-in-maze/)
4. [Find Longest Possible Route in a Matrix](https://www.techiedelight.com/find-longest-possible-route-matrix/)
5. [Find path from source to destination in a matrix that satisfies given constraints](https://www.techiedelight.com/find-path-source-destination-matrix-satisfies-given-constraints/)
6. [Find total number of unique paths in a maze from source to destination](https://www.techiedelight.com/find-total-number-unique-paths-maze-source-destination/)
7. [Print All Hamiltonian Path present in a graph](https://www.techiedelight.com/print-all-hamiltonian-path-present-in-a-graph/)
8. [Print all k-colorable configurations of the graph (Vertex coloring of graph)](https://www.techiedelight.com/print-k-colorable-configurations-graph-vertex-coloring-graph/)
9. [Find all Permutations of a given string](https://www.techiedelight.com/find-permutations-given-string/)
10. [All combinations of elements satisfying given constraints](https://www.techiedelight.com/find-combinations-of-elements-satisfies-given-constraints/)
11. [Find all binary strings that can be formed from given wildcard pattern](https://www.techiedelight.com/find-binary-strings-can-formed-given-wildcard-pattern/)
12. [K-Partition Problem | Printing all Partitions](https://www.techiedelight.com/k-partition-problem-print-all-subsets/)
13. [Magnet Puzzle](https://www.techiedelight.com/magnet-puzzle/)
14. [Find ways to calculate a target from elements of specified array](https://www.techiedelight.com/find-ways-calculate-target-elements-array/)
15. [Find minimum number possible by doing at-most K swaps](https://www.techiedelight.com/find-minimum-number-possible-k-swaps/)
16. [Determine if a pattern matches with a string or not](https://www.techiedelight.com/determine-pattern-matches-string-not/)
17. [Generate list of possible words from a character matrix](https://www.techiedelight.com/generate-list-of-possible-words-from-a-character-matrix/)
18. [Find the path between given vertices in a directed graph](https://www.techiedelight.com/find-path-between-vertices-directed-graph/)
19. [Find all Possible Topological Orderings of a DAG](https://www.techiedelight.com/find-all-possible-topological-orderings-of-dag/)
20. [Print all shortest routes in a rectangular grid](https://www.techiedelight.com/print-all-shortest-routes-rectangular-grid/)

# Binary

1. [Bit Hacks — Part 1 (Basic)](https://www.techiedelight.com/bit-hacks-part-1-basic/)
2. [Bit Hacks — Part 2 (Playing with k’th bit)](https://www.techiedelight.com/bit-hacks-part-2-playing-kth-bit/)
3. [Bit Hacks — Part 3 (Playing with rightmost set bit of a number)](https://www.techiedelight.com/bit-hacks-part-3-playing-rightmost-set-bit-number/)
4. [Bit Hacks — Part 4 (Playing with letters of English alphabet)](https://www.techiedelight.com/bit-hacks-part-4-playing-letters-english-alphabet/)
5. [Bit Hacks — Part 5 (Find absolute value of an integer without branching)](https://www.techiedelight.com/bit-hacks-part-5-find-absolute-value-integer-without-branching/)
6. [Bit Hacks — Part 6 (Random Problems)](https://www.techiedelight.com/bit-hacks-part-6-random-problems/)
7. [Brian Kernighan’s Algorithm to count set bits in an integer](https://www.techiedelight.com/brian-kernighans-algorithm-count-set-bits-integer/)
8. [Round up to the next highest power of 2](https://www.techiedelight.com/round-next-highest-power-2/)
9. [Round up to the previous power of 2](https://www.techiedelight.com/round-previous-power-2/)
10. [Compute parity of a number using lookup table](https://www.techiedelight.com/compute-parity-number-using-lookup-table/)
11. [Count set bits using lookup table](https://www.techiedelight.com/count-set-bits-using-lookup-table/)
12. [Find the minimum or maximum of two integers without using branching](https://www.techiedelight.com/find-minimum-maximum-two-integers-without-using-branching/)
13. [Multiply 16-bit integers using 8-bit multiplier](https://www.techiedelight.com/multiply-16-bit-integers-using-8-bit-multiplier/)
14. [Swap individual bits at given position in an integer](https://www.techiedelight.com/swap-individual-bits-given-position-integer/)
15. [Check if given number is power of 4 or not](https://www.techiedelight.com/check-given-number-power-of-4/)
16. [Check if given number is power of 8 or not](https://www.techiedelight.com/check-given-number-power-8-not/)
17. [Reverse Bits of a given Integer](https://www.techiedelight.com/reverse-bits-of-given-integer/)
18. [Find odd occurring element in an array in single traversal](https://www.techiedelight.com/find-odd-occurring-element-array-single-traversal/)
19. [Find two odd occurring elements in an array without using any extra space](https://www.techiedelight.com/find-two-odd-occurring-element-array-without-extra-space/)
20. [Swap two bits at given position in an integer](https://www.techiedelight.com/swap-two-bits-given-position-integer/)
21. [Add binary representation of two integers](https://www.techiedelight.com/add-binary-representation-two-integers/)
22. [Swap Adjacent Bits of a Number](https://www.techiedelight.com/swap-adjacent-bits-number/)
23. [Print all distinct subsets of a given set](https://www.techiedelight.com/print-distinct-subsets-given-set/)
24. [Perform Division of two numbers without using division operator (/)](https://www.techiedelight.com/perform-division-two-numbers-without-using-division-operator/)
25. [Check if adjacent bits are set in binary representation of a given number](https://www.techiedelight.com/check-adjacent-bits-set-binary-representation-number/)
26. [Conditionally negate a value without branching](https://www.techiedelight.com/conditionally-negate-value-without-branching/)
27. [Find two duplicate elements in a limited range array (using XOR)](https://www.techiedelight.com/find-two-duplicate-elements-limited-range-array-using-xor/)
28. [Reverse Bits of an integer using lookup table](https://www.techiedelight.com/reverse-bits-integer-using-lookup-table/)
29. [Find missing number and duplicate elements in an array](https://www.techiedelight.com/find-missing-number-duplicate-elements-array/)
30. [Circular shift on binary representation of an integer by k positions](https://www.techiedelight.com/circular-shift-integer-k-positions/)
31. [Compute modulus division without division and modulo operator](https://www.techiedelight.com/compute-modulus-division-without-division-modulo-operator/)
32. [Solve given set of problems without using multiplication or division operators](https://www.techiedelight.com/solve-problems-without-using-multiplication-division-operators/)
33. [Find XOR of two numbers without using XOR operator](https://www.techiedelight.com/find-xor-two-numbers-without-using-xor-operator/)
34. [Generate power set of a given set](https://www.techiedelight.com/generate-power-set-given-set/)
35. [Huffman Coding](https://www.techiedelight.com/huffman-coding/)
36. [Find missing number in array without using extra space](https://www.techiedelight.com/find-missing-number-array-without-extra-space/)
37. [Find odd occurring element in logarithmic time](https://www.techiedelight.com/find-odd-occurring-element-logn-time/)
38. [Find all odd occurring elements in an array having limited range of elements](https://www.techiedelight.com/find-odd-occurring-elements-array/)

