

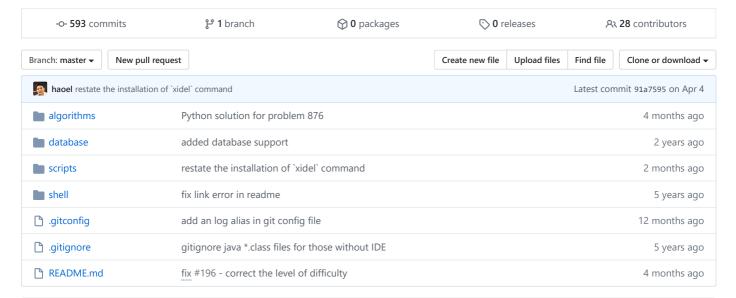
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#### LeetCode Problems' Solutions



#### ☐ README.md

# LeetCode

#### LeetCode Algorithm

(Notes: "♥" means you need to buy a book from Leetcode)

#	Title	Solution	Difficulty
1207	Unique Number of Occurrences	C++	Easy
1170	Compare Strings by Frequency of the Smallest Character	C++	Easy
1030	Matrix Cells in Distance Order	C++	Easy
1029	Two City Scheduling	C++	Easy
1028	Recover a Tree From Preorder Traversal	C++	Hard
1024	Video Stitching	C++	Medium
993	Cousins in Binary Tree	C++	Easy
991	Broken Calculator	C++	Medium
990	Satisfiability of Equality Equations	C++	Medium
989	Add to Array-Form of Integer	C++	Easy

#	Title	Solution	Difficulty
988	Smallest String Starting From Leaf	C++	Medium
987	Vertical Order Traversal of a Binary Tree	C++	Medium
986	Interval List Intersections	C++	Medium
985	Sum of Even Numbers After Queries	C++	Easy
984	String Without AAA or BBB	C++	Easy
983	Minimum Cost For Tickets	C++	Medium
981	Time Based Key-Value Store	C++	Medium
980	Unique Paths III	C++	Hard
979	Distribute Coins in Binary Tree	C++	Medium
978	Longest Turbulent Subarray	C++,Python	Medium
977	Squares of a Sorted Array	C++, Python	Easy
976	Largest Perimeter Triangle	C++, Python	Easy
971	Flip Binary Tree To Match Preorder Traversal	Python	Medium
969	Pancake Sorting	Python	Medium
961	N-Repeated element in size 2N Array	C++	Easy
958	Check Completeness of a Binary Tree	Python	Medium
951	Flip Equivalent Binary Trees	Python	Medium
950	Reveal Cards In Increasing Order	Python	Medium
941	Valid Mountain Array	Python	Easy
931	Minimum Falling Path Sum	C++	Medium
922	Sort Array By Parity II	C++	Easy
914	X of a Kind in a Deck of Cards	Python	Easy
905	Sort Array By Parity	C++	Easy
876	Middle of the Linked List	Python	Easy
859	Buddy Strings	C++	Easy
858	Mirror Reflection	C++	Medium
852	Peak Index in a Mountain Array	C++	Easy
849	Maximize Distance to Closest Person	Python	Easy
844	Backspace String Compare	C++	Easy
837	Most Common Word	C++	Easy
830	Positions of Large Groups	Python	Easy
804	Unique Morse Code Words	C++	Easy
771	Jewels and Stones	C++	Easy
747	Largest Number At Least Twice of Others	Python	Easy
746	Min Cost Climbing Stairs	C++, Python	Easy
721	Accounts Merge	C++	Medium
717	1-bit and 2-bit Characters	Python	Easy
714	Best Time to Buy and Sell Stock with Transaction Fee	C++	Medium

