**Algorithms**

* [Bit Manipulation](https://github.com/kamyu104/LeetCode#bit-manipulation)
* [Array](https://github.com/kamyu104/LeetCode#array)
* [String](https://github.com/kamyu104/LeetCode#string)
* [Linked List](https://github.com/kamyu104/LeetCode#linked-list)
* [Stack](https://github.com/kamyu104/LeetCode#stack)
* [Queue](https://github.com/kamyu104/LeetCode#queue)
* [Heap](https://github.com/kamyu104/LeetCode#heap)
* [Tree](https://github.com/kamyu104/LeetCode#tree)
* [Hash Table](https://github.com/kamyu104/LeetCode#hash-table)
* [Math](https://github.com/kamyu104/LeetCode#math)
* [Two Pointers](https://github.com/kamyu104/LeetCode#two-pointers)
* [Sort](https://github.com/kamyu104/LeetCode#sort)
* [Recursion](https://github.com/kamyu104/LeetCode#recursion)
* [Binary Search](https://github.com/kamyu104/LeetCode#binary-search)
* [Binary Search Tree](https://github.com/kamyu104/LeetCode#binary-search-tree)
* [Breadth-First Search](https://github.com/kamyu104/LeetCode#breadth-first-search)
* [Depth-First Search](https://github.com/kamyu104/LeetCode#depth-first-search)
* [Backtracking](https://github.com/kamyu104/LeetCode#backtracking)
* [Dynamic Programming](https://github.com/kamyu104/LeetCode#dynamic-programming)
* [Greedy](https://github.com/kamyu104/LeetCode#greedy)
* [Graph](https://github.com/kamyu104/LeetCode#graph)
* [Geometry](https://github.com/kamyu104/LeetCode#geometry)
* [Design](https://github.com/kamyu104/LeetCode#design)

**Database**

* [SQL](https://github.com/kamyu104/LeetCode#sql)

**Shell**

* [Shell Script](https://github.com/kamyu104/LeetCode#shell-script)

**Bit Manipulation**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 136 | [Single Number](https://leetcode.com/problems/single-number/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/single-number.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/single-number.py) | *O(n)* | *O(1)* | Easy |  |  |
| 137 | [Single Number II](https://leetcode.com/problems/single-number-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/single-number-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/single-number-ii.py) | *O(n)* | *O(1)* | Medium |  |  |
| 190 | [Reverse Bits](https://leetcode.com/problems/reverse-bits/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/reverse-bits.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/reverse-bits.py) | *O(1)* | *O(1)* | Easy |  |  |
| 191 | [Number of 1 Bits](https://leetcode.com/problems/number-of-1-bits/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/number-of-1-bits.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/number-of-1-bits.py) | *O(1)* | *O(1)* | Easy |  |  |
| 201 | [Bitwise AND of Numbers Range](https://leetcode.com/problems/bitwise-and-of-numbers-range/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/bitwise-and-of-numbers-range.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/bitwise-and-of-numbers-range.py) | *O(1)* | *O(1)* | Medium |  |  |
| 231 | [Power of Two](https://leetcode.com/problems/power-of-two/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/power-of-two.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/power-of-two.py) | *O(1)* | *O(1)* | Easy | LintCode |  |
| 260 | [Single Number III](https://leetcode.com/problems/single-number-iii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/single-number-iii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/single-number-iii.py) | *O(n)* | *O(1)* | Medium |  |  |
| 268 | [Missing Number](https://leetcode.com/problems/missing-number/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/missing-number.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/missing-number.py) | *O(n)* | *O(1)* | Medium | LintCode |  |
| 318 | [Maximum Product of Word Lengths](https://leetcode.com/problems/maximum-product-of-word-lengths/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/maximum-product-of-word-lengths.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/maximum-product-of-word-lengths.py) | *O(n)* ~ *O(n^2)* | *O(n)* | Medium |  | Bit Manipulation, Counting Sort, Pruning |
| 342 | [Power of Four](https://leetcode.com/problems/power-of-four/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/power-of-four.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/power-of-four.py) | *O(1)* | *O(1)* | Easy |  |  |
| 371 | [Sum of Two Integers](https://leetcode.com/problems/sum-of-two-integers/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/sum-of-two-integers.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/sum-of-two-integers.py) | *O(1)* | *O(1)* | Easy | LintCode |  |
| 389 | [Find the Difference](https://leetcode.com/problems/find-the-difference/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/find-the-difference.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/find-the-difference.py) | *O(n)* | *O(1)* | Easy |  |  |
| 393 | [UTF-8 Validation](https://leetcode.com/problems/utf-8-validation/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/utf-8-validation.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/utf-8-validation.py) | *O(n)* | *O(1)* | Medium |  |  |
| 401 | [Binary Watch](https://leetcode.com/problems/binary-watch/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/binary-watch.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/binary-watch.py) | *O(1)* | *O(1)* | Easy |  |  |
| 411 | [Minimum Unique Word Abbreviation](https://leetcode.com/problems/minimum-unique-word-abbreviation/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/minimum-unique-word-abbreviation.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/minimum-unique-word-abbreviation.py) | *O(2^n)* | *O(n)* | Hard | 📖 |  |
| 421 | [Maximum XOR of Two Numbers in an Array](https://leetcode.com/problems/maximum-xor-of-two-numbers-in-an-array/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/maximum-xor-of-two-numbers-in-an-array.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/maximum-xor-of-two-numbers-in-an-array.py) | *O(n)* | *O(1)* | Medium |  |  |
| 461 | [Hamming Distance](https://leetcode.com/problems/hamming-distance/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/hamming-distance.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/hamming-distance.py) | *O(1)* | *O(1)* | Easy |  |  |
| 462 | [Minimum Moves to Equal Array Elements II](https://leetcode.com/problems/minimum-moves-to-equal-array-elements-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/minimum-moves-to-equal-array-elements-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/minimum-moves-to-equal-array-elements-ii.py) | *O(n)* on average | *O(1)* | Medium |  |  |
| 477 | [Total Hamming Distance](https://leetcode.com/problems/total-hamming-distance/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/total-hamming-distance.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/total-hamming-distance.py) | *O(n)* | *O(1)* | Medium |  |  |
| 645 | [Set Mismatch](https://leetcode.com/problems/set-mismatch/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/set-mismatch.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/set-mismatch.py) | *O(n)* | *O(1)* | Easy |  |  |
| 693 | [Binary Number with Alternating Bits](https://leetcode.com/problems/binary-number-with-alternating-bits/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/binary-number-with-alternating-bits.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/binary-number-with-alternating-bits.py) | *O(1)* | *O(1)* | Easy |  |  |
| 762 | [Prime Number of Set Bits in Binary Representation](https://leetcode.com/problems/prime-number-of-set-bits-in-binary-representation/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/prime-number-of-set-bits-in-binary-representation.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/prime-number-of-set-bits-in-binary-representation.py) | *O(1)* | *O(1)* | Easy |  |  |

**Array**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 015 | [3 Sum](https://leetcode.com/problems/3sum/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/3sum.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/3sum.py) | *O(n^2)* | *O(1)* | Medium |  | Two Pointers |
| 016 | [3 Sum Closest](https://leetcode.com/problems/3sum-closest/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/3sum-closest.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/3sum-closest.py) | *O(n^2)* | *O(1)* | Medium |  | Two Pointers |
| 018 | [4 Sum](https://leetcode.com/problems/4sum/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/4sum.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/4sum.py) | *O(n^3)* | *O(1)* | Medium |  | Two Pointers |
| 026 | [Remove Duplicates from Sorted Array](https://leetcode.com/problems/remove-duplicates-from-sorted-array/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/remove-duplicates-from-sorted-array.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/remove-duplicates-from-sorted-array.py) | *O(n)* | *O(1)* | Easy |  | Two Pointers |
| 027 | [Remove Element](https://leetcode.com/problems/remove-element/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/remove-element.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/remove-element.py) | *O(n)* | *O(1)* | Easy |  |  |
| 031 | [Next Permutation](https://leetcode.com/problems/next-permutation/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/next-permutation.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/next-permutation.py) | *O(n)* | *O(1)* | Medium |  | Tricky |
| 041 | [First Missing Positive](https://leetcode.com/problems/first-missing-positive/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/first-missing-positive.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/first-missing-positive.py) | *O(n)* | *O(1)* | Hard |  | Tricky |
| 048 | [Rotate Image](https://leetcode.com/problems/rotate-image/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/rotate-image.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/rotate-image.py) | *O(n^2)* | *O(1)* | Medium |  |  |
| 054 | [Spiral Matrix](https://leetcode.com/problems/spiral-matrix/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/spiral-matrix.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/spiral-matrix.py) | *O(m \* n)* | *O(1)* | Medium |  |  |
| 059 | [Spiral Matrix II](https://leetcode.com/problems/spiral-matrix-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/spiral-matrix-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/spiral-matrix-ii.py) | *O(n^2)* | *O(1)* | Medium |  |  |
| 066 | [Plus One](https://leetcode.com/problems/plus-one/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/plus-one.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/plus-one.py) | *O(n)* | *O(1)* | Easy |  |  |
| 073 | [Set Matrix Zeroes](https://leetcode.com/problems/set-matrix-zeroes/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/set-matrix-zeroes.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/set-matrix-zeroes.py) | *O(m \* n)* | *O(1)* | Medium |  |  |
| 080 | [Remove Duplicates from Sorted Array II](https://leetcode.com/problems/remove-duplicates-from-sorted-array-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/remove-duplicates-from-sorted-array-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/remove-duplicates-from-sorted-array-ii.py) | *O(n)* | *O(1)* | Medium |  | Two Pointers |
| 118 | [Pascal's Triangle](https://leetcode.com/problems/pascals-triangle/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/pascals-triangle.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/pascals-triangle.py) | *O(n^2)* | *O(1)* | Easy |  |  |
| 119 | [Pascal's Triangle II](https://leetcode.com/problems/pascals-triangle-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/pascals-triangle-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/pascals-triangle-ii.py) | *O(n^2)* | *O(1)* | Easy |  |  |
| 121 | [Best Time to Buy and Sell Stock](https://leetcode.com/problems/best-time-to-buy-and-sell-stock/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/best-time-to-buy-and-sell-stock.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/best-time-to-buy-and-sell-stock.py) | *O(n)* | *O(1)* | Easy |  |  |
| 128 | [Longest Consecutive Sequence](https://leetcode.com/problems/longest-consecutive-sequence/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/longest-consecutive-sequence.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/longest-consecutive-sequence.py) | *O(n)* | *O(n)* | Hard |  | Tricky |
| 157 | [Read N Characters Given Read4](https://leetcode.com/problems/read-n-characters-given-read4/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/read-n-characters-given-read4.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/read-n-characters-given-read4.py) | *O(n)* | *O(1)* | Easy | 📖 |  |
| 158 | [Read N Characters Given Read4 II - Call multiple times](https://leetcode.com/problems/read-n-characters-given-read4-ii-call-multiple-times/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/read-n-characters-given-read4-ii-call-multiple-times.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/read-n-characters-given-read4-ii-call-multiple-times.py) | *O(n)* | *O(1)* | Hard | 📖 |  |
| 163 | [Missing Ranges](https://leetcode.com/problems/missing-ranges/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/missing-ranges.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/missing-ranges.py) | *O(n)* | *O(1)* | Medium | 📖 |  |
| 169 | [Majority Element](https://leetcode.com/problems/majority-element/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/majority-element.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/majority-element.py) | *O(n)* | *O(1)* | Easy |  |  |
| 189 | [Rotate Array](https://leetcode.com/problems/rotate-array/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/rotate-array.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/rotate-array.py) | *O(n)* | *O(1)* | Easy |  |  |
| 209 | [Minimum Size Subarray Sum](https://leetcode.com/problems/minimum-size-subarray-sum/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/minimum-size-subarray-sum.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/minimum-size-subarray-sum.py) | *O(n)* | *O(1)* | Medium |  | Binary Search |
| 215 | [Kth Largest Element in an Array](https://leetcode.com/problems/kth-largest-element-in-an-array/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/kth-largest-element-in-an-array.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/kth-largest-element-in-an-array.py) | *O(n)* ~ *O(n^2)* | *O(1)* | Medium | EPI |  |
| 228 | [Summary Ranges](https://leetcode.com/problems/summary-ranges/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/summary-ranges.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/summary-ranges.py) | *O(n)* | *O(1)* | Medium |  |  |
| 229 | [Majority Element II](https://leetcode.com/problems/majority-element-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/majority-element-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/majority-element-ii.py) | *O(n)* | *O(1)* | Medium |  |  |
| 238 | [Product of Array Except Self](https://leetcode.com/problems/product-of-array-except-self/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/product-of-array-except-self.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/product-of-array-except-self.py) | *O(n)* | *O(1)* | Medium | LintCode |  |
| 240 | [Search a 2D Matrix II](https://leetcode.com/problems/search-a-2d-matrix-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/search-a-2d-matrix-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/search-a-2d-matrix-ii.py) | *O(m + n)* | *O(1)* | Medium | EPI, LintCode |  |
| 243 | [Shortest Word Distance](https://leetcode.com/problems/shortest-word-distance/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/shortest-word-distance.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/shortest-word-distance.py) | *O(n)* | *O(1)* | Easy | 📖 |  |
| 245 | [Shortest Word Distance III](https://leetcode.com/problems/shortest-word-distance-iii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/shortest-word-distance-iii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/shortest-word-distance-iii.py) | *O(n)* | *O(1)* | Medium | 📖 |  |
| 251 | [Flatten 2D Vector](https://leetcode.com/problems/flatten-2d-vector/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/flatten-2d-vector.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/flatten-2d-vector.py) | *O(1)* | *O(1)* | Medium | 📖 |  |
| 277 | [Find the Celebrity](https://leetcode.com/problems/find-the-celebrity/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/find-the-celebrity.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/find-the-celebrity.py) | *O(n)* | *O(1)* | Medium | 📖, EPI |  |
| 289 | [Game of Life](https://leetcode.com/problems/game-of-life/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/game-of-life.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/game-of-life.py) | *O(m \* n)* | *O(1)* | Medium |  |  |
| 293 | [Flip Game](https://leetcode.com/problems/flip-game/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/flip-game.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/flip-game.py) | *O(n \* (c+1))* | *O(1)* | Easy | 📖 |  |
| 296 | [Best Meeting Point](https://leetcode.com/problems/best-meeting-point/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/best-meeting-point.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/best-meeting-point.py) | *O(m \* n)* | *O(m + n)* | Hard | 📖 |  |
| 311 | [Sparse Matrix Multiplication](https://leetcode.com/problems/sparse-matrix-multiplication/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/sparse-matrix-multiplication.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/sparse-matrix-multiplication.py) | *O(m \* n \* l)* | *O(m \* l)* | Medium | 📖 |  |
| 334 | [Increasing Triplet Subsequence](https://leetcode.com/problems/increasing-triplet-subsequence/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/increasing-triplet-subsequence.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/increasing-triplet-subsequence.py) | *O(n)* | *O(1)* | Medium |  |  |
| 370 | [Range Addition](https://leetcode.com/problems/range-addition/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/range-addition.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/range-addition.py) | *O(k + n)* | *O(1)* | Medium | 📖 |  |
| 384 | [Shuffle an Array](https://leetcode.com/problems/shuffle-an-array/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/shuffle-an-array.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/shuffle-an-array.py) | *O(n)* | *O(n)* | Medium | EPI |  |
| 396 | [Rotate Function](https://leetcode.com/problems/rotate-function/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/rotate-function.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/rotate-function.py) | *O(n)* | *O(1)* | Easy |  |  |
| 412 | [Fizz Buzz](https://leetcode.com/problems/fizz-buzz/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/fizz-buzz.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/fizz-buzz.py) | *O(n)* | *O(1)* | Easy |  |  |
| 414 | [Third Maximum Number](https://leetcode.com/problems/third-maximum-number/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/third-maximum-number.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/third-maximum-number.py) | *O(n)* | *O(1)* | Easy |  |  |
| 419 | [Battleships in a Board](https://leetcode.com/problems/battleships-in-a-board/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/battleships-in-a-board.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/battleships-in-a-board.py) | *O(m \* n)* | *O(1)* | Medium |  |  |
| 422 | [Valid Word Square](https://leetcode.com/problems/valid-word-square/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/valid-word-square.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/valid-word-square.py) | *O(m \* n)* | *O(1)* | Easy | 📖 |  |
| 442 | [Find All Duplicates in an Array](https://leetcode.com/problems/find-all-duplicates-in-an-array/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/find-all-duplicates-in-an-array.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/find-all-duplicates-in-an-array.py) | *O(n)* | *O(1)* | Medium |  |  |
| 448 | [Find All Numbers Disappeared in an Array](https://leetcode.com/problems/find-all-numbers-disappeared-in-an-array/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/find-all-numbers-disappeared-in-an-array.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/find-all-numbers-disappeared-in-an-array.py) | *O(n)* | *O(1)* | Easy |  |  |
| 531 | [Lonely Pixel I](https://leetcode.com/problems/lonely-pixel-i/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/lonely-pixel-i.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/lonely-pixel-i.py) | *O(m \* n)* | *O(m + n)* | Medium | 📖 |  |
| 533 | [Lonely Pixel II](https://leetcode.com/problems/lonely-pixel-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/lonely-pixel-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/lonely-pixel-ii.py) | *O(m \* n)* | *O(m \* n)* | Medium | 📖 |  |
| 565 | [Array Nesting](https://leetcode.com/problems/array-nesting/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/array-nesting.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/array-nesting.py) | *O(n)* | *O(1)* | Medium |  |  |
| 566 | [Reshape the Matrix](https://leetcode.com/problems/reshape-the-matrix/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/reshape-the-matrix.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/reshape-the-matrix.py) | *O(m \* n)* | *O(m \* n)* | Easy |  |  |
| 581 | [Shortest Unsorted Continuous Subarray](https://leetcode.com/problems/shortest-unsorted-continuous-subarray/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/shortest-unsorted-continuous-subarray.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/shortest-unsorted-continuous-subarray.py) | *O(n)* | *O(1)* | Easy |  |  |
| 605 | [Can Place Flowers](https://leetcode.com/problems/can-place-flowers/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/can-place-flowers.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/can-place-flowers.py) | *O(n)* | *O(1)* | Easy |  |  |
| 624 | [Maximum Distance in Arrays](https://leetcode.com/problems/maximum-distance-in-arrays/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/maximum-distance-in-arrays.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/maximum-distance-in-arrays.py) | *O(n)* | *O(1)* | Easy | 📖 |  |
| 643 | [Maximum Average Subarray I](https://leetcode.com/problems/maximum-average-subarray-i/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/maximum-average-subarray-i.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/maximum-average-subarray-i.py) | *O(n)* | *O(1)* | Easy |  | Math |
| 644 | [Maximum Average Subarray II](https://leetcode.com/problems/maximum-average-subarray-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/maximum-average-subarray-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/maximum-average-subarray-ii.py) | *O(n)* | *O(n)* | Hard | 📖 | Math |
| 661 | [Image Smoother](https://leetcode.com/problems/image-smoother/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/image-smoother.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/image-smoother.py) | *O(m \* n)* | *O(1)* | Easy |  |  |
| 665 | [Non-decreasing Array](https://leetcode.com/problems/non-decreasing-array/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/non-decreasing-array.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/non-decreasing-array.py) | *O(n)* | *O(1)* | Easy |  |  |
| 667 | [Beautiful Arrangement II](https://leetcode.com/problems/beautiful-arrangement-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/beautiful-arrangement-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/beautiful-arrangement-ii.py) | *O(n)* | *O(1)* | Medium |  |  |
| 670 | [Maximum Swap](https://leetcode.com/problems/maximum-swap/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/maximum-swap.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/maximum-swap.py) | *O(logn)* | *O(logn)* | Medium |  |  |
| 674 | [Longest Continuous Increasing Subsequence](https://leetcode.com/problems/longest-continuous-increasing-subsequence/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/longest-continuous-increasing-subsequence.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/longest-continuous-increasing-subsequence.py) | *O(n)* | *O(1)* | Easy |  |  |
| 683 | [K Empty Slots](https://leetcode.com/problems/k-empty-slots/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/k-empty-slots.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/k-empty-slots.py) | *O(n)* | *O(n)* | Hard |  |  |
| 697 | [Degree of an Array](https://leetcode.com/problems/degree-of-an-array/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/degree-of-an-array.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/degree-of-an-array.py) | *O(n)* | *O(n)* | Easy |  |  |
| 713 | [Subarray Product Less Than K](https://leetcode.com/problems/subarray-product-less-than-k/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/subarray-product-less-than-k.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/subarray-product-less-than-k.py) | *O(n)* | *O(1)* | Medium |  |  |
| 717 | [1-bit and 2-bit Characters](https://leetcode.com/problems/1-bit-and-2-bit-characters/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/1-bit-and-2-bit-characters.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/1-bit-and-2-bit-characters.py) | *O(n)* | *O(1)* | Easy |  | Greedy |
| 723 | [Candy Crush](https://leetcode.com/problems/candy-crush/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/candy-crush.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/candy-crush.py) | *O((R \* C)^2)* | *O(1)* | Medium |  |  |
| 724 | [Find Pivot Index](https://leetcode.com/problems/find-pivot-index/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/find-pivot-index.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/find-pivot-index.py) | *O(n)* | *O(1)* | Easy |  |  |
| 729 | [My Calendar I](https://leetcode.com/problems/my-calendar-i/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/my-calendar-i.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/my-calendar-i.py) | *O(nlogn)* | *O(n)* | Medium |  |  |
| 731 | [My Calendar II](https://leetcode.com/problems/my-calendar-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/my-calendar-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/my-calendar-ii.py) | *O(n^2)* | *O(n)* | Medium |  |  |
| 732 | [My Calendar III](https://leetcode.com/problems/my-calendar-iii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/my-calendar-iii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/my-calendar-iii.py) | *O(n^2)* | *O(n)* | Hard |  |  |
| 747 | [Largest Number At Least Twice of Others](https://leetcode.com/problems/largest-number-at-least-twice-of-others/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/largest-number-at-least-twice-of-others.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/largest-number-at-least-twice-of-others.py) | *O(n)* | *O(1)* | Easy |  |  |
| 755 | [Pour Water](https://leetcode.com/problems/pour-water/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/pour-water.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/pour-water.py) | *O(v \* n)* | *O(1)* | Medium |  |  |
| 766 | [Toeplitz Matrix](https://leetcode.com/problems/toeplitz-matrix/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/toeplitz-matrix.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/toeplitz-matrix.py) | *O(m \* n)* | *O(1)* | Easy |  |  |
| 768 | [Max Chunks To Make Sorted II](https://leetcode.com/problems/max-chunks-to-make-sorted-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/max-chunks-to-make-sorted-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/max-chunks-to-make-sorted-ii.py) | *O(nlogn)* | *O(n)* | Hard |  |  |
| 769 | [Max Chunks To Make Sorted](https://leetcode.com/problems/max-chunks-to-make-sorted/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/max-chunks-to-make-sorted.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/max-chunks-to-make-sorted.py) | *O(n)* | *O(1)* | Medium |  |  |