# Binary Tree

1. [Check if two given binary trees are identical or not](https://www.techiedelight.com/check-if-two-binary-trees-are-identical-not-iterative-recursive/)
2. [Calculate height of a binary tree](https://www.techiedelight.com/calculate-height-binary-tree-iterative-recursive/)
3. [Delete given Binary Tree](https://www.techiedelight.com/delete-given-binary-tree-iterative-recursive/)
4. [Inorder Tree Traversal (Iterative & Recursive Implementation)](https://www.techiedelight.com/inorder-tree-traversal-iterative-recursive/)
5. [Preorder Tree Traversal (Iterative & Recursive Implementation)](https://www.techiedelight.com/preorder-tree-traversal-iterative-recursive/)
6. [Postorder Tree Traversal (Iterative & Recursive Implementation)](https://www.techiedelight.com/postorder-tree-traversal-iterative-recursive/)
7. [Level Order Traversal of Binary Tree](https://www.techiedelight.com/level-order-traversal-binary-tree/)
8. [Spiral Order Traversal of Binary Tree](https://www.techiedelight.com/spiral-order-traversal-binary-tree/)
9. [Reverse Level Order Traversal of Binary Tree](https://www.techiedelight.com/reverse-level-order-traversal-binary-tree/)
10. [Print all nodes of a given binary tree in specific order](https://www.techiedelight.com/print-nodes-binary-tree-specific-order/)
11. [Print left view of binary tree](https://www.techiedelight.com/print-left-view-of-binary-tree/)
12. [Print Bottom View of Binary Tree](https://www.techiedelight.com/print-bottom-view-of-binary-tree/)
13. [Print Top View of Binary Tree](https://www.techiedelight.com/print-top-view-binary-tree/)
14. [Find next node in same level for given node in a binary tree](https://www.techiedelight.com/find-next-node-in-same-level-binary-tree/)
15. [Check if given binary tree is complete binary tree or not](https://www.techiedelight.com/check-given-binary-tree-complete-binary-tree-not/)
16. [In-place convert given binary tree to its sum tree](https://www.techiedelight.com/inplace-convert-a-tree-sum-tree/)
17. [Determine if given two nodes are cousins of each other](https://www.techiedelight.com/determine-two-nodes-are-cousins/)
18. [Print cousins of given node in a binary tree](https://www.techiedelight.com/print-cousins-of-given-node-binary-tree/)
19. [Check if given binary tree is a sum tree or not](https://www.techiedelight.com/check-given-binary-tree-sum-tree-not/)
20. [Combinations of words formed by replacing given numbers with corresponding alphabets](https://www.techiedelight.com/combinations-of-words-formed-replacing-given-numbers-corresponding-english-alphabet/)
21. [Determine if given binary tree is a subtree of another binary tree or not](https://www.techiedelight.com/determine-given-binary-tree-is-subtree-of-another-binary-tree-not/)
22. [Find diameter of a binary tree](https://www.techiedelight.com/find-diameter-of-a-binary-tree/)
23. [Check if given binary Tree has symmetric structure or not](https://www.techiedelight.com/check-given-binary-tree-symmetric-structure-not/)
24. [Convert binary tree to its mirror](https://www.techiedelight.com/convert-binary-tree-to-its-mirror/)
25. [Check if binary tree can be converted to another by doing any no. of swaps of left & right child](https://www.techiedelight.com/determine-binary-tree-can-converted-another-number-swaps-left-right-child/)
26. [Find Lowest Common Ancestor (LCA) of two nodes in a binary tree](https://www.techiedelight.com/find-lowest-common-ancestor-lca-two-nodes-binary-tree/)
27. [Print all paths from root to leaf nodes in a binary tree](https://www.techiedelight.com/print-all-paths-from-root-to-leaf-nodes-binary-tree/)
28. [Find ancestors of given node in a Binary Tree](https://www.techiedelight.com/find-ancestors-of-given-node-binary-tree/)
29. [Find the distance between given pairs of nodes in a binary tree](https://www.techiedelight.com/distance-between-given-pairs-of-nodes-binary-tree/)
30. [Find Vertical Sum in a given Binary Tree](https://www.techiedelight.com/find-vertical-sum-given-binary-tree/)
31. [Perform vertical traversal of a binary tree — I](https://www.techiedelight.com/vertical-traversal-binary-tree/)
32. [Perform vertical traversal of a binary tree — II](https://www.techiedelight.com/print-nodes-binary-tree-vertical-order/)
33. [Print corner nodes of every level in binary tree](https://www.techiedelight.com/print-corner-nodes-every-level-binary-tree/)
34. [Find the diagonal sum of given binary tree](https://www.techiedelight.com/find-diagonal-sum-given-binary-tree/)
35. [Print Diagonal Traversal of Binary Tree](https://www.techiedelight.com/print-diagonal-traversal-binary-tree/)
36. [In-place convert Binary Tree to Doubly Linked List](https://www.techiedelight.com/place-convert-given-binary-tree-to-doubly-linked-list/)
37. [Sink nodes containing zero to the bottom of the binary tree](https://www.techiedelight.com/sink-nodes-containing-zero-bottom-binary-tree/)
38. [Convert given binary tree to full tree by removing half nodes](https://www.techiedelight.com/convert-given-binary-tree-to-full-tree-removing-half-nodes/)
39. [Truncate given binary tree to remove nodes which lie on a path having sum less than K](https://www.techiedelight.com/truncate-given-binary-tree-remove-nodes-lie-path-sum-less-k/)
40. [Find maximum sum root-to-leaf path in a binary tree](https://www.techiedelight.com/find-maximum-sum-root-to-leaf-path-binary-tree/)