#	Title	Solution	Difficulty
712	Minimum ASCII Delete Sum for Two Strings	C++	Medium
695	Max Area of Island	C++	Medium
687	Longest Univalue Path	Python	Easy
684	Redundant Connection	Python	Medium
674	Longest Continuous Increasing Subsequence	Python	Easy
671	Second Minimum Node In a Binary Tree	Python	Easy
665	Non-decreasing Array	Python	Easy
662	Maximum Width of Binary Tree	Python	Medium
661	Image Smoother	Python	Easy
655	Print Binary Tree	Python	Medium
652	Find Duplicate Subtrees	Python	Medium
647	Palindromic Substrings	C++	Medium
643	Maximum Average Subarray I	C++, Python	Easy
628	Maximum Product of Three Numbers	Python	Easy
623	Add One Row to Tree	Python	Medium
581	Shortest Unsorted Continuous Subarray	Python	Easy
572	Subtree of Another Tree	Python	Easy
563	Binary Tree Tilt	Python	Easy
547	Friend Circles	C++	Medium
543	Diameter of Binary Tree	Python	Easy
538	Convert BST to Greater Tree	Python	Easy
532	K-diff Pairs in an Array	Python	Easy
520	Detect Capital	C++	Easy
518	Coin Change 2	C++	Medium
509	Fibonacci Number	C++, Python	Easy
477	Total Hamming Distance	C++	Medium
463	Island Perimeter	C++	Easy
450	DeleteNodeInABST	Python	Medium
449	Serialize and Deserialize BST	Python	Medium
438	Find all Anagrams in a string	C++	Medium
437	Path Sum III	Python	Medium
418	SentenceScreenFitting ♥	C++	Easy
416	Partition Equal Subset Sum	C++	Medium
415	Add Strings	C++	Easy
414	Third Maximum Number	C++, Python	Easy
413	Arithmetic Slices	C++	Medium
412	Fizz Buzz	C++	Easy
410	Split Array Largest Sum	C++	Hard

#	Title	Solution	Difficulty
409	Longest Palindrome	C++	Easy
406	Queue Reconstruction by Height	C++	Medium
405	Convert a Number to Hexadecimal	C++	Easy
404	Sum of Left Leaves	C++, Python	Easy
403	Frog Jump	C++	Hard
402	Remove K Digits	C++	Medium
401	Binary Watch	C++	Easy
400	Nth Digit	C++	Medium
399	Evaluate Division	C++	Medium
398	Random Pick Index	C++	Medium
397	Integer Replacement	C++	Medium
396	Rotate Function	C++	Easy
395	Longest Substring with At Least K Repeating Characters	C++	Medium
394	Decode String	C++	Medium
393	UTF-8 Validation	C++	Medium
392	Is Subsequence	C++	Medium
391	Perfect Rectangle	C++	Hard
390	Elimination Game	C++	Medium
389	Find the Difference	C++	Easy
388	Longest Absolute File Path	C++	Medium
387	First Unique Character in a String	C++	Easy
386	Lexicographical Numbers	C++	Medium
385	Mini Parser	C++	Medium
384	Shuffle an Array	C++	Medium
383	Ransom Note	C++	Easy
382	Linked List Random Node	C++	Medium
381	Insert Delete GetRandom O(1) - Duplicates allowed	C++	Hard
380	Insert Delete GetRandom O(1)	C++	Hard
377	Combination Sum IV	C++	Medium
376	Wiggle Subsequence	C++	Medium
371	Sum of Two Integers	C++	Easy
367	Valid Perfect Square	C++	Easy
357	Count Numbers with Unique Digits	C++	Medium
350	Intersection of Two Arrays II	C++	Easy
349	Intersection of Two Arrays	C++	Easy
347	Top K Frequent Elements	C++	Medium
345	Reverse Vowels of a String	C++	Easy
344	Reverse String	C++	Easy

#	Title	Solution	Difficulty
343	Integer Break	C++	Medium
342	Power of Four	C++	Easy
341	Flatten Nested List Iterator	C++	Medium
338	Counting Bits	C++	Medium
337	House Robber III	C++, Python	Medium
336	Palindrome Pairs	C++	Hard
334	Increasing Triplet Subsequence	C++	Medium
332	Reconstruct Itinerary	C++	Medium
331	Verify Preorder Serialization of a Binary Tree	C++	Medium
330	Patching Array	C++	Medium
329	Longest Increasing Path in a Matrix	C++	Medium
328	Odd Even Linked List	C++	Easy
327	Count of Range Sum	C++	Hard
326	Power of Three	C++	Easy
324	Wiggle Sort II	C++	Medium
322	Coin Change	C++	Medium
321	Create Maximum Number	C++	Hard
319	Bulb Switcher	C++	Medium
318	Maximum Product of Word Lengths	C++	Medium
316	Remove Duplicate Letters	C++	Hard
315	Count of Smaller Numbers After Self	C++	Hard
313	Super Ugly Number	C++	Medium
312	Burst Balloons	C++	Hard
310	Minimum Height Trees	C++	Medium
309	Best Time to Buy and Sell Stock with Cooldown	C++	Medium
307	Range Sum Query - Mutable	C++	Medium
306	Additive Number	C++	Medium
304	Range Sum Query 2D - Immutable	C++	Medium
303	Range Sum Query - Immutable	C++	Easy
301	Remove Invalid Parentheses	C++	Hard
300	Longest Increasing Subsequence	C++	Medium
299	Bulls and Cows	C++	Easy
297	Serialize and Deserialize Binary Tree	C++	Medium
295	Find Median from Data Stream	C++	Hard
292	Nim Game	C++	Easy
290	Word Pattern	C++	Easy
289	Game of Life	C++	Medium
287	Find the Duplicate Number	C++, Python	Hard