**String**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 005 | [Longest Palindromic Substring](https://leetcode.com/problems/longest-palindromic-substring/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/longest-palindromic-substring.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/longest-palindromic-substring.py) | *O(n)* | *O(n)* | Medium |  | Manacher's Algorithm |
| 006 | [ZigZag Conversion](https://leetcode.com/problems/zigzag-conversion/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/zigzag-conversion.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/zigzag-conversion.py) | *O(n)* | *O(1)* | Easy |  |  |
| 008 | [String to Integer (atoi)](https://leetcode.com/problems/string-to-integer-atoi/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/string-to-integer-atoi.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/string-to-integer-atoi.py) | *O(n)* | *O(1)* | Easy |  |  |
| 014 | [Longest Common Prefix](https://leetcode.com/problems/longest-common-prefix/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/longest-common-prefix.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/longest-common-prefix.py) | *O(n \* k)* | *O(1)* | Easy |  |  |
| 028 | [Implement strStr()](https://leetcode.com/problems/implement-strstr/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/implement-strstr.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/implement-strstr.py) | *O(n + k)* | *O(k)* | Easy |  | KMP Algorithm |
| 038 | [Count and Say](https://leetcode.com/problems/count-and-say/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/count-and-say.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/count-and-say.py) | *O(n \* 2^n)* | *O(2^n)* | Easy |  |  |
| 043 | [Multiply Strings](https://leetcode.com/problems/multiply-strings/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/multiply-strings.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/multiply-strings.py) | *O(m \* n)* | *O(m + n)* | Medium |  |  |
| 058 | [Length of Last Word](https://leetcode.com/problems/length-of-last-word/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/length-of-last-word.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/length-of-last-word.py) | *O(n)* | *O(1)* | Easy |  |  |
| 067 | [Add Binary](https://leetcode.com/problems/add-binary/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/add-binary.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/add-binary.py) | *O(n)* | *O(1)* | Easy |  |  |
| 068 | [Text Justification](https://leetcode.com/problems/text-justification/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/text-justification.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/text-justification.py) | *O(n)* | *O(1)* | Hard |  |  |
| 125 | [Valid Palindrome](https://leetcode.com/problems/valid-palindrome/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/valid-palindrome.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/valid-palindrome.py) | *O(n)* | *O(1)* | Easy |  |  |
| 151 | [Reverse Words in a String](https://leetcode.com/problems/reverse-words-in-a-string/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/reverse-words-in-a-string.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/reverse-words-in-a-string.py) | *O(n)* | *O(1)* | Medium |  |  |
| 161 | [One Edit Distance](https://leetcode.com/problems/one-edit-distance/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/one-edit-distance.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/one-edit-distance.py) | *O(m + n)* | *O(1)* | Medium | 📖 |  |
| 165 | [Compare Version Numbers](https://leetcode.com/problems/compare-version-numbers/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/compare-version-numbers.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/compare-version-numbers.py) | *O(n)* | *O(1)* | Easy |  |  |
| 186 | [Reverse Words in a String II](https://leetcode.com/problems/reverse-words-in-a-string-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/reverse-words-in-a-string-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/reverse-words-in-a-string-ii.py) | *O(n)* | *O(1)* | Medium | 📖 |  |
| 214 | [Shortest Palindrome](https://leetcode.com/problems/shortest-palindrome/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/shortest-palindrome.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/shortest-palindrome.py) | *O(n)* | *O(n)* | Hard |  | KMP AlgorithmManacher's Algorithm |
| 242 | [Valid Anagram](https://leetcode.com/problems/valid-anagram/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/valid-anagram.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/valid-anagram.py) | *O(n)* | *O(1)* | Easy | LintCode |  |
| 271 | [Encode and Decode Strings](https://leetcode.com/problems/encode-and-decode-strings/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/encode-and-decode-strings.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/encode-and-decode-strings.py) | *O(n)* | *O(1)* | Medium | 📖 |  |
| 273 | [Integer to English Words](https://leetcode.com/problems/integer-to-english-words/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/integer-to-english-words.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/integer-to-english-words.py) | *O(1)* | *O(1)* | Hard |  |  |
| 306 | [Addictive Number](https://leetcode.com/problems/additive-number/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/additive-number.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/additive-number.py) | *O(n^3)* | *O(n)* | Medium |  |  |
| 383 | [Ransom Note](https://leetcode.com/problems/ransom-note/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/ransom-note.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/ransom-note.py) | *O(n)* | *O(1)* | Easy | EPI |  |
| 405 | [Convert a Number to Hexadecimal](https://leetcode.com/problems/convert-a-number-to-hexadecimal/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/convert-a-number-to-hexadecimal.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/convert-a-number-to-hexadecimal.py) | *O(n)* | *O(1)* | Easy |  |  |
| 408 | [Valid Word Abbreviation](https://leetcode.com/problems/valid-word-abbreviation/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/valid-word-abbreviation.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/valid-word-abbreviation.py) | *O(n)* | *O(1)* | Easy | 📖 |  |
| 415 | [Add Strings](https://leetcode.com/problems/add-strings/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/add-strings.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/add-strings.py) | *O(n)* | *O(1)* | Easy |  |  |
| 420 | [Strong Password Checker](https://leetcode.com/problems/strong-password-checker/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/strong-password-checker.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/strong-password-checker.py) | *O(n)* | *O(1)* | Hard |  |  |
| 434 | [Number of Segments in a String](https://leetcode.com/problems/number-of-segments-in-a-string/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/number-of-segments-in-a-string.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/number-of-segments-in-a-string.py) | *O(n)* | *O(1)* | Easy |  |  |
| 443 | [String Compression](https://leetcode.com/problems/string-compression/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/string-compression.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/string-compression.py) | *O(n)* | *O(1)* | Easy |  |  |
| 459 | [Repeated Substring Pattern](https://leetcode.com/problems/repeated-substring-pattern/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/repeated-substring-pattern.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/repeated-substring-pattern.py) | *O(n)* | *O(n)* | Easy |  | KMP Algorithm |
| 468 | [Validate IP Address](https://leetcode.com/problems/validate-ip-address/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/validate-ip-address.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/validate-ip-address.py) | *O(1)* | *O(1)* | Medium |  |  |
| 527 | [Word Abbreviation](https://leetcode.com/problems/word-abbreviation/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/word-abbreviation.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/word-abbreviation.py) | *O(n \* l)* ~ *O(n^2 \* l^2)* | *O(n \* l)* | Hard | 📖 |  |
| 539 | [Minimum Time Difference](https://leetcode.com/problems/minimum-time-difference/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/minimum-time-difference.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/minimum-time-difference.py) | *O(nlogn)* | *O(n)* | Medium |  |  |
| 541 | [Reverse String II](https://leetcode.com/problems/reverse-string-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/reverse-string-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/reverse-string-ii.py) | *O(n)* | *O(1)* | Easy |  |  |
| 551 | [Student Attendance Record I](https://leetcode.com/problems/student-attendance-record-i/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/student-attendance-record-i.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/student-attendance-record-i.py) | *O(n)* | *O(1)* | Easy |  |  |
| 556 | [Next Greater Element III](https://leetcode.com/problems/next-greater-element-iii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/next-greater-element-iii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/next-greater-element-iii.py) | *O(1)* | *O(1)* | Medium |  |  |
| 557 | [Reverse Words in a String III](https://leetcode.com/problems/reverse-words-in-a-string-iii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/reverse-words-in-a-string-iii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/reverse-words-in-a-string-iii.py) | *O(n)* | *O(1)* | Easy |  |  |
| 564 | [Find the Closest Palindrome](https://leetcode.com/problems/find-the-closest-palindrome/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/find-the-closest-palindrome.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/find-the-closest-palindrome.py) | *O(l)* | *O(l)* | Hard |  |  |
| 591 | [Tag Validator](https://leetcode.com/problems/tag-validator/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/tag-validator.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/tag-validator.py) | *O(n)* | *O(n)* | Hard |  |  |
| 616 | [Add Bold Tag in String](https://leetcode.com/problems/add-bold-tag-in-string/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/add-bold-tag-in-string.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/add-bold-tag-in-string.py) | *O(n \* d \* l)* | *O(n)* | Medium | 📖 |  |
| 647 | [Palindromic Substrings](https://leetcode.com/problems/palindromic-substrings/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/palindromic-substrings.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/palindromic-substrings.py) | *O(n)* | *O(n)* | Medium |  | Manacher's Algorithm |
| 648 | [Replace Words](https://leetcode.com/problems/replace-words/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/replace-words.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/replace-words.py) | *O(n)* | *O(t)* | Medium |  | Trie |
| 657 | [Judge Route Circle](https://leetcode.com/problems/judge-route-circle/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/judge-route-circle.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/judge-route-circle.py) | *O(n)* | *O(1)* | Easy |  |  |
| 678 | [Valid Parenthesis String](https://leetcode.com/problems/valid-parenthesis-string/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/valid-parenthesis-string.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/valid-parenthesis-string.py) | *O(n)* | *O(1)* | Medium |  |  |
| 680 | [Valid Palindrome II](https://leetcode.com/problems/valid-palindrome-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/valid-palindrome-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/valid-palindrome-ii.py) | *O(n)* | *O(1)* | Easy |  |  |
| 681 | [Next Closest Time](https://leetcode.com/problems/next-closest-time/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/next-closest-time.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/next-closest-time.py) | *O(1)* | *O(1)* | Medium |  |  |
| 686 | [Repeated String Match](https://leetcode.com/problems/repeated-string-match/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/repeated-string-match.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/repeated-string-match.py) | *O(n + m)* | *O(1)* | Easy |  | Rabin-Karp Algorithm |
| 696 | [Count Binary Substrings](https://leetcode.com/problems/count-binary-substrings/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/count-binary-substrings.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/count-binary-substrings.py) | *O(n)* | *O(1)* | Easy |  |  |
| 720 | [Longest Word in Dictionary](https://leetcode.com/problems/longest-word-in-dictionary/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/longest-word-in-dictionary.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/longest-word-in-dictionary.py) | *O(n)* | *O(t)* | Easy |  | Trie |
| 722 | [Remove Comments](https://leetcode.com/problems/remove-comments/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/remove-comments.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/remove-comments.py) | *O(n)* | *O(k)* | Medium |  |  |
| 751 | [IP to CIDR](https://leetcode.com/problems/ip-to-cidr/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/ip-to-cidr.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/ip-to-cidr.py) | *O(n)* | *O(1)* | Medium |  |  |
| 758 | [Bold Words in String](https://leetcode.com/contest/weekly-contest-66/problems/bold-words-in-string/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/bold-words-in-string.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/bold-words-in-string.py) | *O(n \* l)* | *O(t)* | Easy | 📖, variant of [Add Bold Tag in String](https://leetcode.com/problems/add-bold-tag-in-string/) |  |

**Linked List**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 002 | [Add Two Numbers](https://leetcode.com/problems/add-two-numbers/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/add-two-numbers.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/add-two-numbers.py) | *O(n)* | *O(1)* | Medium |  |  |
| 021 | [Merge Two Sorted Lists](https://leetcode.com/problems/merge-two-sorted-lists/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/merge-two-sorted-lists.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/merge-two-sorted-lists.py) | *O(n)* | *O(1)* | Easy |  |  |
| 023 | [Merge k Sorted Lists](https://leetcode.com/problems/merge-k-sorted-lists/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/merge-k-sorted-lists.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/merge-k-sorted-lists.py) | *O(nlogk)* | *O(1)* | Hard |  | Heap, Divide and Conquer |
| 024 | [Swap Nodes in Pairs](https://leetcode.com/problems/swap-nodes-in-pairs/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/swap-nodes-in-pairs.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/swap-nodes-in-pairs.py) | *O(n)* | *O(1)* | Easy |  |  |
| 025 | [Reverse Nodes in k-Group](https://leetcode.com/problems/reverse-nodes-in-k-group/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/reverse-nodes-in-k-group.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/reverse-nodes-in-k-group.py) | *O(n)* | *O(1)* | Hard |  |  |
| 061 | [Rotate List](https://leetcode.com/problems/rotate-list/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/rotate-list.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/rotate-list.py) | *O(n)* | *O(1)* | Medium |  |  |
| 082 | [Remove Duplicates from Sorted List II](https://leetcode.com/problems/remove-duplicates-from-sorted-list-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/remove-duplicates-from-sorted-list-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/remove-duplicates-from-sorted-list-ii.py) | *O(n)* | *O(1)* | Medium |  |  |
| 083 | [Remove Duplicates from Sorted List](https://leetcode.com/problems/remove-duplicates-from-sorted-list/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/remove-duplicates-from-sorted-list.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/remove-duplicates-from-sorted-list.py) | *O(n)* | *O(1)* | Easy |  |  |
| 092 | [Reverse Linked List II](https://leetcode.com/problems/reverse-linked-list-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/reverse-linked-list-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/reverse-linked-list-ii.py) | *O(n)* | *O(1)* | Medium |  |  |
| 138 | [Copy List with Random Pointer](https://leetcode.com/problems/copy-list-with-random-pointer/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/copy-list-with-random-pointer.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/copy-list-with-random-pointer.py) | *O(n)* | *O(1)* | Hard |  |  |
| 160 | [Intersection of Two Linked Lists](https://leetcode.com/problems/intersection-of-two-linked-lists/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/intersection-of-two-linked-lists.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/intersection-of-two-linked-lists.py) | *O(m + n)* | *O(1)* | Easy |  |  |
| 203 | [Remove Linked List Elements](https://leetcode.com/problems/remove-linked-list-elements/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/remove-linked-list-elements.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/remove-linked-list-elements.py) | *O(n)* | *O(1)* | Easy |  |  |
| 206 | [Reverse Linked List](https://leetcode.com/problems/reverse-linked-list/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/reverse-linked-list.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/reverse-linked-list.py) | *O(n)* | *O(1)* | Easy |  |  |
| 234 | [Palindrome Linked List](https://leetcode.com/problems/palindrome-linked-list/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/palindrome-linked-list.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/palindrome-linked-list.py) | *O(n)* | *O(1)* | Easy |  |  |
| 237 | [Delete Node in a Linked List](https://leetcode.com/problems/delete-node-in-a-linked-list/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/delete-node-in-a-linked-list.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/delete-node-in-a-linked-list.py) | *O(1)* | *O(1)* | Easy | LintCode |  |
| 328 | [Odd Even Linked List](https://leetcode.com/problems/odd-even-linked-list/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/odd-even-linked-list.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/odd-even-linked-list.py) | *O(n)* | *O(1)* | Medium |  |  |
| 369 | [Plus One Linked List](https://leetcode.com/problems/plus-one-linked-list/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/plus-one-linked-list.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/plus-one-linked-list.py) | *O(n)* | *O(1)* | Medium | 📖 | Two Pointers |
| 445 | [Add Two Numbers II](https://leetcode.com/problems/add-two-numbers-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/add-two-numbers-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/add-two-numbers-ii.py) | *O(m + n)* | *O(m + n)* | Medium |  |  |
| 725 | [Split Linked List in Parts](https://leetcode.com/problems/split-linked-list-in-parts/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/split-linked-list-in-parts.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/split-linked-list-in-parts.py) | *O(n + k)* | *O(1)* | Medium |  |  |