41. [Check if given binary tree is height balanced or not](https://www.techiedelight.com/check-given-binary-tree-is-height-balanced-not/)
42. [Find maximum width of given binary tree](https://www.techiedelight.com/find-maximum-width-given-binary-tree/)
43. [Convert normal binary tree to Left-child right-sibling binary tree](https://www.techiedelight.com/convert-normal-binary-tree-left-child-right-sibling-binary-tree/)
44. [Determine if given Binary Tree is a BST or not](https://www.techiedelight.com/determine-given-binary-tree-is-a-bst-or-not/)
45. [Convert a Binary Tree to BST by maintaining its original structure](https://www.techiedelight.com/convert-binary-tree-to-bst-maintaining-original-structure/)
46. [Invert a Binary Tree](https://www.techiedelight.com/invert-binary-tree-recursive-iterative/)
47. [Print Right View of a Binary Tree](https://www.techiedelight.com/print-right-view-binary-tree/)
48. [Print all paths from leaf to root node in given binary tree](https://www.techiedelight.com/print-all-paths-from-leaf-to-root-binary-tree/)
49. [Iteratively print leaf to root path for every leaf node in a binary tree](https://www.techiedelight.com/print-leaf-to-root-path-binary-tree/)
50. [Build Binary Tree from given Parent array](https://www.techiedelight.com/build-binary-tree-given-parent-array/)
51. [Find all nodes at given distance from leaf nodes in a binary tree](https://www.techiedelight.com/find-all-nodes-at-given-distance-from-leaf-nodes-in-a-binary-tree/)
52. [Count all subtrees having same value of nodes in a binary tree](https://www.techiedelight.com/count-subtrees-value-nodes-binary-tree/)
53. [Find Maximum Difference Between a Node and its Descendants in a Binary Tree](https://www.techiedelight.com/find-maximum-difference-node-descendants/)
54. [Construct a Binary Tree from Ancestor Matrix](https://www.techiedelight.com/construct-binary-tree-ancestor-matrix/)
55. [Calculate height of a binary tree with leaf nodes forming a circular doubly linked list](https://www.techiedelight.com/calculate-height-binary-tree-leaf-nodes-forming-circular-doubly-linked-list/)
56. [Find maximum sum path between two leaves in a binary tree](https://www.techiedelight.com/find-maximum-sum-path-between-two-leaves-in-a-binary-tree/)
57. [Fix a binary tree that is only one swap away from becoming a BST](https://www.techiedelight.com/fix-binary-tree-one-swap-bst/)
58. [Construct a binary tree from inorder and preorder traversal](https://www.techiedelight.com/construct-binary-tree-from-inorder-preorder-traversal/)
59. [Construct a binary tree from inorder and postorder traversals](https://www.techiedelight.com/construct-binary-tree-from-inorder-postorder-traversals/)
60. [Construct a binary tree from inorder and level order sequence](https://www.techiedelight.com/construct-binary-tree-from-inorder-level-order-traversals/)
61. [Construct a full binary tree from preorder sequence with leaf node information](https://www.techiedelight.com/construct-full-binary-tree-from-preorder-sequence-with-leaf-information/)
62. [Construct a full binary tree from a preorder and postorder sequence](https://www.techiedelight.com/construct-full-binary-tree-from-preorder-postorder-sequence/)
63. [Set next pointer to inorder successor of all nodes in binary tree](https://www.techiedelight.com/set-next-pointer-inorder-successor-binary-tree/)
64. [Efficiently print all nodes between two given levels in a binary tree](https://www.techiedelight.com/print-nodes-between-two-levels-binary-tree/)
65. [Find preorder traversal of a binary tree from its inorder and postorder sequence](https://www.techiedelight.com/find-preorder-traversal-binary-tree-from-inorder-postorder/)
66. [Find the difference between sum of all nodes present at odd and even levels in a binary tree](https://www.techiedelight.com/difference-between-sum-nodes-odd-even-levels/)
67. [Find the size of the largest BST in a Binary Tree](https://www.techiedelight.com/find-size-largest-bst-in-binary-tree/)
68. [Link nodes present in each level of a binary tree in the form of a linked list](https://www.techiedelight.com/link-nodes-each-level-binary-tree/)
69. [Construct a Cartesian Tree from In-order Traversal](https://www.techiedelight.com/construct-cartesian-tree-from-inorder-traversal/)
70. [Implementation of Treap Data Structure (Insert, Search and Delete)](https://www.techiedelight.com/implementation-treap-data-structure-cpp-java-insert-search-delete/)
71. [Clone a binary tree with random pointers](https://www.techiedelight.com/clone-a-binary-tree-with-random-pointers/)
72. [Threaded Binary Tree: Overview and Implementation](https://www.techiedelight.com/threaded-binary-tree-overview-implementation/)
73. [Invert alternate levels of a perfect binary tree](https://www.techiedelight.com/invert-alternate-levels-perfect-binary-tree/)
74. [Convert a Binary Tree into a Doubly Linked List in Spiral Order](https://www.techiedelight.com/convert-binary-tree-into-doubly-linked-list/)
75. [Check if a binary tree is a min-heap or not](https://www.techiedelight.com/check-binary-tree-is-min-heap/)
76. [Determine if a binary tree satisfy the height-balanced property of red–black tree](https://www.techiedelight.com/determine-binary-tree-satisfy-height-balanced-property-red-black-tree/)
77. [Depth first search (DFS) vs Breadth first search (BFS)](https://www.techiedelight.com/depth-first-search-dfs-vs-breadth-first-search-bfs/)