#	Title	Solution	Difficulty
285	Inorder Successor in BST ♥	Java	Medium
284	Peeking Iterator	C++	Medium
283	Move Zeroes	C++	Easy
282	Expression Add Operators	C++	Hard
279	Perfect Squares	C++	Medium
278	First Bad Version	C++, Java	Easy
275	H-Index II	C++	Medium
274	H-Index	C++	Medium
273	Integer to English Words	C++	Medium
268	Missing Number	C++	Medium
264	Ugly Number II	C++	Medium
263	Ugly Number	C++	Easy
260	Single Number III	C++	Medium
258	Add Digits	C++	Easy
257	Binary Tree Paths	C++	Easy
242	Valid Anagram	C++, Java	Easy
241	Different Ways to Add Parentheses	C++, Python	Medium
240	Search a 2D Matrix II	C++, Java, Python	Medium
239	Sliding Window Maximum	C++	Hard
238	Product of Array Except Self	C++	Medium
237	Delete Node in a Linked List	C++	Easy
236	Lowest Common Ancestor of a Binary Tree	C++, Java, Python	Medium
235	Lowest Common Ancestor of a Binary Search Tree	C++, Python	Easy
234	Palindrome Linked List	C++	Easy
233	Number of Digit One	C++	Medium
232	Implement Queue using Stacks	C++, Java	Easy
231	Power of Two	C++	Easy
230	Kth Smallest Element in a BST	C++, Python	Medium
229	Majority Element II	C++	Medium
228	Summary Ranges	C++	Easy
227	Basic Calculator II	C++	Medium
226	Invert Binary Tree	C++	Easy
225	Implement Stack using Queues	C++, Java	Medium
224	Basic Calculator	C++	Medium
223	Rectangle Area	C++	Easy
222	Count Complete Tree Nodes	C++, Python	Medium
221	Maximal Square	C++	Medium
220	Contains Duplicate III	C++, Python	Medium

#	Title	Solution	Difficulty
219	Contains Duplicate II	C++, Python	Easy
218	The Skyline Problem	C++	Hard
217	Contains Duplicate	C++	Easy
216	Combination Sum III	C++	Medium
215	Kth Largest Element in an Array	C++	Medium
214	Shortest Palindrome	C++	Hard
213	House Robber II	C++	Medium
212	Word Search II	C++	Hard
211	Add and Search Word - Data structure design	C++	Medium
210	Course Schedule II	C++	Medium
209	Minimum Size Subarray Sum	C++	Medium
208	Implement Trie (Prefix Tree)	C++	Medium
207	Course Schedule	C++	Medium
206	Reverse Linked List	C++, Java	Easy
205	Isomorphic Strings	C++	Easy
204	Count Primes	C++	Easy
203	Remove Linked List Elements	C++	Easy
202	Happy Number	C++, Python	Easy
201	Bitwise AND of Numbers Range	C++	Medium
200	Number of Islands	C++, Python	Medium
199	Binary Tree Right Side View	C++	Medium
198	House Robber	C++, Python	Easy
191	Number of 1 Bits	C++	Easy
190	Reverse Bits	C++	Easy
189	Rotate Array	C++, Java	Easy
188	Best Time to Buy and Sell Stock IV	C++	Hard
187	Repeated DNA Sequences	C++	Medium
186	Reverse Words in a String II •	C++	Medium
179	Largest Number	C++	Medium
174	Dungeon Game	C++	Hard
173	Binary Search Tree Iterator	C++, Java, Python	Medium
172	Factorial Trailing Zeroes	C++	Easy
171	Excel Sheet Column Number	C++	Easy
170	Two Sum III - Data structure design ♥	C++	Easy
169	Majority Element	C++	Easy
168	Excel Sheet Column Title	C++	Easy
167	Two Sum II - Input array is sorted ♥	C++	Medium
166	Fraction to Recurring Decimal	C++	Medium