**Stack**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 020 | [Valid Parentheses](https://leetcode.com/problems/valid-parentheses/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/valid-parentheses.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/valid-parentheses.py) | *O(n)* | *O(n)* | Easy |  |  |
| 032 | [Longest Valid Parentheses](https://leetcode.com/problems/longest-valid-parentheses/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/longest-valid-parentheses.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/longest-valid-parentheses.py) | *O(n)* | *O(1)* | Hard |  |  |
| 071 | [Simplify Path](https://leetcode.com/problems/simplify-path/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/simplify-path.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/simplify-path.py) | *O(n)* | *O(n)* | Medium |  |  |
| 084 | [Largest Rectangle in Histogram](https://leetcode.com/problems/largest-rectangle-in-histogram/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/largest-rectangle-in-histogram.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/largest-rectangle-in-histogram.py) | *O(n)* | *O(n)* | Hard |  | Ascending Stack, DP |
| 085 | [Maximal Rectangle](https://leetcode.com/problems/maximal-rectangle/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/maximal-rectangle.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/maximal-rectangle.py) | *O(m \* n)* | *O(n)* | Hard | EPI | Ascending Stack |
| 101 | [Symmetric Tree](https://leetcode.com/problems/symmetric-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/symmetric-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/symmetric-tree.py) | *O(n)* | *O(h)* | Easy |  |  |
| 150 | [Evaluate Reverse Polish Notation](https://leetcode.com/problems/evaluate-reverse-polish-notation/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/evaluate-reverse-polish-notation.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/evaluate-reverse-polish-notation.py) | *O(n)* | *O(n)* | Medium |  |  |
| 155 | [Min Stack](https://leetcode.com/problems/min-stack/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/min-stack.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/min-stack.py) | *O(n)* | *O(1)* | Easy |  |  |
| 173 | [Binary Search Tree Iterator](https://leetcode.com/problems/binary-search-tree-iterator/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/binary-search-tree-iterator.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/binary-search-tree-iterator.py) | *O(1)* | *O(h)* | Medium |  |  |
| 224 | [Basic Calculator](https://leetcode.com/problems/basic-calculator/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/basic-calculator.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/basic-calculator.py) | *O(n)* | *O(n)* | Hard |  |  |
| 227 | [Basic Calculator II](https://leetcode.com/problems/basic-calculator-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/basic-calculator-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/basic-calculator-ii.py) | *O(n)* | *O(n)* | Medium |  |  |
| 232 | [Implement Queue using Stacks](https://leetcode.com/problems/implement-queue-using-stacks/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/implement-queue-using-stacks.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/implement-queue-using-stacks.py) | *O(1), amortized* | *O(n)* | Easy | EPI, LintCode |  |
| 255 | [Verify Preorder Sequence in Binary Search Tree](https://leetcode.com/problems/verify-preorder-sequence-in-binary-search-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/verify-preorder-sequence-in-binary-search-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/verify-preorder-sequence-in-binary-search-tree.py) | *O(n)* | *O(1)* | Medium | 📖 |  |
| 272 | [Closest Binary Search Tree Value II](https://leetcode.com/problems/closest-binary-search-tree-value-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/closest-binary-search-tree-value-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/closest-binary-search-tree-value-ii.py) | *O(h + k)* | *O(h)* | Hard | 📖 |  |
| 331 | [Verify Preorder Serialization of a Binary Tree](https://leetcode.com/problems/verify-preorder-serialization-of-a-binary-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/verify-preorder-serialization-of-a-binary-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/verify-preorder-serialization-of-a-binary-tree.py) | *O(n)* | *O(1)* | Medium |  |  |
| 341 | [Flatten Nested List Iterator](https://leetcode.com/problems/flatten-nested-list-iterator/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/flatten-nested-list-iterator.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/flatten-nested-list-iterator.py) | *O(n)* | *O(h)* | Medium | 📖 | Iterator |
| 385 | [Mini Parser](https://leetcode.com/problems/mini-parser/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/mini-parser.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/mini-parser.py) | *O(n)* | *O(h)* | Medium |  |  |
| 394 | [Decode String](https://leetcode.com/problems/decode-string/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/decode-string.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/decode-string.py) | *O(n)* | *O(h)* | Medium |  |  |
| 439 | [Ternary Expression Parser](https://leetcode.com/problems/ternary-expression-parser/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/ternary-expression-parser.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/ternary-expression-parser.py) | *O(n)* | *O(1)* | Medium | 📖 |  |
| 456 | [132 Pattern](https://leetcode.com/problems/132-pattern/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/132-pattern.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/132-pattern.py) | *O(n)* | *O(n)* | Medium |  |  |
| 636 | [Exclusive Time of Functions](https://leetcode.com/problems/exclusive-time-of-functions/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/exclusive-time-of-functions.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/exclusive-time-of-functions.py) | *O(n)* | *O(n)* | Medium |  |  |
| 682 | [Baseball Game](https://leetcode.com/problems/baseball-game/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/baseball-game.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/baseball-game.py) | *O(n)* | *O(n)* | Easy |  |  |
| 726 | [Number of Atoms](https://leetcode.com/problems/number-of-atoms/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/number-of-atoms.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/number-of-atoms.py) | *O(n)* | *O(n)* | Hard |  |  |
| 735 | [Asteroid Collision](https://leetcode.com/problems/asteroid-collision/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/asteroid-collision.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/asteroid-collision.py) | *O(n)* | *O(n)* | Medium |  |  |
| 736 | [Parse Lisp Expression](https://leetcode.com/problems/parse-lisp-expression/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/parse-lisp-expression.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/parse-lisp-expression.py) | *O(n^2)* | *O(n^2)* | Hard |  |  |
| 739 | [Daily Temperatures](https://leetcode.com/problems/daily-temperatures/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/daily-temperatures.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/daily-temperatures.py) | *O(n)* | *O(n)* | Medium |  |  |
| 770 | [Basic Calculator IV](https://leetcode.com/problems/basic-calculator-iv/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/basic-calculator-iv.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/basic-calculator-iv.py) | add: *O(d \* t)* sub: *O(d \* t)* mul: *O(d \* t^2)* eval: *O(d \* t)*  to\_list: *O(d \* tlogt)* | *O(e + d \* t)* | Hard |  |  |
| 772 | [Basic Calculator III](https://leetcode.com/problems/basic-calculator-iii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/basic-calculator-iii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/basic-calculator-iii.py) | *O(n)* | *O(n)* | Hard |  |  |

**Queue**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 239 | [Sliding Window Maximum](https://leetcode.com/problems/sliding-window-maximum/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/sliding-window-maximum.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/sliding-window-maximum.py) | *O(n)* | *O(k)* | Hard | EPI, LintCode |  |
| 281 | [Zigzag Iterator](https://leetcode.com/problems/zigzag-iterator/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/zigzag-iterator.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/zigzag-iterator.py) | *O(n)* | *O(k)* | Medium | 📖 |  |
| 346 | [Moving Average from Data Stream](https://leetcode.com/problems/moving-average-from-data-stream/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/moving-average-from-data-stream.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/moving-average-from-data-stream.py) | *O(1)* | *O(w)* | Easy | 📖 |  |

**Heap**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 264 | [Ugly Number II](https://leetcode.com/problems/ugly-number-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/ugly-number-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/ugly-number-ii.py) | *O(n)* | *O(1)* | Medium | CTCI, LintCode | BST, Heap |
| 295 | [Find Median from Data Stream](https://leetcode.com/problems/find-median-from-data-stream/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/find-median-from-data-stream.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/find-median-from-data-stream.py) | *O(nlogn)* | *O(n)* | Hard | EPI, LintCode | BST, Heap |
| 313 | [Super Ugly Number](https://leetcode.com/problems/super-ugly-number/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/super-ugly-number.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/super-ugly-number.py) | *O(n \* k)* | *O(n + k)* | Medium |  | BST, Heap |
| 358 | [Rearrange String k Distance Apart](https://leetcode.com/problems/rearrange-string-k-distance-apart/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/rearrange-string-k-distance-apart.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/rearrange-string-k-distance-apart.py) | *O(n)* | *O(n)* | Hard | 📖 | Greedy, Heap |
| 373 | [Find K Pairs with Smallest Sums](https://leetcode.com/problems/find-k-pairs-with-smallest-sums/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/find-k-pairs-with-smallest-sums.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/find-k-pairs-with-smallest-sums.py) | *O(k \* log(min(n, m, k)))* | *O(min(n, m, k))* | Medium |  |  |
| 378 | [Kth Smallest Element in a Sorted Matrix](https://leetcode.com/problems/kth-smallest-element-in-a-sorted-matrix/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/kth-smallest-element-in-a-sorted-matrix.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/kth-smallest-element-in-a-sorted-matrix.py) | *O(k \* log(min(n, m, k)))* | *O(min(n, m, k))* | Medium | LintCode |  |
| 407 | [Trapping Rain Water II](https://leetcode.com/problems/trapping-rain-water-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/trapping-rain-water-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/trapping-rain-water-ii.py) | *O(m \* n \* (logm + logn))* | *O(m \* n)* | Hard | LintCode |  |
| 632 | [Smallest Range](https://leetcode.com/problems/smallest-range/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/smallest-range.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/smallest-range.py) | *O(nlogk)* | *O(k)* | Hard |  |  |

**Tree**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 094 | [Binary Tree Inorder Traversal](https://leetcode.com/problems/binary-tree-inorder-traversal/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/binary-tree-inorder-traversal.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/binary-tree-inorder-traversal.py) | *O(n)* | *O(1)* | Medium |  | Morris Traversal |
| 099 | [Recover Binary Search Tree](https://leetcode.com/problems/recover-binary-search-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/recover-binary-search-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/recover-binary-search-tree.py) | *O(n)* | *O(1)* | Hard |  | Morris Traversal |
| 144 | [Binary Tree Preorder Traversal](https://leetcode.com/problems/binary-tree-preorder-traversal/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/binary-tree-preorder-traversal.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/binary-tree-preorder-traversal.py) | *O(n)* | *O(1)* | Medium |  | Morris Traversal |
| 145 | [Binary Tree Postorder Traversal](https://leetcode.com/problems/binary-tree-postorder-traversal/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/binary-tree-postorder-traversal.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/binary-tree-postorder-traversal.py) | *O(n)* | *O(1)* | Hard |  | Morris Traversal |
| 208 | [Implement Trie (Prefix Tree)](https://leetcode.com/problems/implement-trie-prefix-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/implement-trie-prefix-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/implement-trie-prefix-tree.py) | *O(n)* | *O(1)* | Medium |  | Trie |
| 211 | [Add and Search Word - Data structure design](https://leetcode.com/problems/add-and-search-word-data-structure-design/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/add-and-search-word-data-structure-design.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/add-and-search-word-data-structure-design.py) | *O(min(n, h))* | *O(min(n, h))* | Medium |  | Trie, DFS |
| 226 | [Invert Binary Tree](https://leetcode.com/problems/invert-binary-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/invert-binary-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/invert-binary-tree.py) | *O(n)* | *O(h)*, *O(w)* | Easy |  |  |
| 297 | [Serialize and Deserialize Binary Tree](https://leetcode.com/problems/serialize-and-deserialize-binary-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/serialize-and-deserialize-binary-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/serialize-and-deserialize-binary-tree.py) | *O(n)* | *O(h)* | Hard | LintCode | DFS |
| 307 | [Range Sum Query - Mutable](https://leetcode.com/problems/range-sum-query-mutable/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/range-sum-query-mutable.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/range-sum-query-mutable.py) | ctor: *O(n)*, update: *O(logn)*, query:*O(logn)* | *O(n)* | Medium | LintCode | DFS, Segment Tree, BIT |
| 308 | [Range Sum Query 2D - Mutable](https://leetcode.com/problems/range-sum-query-2d-mutable/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/range-sum-query-2d-mutable.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/range-sum-query-2d-mutable.py) | ctor: *O(m \* n)*, update: *O(logm + logn)*, query:*O(logm + logn)* | *O(m \* n)* | Hard | 📖 | DFS, Segment Tree, BIT |
| 315 | [Count of Smaller Numbers After Self](https://leetcode.com/problems/count-of-smaller-numbers-after-self/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/count-of-smaller-numbers-after-self.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/count-of-smaller-numbers-after-self.py) | *O(nlogn)* | *O(n)* | Hard | LintCode | BST, BIT, Divide and Conquer |
| 529 | [Minesweeper](https://leetcode.com/problems/minesweeper/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/minesweeper.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/minesweeper.py) | *O(m \* n)* | *O(m + n)* | Medium |  |  |
| 536 | [Construct Binary Tree from String](https://leetcode.com/problems/construct-binary-tree-from-string/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/construct-binary-tree-from-string.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/construct-binary-tree-from-string.py) | *O(n)* | *O(h)* | Medium | 📖 |  |
| 538 | [Convert BST to Greater Tree](https://leetcode.com/problems/convert-bst-to-greater-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/convert-bst-to-greater-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/convert-bst-to-greater-tree.py) | *O(n)* | *O(h)* | Easy |  |  |
| 543 | [Diameter of Binary Tree](https://leetcode.com/problems/diameter-of-binary-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/diameter-of-binary-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/diameter-of-binary-tree.py) | *O(n)* | *O(h)* | Easy |  |  |
| 545 | [Boundary of Binary Tree](https://leetcode.com/problems/boundary-of-binary-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/boundary-of-binary-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/boundary-of-binary-tree.py) | *O(n)* | *O(h)* | Medium | 📖 |  |
| 548 | [Split Array with Equal Sum](https://leetcode.com/problems/split-array-with-equal-sum/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/split-array-with-equal-sum.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/split-array-with-equal-sum.py) | *O(n^2)* | *O(n)* | Medium | 📖 |  |
| 563 | [Binary Tree Tilt](https://leetcode.com/problems/binary-tree-tilt/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/binary-tree-tilt.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/binary-tree-tilt.py) | *O(n)* | *O(n)* | Easy |  |  |
| 572 | [Subtree of Another Tree](https://leetcode.com/problems/construct-string-from-binary-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/subtree-of-another-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/subtree-of-another-tree.py) | *O(m \* n)* | *O(h)* | Easy |  |  |
| 606 | [Construct String from Binary Tree](https://leetcode.com/problems/construct-string-from-binary-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/construct-string-from-binary-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/construct-string-from-binary-tree.py) | *O(n)* | *O(h)* | Easy |  |  |
| 617 | [Merge Two Binary Trees](https://leetcode.com/problems/merge-two-binary-trees/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/merge-two-binary-trees.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/merge-two-binary-trees.py) | *O(n)* | *O(h)* | Easy |  |  |
| 623 | [Add One Row to Tree](https://leetcode.com/problems/add-one-row-to-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/add-one-row-to-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/add-one-row-to-tree.py) | *O(n)* | *O(h)* | Medium |  |  |
| 637 | [Average of Levels in Binary Tree](https://leetcode.com/problems/average-of-levels-in-binary-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/average-of-levels-in-binary-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/average-of-levels-in-binary-tree.py) | *O(n)* | *O(h)* | Easy |  |  |
| 652 | [Find Duplicate Subtrees](https://leetcode.com/problems/find-duplicate-subtrees/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/find-duplicate-subtrees.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/find-duplicate-subtrees.py) | *O(n)* | *O(n)* | Medium |  | DFS, Hash |
| 653 | [Two Sum IV - Input is a BST](https://leetcode.com/problems/two-sum-iv-input-is-a-bst/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/two-sum-iv-input-is-a-bst.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/two-sum-iv-input-is-a-bst.py) | *O(n)* | *O(h)* | Easy |  | Two Pointers |
| 654 | [Maximum Binary Tree](https://leetcode.com/problems/maximum-binary-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/maximum-binary-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/maximum-binary-tree.py) | *O(n)* | *O(n)* | Medium | LintCode | Descending Stack |
| 655 | [Print Binary Tree](https://leetcode.com/problems/print-binary-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/print-binary-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/print-binary-tree.py) | *O(n)* | *O(h)* | Medium |  |  |
| 662 | [Maximum Width of Binary Tree](https://leetcode.com/problems/maximum-width-of-binary-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/maximum-width-of-binary-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/maximum-width-of-binary-tree.py) | *O(n)* | *O(h)* | Medium |  | DFS |
| 663 | [Equal Tree Partition](https://leetcode.com/problems/strange-printer/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/equal-tree-partition.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/equal-tree-partition.py) | *O(n)* | *O(n)* | Medium | 📖 | Hash |
| 677 | [Map Sum Pairs](https://leetcode.com/problems/map-sum-pairs/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/map-sum-pairs.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/map-sum-pairs.py) | *O(n)* | *O(t)* | Medium |  | Trie |
| 684 | [Redundant Connection](https://leetcode.com/problems/redundant-connection/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/redundant-connection.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/redundant-connection.py) | *O(n)* | *O(n)* | Medium |  | Union Find |
| 685 | [Redundant Connection II](https://leetcode.com/problems/redundant-connection-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/redundant-connection-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/redundant-connection-ii.py) | *O(n)* | *O(n)* | Hard |  | Union Find |
| 687 | [Longest Univalue Path](https://leetcode.com/problems/longest-univalue-path/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/longest-univalue-path.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/longest-univalue-path.py) | *O(n)* | *O(h)* | Easy |  |  |
| 699 | [Falling Squares](https://leetcode.com/problems/falling-squares/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/falling-squares.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/falling-squares.py) | *O(nlogn)* | *O(n)* | Hard |  | Segment Tree |