# BST

1. [Insertion in BST](https://www.techiedelight.com/insertion-in-bst/)
2. [Search given key in BST](https://www.techiedelight.com/search-given-key-in-bst/)
3. [Deletion from BST](https://www.techiedelight.com/deletion-from-bst/)
4. [Construct balanced BST from given keys](https://www.techiedelight.com/construct-balanced-bst-given-keys/)
5. [Determine if given Binary Tree is a BST or not](https://www.techiedelight.com/determine-given-binary-tree-is-a-bst-or-not/)
6. [Check if given keys represents same BSTs or not without building the BST](https://www.techiedelight.com/check-given-keys-represents-same-bsts-not-without-building-bst/)
7. [Find inorder predecessor for given key in a BST](https://www.techiedelight.com/find-inorder-predecessor-given-key-bst/)
8. [Find Lowest Common Ancestor (LCA) of two nodes in a Binary Search Tree](https://www.techiedelight.com/find-lowest-common-ancestor-lca-two-nodes-bst/)
9. [Find K’th smallest and K’th largest element in BST](https://www.techiedelight.com/find-kth-smallest-largest-element-bst/)
10. [Floor and Ceil in a Binary Search Tree](https://www.techiedelight.com/floor-ceil-bst-iterative-recursive/)
11. [Find optimal cost to construct binary search tree](https://www.techiedelight.com/find-optimal-cost-to-construct-binary-search-tree/)
12. [Convert a Binary Tree to BST by maintaining its original structure](https://www.techiedelight.com/convert-binary-tree-to-bst-maintaining-original-structure/)
13. [Remove nodes from BST that have keys outside the valid range](https://www.techiedelight.com/remove-nodes-bst-keys-outside-valid-range/)
14. [Find a pair with given sum in a BST](https://www.techiedelight.com/find-pair-with-given-sum-bst/)
15. [Find inorder successor for given key in a BST](https://www.techiedelight.com/find-inorder-successor-given-key-bst/)
16. [Replace every element of an array with the least greater element on its right](https://www.techiedelight.com/replace-every-element-array-least-greater-element-right/)
17. [Fix a binary tree that is only one swap away from becoming a BST](https://www.techiedelight.com/fix-binary-tree-one-swap-bst/)
18. [Update every key in BST to contain sum of all greater keys](https://www.techiedelight.com/update-every-key-bst-contain-sum-greater-keys/)
19. [Check if a given sequence represents preorder traversal of a BST](https://www.techiedelight.com/check-sequence-represents-preorder-traversal-bst/)
20. [Build a Binary Search Tree from a Postorder Sequence](https://www.techiedelight.com/build-binary-search-tree-from-postorder-sequence/)
21. [Build a Binary Search Tree from a Preorder Sequence](https://www.techiedelight.com/build-binary-search-tree-from-preorder-sequence/)
22. [Find a triplet with given sum in a BST](https://www.techiedelight.com/find-triplet-with-given-sum-bst/)
23. [Count subtrees in a BST whose nodes lies within a given range](https://www.techiedelight.com/count-subtrees-bst-whose-nodes-within-range/)
24. [Merge two BSTs into a doubly linked list in sorted order](https://www.techiedelight.com/merge-two-bsts-into-doubly-linked-list-sorted-order/)
25. [Construct a height-balanced BST from an unbalanced BST](https://www.techiedelight.com/construct-height-balanced-bst-from-unbalanced-bst/)
26. [Find the size of the largest BST in a Binary Tree](https://www.techiedelight.com/find-size-largest-bst-in-binary-tree/)
27. [Convert a Binary Search Tree into a Min Heap](https://www.techiedelight.com/convert-binary-search-tree-into-min-heap/)
28. [Construct a Height-Balanced BST from a Sorted Doubly Linked List](https://www.techiedelight.com/construct-height-balanced-bst-from-sorted-doubly-linked-list/)

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# Divide & Conquer

1. [Binary Search Algorithm](https://www.techiedelight.com/binary-search/)
2. [Find number of rotations in a circularly sorted array](https://www.techiedelight.com/find-number-rotations-circularly-sorted-array/)
3. [Search an element in a circular sorted array](https://www.techiedelight.com/search-element-circular-sorted-array/)
4. [Find first or last occurrence of a given number in a sorted array](https://www.techiedelight.com/find-first-or-last-occurrence-of-a-given-number-sorted-array/)
5. [Count occurrences of a number in a sorted array with duplicates](https://www.techiedelight.com/count-occurrences-number-sorted-array-duplicates/)
6. [Find smallest missing element from a sorted array](https://www.techiedelight.com/find-smallest-missing-element-sorted-array/)
7. [Find Floor and Ceil of a number in a sorted array](https://www.techiedelight.com/find-floor-ceil-number-sorted-array/)
8. [Search in a nearly sorted array in logarithmic time](https://www.techiedelight.com/search-nearly-sorted-array-ologn-time/)
9. [Find number of 1’s in a sorted binary array](https://www.techiedelight.com/find-number-1s-sorted-binary-array/)
10. [Find the peak element in an array](https://www.techiedelight.com/find-peak-element-array/)
11. [Maximum Sum Subarray using Divide & Conquer](https://www.techiedelight.com/maximum-sum-subarray-using-divide-conquer/)
12. [Efficiently implement a power function](https://www.techiedelight.com/power-function-implementation-recursive-iterative/)
13. [Find Missing Term in a Sequence in Logarithmic time](https://www.techiedelight.com/find-missing-term-sequence-ologn-time/)
14. [Division of Two Numbers using Binary Search Algorithm](https://www.techiedelight.com/division-two-numbers-using-binary-search-algorithm/)
15. [Find Floor and Ceil of a number in a sorted array (Recursive solution)](https://www.techiedelight.com/find-floor-ceil-number-sorted-array-recursive/)
16. [Find Frequency of each element in a sorted array containing duplicates](https://www.techiedelight.com/find-frequency-element-sorted-array-containing-duplicates/)
17. [Find odd occurring element in logarithmic time](https://www.techiedelight.com/find-odd-occurring-element-logn-time/)
18. [Ternary Search vs Binary search](https://www.techiedelight.com/ternary-search-vs-binary-search/)
19. [Exponential search](https://www.techiedelight.com/exponential-search/)
20. [Unbounded Binary Search](https://www.techiedelight.com/unbounded-binary-search/)
21. [Interpolation search](https://www.techiedelight.com/interpolation-search/)
22. [Merge Sort Algorithm](https://www.techiedelight.com/merge-sort/)
23. [QuickSort Algorithm](https://www.techiedelight.com/quicksort/)

# Dynamic Programming

1. [Introduction to Dynamic Programming](https://www.techiedelight.com/introduction-dynamic-programming/)
2. [Longest Common Subsequence Problem](https://www.techiedelight.com/longest-common-subsequence/)
3. [Longest Common Subsequence | Space optimized version](https://www.techiedelight.com/longest-common-subsequence-lcs-space-optimized-version/)
4. [Longest Common Subsequence of K-sequences](https://www.techiedelight.com/longest-common-subsequence-of-k-sequences/)
5. [Longest Common Subsequence | Finding all LCS](https://www.techiedelight.com/longest-common-subsequence-finding-lcs/)
6. [Longest Common Substring Problem](https://www.techiedelight.com/longest-common-substring-problem/)
7. [Longest Palindromic Subsequence Problem](https://www.techiedelight.com/longest-palindromic-subsequence-using-dynamic-programming/)
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9. [Implement Diff Utility](https://www.techiedelight.com/implement-diff-utility/)
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56. [Clone a Linked List with Random Pointers](https://www.techiedelight.com/clone-a-linked-list-with-random-pointers/)
57. [Update random pointer for each linked list node to point to the maximum node](https://www.techiedelight.com/update-random-pointer-linked-list-node-maximum-node/)
58. [Link nodes present in each level of a binary tree in the form of a linked list](https://www.techiedelight.com/link-nodes-each-level-binary-tree/)
59. [Convert a Ternary Tree to a Doubly Linked List](https://www.techiedelight.com/convert-ternary-tree-doubly-linked-list/)
60. [Print nodes of a given binary tree in vertical order](https://www.techiedelight.com/print-nodes-binary-tree-vertical-order/)
61. [Convert a Binary Tree into a Doubly Linked List in Spiral Order](https://www.techiedelight.com/convert-binary-tree-into-doubly-linked-list/)
62. [Construct a Height-Balanced BST from a Sorted Doubly Linked List](https://www.techiedelight.com/construct-height-balanced-bst-from-sorted-doubly-linked-list/)
63. [In-place merge two sorted linked lists without modifying links of the first list](https://www.techiedelight.com/in-place-merge-two-sorted-linked-lists/)
64. [Reverse specified portion of a Linked List](https://www.techiedelight.com/reverse-specified-portion-linked-list/)