#	Title	Solution	Difficulty
165	Compare Version Numbers	C++	Easy
164	Maximum Gap	C++	Hard
163	Missing Ranges ♥	C++	Medium
162	Find Peak Element	C++, Java	Medium
161	One Edit Distance♥	C++	Medium
160	Intersection of Two Linked Lists	C++	Easy
159	Longest Substring with At Most Two Distinct Characters ♥	C++	Hard
158	Read N Characters Given Read4 II - Call multiple times •	C++	Hard
157	Read N Characters Given Read4 ♥	C++	Easy
156	Binary Tree Upside Down ♥	C++	Medium
155	Min Stack	C++, Java	Easy
154	Find Minimum in Rotated Sorted Array II	C++	Hard
153	Find Minimum in Rotated Sorted Array	C++, Java	Medium
152	Maximum Product Subarray	C++	Medium
151	Reverse Words in a String	C++, Java	Medium
150	Evaluate Reverse Polish Notation	C++	Medium
149	Max Points on a Line	C++	Hard
148	Sort List	C++, Python	Medium
147	Insertion Sort List	C++, Python	Medium
146	LRU Cache	C++, Java	Hard
145	Binary Tree Postorder Traversal	C++, Python	Hard
144	Binary Tree Preorder Traversal	C++, Java	Medium
143	Reorder List	C++, Python	Medium
142	Linked List Cycle II	C++, Python	Medium
141	Linked List Cycle	C++	Medium
140	Word Break II	C++	Hard
139	Word Break	C++	Medium
138	Copy List with Random Pointer	C++, Python	Hard
137	Single Number II	C++	Medium
136	Single Number	C++	Medium
135	Candy	C++	Hard
134	Gas Station	C++	Medium
133	Clone Graph	C++	Medium
132	Palindrome Partitioning II	C++	Hard
131	Palindrome Partitioning	C++	Medium
130	Surrounded Regions	C++	Medium
129	Sum Root to Leaf Numbers	C++, Python	Medium
128	Longest Consecutive Sequence	C++	Hard

#	Title	Solution	Difficulty
127	Word Ladder	C++	Medium
126	Word Ladder II	C++	Hard
125	Valid Palindrome	C++, Java	Easy
124	Binary Tree Maximum Path Sum	C++, Java	Hard
123	Best Time to Buy and Sell Stock III	C++	Hard
122	Best Time to Buy and Sell Stock II	C++	Medium
121	Best Time to Buy and Sell Stock	C++	Medium
120	Triangle	C++, Java	Medium
119	Pascal's Triangle II	C++	Easy
118	Pascal's Triangle	C++	Easy
117	Populating Next Right Pointers in Each Node II	C++, Python	Hard
116	Populating Next Right Pointers in Each Node	C++, Python	Medium
115	Distinct Subsequences	C++	Hard
114	Flatten Binary Tree to Linked List	C++, Python	Medium
113	Path Sum II	C++, Python	Medium
112	Path Sum	C++	Easy
111	Minimum Depth of Binary Tree	C++	Easy
110	Balanced Binary Tree	C++, Java	Easy
109	Convert Sorted List to Binary Search Tree	C++	Medium
108	Convert Sorted Array to Binary Search Tree	C++	Medium
107	Binary Tree Level Order Traversal II	C++	Easy
106	Construct Binary Tree from Inorder and Postorder Traversal	C++, Python	Medium
105	Construct Binary Tree from Preorder and Inorder Traversal	C++, Python	Medium
104	Maximum Depth of Binary Tree	C++, Java	Easy
103	Binary Tree Zigzag Level Order Traversal	C++, Python	Medium
102	Binary Tree Level Order Traversal	C++, Java	Easy
101	Symmetric Tree	C++	Easy
100	Same Tree	C++	Easy
99	Recover Binary Search Tree	C++	Hard
98	Validate Binary Search Tree	C++, Java, Python	Medium
97	Interleaving String	C++	Hard
96	Unique Binary Search Trees	C++, Python	Medium
95	Unique Binary Search Trees II	C++, Python	Medium
94	Binary Tree Inorder Traversal	C++	Medium
93	Restore IP Addresses	C++	Medium
92	Reverse Linked List II	C++, Java, Python	Medium
91	Decode Ways	C++	Medium
90	Subsets II	C++, Java	Medium

#	Title	Solution	Difficulty
89	Gray Code	C++	Medium
88	Merge Sorted Array	C++	Easy
87	Scramble String	C++	Hard
86	Partition List	C++, Python	Medium
85	Maximal Rectangle	C++	Hard
84	Largest Rectangle in Histogram	C++	Hard
83	Remove Duplicates from Sorted List	C++	Easy
82	Remove Duplicates from Sorted List II	C++, Python	Medium
81	Search in Rotated Sorted Array II	C++	Medium
80	Remove Duplicates from Sorted Array II	C++	Medium
79	Word Search	C++	Medium
78	Subsets	C++, Java, Python	Medium
77	Combinations	C++	Medium
76	Minimum Window Substring	C++	Hard
75	Sort Colors	C++	Medium
74	Search a 2D Matrix	C++, Java	Medium
73	Set Matrix Zeroes	C++	Medium
72	Edit Distance	C++	Hard
71	Simplify Path	C++	Medium
70	Climbing Stairs	C++, Java	Easy
69	Sqrt(x)	C++	Medium
68	Text Justification	C++	Hard
67	Add Binary	C++	Easy
66	Plus One	C++	Easy
65	Valid Number	C++	Easy
64	Minimum Path Sum	C++, Java	Medium
63	Unique Paths II	C++, Java	Medium
62	Unique Paths	C++, Java	Medium
61	Rotate List	C++	Medium
60	Permutation Sequence	C++	Medium
59	Spiral Matrix II	C++	Medium
58	Length of Last Word	C++, Java	Easy
57	Insert Interval	C++	Hard
56	Merge Intervals	C++	Hard
55	Jump Game	C++	Medium
54	Spiral Matrix	C++	Medium
53	Maximum Subarray	C++	Medium
52	N-Queens II	C++	Hard

#	Title	Solution	Difficulty
51	N-Queens	C++	Hard
50	"Pow(x, n)"	C++, Java	Medium
49	Group Anagrams	C++	Medium
48	Rotate Image	C++	Medium
47	Permutations II	C++	Hard
46	Permutations	C++	Medium
45	Jump Game II	C++	Hard
44	Wildcard Matching	C++	Hard
43	Multiply Strings	C++	Medium
42	Trapping Rain Water	C++	Hard
41	First Missing Positive	C++	Hard
40	Combination Sum II	C++	Medium
39	Combination Sum	C++	Medium
38	Count and Say	C++, Java	Easy
37	Sudoku Solver	C++	Hard
36	Valid Sudoku	C++	Easy
35	Search Insert Position	C++, Java	Medium
34	Search for a Range	C++, Java	Medium
33	Search in Rotated Sorted Array	C++, Java	Hard
32	Longest Valid Parentheses	C++	Hard
31	Next Permutation	C++	Medium
30	Substring with Concatenation of All Words	C++	Hard
29	Divide Two Integers	C++	Medium
28	Implement strStr()	C++, Java	Easy
27	Remove Element	C++	Easy
26	Remove Duplicates from Sorted Array	C++, Java	Easy
25	Reverse Nodes in k-Group	C++	Hard
24	Swap Nodes in Pairs	C++	Medium
23	Merge k Sorted Lists	C++	Hard
22	Generate Parentheses	C++	Medium
21	Merge Two Sorted Lists	C++	Easy
20	Valid Parentheses	C++	Easy
19	Remove Nth Node From End of List	C++, Python	Easy
18	4Sum	C++	Medium
17	Letter Combinations of a Phone Number	C++	Medium
16	3Sum Closest	C++	Medium
15	3Sum	C++	Medium
14	Longest Common Prefix	C++	Easy

#	Title	Solution	Difficulty
13	Roman to Integer	C++	Easy
12	Integer to Roman	C++	Medium
11	Container With Most Water	C++	Medium
10	Regular Expression Matching	C++	Hard
9	Palindrome Number	C++, Java	Easy
8	String to Integer (atoi)	C++	Easy
7	Reverse Integer	C++	Easy
6	ZigZag Conversion	C++	Easy
5	Longest Palindromic Substring	C++	Medium
4	Median of Two Sorted Arrays	C++	Hard
3	Longest Substring Without Repeating Characters	C++	Medium
2	Add Two Numbers	C++	Medium
1	Two Sum	C++, Go	Easy

# LeetCode Shell

#	Title	Solution	Difficulty
4	Tenth Line	Bash	Easy
3	Transpose File	Bash	Medium
2	Valid Phone Numbers	Bash	Easy
1	Word Frequency	Bash	Medium

### LintCode

#	Title	Solution	Difficulty
1	Search in a big sorted array	Java	Medium
2	Search Range in Binary Search Tree	Java	Medium