**Hash Table**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 001 | [Two Sum](https://leetcode.com/problems/two-sum/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/two-sum.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/two-sum.py) | *O(n)* | *O(n)* | Easy |  |  |
| 003 | [Longest Substring Without Repeating Characters](https://leetcode.com/problems/longest-substring-without-repeating-characters/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/longest-substring-without-repeating-characters.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/longest-substring-without-repeating-characters.py) | *O(n)* | *O(1)* | Medium |  |  |
| 030 | [Substring with Concatenation of All Words](https://leetcode.com/problems/substring-with-concatenation-of-all-words/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/substring-with-concatenation-of-all-words.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/substring-with-concatenation-of-all-words.py) | *O((m + n) \* k)* | *O(n \* k)* | Hard |  |  |
| 036 | [Valid Sudoku](https://leetcode.com/problems/valid-sudoku/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/valid-sudoku.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/valid-sudoku.py) | *O(9^2)* | *O(9)* | Easy |  |  |
| 049 | [Group Anagrams](https://leetcode.com/problems/group-anagrams/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/group-anagrams.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/group-anagrams.py) | *O(n \* glogg)* | *O(n)* | Medium |  |  |
| 076 | [Minimum Window Substring](https://leetcode.com/problems/minimum-window-substring/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/minimum-window-substring.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/minimum-window-substring.py) | *O(n)* | *O(k)* | Hard |  |  |
| 149 | [Max Points on a Line](https://leetcode.com/problems/max-points-on-a-line/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/max-points-on-a-line.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/max-points-on-a-line.py) | *O(n^2)* | *O(n)* | Hard |  |  |
| 159 | [Longest Substring with At Most Two Distinct Characters](https://leetcode.com/problems/longest-substring-with-at-most-two-distinct-characters/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/longest-substring-with-at-most-two-distinct-characters.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/longest-substring-with-at-most-two-distinct-characters.py) | *O(n)* | *O(1)* | Hard | 📖 |  |
| 170 | [Two Sum III - Data structure design](https://leetcode.com/problems/two-sum-iii-data-structure-design/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/two-sum-iii-data-structure-design.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/two-sum-iii-data-structure-design.py) | *O(n)* | *O(n)* | Easy | 📖 |  |
| 187 | [Repeated DNA Sequences](https://leetcode.com/problems/repeated-dna-sequences/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/repeated-dna-sequences.py) | *O(n)* | *O(n)* | Medium |  |  |
| 202 | [Happy Number](https://leetcode.com/problems/happy-number/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/happy-number.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/happy-number.py) | *O(k)* | *O(k)* | Easy |  |  |
| 204 | [Count Primes](https://leetcode.com/problems/count-primes/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/count-primes.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/count-primes.py) | *O(n)* | *O(n)* | Easy |  |  |
| 205 | [Isomorphic Strings](https://leetcode.com/problems/isomorphic-strings/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/isomorphic-strings.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/isomorphic-strings.py) | *O(n)* | *O(1)* | Easy |  |  |
| 217 | [Contains Duplicate](https://leetcode.com/problems/contains-duplicate/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/contains-duplicate.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/contains-duplicate.py) | *O(n)* | *O(n)* | Easy |  |  |
| 219 | [Contains Duplicate II](https://leetcode.com/problems/contains-duplicate-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/contains-duplicate-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/contains-duplicate-ii.py) | *O(n)* | *O(n)* | Easy |  |  |
| 244 | [Shortest Word Distance II](https://leetcode.com/problems/shortest-word-distance-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/shortest-word-distance-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/shortest-word-distance-ii.py) | ctor: *O(n)*, lookup: *O(a + b)* | *O(n)* | Medium | 📖 |  |
| 246 | [Strobogrammatic Number](https://leetcode.com/problems/strobogrammatic-number/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/strobogrammatic-number.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/strobogrammatic-number.py) | *O(n)* | *O(1)* | Easy | 📖 |  |
| 249 | [Group Shifted Strings](https://leetcode.com/problems/group-shifted-strings/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/group-shifted-strings.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/group-shifted-strings.py) | *O(nlogn)* | *O(n)* | Easy | 📖 |  |
| 266 | [Palindrome Permutation](https://leetcode.com/problems/palindrome-permutation/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/palindrome-permutation.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/palindrome-permutation.py) | *O(n)* | *O(1)* | Easy | 📖 |  |
| 288 | [Unique Word Abbreviation](https://leetcode.com/problems/unique-word-abbreviation/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/unique-word-abbreviation.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/unique-word-abbreviation.py) | ctor: *O(n)*, lookup: *O(1)* | *O(k)* | Easy | 📖 |  |
| 290 | [Word Pattern](https://leetcode.com/problems/word-pattern/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/word-pattern.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/word-pattern.py) | *O(n)* | *O(c)* | Easy | variant of [Isomorphic Strings](https://leetcode.com/problems/isomorphic-strings/) |  |
| 299 | [Bulls and Cows](https://leetcode.com/problems/bulls-and-cows/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/bulls-and-cows.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/bulls-and-cows.py) | *O(n)* | *O(1)* | Easy |  |  |
| 305 | [Number of Islands II](https://leetcode.com/problems/number-of-islands-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/number-of-islands-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/number-of-islands-ii.py) | *O(k)* | *O(k)* | Hard | LintCode, 📖 | Union Find |
| 314 | [Binary Tree Vertical Order Traversal](https://leetcode.com/problems/binary-tree-vertical-order-traversal/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/binary-tree-vertical-order-traversal.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/binary-tree-vertical-order-traversal.py) | *O(n)* | *O(n)* | Medium | 📖 | BFS |
| 323 | [Number of Connected Components in an Undirected Graph](https://leetcode.com/problems/number-of-connected-components-in-an-undirected-graph/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/number-of-connected-components-in-an-undirected-graph.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/number-of-connected-components-in-an-undirected-graph.py) | *O(n)* | *O(n)* | Medium | 📖 | Union Find |
| 325 | [Maximum Size Subarray Sum Equals k](https://leetcode.com/problems/maximum-size-subarray-sum-equals-k/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/maximum-size-subarray-sum-equals-k.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/maximum-size-subarray-sum-equals-k.py) | *O(n)* | *O(n)* | Medium | 📖 |  |
| 336 | [Palindrome Pairs](https://leetcode.com/problems/palindrome-pairs/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/palindrome-pairs.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/palindrome-pairs.py) | *O(n \* k^2)* | *O(n \* k)* | Hard |  |  |
| 340 | [Longest Substring with At Most K Distinct Characters](https://leetcode.com/problems/longest-substring-with-at-most-k-distinct-characters/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/longest-substring-with-at-most-k-distinct-characters.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/longest-substring-with-at-most-k-distinct-characters.py) | *O(n)* | *O(1)* | Hard | 📖 |  |
| 356 | [Line Reflection](https://leetcode.com/problems/line-reflection/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/line-reflection.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/line-reflection.py) | *O(n)* | *O(n)* | Medium | 📖 | Hash, Two Pointers |
| 387 | [First Unique Character in a String](https://leetcode.com/problems/first-unique-character-in-a-string/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/first-unique-character-in-a-string.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/first-unique-character-in-a-string.py) | *O(n)* | *O(n)* | Easy |  |  |
| 388 | [Longest Absolute File Path](https://leetcode.com/problems/longest-absolute-file-path/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/longest-absolute-file-path.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/longest-absolute-file-path.py) | *O(n)* | *O(d)* | Medium |  | Stack |
| 409 | [Longest Palindrome](https://leetcode.com/problems/longest-palindrome/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/longest-palindrome.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/longest-palindrome.py) | *O(n)* | *O(1)* | Easy |  |  |
| 424 | [Longest Repeating Character Replacement](https://leetcode.com/problems/longest-repeating-character-replacement/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/longest-repeating-character-replacement.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/longest-repeating-character-replacement.py) | *O(n)* | *O(1)* | Medium |  |  |
| 438 | [Find All Anagrams in a String](https://leetcode.com/problems/find-all-anagrams-in-a-string/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/find-all-anagrams-in-a-string.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/find-all-anagrams-in-a-string.py) | *O(n)* | *O(1)* | Easy |  |  |
| 447 | [Number of Boomerangs](https://leetcode.com/problems/number-of-boomerangs/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/number-of-boomerangs.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/number-of-boomerangs.py) | *O(n^2)* | *O(n)* | Easy |  |  |
| 454 | [4Sum II](https://leetcode.com/problems/4sum-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/4sum-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/4sum-ii.py) | *O(n^2)* | *O(n^2)* | Medium |  |  |
| 473 | [Matchsticks to Square](https://leetcode.com/problems/matchsticks-to-square/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/matchsticks-to-square.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/matchsticks-to-square.py) | *O(n \* s \* 2^n)* | *O(n \* (2^n + s))* | Medium |  |  |
| 532 | [K-diff Pairs in an Array](https://leetcode.com/problems/k-diff-pairs-in-an-array/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/k-diff-pairs-in-an-array.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/k-diff-pairs-in-an-array.py) | *O(n)* | *O(n)* | Easy |  |  |
| 554 | [Brick Wall](https://leetcode.com/problems/brick-wall/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/brick-wall.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/brick-wall.py) | *O(n)* | *O(m)* | Medium |  |  |
| 560 | [Subarray Sum Equals K](https://leetcode.com/problems/subarray-sum-equals-k/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/subarray-sum-equals-k.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/subarray-sum-equals-k.py) | *O(n)* | *O(n)* | Medium |  |  |
| 561 | [Array Partition I](https://leetcode.com/problems/array-partition-i/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/array-partition-i.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/array-partition-i.py) | *O(r)* | *O(r)* | Easy |  |  |
| 575 | [Distribute Candies](https://leetcode.com/problems/distribute-candies/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/distribute-candies.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/distribute-candies.py) | *O(n)* | *O(n)* | Easy |  |  |
| 594 | [Longest Harmonious Subsequence](https://leetcode.com/problems/longest-harmonious-subsequence/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/longest-harmonious-subsequence.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/longest-harmonious-subsequence.py) | *O(n)* | *O(n)* | Easy |  |  |
| 599 | [Minimum Index Sum of Two Lists](https://leetcode.com/problems/minimum-index-sum-of-two-lists/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/minimum-index-sum-of-two-lists.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/minimum-index-sum-of-two-lists.py) | *O((m + n) \* l)* | *O(m \* l)* | Easy |  |  |
| 609 | [Find Duplicate File in System](https://leetcode.com/problems/find-duplicate-file-in-system/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/find-duplicate-file-in-system.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/find-duplicate-file-in-system.py) | *O(n \* l)* | *O(n \* l)* | Medium |  |  |
| 721 | [Accounts Merge](https://leetcode.com/problems/accounts-merge/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/accounts-merge.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/accounts-merge.py) | *O(nlogn)* | *O(n)* | Medium |  | Union Find |
| 734 | [Sentence Similarity](https://leetcode.com/problems/sentence-similarity/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/sentence-similarity.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/sentence-similarity.py) | *O(n + p)* | *O(p)* | Easy |  |  |
| 737 | [Sentence Similarity II](https://leetcode.com/problems/sentence-similarity-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/sentence-similarity-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/sentence-similarity-ii.py) | *O(n + p)* | *O(p)* | Medium |  | Union Find |
| 748 | [Shortest Completing Word](https://leetcode.com/problems/shortest-completing-word/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/shortest-completing-word.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/shortest-completing-word.py) | *O(n)* | *O(1)* | Easy |  |  |
| 760 | [Find Anagram Mappings](https://leetcode.com/problems/find-anagram-mappings/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/find-anagram-mappings.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/find-anagram-mappings.py) | *O(n)* | *O(n)* | Easy |  |  |
| 771 | [Jewels and Stones](https://leetcode.com/problems/jewels-and-stones/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/jewels-and-stones.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/jewels-and-stones.py) | *O(m + n)* | *O(n)* | Easy |  |  |

**Math**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 007 | [Reverse Integer](https://leetcode.com/problems/reverse-integer/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/reverse-integer.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/reverse-integer.py) | *O(1)* | *O(1)* | Easy |  |  |
| 009 | [Palindrome Number](https://leetcode.com/problems/palindrome-number/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/palindrome-number.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/palindrome-number.py) | *O(1)* | *O(1)* | Easy |  |  |
| 012 | [Integer to Roman](https://leetcode.com/problems/integer-to-roman/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/integer-to-roman.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/integer-to-roman.py) | *O(n)* | *O(1)* | Medium |  |  |
| 013 | [Roman to Integer](https://leetcode.com/problems/roman-to-integer/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/roman-to-integer.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/roman-to-integer.py) | *O(n)* | *O(1)* | Easy |  |  |
| 029 | [Divide Two Integers](https://leetcode.com/problems/divide-two-integers/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/divide-two-integers.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/divide-two-integers.py) | *O(1)* | *O(1)* | Medium |  |  |
| 050 | [Pow(x, n)](https://leetcode.com/problems/powx-n/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/powx-n.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/powx-n.py) | *O(1)* | *O(1)* | Medium |  |  |
| 060 | [Permutation Sequence](https://leetcode.com/problems/permutation-sequence/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/permutation-sequence.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/permutation-sequence.py) | *O(n^2)* | *O(n)* | Medium |  | Cantor Ordering |
| 065 | [Valid Number](https://leetcode.com/problems/valid-number/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/valid-number.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/valid-number.py) | *O(n)* | *O(1)* | Hard |  | Automata |
| 089 | [Gray Code](https://leetcode.com/problems/gray-code/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/gray-code.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/gray-code.py) | *O(2^n)* | *O(1)* | Medium |  |  |
| 166 | [Fraction to Recurring Decimal](https://leetcode.com/problems/fraction-to-recurring-decimal/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/fraction-to-recurring-decimal.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/fraction-to-recurring-decimal.py) | *O(logn)* | *O(1)* | Medium |  |  |
| 168 | [Excel Sheet Column Title](https://leetcode.com/problems/excel-sheet-column-title/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/excel-sheet-column-title.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/excel-sheet-column-title.py) | *O(logn)* | *O(1)* | Easy |  |  |
| 171 | [Excel Sheet Column Number](https://leetcode.com/problems/excel-sheet-column-number/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/excel-sheet-column-number.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/excel-sheet-column-number.py) | *O(n)* | *O(1)* | Easy |  |  |
| 172 | [Factorial Trailing Zeroes](https://leetcode.com/problems/factorial-trailing-zeroes/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/factorial-trailing-zeroes.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/factorial-trailing-zeroes.py) | *O(1)* | *O(1)* | Easy |  |  |
| 223 | [Rectangle Area](https://leetcode.com/problems/rectangle-area/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/rectangle-area.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/rectangle-area.py) | *O(1)* | *O(1)* | Easy |  |  |
| 233 | [Number of Digit One](https://leetcode.com/problems/number-of-digit-one/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/number-of-digit-one.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/number-of-digit-one.py) | *O(1)* | *O(1)* | Hard | CTCI, LintCode |  |
| 248 | [Strobogrammatic Number III](https://leetcode.com/problems/strobogrammatic-number-iii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/strobogrammatic-number-iii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/strobogrammatic-number-iii.py) | *O(5^(n/2))* | *O(n)* | Hard | 📖 |  |
| 258 | [Add Digits](https://leetcode.com/problems/add-digits/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/add-digits.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/add-digits.py) | *O(1)* | *O(1)* | Easy |  |  |
| 263 | [Ugly Number](https://leetcode.com/problems/ugly-number/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/ugly-number.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/ugly-number.py) | *O(1)* | *O(1)* | Easy |  |  |
| 292 | [Nim Game](https://leetcode.com/problems/nim-game/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/nim-game.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/nim-game.py) | *O(1)* | *O(1)* | Easy | LintCode |  |
| 319 | [Bulb Switcher](https://leetcode.com/problems/bulb-switcher/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/bulb-switcher.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/bulb-switcher.py) | *O(1)* | *O(1)* | Medium |  |  |
| 326 | [Power of Three](https://leetcode.com/problems/power-of-three/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/power-of-three.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/power-of-three.py) | *O(1)* | *O(1)* | Easy |  |  |
| 335 | [Self Crossing](https://leetcode.com/problems/self-crossing/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/self-crossing.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/self-crossing.py) | *O(n)* | *O(1)* | Hard |  |  |
| 338 | [Counting Bits](https://leetcode.com/problems/counting-bits/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/counting-bits.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/counting-bits.py) | *O(n)* | *O(n)* | Medium |  |  |
| 343 | [Integer Break](https://leetcode.com/problems/integer-break/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/integer-break.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/integer-break.py) | *O(logn)* | *O(1)* | Medium |  | Tricky, DP |
| 365 | [Water and Jug Problem](https://leetcode.com/problems/water-and-jug-problem/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/water-and-jug-problem.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/water-and-jug-problem.py) | *O(logn)* | *O(1)* | Medium |  | Bézout's identity |
| 372 | [Super Pow](https://leetcode.com/problems/super-pow/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/super-pow.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/super-pow.py) | *O(n)* | *O(1)* | Medium |  |  |
| 382 | [Linked List Random Node](https://leetcode.com/problems/linked-list-random-node/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/linked-list-random-node.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/linked-list-random-node.py) | *O(n)* | *O(1)* | Medium |  | Reservoir Sampling |
| 386 | [Lexicographical Numbers](https://leetcode.com/problems/lexicographical-numbers/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/lexicographical-numbers.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/lexicographical-numbers.py) | *O(n)* | *O(1)* | Medium |  |  |
| 390 | [Elimination Game](https://leetcode.com/problems/elimination-game/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/elimination-game.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/elimination-game.py) | *O(logn)* | *O(1)* | Medium |  |  |
| 391 | [Perfect Rectangle](https://leetcode.com/problems/perfect-rectangle/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/perfect-rectangle.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/perfect-rectangle.py) | *O(n)* | *O(n)* | Hard |  |  |
| 398 | [Random Pick Index](https://leetcode.com/problems/random-pick-index/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/random-pick-index.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/random-pick-index.py) | *O(n)* | *O(1)* | Medium |  | Reservoir Sampling |
| 400 | [Nth Digit](https://leetcode.com/problems/nth-digit/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/nth-digit.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/nth-digit.py) | *O(logn)* | *O(1)* | Easy |  |  |
| 413 | [Arithmetic Slices](https://leetcode.com/problems/arithmetic-slices/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/arithmetic-slices.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/arithmetic-slices.py) | *O(n)* | *O(1)* | Medium |  |  |
| 423 | [Reconstruct Original Digits from English](https://leetcode.com/problems/reconstruct-original-digits-from-english/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/reconstruct-original-digits-from-english.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/reconstruct-original-digits-from-english.py) | *O(n)* | *O(1)* | Medium | [GCJ2016 - Round 1B](https://code.google.com/codejam/contest/11254486/dashboard#s=p0) |  |
| 441 | [Arranging Coins](https://leetcode.com/problems/arranging-coins/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/arranging-coins.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/arranging-coins.py) | *O(nlogn)* | *O(1)* | Easy |  | Binary Search |
| 453 | [Minimum Moves to Equal Array Elements](https://leetcode.com/problems/minimum-moves-to-equal-array-elements/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/minimum-moves-to-equal-array-elements.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/minimum-moves-to-equal-array-elements.py) | *O(n)* | *O(1)* | Easy |  |  |
| 458 | [Poor Pigs](https://leetcode.com/problems/poor-pigs/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/poor-pigs.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/poor-pigs.py) | *O(n)* | *O(1)* | Easy |  |  |
| 469 | [Convex Polygon](https://leetcode.com/problems/convex-polygon/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/convex-polygon.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/convex-polygon.py) | *O(n)* | *O(1)* | Medium | 📖 |  |
| 537 | [Complex Number Multiplication](https://leetcode.com/problems/complex-number-multiplication/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/complex-number-multiplication.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/complex-number-multiplication.py) | *O(1)* | *O(1)* | Medium |  |  |
| 553 | [Optimal Division](https://leetcode.com/problems/optimal-division/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/optimal-division.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/optimal-division.py) | *O(n)* | *O(1)* | Medium |  |  |
| 573 | [Squirrel Simulation](https://leetcode.com/problems/squirrel-simulation/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/squirrel-simulation.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/squirrel-simulation.py) | *O(n)* | *O(1)* | Medium | 📖 |  |
| 592 | [Fraction Addition and Subtraction](https://leetcode.com/problems/fraction-addition-and-subtraction/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/fraction-addition-and-subtraction.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/fraction-addition-and-subtraction.py) | *O(nlogx)* | *O(n)* | Medium |  |  |
| 593 | [Valid Square](https://leetcode.com/problems/valid-square/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/valid-square.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/valid-square.py) | *O(1)* | *O(1)* | Medium |  |  |
| 598 | [Range Addition II](https://leetcode.com/problems/range-addition-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/range-addition-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/range-addition-ii.py) | *O(p)* | *O(1)* | Easy |  |  |
| 625 | [Minimum Factorization](https://leetcode.com/problems/minimum-factorization/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/minimum-factorization.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/minimum-factorization.py) | *O(loga)* | *O(1)* | Medium | 📖 |  |
| 628 | [Maximum Product of Three Numbers](https://leetcode.com/problems/maximum-product-of-three-numbers/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/maximum-product-of-three-numbers.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/maximum-product-of-three-numbers.py) | *O(n)* | *O(1)* | Easy |  |  |
| 633 | [Sum of Square Numbers](https://leetcode.com/problems/sum-of-square-numbers/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/sum-of-square-numbers.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/sum-of-square-numbers.py) | *O(sqrt(c) \* logc)* | *O(1)* | Easy |  |  |
| 634 | [Find the Derangement of An Array](https://leetcode.com/problems/find-the-derangement-of-an-array/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/find-the-derangement-of-an-array.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/find-the-derangement-of-an-array.py) | *O(n)* | *O(1)* | Medium | 📖 |  |
| 640 | [Solve the Equation](https://leetcode.com/problems/solve-the-equation/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/solve-the-equation.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/solve-the-equation.py) | *O(n)* | *O(n)* | Medium |  |  |
| 651 | [4 Keys Keyboard](https://leetcode.com/problems/4-keys-keyboard/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/4-keys-keyboard.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/4-keys-keyboard.py) | *O(1)* | *O(1)* | Medium | 📖 | Math, DP |
| 660 | [Remove 9](https://leetcode.com/problems/remove-9/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/remove-9.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/remove-9.py) | *O(logn)* | *O(1)* | Hard | 📖 |  |
| 672 | [Bulb Switcher II](https://leetcode.com/problems/bulb-switcher-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/bulb-switcher-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/bulb-switcher-ii.py) | *O(1)* | *O(1)* | Medium |  |  |
| 728 | [Self Dividing Numbers](https://leetcode.com/problems/self-dividing-numbers/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/self-dividing-numbers.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/self-dividing-numbers.py) | *O(n)* | *O(1)* | Medium |  |  |
| 754 | [Reach a Number](https://leetcode.com/problems/reach-a-number/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/reach-a-number.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/reach-a-number.py) | *O(logn)* | *O(1)* | Medium |  |  |
| 775 | [Global and Local Inversions](https://leetcode.com/problems/global-and-local-inversions/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/global-and-local-inversions.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/global-and-local-inversions.py) | *O(n)* | *O(1)* | Medium |  |  |

**Sort**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 056 | [Merge Intervals](https://leetcode.com/problems/merge-intervals/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/merge-intervals.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/merge-intervals.py) | *O(nlogn)* | *O(1)* | Hard |  |  |
| 057 | [Insert Interval](https://leetcode.com/problems/insert-interval/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/insert-interval.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/insert-interval.py) | *O(n)* | *O(1)* | Hard |  |  |
| 075 | [Sort Colors](https://leetcode.com/problems/sort-colors/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/sort-colors.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/sort-colors.py) | *O(n)* | *O(1)* | Medium |  | Tri Partition |
| 088 | [Merge Sorted Array](https://leetcode.com/problems/merge-sorted-array/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/merge-sorted-array.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/merge-sorted-array.py) | *O(n)* | *O(1)* | Easy |  |  |
| 147 | [Insertion Sort List](https://leetcode.com/problems/insertion-sort-list/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/insertion-sort-list.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/insertion-sort-list.py) | *O(n^2)* | *O(1)* | Medium |  |  |
| 148 | [Sort List](https://leetcode.com/problems/sort-list/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/sort-list.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/sort-list.py) | *O(nlogn)* | *O(logn)* | Medium |  |  |
| 164 | [Maximum Gap](https://leetcode.com/problems/maximum-gap/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/maximum-gap.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/maximum-gap.py) | *O(n)* | *O(n)* | Hard |  | Tricky |
| 179 | [Largest Number](https://leetcode.com/problems/largest-number/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/largest-number.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/largest-number.py) | *O(nlogn)* | *O(1)* | Medium |  |  |
| 218 | [The Skyline Problem](https://leetcode.com/problems/the-skyline-problem/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/the-skyline-problem.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/the-skyline-problem.py) | *O(nlogn)* | *O(n)* | Hard |  | Sort, BST |
| 252 | [Meeting Rooms](https://leetcode.com/problems/meeting-rooms/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/meeting-rooms.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/meeting-rooms.py) | *O(nlogn)* | *O(n)* | Easy | 📖 |  |
| 253 | [Meeting Rooms II](https://leetcode.com/problems/meeting-rooms-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/meeting-rooms-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/meeting-rooms-ii.py) | *O(nlogn)* | *O(n)* | Medium | 📖 |  |
| 274 | [H-Index](https://leetcode.com/problems/h-index/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/h-index.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/h-index.py) | *O(n)* | *O(n)* | Medium |  | Counting Sort |
| 280 | [Wiggle Sort](https://leetcode.com/problems/wiggle-sort/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/wiggle-sort.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/wiggle-sort.py) | *O(n)* | *O(1)* | Medium | 📖 |  |
| 324 | [Wiggle Sort II](https://leetcode.com/problems/wiggle-sort-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/wiggle-sort-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/wiggle-sort-ii.py) | *O(n)* on average | *O(1)* | Medium | variant of [Sort Colors](https://leetcode.com/problems/sort-colors/) | Tri Partition |
| 347 | [Top K Frequent Elements](https://leetcode.com/problems/top-k-frequent-elements/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/top-k-frequent-elements.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/top-k-frequent-elements.py) | *O(n)* | *O(n)* | Medium |  | Quick Select, Heap, Bucket Sort |
| 406 | [Queue Reconstruction by Height](https://leetcode.com/problems/queue-reconstruction-by-height/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/queue-reconstruction-by-height.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/queue-reconstruction-by-height.py) | *O(n \* sqrt(n))* | *O(n)* | Medium |  | Tricky |
| 451 | [Sort Characters By Frequency](https://leetcode.com/problems/sort-characters-by-frequency/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/sort-characters-by-frequency.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/sort-characters-by-frequency.py) | *O(n)* | *O(n)* | Medium |  |  |
| 692 | [Top K Frequent Words](https://leetcode.com/problems/top-k-frequent-words/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/top-k-frequent-words.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/top-k-frequent-words.py) | *O(n + klogk)*on average | *O(n)* | Medium |  | Quick Select, Heap, Bucket Sort |

**Two Pointers**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 019 | [Remove Nth Node From End of List](https://leetcode.com/problems/remove-nth-node-from-end-of-list/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/remove-nth-node-from-end-of-list.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/remove-nth-node-from-end-of-list.py) | *O(n)* | *O(1)* | Easy |  |  |
| 086 | [Partition List](https://leetcode.com/problems/partition-list/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/partition-list.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/partition-list.py) | *O(n)* | *O(1)* | Medium |  |  |
| 141 | [Linked List Cycle](https://leetcode.com/problems/linked-list-cycle/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/linked-list-cycle.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/linked-list-cycle.py) | *O(n)* | *O(1)* | Easy |  |  |
| 142 | [Linked List Cycle II](https://leetcode.com/problems/linked-list-cycle-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/linked-list-cycle-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/linked-list-cycle-ii.py) | *O(n)* | *O(1)* | Medium |  |  |
| 143 | [Reorder List](https://leetcode.com/problems/reorder-list/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/reorder-list.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/reorder-list.py) | *O(n)* | *O(1)* | Medium |  |  |
| 167 | [Two Sum II - Input array is sorted](https://leetcode.com/problems/two-sum-ii-input-array-is-sorted/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/two-sum-ii-input-array-is-sorted.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/two-sum-ii-input-array-is-sorted.py) | *O(n)* | *O(1)* | Medium |  |  |
| 259 | [3Sum Smaller](https://leetcode.com/problems/3sum-smaller/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/3sum-smaller.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/3sum-smaller.py) | *O(n^2)* | *O(1)* | Medium | 📖, LintCode |  |
| 283 | [Move Zeroes](https://leetcode.com/problems/move-zeroes/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/move-zeroes.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/move-zeroes.py) | *O(n)* | *O(1)* | Easy |  |  |
| 287 | [Find the Duplicate Number](https://leetcode.com/problems/find-the-duplicate-number/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/find-the-duplicate-number.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/find-the-duplicate-number.py) | *O(n)* | *O(1)* | Hard |  | Binary Search, Two Pointers |
| 344 | [Reverse String](https://leetcode.com/problems/reverse-string/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/reverse-string.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/reverse-string.py) | *O(n)* | *O(1)* | Easy |  |  |
| 345 | [Reverse Vowels of a String](https://leetcode.com/problems/reverse-vowels-of-a-string/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/reverse-vowels-of-a-string.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/reverse-vowels-of-a-string.py) | *O(n)* | *O(1)* | Easy |  |  |
| 349 | [Intersection of Two Arrays](https://leetcode.com/problems/intersection-of-two-arrays/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/intersection-of-two-arrays.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/intersection-of-two-arrays.py) | *O(m + n)* | *O(min(m, n))* | Easy | EPI | Hash, Binary Search |
| 350 | [Intersection of Two Arrays II](https://leetcode.com/problems/intersection-of-two-arrays-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/intersection-of-two-arrays-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/intersection-of-two-arrays-ii.py) | *O(m + n)* | *O(1)* | Easy | EPI | Hash, Binary Search |
| 360 | [Sort Transformed Array](https://leetcode.com/problems/sort-transformed-array/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/sort-transformed-array.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/sort-transformed-array.py) | *O(n)* | *O(1)* | Medium | 📖 |  |
| 457 | [Circular Array Loop](https://leetcode.com/problems/circular-array-loop/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/circular-array-loop.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/circular-array-loop.py) | *O(n)* | *O(1)* | Medium |  |  |
| 567 | [Permutation in String](https://leetcode.com/problems/permutation-in-string/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/permutation-in-string.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/permutation-in-string.py) | *O(n)* | *O(1)* | Medium |  |  |
| 611 | [Valid Triangle Number](https://leetcode.com/problems/valid-triangle-number/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/valid-triangle-number.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/valid-triangle-number.py) | *O(n^2)* | *O(1)* | Medium |  |  |

**Recursion**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 095 | [Unique Binary Search Trees II](https://leetcode.com/problems/unique-binary-search-trees-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/unique-binary-search-trees-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/unique-binary-search-trees-ii.py) | *O(4^n / n^(3/2)* | *O(4^n / n^(3/2)* | Medium |  |  |
| 098 | [Validate Binary Search Tree](https://leetcode.com/problems/validate-binary-search-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/validate-binary-search-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/validate-binary-search-tree.py) | *O(n)* | *O(1)* | Medium |  |  |
| 100 | [Same Tree](https://leetcode.com/problems/same-tree/) | [C+](https://github.com/kamyu104/LeetCode/blob/master/C++/same-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/same-tree.py) | *O(n)* | *O(h)* | Easy |  |  |
| 104 | [Maximum Depth of Binary Tree](https://leetcode.com/problems/maximum-depth-of-binary-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/maximum-depth-of-binary-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/maximum-depth-of-binary-tree.py) | *O(n)* | *O(h)* | Easy |  |  |
| 105 | [Construct Binary Tree from Preorder and Inorder Traversal](https://leetcode.com/problems/construct-binary-tree-from-preorder-and-inorder-traversal/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/construct-binary-tree-from-preorder-and-inorder-traversal.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/construct-binary-tree-from-preorder-and-inorder-traversal.py) | *O(n)* | *O(n)* | Medium |  |  |
| 106 | [Construct Binary Tree from Inorder and Postorder Traversal](https://leetcode.com/problems/construct-binary-tree-from-inorder-and-postorder-traversal/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/construct-binary-tree-from-inorder-and-postorder-traversal.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/construct-binary-tree-from-inorder-and-postorder-traversal.py) | *O(n)* | *O(n)* | Medium |  |  |
| 108 | [Convert Sorted Array to Binary Search Tree](https://leetcode.com/problems/convert-sorted-array-to-binary-search-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/convert-sorted-array-to-binary-search-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/convert-sorted-array-to-binary-search-tree.py) | *O(n)* | *O(logn)* | Medium |  |  |
| 109 | [Convert Sorted List to Binary Search Tree](https://leetcode.com/problems/convert-sorted-list-to-binary-search-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/convert-sorted-list-to-binary-search-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/convert-sorted-list-to-binary-search-tree.py) | *O(n)* | *O(logn)* | Medium |  |  |
| 110 | [Balanced Binary Tree](https://leetcode.com/problems/balanced-binary-tree/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/balanced-binary-tree.py) | *O(n)* | *O(h)* | Easy |  |  |
| 111 | [Minimum Depth of Binary Tree](https://leetcode.com/problems/minimum-depth-of-binary-tree/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/minimum-depth-of-binary-tree.py) | *O(n)* | *O(h)* | Easy |  |  |
| 114 | [Flatten Binary Tree to Linked List](https://leetcode.com/problems/flatten-binary-tree-to-linked-list/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/flatten-binary-tree-to-linked-list.py) | *O(n)* | *O(h)* | Medium |  |  |
| 116 | [Populating Next Right Pointers in Each Node](https://leetcode.com/problems/populating-next-right-pointers-in-each-node/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/populating-next-right-pointers-in-each-node.py) | *O(n)* | *O(1)* | Medium |  |  |
| 124 | [Binary Tree Maximum Path Sum](https://leetcode.com/problems/binary-tree-maximum-path-sum/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/binary-tree-maximum-path-sum.py) | *O(n)* | *O(h)* | Hard |  |  |
| 129 | [Sum Root to Leaf Numbers](https://leetcode.com/problems/sum-root-to-leaf-numbers/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/sum-root-to-leaf-numbers.py) | *O(n)* | *O(h)* | Medium |  |  |
| 156 | [Binary Tree Upside Down](https://leetcode.com/problems/binary-tree-upside-down/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/binary-tree-upside-down.py) | *O(n)* | *O(1)* | Medium | 📖 |  |
| 241 | [Different Ways to Add Parentheses](https://leetcode.com/problems/different-ways-to-add-parentheses/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/different-ways-to-add-parentheses.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/different-ways-to-add-parentheses.py) | *O(n \* 4^n / n^(3/2))* | *O(n \* 4^n / n^(3/2))* | Medium |  |  |
| 298 | [Binary Tree Longest Consecutive Sequence](https://leetcode.com/problems/binary-tree-longest-consecutive-sequence/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/binary-tree-longest-consecutive-sequence.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/binary-tree-longest-consecutive-sequence.py) | *O(n)* | *O(h)* | Medium | 📖 |  |
| 327 | [Count of Range Sum](https://leetcode.com/problems/count-of-range-sum/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/count-of-range-sum.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/count-of-range-sum.py) | *O(nlogn)* | *O(n)* | Hard |  |  |
| 333 | [Largest BST Subtree](https://leetcode.com/problems/largest-bst-subtree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/largest-bst-subtree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/largest-bst-subtree.py) | *O(n)* | *O(h)* | Medium | 📖 |  |
| 337 | [House Robber III](https://leetcode.com/problems/house-robber-iii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/house-robber-iii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/house-robber-iii.py) | *O(n)* | *O(h)* | Medium |  |  |
| 395 | [Longest Substring with At Least K Repeating Characters](https://leetcode.com/problems/longest-substring-with-at-least-k-repeating-characters/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/longest-substring-with-at-least-k-repeating-characters.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/longest-substring-with-at-least-k-repeating-characters.py) | *O(n)* | *O(1)* | Medium |  |  |
| 404 | [Sum of Left Leaves](https://leetcode.com/problems/sum-of-left-leaves/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/sum-of-left-leaves.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/sum-of-left-leaves.py) | *O(n)* | *O(h)* | Easy |  |  |
| 437 | [Path Sum III](https://leetcode.com/problems/path-sum-iii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/path-sum-iii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/path-sum-iii.py) | *O(n)* | *O(h)* | Easy |  |  |
| 544 | [Output Contest Matches](https://leetcode.com/problems/output-contest-matches/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/output-contest-matches.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/output-contest-matches.py) | *O(n)* | *O(n)* | Medium |  |  |
| 549 | [Binary Tree Longest Consecutive Sequence II](https://leetcode.com/problems/binary-tree-longest-consecutive-sequence-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/binary-tree-longest-consecutive-sequence-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/binary-tree-longest-consecutive-sequence-ii.py) | *O(n)* | *O(h)* | Medium | 📖 |  |
| 669 | [Trim a Binary Search Tree](https://leetcode.com/problems/trim-a-binary-search-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/trim-a-binary-search-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/trim-a-binary-search-tree.py) | *O(n)* | *O(h)* | Easy |  |  |
| 671 | [Second Minimum Node In a Binary Tree](https://leetcode.com/problems/second-minimum-node-in-a-binary-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/second-minimum-node-in-a-binary-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/second-minimum-node-in-a-binary-tree.py) | *O(n)* | *O(h)* | Easy |  |  |
| 761 | [Special Binary String](https://leetcode.com/problems/special-binary-string/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/special-binary-string.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/special-binary-string.py) | *O(n^2)* | *O(n)* | Hard |  |  |

**Binary Search**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 004 | [Median of Two Sorted Arrays](https://leetcode.com/problems/median-of-two-sorted-arrays/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/median-of-two-sorted-arrays.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/median-of-two-sorted-arrays.py) | *O(log(min(m, n)))* | *O(1)* | Hard |  |  |
| 033 | [Search in Rotated Sorted Array](https://leetcode.com/problems/search-in-rotated-sorted-array/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/search-in-rotated-sorted-array.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/search-in-rotated-sorted-array.py) | *O(logn)* | *O(1)* | Hard |  |  |
| 034 | [Search for a Range](https://leetcode.com/problems/search-for-a-range/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/search-for-a-range.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/search-for-a-range.py) | *O(logn)* | *O(1)* | Medium |  |  |
| 305 | [Search Insert Position](https://leetcode.com/problems/search-insert-position/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/search-insert-position.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/search-insert-position.py) | *O(logn)* | *O(1)* | Medium |  |  |
| 069 | [Sqrt(x)](https://leetcode.com/problems/sqrtx/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/sqrtx.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/sqrtx.py) | *O(logn)* | *O(1)* | Medium |  |  |
| 074 | [Search a 2D Matrix](https://leetcode.com/problems/search-a-2d-matrix/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/search-a-2d-matrix.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/search-a-2d-matrix.py) | *O(logm + logn)* | *O(1)* | Medium |  |  |
| 081 | [Search in Rotated Sorted Array II](https://leetcode.com/problems/search-in-rotated-sorted-array-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/search-in-rotated-sorted-array-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/search-in-rotated-sorted-array-ii.py) | *O(logn)* | *O(1)* | Medium |  |  |
| 153 | [Find Minimum in Rotated Sorted Array](https://leetcode.com/problems/find-minimum-in-rotated-sorted-array/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/find-minimum-in-rotated-sorted-array.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/find-minimum-in-rotated-sorted-array.py) | *O(logn)* | *O(1)* | Medium |  |  |
| 154 | [Find Minimum in Rotated Sorted Array II](https://leetcode.com/problems/find-minimum-in-rotated-sorted-array-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/find-minimum-in-rotated-sorted-array-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/find-minimum-in-rotated-sorted-array-ii.py) | *O(logn)* ~ *O(n)* | *O(1)* | Hard |  |  |
| 162 | [Find Peak Element](https://leetcode.com/problems/find-peak-element/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/find-peak-element.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/find-peak-element.py) | *O(logn)* | *O(1)* | Medium |  |  |
| 222 | [Count Complete Tree Nodes](https://leetcode.com/problems/count-complete-tree-nodes/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/count-complete-tree-nodes.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/count-complete-tree-nodes.py) | *O((logn)^2)* | *O(1)* | Medium |  |  |
| 275 | [H-Index II](https://leetcode.com/problems/h-index-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/h-index-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/h-index-ii.py) | *O(logn)* | *O(1)* | Medium |  | Binary Search |
| 278 | [First Bad Version](https://leetcode.com/problems/first-bad-version/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/first-bad-version.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/first-bad-version.py) | *O(logn)* | *O(1)* | Easy | LintCode |  |
| 300 | [Longest Increasing Subsequence](https://leetcode.com/problems/longest-increasing-subsequence/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/longest-increasing-subsequence.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/longest-increasing-subsequence.py) | *O(nlogn)* | *O(n)* | Medium | CTCI, LintCode | Binary Search, DP |
| 302 | [Smallest Rectangle Enclosing Black Pixels](https://leetcode.com/problems/smallest-rectangle-enclosing-black-pixels/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/smallest-rectangle-enclosing-black-pixels.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/smallest-rectangle-enclosing-black-pixels.py) | *O(nlogn)* | *O(1)* | Hard | 📖 |  |
| 354 | [Russian Doll Envelopes](https://leetcode.com/problems/russian-doll-envelopes/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/russian-doll-envelopes.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/russian-doll-envelopes.py) | *O(nlogn)* | *O(1)* | Hard |  |  |
| 363 | [Max Sum of Rectangle No Larger Than K](https://leetcode.com/problems/max-sum-of-sub-matrix-no-larger-than-k/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/max-sum-of-sub-matrix-no-larger-than-k.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/max-sum-of-sub-matrix-no-larger-than-k.py) | *O(min(m, n)^2 \* max(m, n) \* logn(max(m, n)))* | *O(max(m, n))* | Hard |  |  |
| 367 | [Valid Perfect Square](https://leetcode.com/problems/valid-perfect-square/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/valid-perfect-square.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/valid-perfect-square.py) | *O(logn)* | *O(1)* | Medium |  |  |
| 374 | [Guess Number Higher or Lower](https://leetcode.com/problems/guess-number-higher-or-lower/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/guess-number-higher-or-lower.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/guess-number-higher-or-lower.py) | *O(logn)* | *O(1)* | Easy |  |  |
| 410 | [Split Array Largest Sum](https://leetcode.com/problems/split-array-largest-sum/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/split-array-largest-sum.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/split-array-largest-sum.py) | *O(nlogs)* | *O(1)* | Hard |  |  |
| 436 | [Find Right Interval](https://leetcode.com/problems/find-right-interval/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/find-right-interval.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/find-right-interval.py) | *O(nlogn)* | *O(n)* | Medium |  |  |
| 475 | [Heaters](https://leetcode.com/problems/heaters/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/heaters.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/heaters.py) | *O((m + n) \* logn)* | *O(1)* | Easy |  |  |
| 540 | [Single Element in a Sorted Array](https://leetcode.com/problems/dsingle-element-in-a-sorted-array/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/single-element-in-a-sorted-array.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/single-element-in-a-sorted-array.py) | *O(logn)* | *O(1)* | Medium |  |  |
| 658 | [Find K Closest Elements](https://leetcode.com/problems/find-k-closest-elements/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/find-k-closest-elements.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/find-k-closest-elements.py) | *O(logn + k)* | *O(1)* | Medium |  |  |
| 668 | [Kth Smallest Number in Multiplication Table](https://leetcode.com/problems/kth-smallest-number-in-multiplication-table/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/kth-smallest-number-in-multiplication-table.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/kth-smallest-number-in-multiplication-table.py) | *O(m \* log(m \* n))* | *O(1)* | Hard |  |  |
| 719 | [Find K-th Smallest Pair Distance](https://leetcode.com/problems/find-k-th-smallest-pair-distance/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/find-k-th-smallest-pair-distance.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/find-k-th-smallest-pair-distance.py) | *O(nlogn + nlogw)* | *O(1)* | Hard |  |  |
| 744 | [Find Smallest Letter Greater Than Target](https://leetcode.com/problems/find-smallest-letter-greater-than-target/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/find-smallest-letter-greater-than-target.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/find-smallest-letter-greater-than-target.py) | *O(logn)* | *O(1)* | Easy |  |  |
| 774 | [Minimize Max Distance to Gas Station](https://leetcode.com/problems/minimize-max-distance-to-gas-station/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/minimize-max-distance-to-gas-station.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/minimize-max-distance-to-gas-station.py) | *O(nlogr)* | *O(1)* | Hard |  |  |

**Binary Search Tree**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 220 | [Contains Duplicate III](https://leetcode.com/problems/contains-duplicate-iii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/contains-duplicate-iii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/contains-duplicate-iii.py) | *O(nlogk)* | *O(k)* | Medium |  |  |
| 230 | [Kth Smallest Element in a BST](https://leetcode.com/problems/kth-smallest-element-in-a-bst/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/kth-smallest-element-in-a-bst.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/kth-smallest-element-in-a-bst.py) | *O(max(h, k))* | *O(min(h, k))* | Medium |  |  |
| 235 | [Lowest Common Ancestor of a Binary Search Tree](https://leetcode.com/problems/lowest-common-ancestor-of-a-binary-search-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/lowest-common-ancestor-of-a-binary-search-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/lowest-common-ancestor-of-a-binary-search-tree.py) | *O(h)* | *O(1)* | Easy | EPI |  |
| 270 | [Closest Binary Search Tree Value](https://leetcode.com/problems/closest-binary-search-tree-value/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/closest-binary-search-tree-value.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/closest-binary-search-tree-value.py) | *O(h)* | *O(1)* | Easy | 📖 |  |
| 285 | [Inorder Successor in BST](https://leetcode.com/problems/inorder-successor-in-bst/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/inorder-successor-in-bst.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/inorder-successor-in-bst.py) | *O(h)* | *O(1)* | Medium | 📖 |  |
| 352 | [Data Stream as Disjoint Intervals](https://leetcode.com/problems/data-stream-as-disjoint-intervals/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/data-stream-as-disjoint-intervals.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/data-stream-as-disjoint-intervals.py) | *O(logn)* | *O(n)* | Hard |  |  |
| 449 | [Serialize and Deserialize BST](https://leetcode.com/problems/serialize-and-deserialize-bst/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/serialize-and-deserialize-bst.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/serialize-and-deserialize-bst.py) | *O(n)* | *O(h)* | Medium |  |  |
| 450 | [Delete Node in a BST](https://leetcode.com/problems/delete-node-in-a-bst/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/delete-node-in-a-bst.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/delete-node-in-a-bst.py) | *O(h)* | *O(h)* | Medium |  |  |
| 530 | [Minimum Absolute Difference in BST](https://leetcode.com/problems/minimum-absolute-difference-in-bst/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/minimum-absolute-difference-in-bst.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/minimum-absolute-difference-in-bst.py) | *O(n)* | *O(h)* | Easy |  |  |

**Breadth-First Search**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 102 | [Binary Tree Level Order Traversal](https://leetcode.com/problems/binary-tree-level-order-traversal/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/binary-tree-level-order-traversal.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/binary-tree-level-order-traversal.py) | *O(n)* | *O(n)* | Easy |  |  |
| 107 | [Binary Tree Level Order Traversal II](https://leetcode.com/problems/binary-tree-level-order-traversal-ii/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/binary-tree-level-order-traversal-ii.py) | *O(n)* | *O(n)* | Easy |  |  |
| 103 | [Binary Tree Zigzag Level Order Traversal](https://leetcode.com/problems/binary-tree-zigzag-level-order-traversal/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/binary-tree-zigzag-level-order-traversal.py) | *O(n)* | *O(n)* | Medium |  |  |
| 117 | [Populating Next Right Pointers in Each Node II](https://leetcode.com/problems/populating-next-right-pointers-in-each-node-ii/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/populating-next-right-pointers-in-each-node-ii.py) | *O(n)* | *O(1)* | Hard |  |  |
| 127 | [Word Ladder](https://leetcode.com/problems/word-ladder/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/word-ladder.py) | *O(n \* d)* | *O(d)* | Medium |  |  |
| 130 | [Surrounded Regions](https://leetcode.com/problems/surrounded-regions/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/surrounded-regions.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/surrounded-regions.py) | *O(m \* n)* | *O(m + n)* | Medium |  |  |
| 133 | [Clone Graph](https://leetcode.com/problems/clone-graph/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/clone-graph.py) | *O(n)* | *O(n)* | Medium |  |  |
| 207 | [Course Schedule](https://leetcode.com/problems/course-schedule/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/course-schedule.py) | *O(|V| + |E|)* | *O(|E|)* | Medium |  | Topological Sort |
| 210 | [Course Schedule II](https://leetcode.com/problems/course-schedule-ii/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/course-schedule-ii.py) | *O(|V| + |E|)* | *O(|E|)* | Medium |  | Topological Sort |
| 261 | [Graph Valid Tree](https://leetcode.com/problems/graph-valid-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/graph-valid-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/graph-valid-tree.py) | *O(|V| + |E|)* | *O(|V| + |E|)* | Medium | 📖 |  |
| 269 | [Alien Dictionary](https://leetcode.com/problems/alien-dictionary/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/alien-dictionary.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/alien-dictionary.py) | *O(n)* | *O(1)* | Hard | 📖 | Topological Sort, BFS, DFS |
| 286 | [Walls and Gates](https://leetcode.com/problems/walls-and-gates/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/walls-and-gates.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/walls-and-gates.py) | *O(m \* n)* | *O(g)* | Medium | 📖 |  |
| 310 | [Minimum Height Trees](https://leetcode.com/problems/minimum-height-trees/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/minimum-height-trees.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/minimum-height-trees.py) | *O(n)* | *O(n)* | Medium |  |  |
| 317 | [Shortest Distance from All Buildings](https://leetcode.com/problems/shortest-distance-from-all-buildings/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/shortest-distance-from-all-buildings.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/shortest-distance-from-all-buildings.py) | *O(k \* m \* n)* | *O(m \* n)* | Hard | 📖 |  |
| 433 | [Minimum Genetic Mutation](https://leetcode.com/problems/minimum-genetic-mutation/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/minimum-genetic-mutation.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/minimum-genetic-mutation.py) | *O(n \* b)* | *O(b)* | Medium |  |  |
| 444 | [Sequence Reconstruction](https://leetcode.com/problems/sequence-reconstruction/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/sequence-reconstruction.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/sequence-reconstruction.py) | *O(n \* s)* | *O(n)* | Medium | 📖 | Topological Sort |
| 542 | [01 Matrix](https://leetcode.com/problems/01-matrix/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/01-matrix.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/01-matrix.py) | *O(m \* n)* | *O(m \* n)* | Medium |  | DP |
| 666 | [Path Sum IV](https://leetcode.com/problems/path-sum-iv/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/path-sum-iv.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/path-sum-iv.py) | *O(n)* | *O(w)* | Medium | 📖 | Topological Sort |
| 675 | [Cut Off Trees for Golf Event](https://leetcode.com/problems/cut-off-trees-for-golf-event/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/cut-off-trees-for-golf-event.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/cut-off-trees-for-golf-event.py) | *O(t \* m \* n)* | *O(m \* n)* | Hard |  | A\* Search Algorithm |
| 742 | [Closest Leaf in a Binary Tree](https://leetcode.com/problems/closest-leaf-in-a-binary-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/closest-leaf-in-a-binary-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/closest-leaf-in-a-binary-tree.py) | *O(n)* | *O(n)* | Medium |  |  |
| 743 | [Network Delay Time](https://leetcode.com/problems/network-delay-time/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/network-delay-time.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/network-delay-time.py) | *O(|E| + |V|log|V|)* | *O(|E| + |V|)* | Medium |  | Dijkstra's algorithm |
| 752 | [Open the Lock](https://leetcode.com/problems/open-the-lock/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/open-the-lock.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/open-the-lock.py) | *O(k \* n^k + d)* | *O(k \* n^k + d)* | Medium |  |  |
| 773 | [Sliding Puzzle](https://leetcode.com/problems/sliding-puzzle/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/sliding-puzzle.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/sliding-puzzle.py) | *O((m \* n) \* (m \* n)!)* | *O((m \* n) \* (m \* n)!)* | Hard |  | A\* Search Algorithm |

**Depth-First Search**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 112 | [Path Sum](https://leetcode.com/problems/path-sum/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/path-sum.py) | *O(n)* | *O(h)* | Easy |  |  |
| 113 | [Path Sum II](https://leetcode.com/problems/path-sum-ii/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/path-sum-ii.py) | *O(n)* | *O(h)* | Medium |  |  |
| 199 | [Binary Tree Right Side View](https://leetcode.com/problems/binary-tree-right-side-view/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/binary-tree-right-side-view.py) | *O(n)* | *O(h)* | Medium |  |  |
| 200 | [Number of Islands](https://leetcode.com/problems/number-of-islands/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/number-of-islands.py) | *O(m \* n)* | *O(m \* n)* | Medium |  |  |
| 236 | [Lowest Common Ancestor of a Binary Tree](https://leetcode.com/problems/lowest-common-ancestor-of-a-binary-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/lowest-common-ancestor-of-a-binary-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/lowest-common-ancestor-of-a-binary-tree.py) | *O(n)* | *O(h)* | Medium | EPI |  |
| 247 | [Strobogrammatic Number II](https://leetcode.com/problems/strobogrammatic-number-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/strobogrammatic-number-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/strobogrammatic-number-ii.py) | *O(n^2 \* 5^(n/2))* | *O(n)* | Medium | 📖 |  |
| 250 | [Count Univalue Subtrees](https://leetcode.com/problems/count-univalue-subtrees) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/count-univalue-subtrees.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/count-univalue-subtrees.py) | *O(n)* | *O(h)* | Medium | 📖 |  |
| 257 | [Binary Tree Paths](https://leetcode.com/problems/binary-tree-paths/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/binary-tree-paths.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/binary-tree-paths.py) | *O(n \* h)* | *O(h)* | Easy |  |  |
| 282 | [Expression Add Operators](https://leetcode.com/problems/expression-add-operators/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/expression-add-operators.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/expression-add-operators.py) | *O(4^n)* | *O(n)* | Hard |  |  |
| 301 | [Remove Invalid Parentheses](https://leetcode.com/problems/remove-invalid-parentheses/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/remove-invalid-parentheses.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/remove-invalid-parentheses.py) | *O(C(n, c))* | *O(c)* | Hard |  |  |
| 329 | [Longest Increasing Path in a Matrix](https://leetcode.com/problems/longest-increasing-path-in-a-matrix/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/longest-increasing-path-in-a-matrix.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/longest-increasing-path-in-a-matrix.py) | *O(m \* n)* | *O(m \* n)* | Hard |  |  |
| 332 | [Reconstruct Itinerary](https://leetcode.com/problems/reconstruct-itinerary/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/reconstruct-itinerary.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/reconstruct-itinerary.py) | *O(t! / (n1! \* n2! \* ... nk!))* | *O(t)* | Medium |  |  |
| 339 | [Nested List Weight Sum](https://leetcode.com/problems/nested-list-weight-sum/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/nested-list-weight-sum.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/nested-list-weight-sum.py) | *O(n)* | *O(h)* | Easy | 📖 |  |
| 364 | [Nested List Weight Sum II](https://leetcode.com/problems/nested-list-weight-sum-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/nested-list-weight-sum-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/nested-list-weight-sum-ii.py) | *O(n)* | *O(h)* | Medium | 📖 |  |
| 366 | [Find Leaves of Binary Tree](https://leetcode.com/problems/find-leaves-of-binary-tree/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/find-leaves-of-binary-tree.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/find-leaves-of-binary-tree.py) | *O(n)* | *O(h)* | Medium | 📖 |  |
| 399 | [Evaluate Division](https://leetcode.com/problems/evaluate-division/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/evaluate-division.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/evaluate-division.py) | *O(q \* |V|!)* | *O(e)* | Medium |  |  |
| 417 | [Pacific Atlantic Water Flow](https://leetcode.com/problems/pacific-atlantic-water-flow/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/pacific-atlantic-water-flow.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/pacific-atlantic-water-flow.py) | *O(m \* n)* | *O(m \* n)* | Medium |  |  |
| 440 | [K-th Smallest in Lexicographical Order](https://leetcode.com/problems/k-th-smallest-in-lexicographical-order/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/k-th-smallest-in-lexicographical-order.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/k-th-smallest-in-lexicographical-order.py) | *O(logn)* | *O(logn)* | Hard |  |  |
| 464 | [Can I Win](https://leetcode.com/problems/can-i-win/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/can-i-win.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/can-i-win.py) | *O(n!)* | *O(n)* | Medium |  |  |
| 547 | [Friend Circles](https://leetcode.com/problems/friend-circles/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/friend-circles.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/friend-circles.py) | *O(n^2)* | *O(n)* | Medium |  | Union Find |
| 582 | [Kill Process](https://leetcode.com/problems/kill-process/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/kill-process.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/kill-process.py) | *O(n)* | *O(n)* | Medium | 📖 | DFS, BFS |
| 638 | [Shopping Offers](https://leetcode.com/problems/shopping-offers/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/shopping-offers.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/shopping-offers.py) | *O(n \* 2^n)* | *O(n)* | Medium |  |  |
| 690 | [Employee Importance](https://leetcode.com/problems/employee-importance/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/employee-importance.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/employee-importance.py) | *O(n)* | *O(h)* | Easy |  | DFS, BFS |
| 694 | [Number of Distinct Islands](https://leetcode.com/problems/number-of-distinct-islands/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/number-of-distinct-islands.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/number-of-distinct-islands.py) | *O(m \* n)* | *O(m \* n)* | Medium | 📖 |  |
| 695 | [Max Area of Island](https://leetcode.com/problems/max-area-of-island/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/max-area-of-island.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/max-area-of-island.py) | *O(m \* n)* | *O(m \* n)* | Easy |  |  |
| 711 | [Number of Distinct Islands II](https://leetcode.com/problems/number-of-distinct-islands-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/number-of-distinct-islands-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/number-of-distinct-islands-ii.py) | *O((m \* n) \* log(m \* n))* | *O(m \* n)* | Hard | 📖 | Hash |
| 733 | [Max Area of Island](https://leetcode.com/problems/flood-fill/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/flood-fill.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/flood-fill.py) | *O(m \* n)* | *O(m \* n)* | Easy |  |  |
| 749 | [Contain Virus](https://leetcode.com/problems/contain-virus/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/contain-virus.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/contain-virus.py) | *O((m \* n)^(4/3))* | *O(m \* n)* | Hard |  | Simulation |
| 753 | [Cracking the Safe](https://leetcode.com/problems/cracking-the-safe/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/cracking-the-safe.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/cracking-the-safe.py) | *O(k^n)* | *O(k^n)* | Hard |  | de Bruijn sequences, Lyndon word |
| 756 | [Pyramid Transition Matrix](https://leetcode.com/problems/pyramid-transition-matrix/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/pyramid-transition-matrix.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/pyramid-transition-matrix.py) | *O(a^b)* | *O(a^b)* | Medium |  |  |