# Matrix

1. [Print Matrix in Spiral Order](https://www.techiedelight.com/print-matrix-spiral-order/)
2. [Create Spiral Matrix from given array](https://www.techiedelight.com/create-spiral-matrix-given-array/)
3. [Shift all matrix elements by 1 in Spiral Order](https://www.techiedelight.com/shift-matrix-elements-1-spiral-order/)
4. [Find Shortest path from source to destination in a matrix that satisfies given constraints](https://www.techiedelight.com/find-shortest-path-source-destination-matrix-satisfies-given-constraints/)
5. [Change all elements of row i and column j in a matrix to 0 if cell (i, j) has value 0](https://www.techiedelight.com/change-elements-row-column-j-matrix-0-cell-j-value-0/)
6. [Print diagonal elements of the matrix having positive slope](https://www.techiedelight.com/print-matrix-diagonally-positive-slope/)
7. [Find all paths from first cell to last cell of a matrix](https://www.techiedelight.com/find-all-paths-from-source-to-destination-in-matrix/)
8. [Replace all occurrences of 0 that are not surrounded by 1 in a binary matrix](https://www.techiedelight.com/replace-occurrences-0-not-surrounded-1-binary-matrix/)
9. [In-place rotate the matrix by 90 degrees in clock-wise direction](https://www.techiedelight.com/place-rotate-matrix-90-degrees-clock-wise-direction/)
10. [Count negative elements present in sorted matrix in linear time](https://www.techiedelight.com/count-negative-elements-present-sorted-matrix/)
11. [Report all occurrences of an element in row wise and column wise sorted matrix in linear time](https://www.techiedelight.com/report-all-occurrences-of-an-element-in-sorted-matrix/)
12. [Calculate sum of all elements in a sub-matrix in constant time](https://www.techiedelight.com/calculate-sum-elements-sub-matrix-constant-time/)
13. [Find maximum sum K x K sub-matrix in a given M x N matrix](https://www.techiedelight.com/find-maximum-sum-submatrix-in-given-matrix/)
14. [Find maximum sum submatrix present in a given matrix](https://www.techiedelight.com/find-maximum-sum-submatrix-present-given-matrix/)
15. [Count the number of islands](https://www.techiedelight.com/count-the-number-of-islands/)
16. [Flood Fill Algorithm](https://www.techiedelight.com/flood-fill-algorithm/)
17. [Find shortest safe route in a field with sensors present](https://www.techiedelight.com/find-shortest-safe-route-field-sensors-present/)
18. [Find all occurrences of given string in a character matrix](https://www.techiedelight.com/find-occurrences-given-string-character-matrix/)
19. [Shortest path in a Maze | Lee Algorithm](https://www.techiedelight.com/lee-algorithm-shortest-path-in-a-maze/)
20. [Check if given matrix is Toeplitz matrix or not](https://www.techiedelight.com/check-given-matrix-toeplitz-matrix-not/)
21. [In-place rotate the matrix by 180 degrees](https://www.techiedelight.com/inplace-rotate-matrix-180-degrees/)
22. [Fill Binary Matrix with Alternating Rectangles of 0 and 1](https://www.techiedelight.com/fill-binary-matrix-alternating-rectangles-0-1/)
23. [Find all common elements present in every row of given matrix](https://www.techiedelight.com/find-common-elements-present-every-row-given-matrix/)
24. [Construct a Binary Tree from Ancestor Matrix](https://www.techiedelight.com/construct-binary-tree-ancestor-matrix/)
25. [Find common elements present in all rows of a matrix](https://www.techiedelight.com/find-common-elements-present-rows-matrix/)
26. [Find index of the row containing maximum number of 1’s in a binary matrix](https://www.techiedelight.com/find-index-row-containing-maximum-number-1s-matrix/)
27. [Find the largest square sub-matrix which is surrounded by all 1's](https://www.techiedelight.com/largest-square-sub-matrix-surrounded-by-1s/)
28. [Find minimum passes required to convert all negative values in the matrix](https://www.techiedelight.com/find-minimum-passes-required-convert-negative-values-matrix/)
29. [Print a spiral square matrix without using any extra space](https://www.techiedelight.com/print-spiral-square-matrix-without-extra-space/)
30. [Print all shortest routes in a rectangular grid](https://www.techiedelight.com/print-all-shortest-routes-rectangular-grid/)
31. [Find length of longest path in the matrix with consecutive characters](https://www.techiedelight.com/find-length-longest-path-matrix-consecutive-characters/)
32. [Collect maximum value of coins in a matrix](https://www.techiedelight.com/collect-maximum-value-coins-matrix/)
33. [Young Tableau | Insert, Search, Extract-Min, Delete, Replace](https://www.techiedelight.com/young-tableau-insert-search-extract-min-delete-replace/)
34. [Sort an array using Young tableau](https://www.techiedelight.com/sort-array-using-young-tableau/)
35. [Find path from source to destination in a matrix that satisfies given constraints](https://www.techiedelight.com/find-path-source-destination-matrix-satisfies-given-constraints/)
36. [Generate list of possible words from a character matrix](https://www.techiedelight.com/generate-list-of-possible-words-from-a-character-matrix/)
37. [Find probability that a person is alive after taking N steps on the island](https://www.techiedelight.com/probability-alive-after-taking-n-steps-island/)
38. [Collect maximum points in a matrix by satisfying given constraints](https://www.techiedelight.com/collect-maximum-points-matrix-satisfying-given-constraints/)
39. [Count number of paths in a matrix with given cost to reach destination cell](https://www.techiedelight.com/counting-paths-on-grid-to-reach-destination-cell/)
40. [Find longest sequence formed by adjacent numbers in the matrix](https://www.techiedelight.com/find-longest-sequence-formed-adjacent-numbers-matrix/)
41. [Find the minimum cost to reach last cell of the matrix from its first cell](https://www.techiedelight.com/find-minimum-cost-reach-last-cell-matrix-first-cell/)
42. [Ways to reach the bottom-right corner of a matrix with exactly k turns allowed](https://www.techiedelight.com/reach-bottom-right-corner-matrix-exactly-k-turns/)
43. [Matrix Chain Multiplication](https://www.techiedelight.com/matrix-chain-multiplication/)
44. [Find size of largest square sub-matrix of 1’s present in given binary matrix](https://www.techiedelight.com/find-size-largest-square-sub-matrix-1s-present-given-binary-matrix/)
45. [Chess Knight Problem — Find Shortest path from source to destination](https://www.techiedelight.com/chess-knight-problem-find-shortest-path-source-destination/)
46. [Find Duplicate rows in a binary matrix](https://www.techiedelight.com/find-duplicate-rows-binary-matrix/)
47. [Print all possible solutions to N Queens Problem](https://www.techiedelight.com/print-possible-solutions-n-queens-problem/)
48. [Print all Possible Knight’s Tours in a chessboard](https://www.techiedelight.com/print-possible-knights-tours-chessboard/)
49. [Find Shortest Path in Maze](https://www.techiedelight.com/find-shortest-path-in-maze/)
50. [Find Longest Possible Route in a Matrix](https://www.techiedelight.com/find-longest-possible-route-matrix/)
51. [Find total number of unique paths in a maze from source to destination](https://www.techiedelight.com/find-total-number-unique-paths-maze-source-destination/)
52. [Calculate size of the largest plus of 1’s in binary matrix](https://www.techiedelight.com/calculate-size-largest-plus-1s-binary-matrix/)
53. [Find the maximum value of M[c][d] — M[a][b] over all choices of indexes](https://www.techiedelight.com/find-maximum-value-choices-indexes/)
54. [Find shortest distance of every cell from landmine in a Maze](https://www.techiedelight.com/find-shortest-distance-every-cell-landmine-maze/)
55. [Find shortest route in a device to construct the given string](https://www.techiedelight.com/find-shortest-route-device-construct-given-string/)
56. [Calculate minimum cost to reach destination city from source city](https://www.techiedelight.com/calculate-minimum-cost-to-reach-destination-city-from-source-city/)
57. [Count all paths in a matrix from first cell to last cell](https://www.techiedelight.com/count-all-paths-matrix-from-first-cell-to-last-cell/)
58. [Merge M sorted lists each containing N elements](https://www.techiedelight.com/merge-m-sorted-lists-containing-n-elements/)
59. [Travelling Salesman Problem using Branch and Bound](https://www.techiedelight.com/travelling-salesman-problem-using-branch-and-bound/)

# Puzzles

1. [Clock Angle Problem — Find angle between hour and minute hand](https://www.techiedelight.com/angle-between-hour-minute-hand/)
2. [Add two numbers without using addition operator](https://www.techiedelight.com/add-two-numbers-without-using-addition-operator/)
3. [Generate power set of a given set](https://www.techiedelight.com/generate-power-set-given-set/)
4. [Implement power function without using multiplication and division operators](https://www.techiedelight.com/implement-power-function-without-using-multiplication-division-operators/)
5. [Print all numbers between 1 to N without using semicolon](https://www.techiedelight.com/print-numbers-1-n-without-using-semicolon/)
6. [Swap two numbers without using third variable](https://www.techiedelight.com/swap-two-numbers-without-using-third-variable/)
7. [Determine the if condition to print specific output](https://www.techiedelight.com/determine-condition-to-print-specific-output/)
8. [Find maximum & minimum of triplet without using conditional statement and ternary operator](https://www.techiedelight.com/maximum-minimum-three-numbers-without-using-conditional-statement-ternary-operator/)
9. [Find numbers represented as sum of two cubes for two different pairs](https://www.techiedelight.com/numbers-represented-as-sum-of-two-cubes/)
10. [Print “Hello World” with empty main() function](https://www.techiedelight.com/print-hello-world-empty-main-function/)
11. [Tower of Hanoi Problem](https://www.techiedelight.com/tower-of-hanoi-problem/)
12. [Print all numbers between 1 to N without using any loop](https://www.techiedelight.com/print-numbers-1-n-without-using-loop-4-methods/)
13. [Print a semicolon without using semicolon anywhere in the program](https://www.techiedelight.com/print-a-semicolon-without-using-semicolon-anywhere-program/)
14. [Multiply two numbers without using multiplication operator or loops](https://www.techiedelight.com/multiply-two-numbers-without-using-multiplication-operator-loops/)
15. [Find square of a number without using multiplication and division operator](https://www.techiedelight.com/find-square-number-without-using-multiplication-division-operator/)
16. [Find if a number is even or odd without using any conditional statement](https://www.techiedelight.com/find-number-even-odd-without-using-conditional-statement/)
17. [Set both elements of a binary array to 0 in single line](https://www.techiedelight.com/set-elements-binary-array-0-single-line/)
18. [Find minimum number without using conditional statement or ternary operator](https://www.techiedelight.com/find-minimum-number-without-using-conditional-statement-ternary-operator/)
19. [Perform Division of two numbers without using division operator (/)](https://www.techiedelight.com/perform-division-two-numbers-without-using-division-operator/)
20. [Generate 0 and 1 with 75% and 25% Probability](https://www.techiedelight.com/generate-0-1-75-25-probability/)
21. [Generate Desired Random Numbers With Equal Probability](https://www.techiedelight.com/generate-random-numbers-equal-probability/)
22. [Return 0, 1 and 2 with equal Probability using the specified function](https://www.techiedelight.com/return-0-1-2-equal-probability-using-specified-function/)
23. [Generate Fair Results from a Biased Coin](https://www.techiedelight.com/generate-fair-results-biased-coin/)
24. [Generate numbers from 1 to 7 with equal probability using specified function](https://www.techiedelight.com/generate-numbers-1-7-equal-probability/)
25. [Implement Ternary Operator Without Using Conditional Expressions](https://www.techiedelight.com/implement-ternary-operator-without-using-conditional-statements/)
26. [Determine if two integers are equal without using comparison and arithmetic operators](https://www.techiedelight.com/determine-two-integers-equal-without-using-comparison-arithmetic-operators/)
27. [Return 0 and 1 with equal Probability using the specified function](https://www.techiedelight.com/get-0-1-equal-probability-using-specified-function/)
28. [Generate random input from an array according to given probabilities](https://www.techiedelight.com/generate-random-input-array-according-given-probabilities/)
29. [Compute modulus division without division and modulo operator](https://www.techiedelight.com/compute-modulus-division-without-division-modulo-operator/)

