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		#slidingwindow	
18		#combination	
19		#backtracking	
20	Quick slow pointers	#twopointer	LintCode: Middle of Linked List
21			Travelling salesman problem
22			Leetcode: Course Schedule
23	Binary Tree Level Order Traversal	#bfs	
24	Longest Common Subsequence		
25			Leetcode: Remove Duplicates from Sorte
26			Leetcode: Min Stack
27			Leetcode: LRU Cache

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

1.2 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

1.3 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
One pass instead of two pass	
Avoid unnecessary precheck	
Variable Conversion	`float64(x_int/y_int)` != `float64(x_int)/float64(y_int)`, Leetcode: Maximum Avera
Golang return a tuple	`func dfs(root *TreeNode, max *float64) (sum int, cnt int)`, Leetcode: Maximum
Fast slow pointers	
Swiping line algorithm	

1.4 More Resources