**Backtracking**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 017 | [Letter Combinations of a Phone Number](https://leetcode.com/problems/letter-combinations-of-a-phone-number/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/letter-combinations-of-a-phone-number.py) | *O(n \* 4^n)* | *O(n)* | Medium |  |  |
| 022 | [Generate Parentheses](https://leetcode.com/problems/generate-parentheses/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/generate-parentheses.py) | *O(4^n / n^(3/2))* | *O(n)* | Medium |  |  |
| 037 | [Sudoku Solver](https://leetcode.com/problems/sudoku-solver/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/sudoku-solver.py) | *O((9!)^9)* | *O(1)* | Hard |  |  |
| 039 | [Combination Sum](https://leetcode.com/problems/combination-sum/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/combination-sum.py) | *O(k \* n^k)* | *O(k)* | Medium |  |  |
| 040 | [Combination Sum II](https://leetcode.com/problems/combination-sum-ii/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/combination-sum-ii.py) | *O(k \* C(n, k))* | *O(k)* | Medium |  |  |
| 046 | [Permutations](https://leetcode.com/problems/permutations/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/permutations.py) | *O(n \* n!)* | *O(n)* | Medium |  |  |
| 047 | [Permutations II](https://leetcode.com/problems/permutations-ii/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/permutations-ii.py) | *O(n \* n!)* | *O(n)* | Medium |  |  |
| 051 | [N-Queens](https://leetcode.com/problems/n-queens/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/n-queens.py) | *O(n!)* | *O(n)* | Hard |  |  |
| 052 | [N-Queens-II](https://leetcode.com/problems/n-queens-ii/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/n-queens-ii.py) | *O(n!)* | *O(n)* | Hard |  |  |
| 077 | [Combinations](https://leetcode.com/problems/combinations/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/combinations.py) | *O(n!)* | *O(n)* | Medium |  |  |
| 079 | [Word Search](https://leetcode.com/problems/word-search/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/word-search.py) | *O(m \* n \* l)* | *O(l)* | Medium |  |  |
| 093 | [Restore IP Addresses](https://leetcode.com/problems/restore-ip-addresses/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/restore-ip-addresses.py) | *O(1)* | *O(1)* | Medium |  |  |
| 078 | [Subsets](https://leetcode.com/problems/subsets/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/subsets.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/subsets.py) | *O(n \* 2^n)* | *O(1)* | Medium |  |  |
| 090 | [Subsets II](https://leetcode.com/problems/subsets-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/subsets-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/subsets-ii.py) | *O(n \* 2^n)* | *O(1)* | Medium |  |  |
| 126 | [Word Ladder II](https://leetcode.com/problems/word-ladder-ii/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/word-ladder-ii.py) | *O(n \* d)* | *O(d)* | Hard |  |  |
| 131 | [Palindrome Partitioning](https://leetcode.com/problems/palindrome-partitioning/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/palindrome-partitioning.py) | *O(n^2)* ~ *O(2^n)* | *O(n^2)* | Medium |  |  |
| 140 | [Word Break II](https://leetcode.com/problems/word-break-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/word-break-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/word-break-ii.py) | *O(n \* l^2 + n \* r)* | *O(n^2)* | Hard |  |  |
| 212 | [Word Search II](https://leetcode.com/problems/word-search-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/word-search-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/word-search-ii.py) | *O(m \* n \* l)* | *O(l)* | Hard | LintCode | Trie, DFS |
| 216 | [Combination Sum III](https://leetcode.com/problems/combination-sum-iii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/combination-sum-iii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/combination-sum-iii.py) | *O(k \* C(n, k))* | *O(k)* | Medium |  |  |
| 254 | [Factor Combinations](https://leetcode.com/problems/factor-combinations/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/factor-combinations.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/factor-combinations.py) | *O(nlogn)* | *O(logn)* | Medium | 📖 |  |
| 267 | [Palindrome Permutation II](https://leetcode.com/problems/palindrome-permutation-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/palindrome-permutation-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/palindrome-permutation-ii.py) | *O(n \* n!)* | *O(n)* | Medium | 📖 |  |
| 291 | [Word Pattern II](https://leetcode.com/problems/word-pattern-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/word-pattern-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/word-pattern-ii.py) | *O(n \* C(n - 1, c - 1))* | *O(n + c)* | Hard | 📖 |  |
| 294 | [Flip Game II](https://leetcode.com/problems/flip-game-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/flip-game-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/flip-game-ii.py) | *O(n + c^2)* | *O(c)* | Medium | 📖 | DP, Hash |
| 320 | [Generalized Abbreviation](https://leetcode.com/problems/generalized-abbreviation/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/generalized-abbreviation.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/generalized-abbreviation.py) | *O(n \* 2^n)* | *O(n)* | Medium | 📖 |  |
| 425 | [Word Squares](https://leetcode.com/problems/word-squares/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/word-squares.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/word-squares.py) | *O(n^2 \* n!)* | *O(n^2)* | Hard | 📖 |  |
| 526 | [Beautiful Arrangement](https://leetcode.com/problems/beautiful-arrangement/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/beautiful-arrangement.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/beautiful-arrangement.py) | *O(n!)* | *O(n)* | Medium |  |  |
| 676 | [Implement Magic Dictionary](https://leetcode.com/problems/implement-magic-dictionary/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/implement-magic-dictionary.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/implement-magic-dictionary.py) | *O(n)* | *O(d)* | Medium |  | Trie, DFS |
| 679 | [24 Game](https://leetcode.com/problems/24-game/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/24-game.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/24-game.py) | *O(1)* | *O(1)* | Hard |  | DFS |
| 698 | [Partition to K Equal Sum Subsets](https://leetcode.com/problems/partition-to-k-equal-sum-subsets/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/partition-to-k-equal-sum-subsets.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/partition-to-k-equal-sum-subsets.py) | *O(n \* 2^n)* | *O(2^n)* | Medium |  | DFS, DP, Memoization |
| 718 | [Maximum Length of Repeated Subarray](https://leetcode.com/problems/maximum-length-of-repeated-subarray/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/maximum-length-of-repeated-subarray.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/maximum-length-of-repeated-subarray.py) | *O(m \* n)* | *O(min(m, n))* | Medium |  | DP, Hash, Binary Search |

**Dynamic Programming**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 010 | [Regular Expression Matching](https://leetcode.com/problems/regular-expression-matching/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/regular-expression-matching.py) | *O(m \* n)* | *O(n)* | Hard |  |  |
| 053 | [Maximum Subarray](https://leetcode.com/problems/maximum-subarray/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/maximum-subarray.py) | *O(n)* | *O(1)* | Medium |  |  |
| 062 | [Unique Paths](https://leetcode.com/problems/unique-paths/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/unique-paths.py) | *O(m \* n)* | *O(m + n)* | Medium |  |  |
| 063 | [Unique Paths II](https://leetcode.com/problems/unique-paths-ii/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/unique-paths-ii.py) | *O(m \* n)* | *O(m + n)* | Medium |  |  |
| 064 | [Minimum Path Sum](https://leetcode.com/problems/minimum-path-sum/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/minimum-path-sum.py) | *O(m \* n)* | *O(m + n)* | Medium |  |  |
| 070 | [Climbing Stairs](https://leetcode.com/problems/climbing-stairs/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/climbing-stairs.py) | *O(n)* | *O(1)* | Easy |  |  |
| 072 | [Edit Distance](https://leetcode.com/problems/edit-distance/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/edit-distance.py) | *O(m \* n)* | *O(m + n)* | Hard |  |  |
| 087 | [Scramble String](https://leetcode.com/problems/scramble-string/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/scramble-string.py) | *O(n^4)* | *O(n^3)* | Hard |  |  |
| 091 | [Decode Ways](https://leetcode.com/problems/decode-ways/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/Python/decode-ways.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/decode-ways.py) | *O(n)* | *O(1)* | Medium |  |  |
| 096 | [Unique Binary Search Trees](https://leetcode.com/problems/unique-binary-search-trees/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/unique-binary-search-trees.py) | *O(n)* | *O(1)* | Medium |  | Math |
| 097 | [Interleaving String](https://leetcode.com/problems/interleaving-string/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/interleaving-string.py) | *O(m \* n)* | *O(m + n)* | Hard |  |  |
| 115 | [Distinct Subsequences](https://leetcode.com/problems/distinct-subsequences/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/distinct-subsequences.py) | *O(n^2)* | *O(n)* | Hard |  |  |
| 120 | [Triangle](https://leetcode.com/problems/triangle/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/triangle.py) | *O(m \* n)* | *O(n)* | Medium |  |  |
| 123 | [Best Time to Buy and Sell Stock III](https://leetcode.com/problems/best-time-to-buy-and-sell-stock-iii/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/best-time-to-buy-and-sell-stock-iii.py) | *O(n)* | *O(1)* | Hard |  |  |
| 132 | [Palindrome Partitioning II](https://leetcode.com/problems/palindrome-partitioning-ii/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/palindrome-partitioning-ii.py) | *O(n^2)* | *O(n^2)* | Hard |  |  |
| 139 | [Word Break](https://leetcode.com/problems/word-break/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/word-break.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/word-break.py) | *O(n \* l^2)* | *O(n)* | Medium |  |  |
| 152 | [Maximum Product Subarray](https://leetcode.com/problems/maximum-product-subarray/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/maximum-product-subarray.py) | *O(n)* | *O(1)* | Medium |  |  |
| 174 | [Dungeon Game](https://leetcode.com/problems/dungeon-game/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/dungeon-game.py) | *O(m \* n)* | *O(m + n)* | Hard |  |  |
| 188 | [Best Time to Buy and Sell Stock IV](https://leetcode.com/problems/best-time-to-buy-and-sell-stock-iv/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/best-time-to-buy-and-sell-stock-iv.py) | *O(k \* n)* | *O(k)* | Hard |  |  |
| 198 | [House Robber](https://leetcode.com/problems/house-robber/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/house-robber.py) | *O(n)* | *O(1)* | Easy |  |  |
| 213 | [House Robber II](https://leetcode.com/problems/house-robber-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/house-robber-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/house-robber-ii.py) | *O(n)* | *O(1)* | Medium |  |  |
| 221 | [Maximal Square](https://leetcode.com/problems/maximal-square/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/maximal-square.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/maximal-square.py) | *O(n^2)* | *O(n)* | Medium | EPI |  |
| 256 | [Paint House](https://leetcode.com/problems/paint-house/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/paint-house.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/paint-house.py) | *O(n)* | *O(1)* | Medium | 📖 |  |
| 265 | [Paint House II](https://leetcode.com/problems/paint-house-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/paint-house-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/paint-house-ii.py) | *O(n \* k)* | *O(k)* | Hard | 📖 |  |
| 276 | [Paint Fence](https://leetcode.com/problems/paint-fence/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/paint-fence.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/paint-fence.py) | *O(n)* | *O(1)* | Easy | 📖 |  |
| 279 | [Perfect Squares](https://leetcode.com/problems/perfect-squares/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/perfect-squares.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/perfect-squares.py) | *O(n \* sqrt(n))* | *O(n)* | Medium |  | Hash |
| 303 | [Range Sum Query - Immutable](https://leetcode.com/problems/range-sum-query-immutable/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/range-sum-query-immutable.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/range-sum-query-immutable.py) | ctor: *O(n)*, lookup: *O(1)* | *O(n)* | Easy |  |  |
| 304 | [Range Sum Query 2D - Immutable](https://leetcode.com/problems/range-sum-query-2d-immutable/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/range-sum-query-2d-immutable.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/range-sum-query-2d-immutable.py) | ctor: *O(m \* n)*, lookup: *O(1)* | *O(m \* n)* | Medium |  |  |
| 309 | [Best Time to Buy and Sell Stock with Cooldown](https://leetcode.com/problems/best-time-to-buy-and-sell-stock-with-cooldown/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/best-time-to-buy-and-sell-stock-with-cooldown.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/best-time-to-buy-and-sell-stock-with-cooldown.py) | *O(n)* | *O(1)* | Medium |  |  |
| 312 | [Burst Balloons](https://leetcode.com/problems/burst-balloons/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/burst-balloons.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/burst-balloons.py) | *O(n^3)* | *O(n^2)* | Hard |  |  |
| 322 | [Coin Change](https://leetcode.com/problems/coin-change/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/coin-change.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/coin-change.py) | *O(n \* k)* | *O(k)* | Medium |  |  |
| 351 | [Android Unlock Patterns](https://leetcode.com/problems/android-unlock-patterns/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/android-unlock-patterns.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/android-unlock-patterns.py) | *O(9^2 \* 2^9)* | *O(9 \* 2^9)* | Medium | 📖 | Backtracking |
| 357 | [Count Numbers with Unique Digits](https://leetcode.com/problems/count-numbers-with-unique-digits/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/count-numbers-with-unique-digits.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/count-numbers-with-unique-digits.py) | *O(n)* | *O(1)* | Medium |  | Backtracking, Math |
| 361 | [Bomb Enemy](https://leetcode.com/problems/bomb-enemy/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/bomb-enemy.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/bomb-enemy.py) | *O(m \* n)* | *O(m \* n)* | Medium | 📖 |  |
| 368 | [Largest Divisible Subset](https://leetcode.com/problems/largest-divisible-subset/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/largest-divisible-subset.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/largest-divisible-subset.py) | *O(n^2)* | *O(n)* | Medium |  |  |
| 375 | [Guess Number Higher or Lower II](https://leetcode.com/problems/guess-number-higher-or-lower-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/guess-number-higher-or-lower-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/guess-number-higher-or-lower-ii.py) | *O(n^2)* | *O(n^2)* | Medium |  |  |
| 377 | [Combination Sum IV](https://leetcode.com/problems/combination-sum-iv/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/combination-sum-iv.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/combination-sum-iv.py) | *O(nlogn + n \* t)* | *O(t)* | Medium |  |  |
| 403 | [Frog Jump](https://leetcode.com/problems/frog-jump/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/frog-jump.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/frog-jump.py) | *O(n)* | *O(n) ~ O(n^2)* | Hard |  |  |
| 416 | [Partition Equal Subset Sum](https://leetcode.com/problems/partition-equal-subset-sum/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/partition-equal-subset-sum.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/partition-equal-subset-sum.py) | *O(n \* s)* | *O(s)* | Medium |  |  |
| 418 | [Sentence Screen Fitting](https://leetcode.com/problems/sentence-screen-fitting/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/sentence-screen-fitting.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/sentence-screen-fitting.py) | *O(r + n \* c)* | *O(n)* | Medium | 📖 |  |
| 446 | [Arithmetic Slices II - Subsequence](https://leetcode.com/problems/arithmetic-slices-ii-subsequence/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/arithmetic-slices-ii-subsequence.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/arithmetic-slices-ii-subsequence.py) | *O(n^2)* | *O(n \* d)* | Hard |  |  |
| 465 | [Optimal Account Balancing](https://leetcode.com/problems/optimal-account-balancing/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/optimal-account-balancing.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/optimal-account-balancing.py) | *O(n \* 2^n)* | *O(n \* 2^n)* | Hard | 📖 |  |
| 466 | [Count The Repetitions](https://leetcode.com/problems/count-the-repetitions/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/count-the-repetitions.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/count-the-repetitions.py) | *O(s1 \* min(s2, n1))* | *O(s2)* | Hard |  |  |
| 467 | [Unique Substrings in Wraparound String](https://leetcode.com/problems/unique-substrings-in-wraparound-string/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/unique-substrings-in-wraparound-string.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/unique-substrings-in-wraparound-string.py) | *O(n)* | *O(1)* | Medium |  |  |
| 471 | [Encode String with Shortest Length](https://leetcode.com/problems/encode-string-with-shortest-length/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/encode-string-with-shortest-length.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/encode-string-with-shortest-length.py) | *O(n^3)* on average | *O(n^2)* | Medium | 📖 |  |
| 472 | [Concatenated Words](https://leetcode.com/problems/concatenated-words/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/concatenated-words.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/concatenated-words.py) | *O(n \* l^2)* | *O(n \* l)* | Medium |  |  |
| 474 | [Ones and Zeroes](https://leetcode.com/problems/ones-and-zeroes/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/ones-and-zeroes.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/ones-and-zeroes.py) | *O(s \* m \* n)* | *O(m \* n)* | Medium |  |  |
| 546 | [Remove Boxes](https://leetcode.com/problems/remove-boxes/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/remove-boxes.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/remove-boxes.py) | *O(n^3)* ~ *O(n^4)* | *O(n^3)* | Hard |  |  |
| 552 | [Student Attendance Record II](https://leetcode.com/problems/student-attendance-record-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/student-attendance-record-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/student-attendance-record-ii.py) | *O(n)* | *O(1)* | Hard |  |  |
| 562 | [Longest Line of Consecutive One in Matrix](https://leetcode.com/problems/longest-line-of-consecutive-one-in-matrix/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/longest-line-of-consecutive-one-in-matrix.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/longest-line-of-consecutive-one-in-matrix.py) | *O(m \* n)* | *O(n)* | Medium | 📖 |  |
| 568 | [Maximum Vacation Days](https://leetcode.com/problems/maximum-vacation-days/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/maximum-vacation-days.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/maximum-vacation-days.py) | *O(n^2 \* k)* | *O(k)* | Hard | 📖 |  |
| 576 | [Out of Boundary Paths](https://leetcode.com/problems/out-of-boundary-paths/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/out-of-boundary-paths.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/out-of-boundary-paths.py) | *O(N \* m \* n)* | *O(m \* n)* | Medium |  |  |
| 583 | [Delete Operation for Two Strings](https://leetcode.com/problems/delete-operation-for-two-strings/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/delete-operation-for-two-strings.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/delete-operation-for-two-strings.py) | *O(m \* n)* | *O(n)* | Medium |  |  |
| 600 | [Non-negative Integers without Consecutive Ones](https://leetcode.com/problems/non-negative-integers-without-consecutive-ones/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/non-negative-integers-without-consecutive-ones.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/non-negative-integers-without-consecutive-ones.py) | *O(1)* | *O(1)* | Hard |  |  |
| 629 | [K Inverse Pairs Array](https://leetcode.com/problems/k-inverse-pairs-array/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/k-inverse-pairs-array.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/k-inverse-pairs-array.py) | *O(n \* k)* | *O(k)* | Hard |  |  |
| 639 | [Decode Ways II](https://leetcode.com/problems/decode-ways-ii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/decode-ways-ii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/decode-ways-ii.py) | *O(n)* | *O(1)* | Hard |  |  |
| 650 | [2 Keys Keyboard](https://leetcode.com/problems/2-keys-keyboard/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/2-keys-keyboard.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/2-keys-keyboard.py) | *O(sqrt(n))* | *O(1)* | Medium |  |  |
| 656 | [Coin Path](https://leetcode.com/problems/coin-path/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/coin-path.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/coin-path.py) | *O(n \* B)* | *O(n)* | Hard | 📖 |  |
| 664 | [Strange Printer](https://leetcode.com/problems/strange-printer/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/strange-printer.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/strange-printer.py) | *O(n^3)* | *O(n^2)* | Hard |  |  |
| 673 | [Number of Longest Increasing Subsequence](https://leetcode.com/problems/number-of-longest-increasing-subsequence/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/number-of-longest-increasing-subsequence.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/number-of-longest-increasing-subsequence.py) | *O(n^2)* | *O(n)* | Medium |  |  |
| 688 | [Knight Probability in Chessboard](https://leetcode.com/problems/knight-probability-in-chessboard/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/knight-probability-in-chessboard.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/knight-probability-in-chessboard.py) | *O(k \* n^2)* | *O(n^2)* | Medium |  |  |
| 689 | [Maximum Sum of 3 Non-Overlapping Subarrays](https://leetcode.com/problems/maximum-sum-of-3-non-overlapping-subarrays/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/maximum-sum-of-3-non-overlapping-subarrays.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/maximum-sum-of-3-non-overlapping-subarrays.py) | *O(n)* | *O(n)* | Hard |  |  |
| 691 | [Stickers to Spell Word](https://leetcode.com/problems/stickers-to-spell-word/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/stickers-to-spell-word.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/stickers-to-spell-word.py) | *O(T \* S^T)* | *O(T \* S^T)* | Hard |  | Backtracking, Memoization |
| 712 | [Minimum ASCII Delete Sum for Two Strings](https://leetcode.com/problems/minimum-ascii-delete-sum-for-two-strings/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/minimum-ascii-delete-sum-for-two-strings.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/minimum-ascii-delete-sum-for-two-strings.py) | *O(m \* n)* | *O(n)* | Medium |  |  |
| 714 | [Best Time to Buy and Sell Stock with Transaction Fee](https://leetcode.com/problems/best-time-to-buy-and-sell-stock-with-transaction-fee/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/best-time-to-buy-and-sell-stock-with-transaction-fee.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/best-time-to-buy-and-sell-stock-with-transaction-fee.py) | *O(n)* | *O(1)* | Medium |  |  |
| 727 | [Minimum Window Subsequence](https://leetcode.com/problems/minimum-window-subsequence/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/minimum-window-subsequence.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/minimum-window-subsequence.py) | *O(s \* t)* | *O(s)* | Hard | 📖 |  |
| 730 | [Count Different Palindromic Subsequences](https://leetcode.com/problems/count-different-palindromic-subsequences/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/count-different-palindromic-subsequences.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/count-different-palindromic-subsequences.py) | *O(n^2)* | *O(n)* | Hard |  |  |
| 740 | [Delete and Earn](https://leetcode.com/problems/delete-and-earn/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/delete-and-earn.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/delete-and-earn.py) | *O(n)* | *O(1)* | Medium |  |  |
| 741 | [Cherry Pickup](https://leetcode.com/problems/cherry-pickup/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/cherry-pickup.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/cherry-pickup.py) | *O(n^3)* | *O(n^2)* | Hard |  |  |
| 746 | [Min Cost Climbing Stairs](https://leetcode.com/problems/min-cost-climbing-stairs/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/min-cost-climbing-stairs.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/min-cost-climbing-stairs.py) | *O(n)* | *O(1)* | Easy |  |  |
| 750 | [Number Of Corner Rectangles](https://leetcode.com/problems/number-of-corner-rectangles/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/number-of-corner-rectangles.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/number-of-corner-rectangles.py) | *O(n \* m^2)* | *O(n \* m)* | Medium |  |  |
| 764 | [Largest Plus Sign](https://leetcode.com/problems/largest-plus-sign/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/largest-plus-sign.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/largest-plus-sign.py) | *O(n^2)* | *O(n^2)* | Medium |  |  |

**Greedy**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 011 | [Container With Most Water](https://leetcode.com/problems/container-with-most-water/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/container-with-most-water.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/container-with-most-water.py) | *O(n)* | *O(1)* | Medium |  |  |
| 042 | [Trapping Rain Water](https://leetcode.com/problems/trapping-rain-water/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/trapping-rain-water.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/trapping-rain-water.py) | *O(n)* | *O(1)* | Hard |  | Tricky |
| 044 | [Wildcard Matching](https://leetcode.com/problems/wildcard-matching/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/wildcard-matching.py) | *O(m + n)* | *O(1)* | Hard |  | Tricky |
| 045 | [Jump Game II](https://leetcode.com/problems/jump-game-ii/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/jump-game-ii.py) | *O(n)* | *O(1)* | Hard |  |  |
| 055 | [Jump Game](https://leetcode.com/problems/jump-game/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/jump-game.py) | *O(n)* | *O(1)* | Medium |  |  |
| 122 | [Best Time to Buy and Sell Stock II](https://leetcode.com/problems/best-time-to-buy-and-sell-stock-ii/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/best-time-to-buy-and-sell-stock-ii.py) | *O(n)* | *O(1)* | Medium |  |  |
| 134 | [Gas Station](https://leetcode.com/problems/gas-station/) | [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/gas-station.py) | *O(n)* | *O(1)* | Medium |  |  |
| 135 | [Candy](https://leetcode.com/problems/candy/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/candy.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/candy.py) | *O(n)* | *O(n)* | Hard |  |  |
| 316 | [Remove Duplicate Letters](https://leetcode.com/problems/remove-duplicate-letters/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/remove-duplicate-letters.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/remove-duplicate-letters.py) | *O(n)* | *O(k)* | Hard |  | Ascending Stack |
| 321 | [Create Maximum Number](https://leetcode.com/problems/create-maximum-number/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/create-maximum-number.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/create-maximum-number.py) | *O(k \* (m + n + k))*~ *O(k \* (m + n + k^2))* | *O(m + n + k^2)* | Hard | variant of [Delete Digits](http://www.lintcode.com/en/problem/delete-digits/) | Greedy, DP |
| 330 | [Patching Array](https://leetcode.com/problems/patching-array/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/patching-array.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/patching-array.py) | *O(s + logn)* | *O(1)* | Hard |  |  |
| 376 | [Wiggle Subsequence](https://leetcode.com/problems/wiggle-subsequence/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/wiggle-subsequence.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/wiggle-subsequence.py) | *O(n)* | *O(1)* | Medium |  |  |
| 392 | [Is Subsequence](https://leetcode.com/problems/is-subsequence/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/is-subsequence.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/is-subsequence.py) | *O(n)* | *O(1)* | Medium |  |  |
| 397 | [Integer Replacement](https://leetcode.com/problems/integer-replacement/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/integer-replacement.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/integer-replacement.py) | *O(n)* | *O(1)* | Medium |  | Math |
| 402 | [Remove K Digits](https://leetcode.com/problems/remove-k-digits/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/remove-k-digits.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/remove-k-digits.py) | *O(n)* | *O(n)* | Medium | LintCode |  |
| 435 | [Non-overlapping Intervals](https://leetcode.com/problems/non-overlapping-intervals/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/non-overlapping-intervals.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/non-overlapping-intervals.py) | *O(nlogn)* | *O(1)* | Medium |  |  |
| 452 | [Minimum Number of Arrows to Burst Balloons](https://leetcode.com/problems/minimum-number-of-arrows-to-burst-balloons/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/minimum-number-of-arrows-to-burst-balloons.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/minimum-number-of-arrows-to-burst-balloons.py) | *O(nlogn)* | *O(1)* | Medium |  |  |
| 455 | [Assign Cookies](https://leetcode.com/problems/assign-cookies/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/assign-cookies.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/assign-cookies.py) | *O(nlogn)* | *O(1)* | Easy |  |  |
| 621 | [Task Scheduler](https://leetcode.com/problems/task-scheduler/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/task-scheduler.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/task-scheduler.py) | *O(n)* | *O(1)* | Medium |  |  |
| 630 | [Course Schedule III](https://leetcode.com/problems/course-schedule-iii/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/course-schedule-iii.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/course-schedule-iii.py) | *O(nlogn)* | *O(k)* | Hard |  |  |
| 646 | [Maximum Length of Pair Chain](https://leetcode.com/problems/maximum-length-of-pair-chain/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/maximum-length-of-pair-chain.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/maximum-length-of-pair-chain.py) | *O(nlogn)* | *O(1)* | Medium |  | Scan Line |
| 649 | [Dota2 Senate](https://leetcode.com/problems/dota2-senate/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/dota2-senate.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/dota2-senate.py) | *O(n)* | *O(n)* | Medium |  |  |
| 659 | [Split Array into Consecutive Subsequences](https://leetcode.com/problems/split-array-into-consecutive-subsequences/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/split-array-into-consecutive-subsequences.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/split-array-into-consecutive-subsequences.py) | *O(n)* | *O(1)* | Medium |  |  |
| 738 | [Monotone Increasing Digits](https://leetcode.com/problems/monotone-increasing-digits/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/monotone-increasing-digits.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/monotone-increasing-digits.py) | *O(1)* | *O(1)* | Medium |  |  |
| 757 | [Set Intersection Size At Least Two](https://leetcode.com/problems/set-intersection-size-at-least-two/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/set-intersection-size-at-least-two.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/set-intersection-size-at-least-two.py) | *O(nlogn)* | *O(n)* | Hard |  |  |
| 759 | [Employee Free Time](https://leetcode.com/problems/employee-free-time/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/employee-free-time.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/employee-free-time.py) | *O(m \* logn)* | *O(n)* | Hard |  |  |
| 763 | [Partition Labels](https://leetcode.com/problems/partition-labels/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/partition-labels.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/partition-labels.py) | *O(n)* | *O(n)* | Medium |  |  |
| 767 | [Reorganize String](https://leetcode.com/problems/reorganize-string/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/reorganize-string.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/reorganize-string.py) | *O(n)* | *O(1)* | Medium |  |  |

**Graph**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 765 | [Couples Holding Hands](https://leetcode.com/problems/couples-holding-hands/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/couples-holding-hands.cpp) [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/couples-holding-hands.py) | *O(n)* | *O(n)* | Hard |  |  |

**Geometry**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 587 | [Erect the Fence](https://leetcode.com/problems/erect-the-fence/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/erect-the-fence.cpp) [Python](https://github.com/kamyu104/LeetCode/blob/master/Python/erect-the-fence.py) | *O(nlogn)* | *O(n)* | Hard |  | Monotone Chain |

**Design**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 146 | [LRU Cache](https://leetcode.com/problems/lru-cache/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/lru-cache.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/lru-cache.py) | *O(1)* | *O(k)* | Hard |  |  |
| 225 | [Implement Stack using Queues](https://leetcode.com/problems/implement-stack-using-queues/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/implement-stack-using-queues.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/implement-stack-using-queues.py) | push: *O(n)*, pop: *O(1)*, top: *O(1)* | *O(n)* | Easy |  |  |
| 284 | [Peeking Iterator](https://leetcode.com/problems/peeking-iterator/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/peeking-iterator.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/peeking-iterator.py) | *O(1)* | *O(1)* | Medium |  |  |
| 348 | [Design Tic-Tac-Toe](https://leetcode.com/problems/design-tic-tac-toe/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/design-tic-tac-toe.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/design-tic-tac-toe.py) | *O(1)* | *O(n^2)* | Medium | 📖 |  |
| 353 | [Design Snake Game](https://leetcode.com/problems/design-snake-game/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/design-snake-game.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/design-snake-game.py) | *O(1)* | *O(s)* | Medium | 📖 | Deque |
| 355 | [Design Twitter](https://leetcode.com/problems/design-twitter/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/design-twitter.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/design-twitter.py) | *O(klogu)* | *O(t + f)* | Medium | LintCode | Heap |
| 359 | [Logger Rate Limiter](https://leetcode.com/problems/logger-rate-limiter/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/logger-rate-limiter.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/logger-rate-limiter.py) | *O(1), amortized* | *O(k)* | Easy | 📖 | Deque |
| 362 | [Design Hit Counter](https://leetcode.com/problems/design-hit-counter/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/design-hit-counter.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/design-hit-counter.py) | *O(1), amortized* | *O(k)* | Medium | 📖 | Deque |
| 379 | [Design Phone Directory](https://leetcode.com/problems/design-phone-directory/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/design-phone-directory.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/design-phone-directory.py) | *O(1)* | *O(n)* | Medium | 📖 |  |
| 380 | [Insert Delete GetRandom O(1)](https://leetcode.com/problems/insert-delete-getrandom-o1/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/insert-delete-getrandom-o1.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/insert-delete-getrandom-o1.py) | *O(1)* | *O(n)* | Hard |  |  |
| 381 | [Insert Delete GetRandom O(1) - Duplicates allowed](https://leetcode.com/problems/insert-delete-getrandom-o1-duplicates-allowed/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/insert-delete-getrandom-o1-duplicates-allowed.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/insert-delete-getrandom-o1-duplicates-allowed.py) | *O(1)* | *O(n)* | Hard |  |  |
| 432 | [All O`one Data Structure](https://leetcode.com/problems/all-oone-data-structure/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/all-oone-data-structure.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/all-oone-data-structure.py) | *O(1)* | *O(n)* | Hard |  |  |
| 460 | [LFU Cache](https://leetcode.com/problems/lfu-cache/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/lfu-cache.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/lfu-cache.py) | *O(1)* | *O(k)* | Hard |  |  |
| 535 | [Encode and Decode TinyURL](https://leetcode.com/problems/encode-and-decode-tinyurl/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/encode-and-decode-tinyurl.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/encode-and-decode-tinyurl.py) | *O(1)* | *O(n)* | Medium |  |  |
| 588 | [Design In-Memory File System](https://leetcode.com/problems/design-in-memory-file-system/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/design-in-memory-file-system.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/design-in-memory-file-system.py) | ls: *O(l + klogk)* mkdir: *O(l)* addContentToFile: *O(l + c)* readContentFromFile: *O(l + c)* | *O(n + s)* | Hard | 📖 |  |
| 604 | [Design Compressed String Iterator](https://leetcode.com/problems/design-compressed-string-iterator/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/design-compressed-string-iterator.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/design-compressed-string-iterator.py) | *O(1)* | *O(1)* | Easy | 📖 |  |
| 631 | [Design Excel Sum Formula](https://leetcode.com/problems/design-excel-sum-formula/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/design-excel-sum-formula.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/design-excel-sum-formula.py) | set: *O((r \* c)^2)* get: *O(1)* sum: *O((r \* c)^2)* | *O(r \* c)* | Hard | 📖 |  |
| 635 | [Design Log Storage System](https://leetcode.com/problems/design-log-storage-system/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/design-log-storage-system.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/design-log-storage-system.py) | put: *O(1)* retrieve: *O(n + dlogd)* | *O(n)* | Medium | 📖 |  |
| 642 | [Design Search Autocomplete System](https://leetcode.com/problems/design-search-autocomplete-system/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/design-search-autocomplete-system.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/design-search-autocomplete-system.py) | *O(p^2)* | *O(p \* t + s)* | Hard | 📖 |  |
| 715 | [Range Module](https://leetcode.com/problems/range-module/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/range-module.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/range-module.py) | add: *O(n)* remove: *O(n)* query: *O(logn)* | *O(n)* | Hard |  |  |
| 716 | [Max Stack](https://leetcode.com/problems/max-stack/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/max-stack.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/max-stack.py) | push: *O(logn)* pop: *O(logn)* popMax: *O(logn)* top: *O(1)* peekMax: *O(1)* | *O(n)* | Easy |  |  |
| 745 | [Prefix and Suffix Search](https://leetcode.com/problems/prefix-and-suffix-search/) | [C++](https://github.com/kamyu104/LeetCode/blob/master/C++/prefix-and-suffix-search.cpp)[Python](https://github.com/kamyu104/LeetCode/blob/master/Python/prefix-and-suffix-search.py) | ctor: *O(w \* l^2)* search : *O(p + s)* | *O(t)* | Hard |  | Trie |

**SQL**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 175 | [Combine Two Tables](https://leetcode.com/problems/combine-two-tables/) | [MySQL](https://github.com/kamyu104/LeetCode/blob/master/MySQL/combine-two-tables.sql) | *O(m + n)* | *O(m + n)* | Easy |  |  |
| 176 | [Second Highest Salary](https://leetcode.com/problems/second-highest-salary/) | [MySQL](https://github.com/kamyu104/LeetCode/blob/master/MySQL/second-highest-salary.sql) | *O(n)* | *O(1)* | Easy |  |  |
| 177 | [Nth Highest Salary](https://leetcode.com/problems/nth-highest-salary/) | [MySQL](https://github.com/kamyu104/LeetCode/blob/master/MySQL/nth-highest-salary.sql) | *O(n^2)* | *O(n)* | Medium |  |  |
| 178 | [Rank Scores](https://leetcode.com/problems/rank-scores/) | [MySQL](https://github.com/kamyu104/LeetCode/blob/master/MySQL/rank-scores.sql) | *O(n^2)* | *O(n)* | Medium |  |  |
| 180 | [Consecutive Numbers](https://leetcode.com/problems/consecutive-numbers/) | [MySQL](https://github.com/kamyu104/LeetCode/blob/master/MySQL/consecutive-numbers.sql) | *O(n)* | *O(n)* | Medium |  |  |
| 181 | [Employees Earning More Than Their Managers](https://leetcode.com/problems/employees-earning-more-than-their-managers/) | [MySQL](https://github.com/kamyu104/LeetCode/blob/master/MySQL/employees-earning-more-than-their-managers.sql) | *O(n^2)* | *O(1)* | Easy |  |  |
| 182 | [Duplicate Emails](https://leetcode.com/problems/duplicate-emails/) | [MySQL](https://github.com/kamyu104/LeetCode/blob/master/MySQL/duplicate-emails.sql) | *O(n^2)* | *O(n)* | Easy |  |  |
| 183 | [Customers Who Never Order](https://leetcode.com/problems/customers-who-never-order/) | [MySQL](https://github.com/kamyu104/LeetCode/blob/master/MySQL/customers-who-never-order.sql) | *O(n^2)* | *O(1)* | Easy |  |  |
| 184 | [Department Highest Salary](https://leetcode.com/problems/department-highest-salary/) | [MySQL](https://github.com/kamyu104/LeetCode/blob/master/MySQL/department-highest-salary.sql) | *O(n^2)* | *O(n)* | Medium |  |  |
| 185 | [Department Top Three Salaries](https://leetcode.com/problems/department-top-three-salaries/) | [MySQL](https://github.com/kamyu104/LeetCode/blob/master/MySQL/department-top-three-salaries.sql) | *O(n^2)* | *O(n)* | Hard |  |  |
| 196 | [Delete Duplicate Emails](https://leetcode.com/problems/delete-duplicate-emails/) | [MySQL](https://github.com/kamyu104/LeetCode/blob/master/MySQL/delete-duplicate-emails.sql) | *O(n^2)* | *O(n)* | Easy |  |  |
| 197 | [Rising Temperature](https://leetcode.com/problems/rising-temperature/) | [MySQL](https://github.com/kamyu104/LeetCode/blob/master/MySQL/rising-temperature.sql) | *O(n^2)* | *O(n)* | Easy |  |  |
| 262 | [Trips and Users](https://leetcode.com/problems/trips-and-users/) | [MySQL](https://github.com/kamyu104/LeetCode/blob/master/MySQL/trips-and-users.sql) | *O((t \* u) + tlogt)* | *O(t)* | Hard |  |  |

**Shell Script**

| **#** | **Title** | **Solution** | **Time** | **Space** | **Difficulty** | **Tag** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 192 | [Word Frequency](https://leetcode.com/problems/word-frequency/) | [Shell](https://github.com/kamyu104/LeetCode/blob/master/Shell/word-frequency.sh) | *O(n)* | *O(k)* | Medium |  |  |
| 193 | [Valid Phone Numbers](https://leetcode.com/problems/valid-phone-numbers/) | [Shell](https://github.com/kamyu104/LeetCode/blob/master/Shell/valid-phone-numbers.sh) | *O(n)* | *O(1)* | Easy |  |  |
| 194 | [Transpose File](https://leetcode.com/problems/transpose-file/) | [Shell](https://github.com/kamyu104/LeetCode/blob/master/Shell/transpose-file.sh) | *O(n^2)* | *O(n^2)* | Medium |  |  |
| 195 | [Tenth Line](https://leetcode.com/problems/tenth-line/) | [Shell](https://github.com/kamyu104/LeetCode/blob/master/Shell/tenth-line.sh) | *O(n)* | *O(1)* | Easy |  |  |