# Queue

1. Queue Implementation using Array/List — [C](https://www.techiedelight.com/circular-queue-implementation-c/), [C++](https://www.techiedelight.com/queue-implementation-cpp/), [Java](https://www.techiedelight.com/queue-implementation-in-java/), [Python](https://www.techiedelight.com/queue-implementation-python/)
2. [Queue Implementation using Linked List](https://www.techiedelight.com/queue-implementation-using-linked-list/)
3. [Implement Stack using Queue Data Structure](https://www.techiedelight.com/implement-stack-using-queue-data-structure/)
4. [Implement a Queue using Stack Data Structure](https://www.techiedelight.com/implement-a-queue-using-stack-data-structure/)
5. [Efficiently print all nodes between two given levels in a binary tree](https://www.techiedelight.com/print-nodes-between-two-levels-binary-tree/)
6. [Chess Knight Problem — Find Shortest path from source to destination](https://www.techiedelight.com/chess-knight-problem-find-shortest-path-source-destination/)
7. [Shortest path in a Maze | Lee Algorithm](https://www.techiedelight.com/lee-algorithm-shortest-path-in-a-maze/)
8. [Find shortest safe route in a field with sensors present](https://www.techiedelight.com/find-shortest-safe-route-field-sensors-present/)
9. [Flood Fill Algorithm](https://www.techiedelight.com/flood-fill-algorithm/)
10. [Count the number of islands](https://www.techiedelight.com/count-the-number-of-islands/)
11. [Find Shortest path from source to destination in a matrix that satisfies given constraints](https://www.techiedelight.com/find-shortest-path-source-destination-matrix-satisfies-given-constraints/)
12. [Generate binary numbers between 1 to N](https://www.techiedelight.com/generate-binary-numbers-1-n/)
13. [Calculate height of a binary tree](https://www.techiedelight.com/calculate-height-binary-tree-iterative-recursive/)
14. [Delete given Binary Tree](https://www.techiedelight.com/delete-given-binary-tree-iterative-recursive/)
15. [Level Order Traversal of Binary Tree](https://www.techiedelight.com/level-order-traversal-binary-tree/)
16. [Spiral Order Traversal of Binary Tree](https://www.techiedelight.com/spiral-order-traversal-binary-tree/)
17. [Reverse Level Order Traversal of Binary Tree](https://www.techiedelight.com/reverse-level-order-traversal-binary-tree/)
18. [Print all nodes of a given binary tree in specific order](https://www.techiedelight.com/print-nodes-binary-tree-specific-order/)
19. [Print left view of binary tree](https://www.techiedelight.com/print-left-view-of-binary-tree/)
20. [Find next node in same level for given node in a binary tree](https://www.techiedelight.com/find-next-node-in-same-level-binary-tree/)
21. [Check if given binary tree is complete binary tree or not](https://www.techiedelight.com/check-given-binary-tree-complete-binary-tree-not/)
22. [Print Diagonal Traversal of Binary Tree](https://www.techiedelight.com/print-diagonal-traversal-binary-tree/)
23. [Print corner nodes of every level in binary tree](https://www.techiedelight.com/print-corner-nodes-every-level-binary-tree/)
24. [Invert a Binary Tree](https://www.techiedelight.com/invert-binary-tree-recursive-iterative/)
25. [Find minimum passes required to convert all negative values in the matrix](https://www.techiedelight.com/find-minimum-passes-required-convert-negative-values-matrix/)
26. [Convert a Binary Tree into a Doubly Linked List in Spiral Order](https://www.techiedelight.com/convert-binary-tree-into-doubly-linked-list/)
27. [Check if a binary tree is a min-heap or not](https://www.techiedelight.com/check-binary-tree-is-min-heap/)
28. [Invert alternate levels of a perfect binary tree](https://www.techiedelight.com/invert-alternate-levels-perfect-binary-tree/)
29. [Convert a Binary Search Tree into a Min Heap](https://www.techiedelight.com/convert-binary-search-tree-into-min-heap/)
30. [Snake and Ladder Problem](https://www.techiedelight.com/min-throws-required-to-win-snake-and-ladder-game/)
31. [Find shortest distance of every cell from landmine in a Maze](https://www.techiedelight.com/find-shortest-distance-every-cell-landmine-maze/)
32. [Convert a multilevel linked list to a singly linked list](https://www.techiedelight.com/convert-multilevel-linked-list-singly/)
33. [Breadth First Search (BFS) Algorithm](https://www.techiedelight.com/breadth-first-search/)
34. [Check if an undirected graph contains cycle or not](https://www.techiedelight.com/check-undirected-graph-contains-cycle-not/)
35. [Find maximum cost path in graph from given source to destination](https://www.techiedelight.com/maximum-cost-path-graph-source-destination/)
36. [Total paths in given digraph from given source to destination having exactly m edges](https://www.techiedelight.com/total-paths-in-digraph-from-source-to-destination-m-edges/)
37. [Least cost path in given digraph from given source to destination having exactly m edges](https://www.techiedelight.com/least-cost-path-digraph-source-destination-m-edges/)

