## 1 CheatSheet: Common Code Problems & Follow-ups

INTERVIEW

Updated: November 26, 2019

- PDF Link: cheatsheet-followup-A4.pdf, Category: interview
- Blog URL: https://cheatsheet.dennyzhang.com/cheatsheet-followup-A4
- $\bullet$ Related posts: Cheat Sheet: System Design For Job Interview, #denny-cheat sheets

File me Issues or star this repo.

## $1.1\quad 50\ {\rm Typical\ Code\ Problems\ \&\ Follow-ups}$

| Num           | ${\rm Category/Tag}$            | Example   |
|---------------|---------------------------------|---|
| 1             | #atmostkdistinct, #string       | Substring with at most k distinct characters            |
| 2             | #twosum, $#$ array              | TwoSum Problems & Follow-Up                             |
| 3             | #maxsubarraysum, $#$ array      | Maximum subarray problem                                |
| 4             | #nextpermutation, #string       | Get the next permutation of an array                    |
| 5             | #editdistance, #string          | Word Distance & Follow-up                               |
| 6             | #baseconversion                 | Base Conversion Problems & Follow-Up                    |
| 7             | #presum, #array                 | Caculate sum of a range quickly                         |
| 8             | #fibonacci                      | Fibonacci Problems & Follow-Up                          |
| 9             | #mergelist                      | Merge K Sorted List Problems & Follow-up                |
| 10            | #sortedmatrix                   | Sorted 2D Matrix Problems & Follow-up                   |
| 11            | #endswith                       | Endswith Problems & Follow-up                           |
| 12            | #island, #dfs, #bfs, #unionfind | Island Problems & Follow-up                             |
| 13            | #matrixtraversal, #array        | Matrix Traversal & Follow-up                            |
| 14            | #rangesum                       | Caculate range sum of a slice                           |
| 15            | #reverseitem                    | Reverse List/String & Follow-up                         |
| 16            | #topk, #heap                    | Top k elements of a problem domain                      |
| 17            | #subsequence                    | Find Subsequence In Strings & Follow-up                 |
| 18            | #lis                            | Longest increasing subsequence & Follow-up              |
| 19            | #lcs                            | Longest common subsequence & Follow-up                  |
| 20            | #findduplicates                 | Find duplicates from a list & Follow-up                 |
| 21            | #coin                           | Coin Problems & Follow-Up                               |
| $\frac{1}{2}$ | #wiggle                         | Wiggle Array Problems & Follow-up                       |
| 23            | #groupelements                  | Seperate a list into several groups                     |
| 24            | #treetraversal, #binarytree     | Tree Traversal & Follow-up                              |
| 25            | #calculator                     | Calculator & Follow-up                                  |
| 26            | #meetingconflict                | Meeting Conflict Problems & Follow-up                   |
| 27            | #meetingpoint                   | Meeting Point Problems & Follow-up                      |
| 28            | #convertds                      | Convert Data Structure Problems & Follow-Up             |
| 29            | #expression                     | Expression Problems & Follow-Up                         |
| 30            | #frogjump                       | Frog Jump Game & Follow-up                              |
| 31            | #houserobber                    | House Robber & Follow-up                                |
| 32            | #ipaddress                      | IP Address Problems & Follow-Up                         |
| 33            | #paintfence                     | Paint Fence & Follow-up                                 |
| 34            | #poison                         | Poison Problems & Follow-up                             |
| 35            | #slidingpuzzle                  | Sliding Puzzle & Follow-up                              |
| 36            | #trappingrain                   | Trapping Rain & Follow-up                               |
| 37            | #parentheses                    | Parentheses problems & Follow-up                        |
| 38            | #buystock                       | Buystock Problems & Follow-Up                           |
| 39            | #countdistinctmoves             | Count of distinct moves Problems & Follow-Up            |
| 40            | #maxprofitwithcost              | Maximum profits with certain costs Problems & Follow-up |
| 41            | #constructstring                | Construct string Problems & Follow-up                   |
| 42            | #constructarray                 | Construct array Problems & Follow-up                    |
| 43            | #colograph                      | Coloring graph nodes Problems & Follow-up               |
| 44            | #graphchangecell                | Change cells of graph Problems & Follow-up              |
| 45            | #splitarray                     | Split Array Problems & Follow-up                        |
| 46            | #multiplechoices                | Multiple Choices At Each Step Problems & Follow-Up      |
| 47            | #rollinghash                    | Rolling Hash Problems & Follow-up                       |
| 48            | #lfu                            | LFU - Least Frequently Used Cache Problems & Follow-up  |
| 49            | #geometry                       | Geometry Problems & Follow-up                           |
| 50            | #reachpoint                     | Reach point Problems & Follow-Up                        |
| 51            | #getmedian                      | Get Median Problems & Follow-Up                         |
| OI            | # 80 median                     | Get Median i robiems & rohow-op                         |

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## 1.2 Review Problems By Category

| Num | Name                    | Summary   |
|-----|-------------------------|---|
| 1   | #binarytree             | Review: Binary Tree Problems                      |
| 2   | # linked list           | Review: Linked List Problems                      |
| 3   | #binarysearch           | Review: Binary Search Problems                    |
| 4   | #dynamic programming    | Review: Dynamic Programming Problems              |
| 5   | $\# { m twopointer}$    | Review: TwoPointers Problems                      |
| 6   | $\# { m trie}$          | Review: Trie Tree Problems                        |
| 7   | $\#\mathrm{string}$     | Review: String Problems                           |
| 8   | $\#\mathrm{stack}$      | Review: Stack Problems                            |
| 9   | #bfs                    | Review: BFS Problems                              |
| 10  | $\#\mathrm{dfs}$        | Review: DFS Problems                              |
| 11  | $\#\mathrm{array}$      | Review: Array/SubArray Problems                   |
| 12  | $\# \mathrm{hashmap}$   | Review: Hashmap Problems                          |
| 13  | $\# \mathrm{minmax}$    | Review: minmax Problems                           |
| 14  | $\# \mathrm{monotone}$  | Review: Monotone Stack Or Monotone Queue Problems |
| 15  | $\#\mathrm{knapsack}$   | Review: Knapsack Problems                         |
| 16  | #heap                   | Review: Heap Problems                             |
| 17  | #divideconquer          | