1   CheatSheet: Leetcode For Code Interview   LANGUAGES

- PDF Link: cheatsheet-leetcode-A4.pdf, Category: languages

- Blog URL: `https://cheatsheet.dennyzhang.com/cheatsheet-leetcode-A4`

- Related posts: CheatSheet: System Design For Code Interview, #denny-cheatsheets

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1.1   Top 30 Classic Problems

Num	Problem	Category/Tag	Example
1	Reverse words in an sentence	#string	Leetcode: Reverse Words in a String II
2	Two pointers	#twosum, #twopointer	Leetcode: Two Sum
3	Sort one array based on another array	#sortbyfunction	Leetcode: Relative Sort Array
4	Int to string or string to int	#bitmanipulation	
5	Find a first failing version	#binarysearch	Leetcode: First Bad Version
6	Count islands in a binary matrix	#island, #dfs	Leetcode: Island Perimeter
7	Prefix search from a list of strings	#trie	Leetcode: Longest Word in Dictionary
8	Maximum subarray problem	#presum, #dynamicprogramming	Leetcode: Maximum Subarray
9	Edit distance of two strings	#dynamicprogramming	Leetcode: Edit Distance
10	Longest increasing subsequence	#dynamicprogramming	Leetcode: Longest Increasing Subsequenc
11		#minmax, #dynamicprogramming	Leetcode: Predict the Winner, Leetcode:
12	Build relationship among different sets	#unionfind	
13	Knapsack problem to maximize benefits	#knapsack	Leetcode: Coin Change
14	Find the next greater value	#monotone	Leetcode: Daily Temperatures
15	Meeting conflict	#interval	Leetcode: Meeting Rooms, Leetcode: Co
16	TopK problem	#heap	Leetcode: Top K Frequent Elements
17	Quick slow pointers	#twopointer	LintCode: Middle of Linked List
18	Binary Tree Level Order Traversal	#bfs	
19	Longest Common Subsequence	#dynamicprogramming, #string	
20	Longest subarray with maximum K 0s	#slidingwindow	Leetcode: Max Consecutive Ones III
21	Get all possibilities of subsets	#subset, #backtracking	Leetcode: Subsets II, Leetcode: Subsets
22	Combination from multiple segments	#combination, #backtracking	Leetcode: Letter Combinations of a Phor
23	Factor Combinations	#combination, #backtracking	Leetcode: Factor Combinations
24			Travelling salesman problem
25			Leetcode: Remove Duplicates from Sorte
26			Leetcode: Min Stack
27			Leetcode: LRU Cache
28			
29			
30			

https://cdn.dennyzhang.com/images/brain/denny$_{\text{leetcode.png}}$

1.2   Common Tips For Clean Code

Name	Summary
Caculate sum of a range quickly	#presum,Leetcode: Maximum Subarray
Move in four directions for a matrix	Leetcode: Sliding Puzzle
Variable Conversion	`float64(x_int/y_int)` != `float64(x_int)/float64(y_int)`, Leetcode: Maxi
Golang return a tuple	`func dfs(root *TreeNode, max *float64) (sum int, cnt int)`, Leetcode:
Split string by multiple seperator	Leetcode: Brace Expansion
Add a dummy tailing element to simplify code	Leetcode: Brace Expansion
Fast slow pointers	LintCode: Middle of Linked List
Deep copy an array	Leetcode: Combination Sum
Use array instead of hashmap, if possible	Leetcode: Number of Days in a Month
One pass instead of two pass	
Avoid unnecessary precheck	
Swiping line algorithm	
Control the order of dfs	Leetcode: Subsets II
Add a dummy head node for linked list	

1.3   Review Problems By Category

Num	Name	Summary
1	#binarytree	Review: Binary Tree Problems
2	#linkedlist	Review: Linked List Problems
3	#binarysearch	Review: Binary Search Problems
4	#dynamicprogramming	Review: Dynamic Programming Problems
5	#twopointer	Review: TwoPointers Problems
6	#trie	Review: Trie Tree Problems
7	#string	Review: String Problems
8	#stack	Review: Stack Problems
9	#bfs	Review: BFS Problems
10	#dfs	Review: DFS Problems
11	#array	Review: Array/SubArray Problems
12	#hashmap	Review: Hashmap Problems
13	#monotone	Review: Monotone Stack Or Monotone Queue Problems
14	#knapsack	Review: Knapsack Problems
15	#heap	Review: Heap Problems
16	#divideconquer	Review: Divide And Conquer Problems
17	#backtracking	Review: Backtracking Problems
18	#greedy	Review: Greedy Problems
19	#gcd	Review: gcd Problems
20	#interval	Review: Interval Problems
21	#combination	Review: Combinations and Permutations Problems
22	#sql	Review: SQL Problems
23	#sqrt	Review: sqrt Problems

1.4   Common Problems By Category

Name	Summary
Array	#twopointer, #presum, #sortbyfunction, #rotatelist, #twosum, #3sum
Array	#getmedian, #fibonacci, #moorevoting, #leftrightpass, #splitarray
String	#palindrome, #anagram, #worddistance, #lexicographical, #parentheses
String	#addtag, #email, #ipaddress
Dynamicprogramming	#frogjump, #houserobber, #coin, #paintfence
Dynamicprogramming	#knapsack, #pathsum, #minmax, #dp2order
Binary Search	#binarysearch
Binarytree	#treetraversal, #postorder, #child2parent
Stack	#calculator, #monotone
Recursive	#recursive
Hashmap	#limitedrange, #hashmap
Linkedlist	#nestedlist, #linkedlist
Graph	#island, #dfs, #bfs, #matrixtraversal, #dst2src
Graph	#dijkstra, #graph
Bitmanipulation	#bignumber, #baseconversion, #encoding, #twocomplement, #bitmanipulation
Greedy	#greedy
Divide And Conquer	#divideconquer, #countsort, #bucketsort
Interval	#calendar, #interval
Heap	#topk, #heap
Math	#sqrt, #triangle, #rectangle, #powerofn, #gcd, #prime, #math
Backtracking	#backtracking
Iterator	#iterator
Unionfind	#unionfind
Slidingwindow	#slidingwindow
Concurrency	#concurrency, #semaphore
SQL	#sql, CheatSheet: SQL & MySql
Reference	Link: List All Problems By Tags

1.5   More Resources