# Sorting

1. [Insertion Sort Algorithm](https://www.techiedelight.com/insertion-sort-iterative-recursive/)
2. [Selection Sort Algorithm](https://www.techiedelight.com/selection-sort-iterative-recursive/)
3. [Bubble Sort Algorithm](https://www.techiedelight.com/bubble-sort-iterative-recursive/)
4. [Merge Sort Algorithm](https://www.techiedelight.com/merge-sort/)
5. [Iterative Merge Sort Algorithm (Bottom-up Merge Sort)](https://www.techiedelight.com/iterative-merge-sort-algorithm-bottom-up/)
6. [QuickSort Algorithm](https://www.techiedelight.com/quicksort/)
7. [Iterative Implementation of QuickSort](https://www.techiedelight.com/iterative-implementation-of-quicksort/)
8. [Hybrid QuickSort](https://www.techiedelight.com/hybrid-quicksort/)
9. [QuickSort using Dutch National Flag Algorithm](https://www.techiedelight.com/quicksort-using-dutch-national-flag-algorithm/)
10. [QuickSort using Hoare’s Partitioning scheme](https://www.techiedelight.com/quick-sort-using-hoares-partitioning-scheme/)
11. [Heap Sort Algorithm](https://www.techiedelight.com/heap-sort-place-place-implementation-c-c/)
12. [Introsort Algorithm](https://www.techiedelight.com/introsort-algorithm/)
13. [External Merge Sort Algorithm](https://www.techiedelight.com/external-merge-sort/)
14. [Counting Sort Algorithm](https://www.techiedelight.com/counting-sort-algorithm-implementation/)
15. [Inversion Count of an array](https://www.techiedelight.com/inversion-count-array/)
16. [Sort an array using Young tableau](https://www.techiedelight.com/sort-array-using-young-tableau/)
17. [Merge Sort Algorithm for Singly Linked List](https://www.techiedelight.com/merge-sort-singly-linked-list/)
18. [Problems solved using partitioning logic of QuickSort](https://www.techiedelight.com/problems-solved-using-partitioning-logic-quicksort/)
19. [Sort a Doubly Linked List using Merge Sort](https://www.techiedelight.com/sort-doubly-linked-list-merge-sort/)
20. [Sort elements by their frequency and Index](https://www.techiedelight.com/sort-elements-by-their-frequency-and-index/)
21. [Sort an array based on order defined by another array](https://www.techiedelight.com/custom-sort-sort-elements-array-order-elements-defined-second-array/)
22. [Efficiently sort an array with many duplicated values](https://www.techiedelight.com/efficiently-sort-array-duplicated-values/)
23. [Find largest number possible from set of given numbers](https://www.techiedelight.com/find-largest-number-possible-set-given-numbers/)
24. [Find the surpasser count for each element of an array](https://www.techiedelight.com/surpasser-count-each-element-array/)
25. [Segregate positive and negative integers using Merge Sort](https://www.techiedelight.com/segregate-positive-negative-integers-using-mergesort/)
26. [Group anagrams together from given list of words](https://www.techiedelight.com/group-anagrams-together-given-list-words/)

# Stack

1. Stack Implementation using Array/List — [C](https://www.techiedelight.com/stack-implementation/), [C++](https://www.techiedelight.com/stack-implementation-in-cpp/), [Java](https://www.techiedelight.com/stack-implementation-in-java/), [Python](https://www.techiedelight.com/stack-implementation-python/)
2. [Stack Implementation using Linked List](https://www.techiedelight.com/stack-implementation-using-linked-list/)
3. [Check if given expression is balanced expression or not](https://www.techiedelight.com/check-given-expression-balanced-expression-not/)
4. [Find duplicate parenthesis in an expression](https://www.techiedelight.com/find-duplicate-parenthesis-expression/)
5. [Evaluate given postfix expression](https://www.techiedelight.com/evaluate-given-postfix-expression/)
6. [Decode the given sequence to construct minimum number without repeated digits](https://www.techiedelight.com/decode-the-given-sequence-construct-minimum-number-without-repeated-digits/)
7. [Design a stack which returns minimum element in constant time](https://www.techiedelight.com/design-stack-which-returns-minimum-element-constant-time/)
8. [Design a stack which returns minimum element without using auxiliary stack](https://www.techiedelight.com/design-a-stack-which-returns-minimum-element-without-using-auxiliary-stack/)
9. [Merging Overlapping Intervals](https://www.techiedelight.com/merging-overlapping-intervals/)
10. [Reverse String without using Recursion](https://www.techiedelight.com/reverse-string-without-using-recursion/)
11. [Implement Stack using Queue Data Structure](https://www.techiedelight.com/implement-stack-using-queue-data-structure/)
12. [Implement a Queue using Stack Data Structure](https://www.techiedelight.com/implement-a-queue-using-stack-data-structure/)
13. [Implement two stacks in a single array](https://www.techiedelight.com/implement-two-stacks-single-array/)
14. [Recursive solution to sort a stack](https://www.techiedelight.com/recursive-solution-sort-stack/)
15. [Find length of the longest balanced parenthesis in a string](https://www.techiedelight.com/find-length-longest-balanced-parenthesis-string/)
16. [Reverse a string using stack data structure](https://www.techiedelight.com/reverse-a-string-using-stack-data-structure/)
17. [Find all elements in an array that are greater than all elements present to their right](https://www.techiedelight.com/find-elements-array-greater-than-elements-right/)
18. [Inorder Tree Traversal](https://www.techiedelight.com/inorder-tree-traversal-iterative-recursive/)
19. [Preorder Tree Traversal](https://www.techiedelight.com/preorder-tree-traversal-iterative-recursive/)
20. [Postorder Tree Traversal](https://www.techiedelight.com/postorder-tree-traversal-iterative-recursive/)
21. [Find preorder traversal of a binary tree from its inorder and postorder sequence](https://www.techiedelight.com/find-preorder-traversal-binary-tree-from-inorder-postorder/)
22. [Find ancestors of given node in a Binary Tree](https://www.techiedelight.com/find-ancestors-of-given-node-binary-tree/)
23. [Check if two given binary trees are identical or not](https://www.techiedelight.com/check-if-two-binary-trees-are-identical-not-iterative-recursive/)
24. [Reverse Level Order Traversal of Binary Tree](https://www.techiedelight.com/reverse-level-order-traversal-binary-tree/)
25. [Reverse given text without reversing the individual words](https://www.techiedelight.com/reverse-text-without-reversing-individual-words/)
26. [Find all binary strings that can be formed from given wildcard pattern](https://www.techiedelight.com/find-binary-strings-can-formed-given-wildcard-pattern/)
27. [Iterative Implementation of QuickSort](https://www.techiedelight.com/iterative-implementation-of-quicksort/)
28. [Depth First Search (DFS) Algorithm](https://www.techiedelight.com/depth-first-search/)
29. [Invert a Binary Tree](https://www.techiedelight.com/invert-binary-tree-recursive-iterative/)
30. [Print leaf to root path for every leaf node in a binary tree](https://www.techiedelight.com/print-leaf-to-root-path-binary-tree/)
31. [Longest Increasing Subsequence](https://www.techiedelight.com/longest-increasing-subsequence/)
32. [Invert alternate levels of a perfect binary tree](https://www.techiedelight.com/invert-alternate-levels-perfect-binary-tree/)

# String

1. [Check if given string is a rotated palindrome or not](https://www.techiedelight.com/check-given-string-rotated-palindrome-not/)
2. [Longest Palindromic Substring (Non-DP Space Optimized Solution)](https://www.techiedelight.com/longest-palindromic-substring-non-dp-space-optimized-solution/)
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# Trie

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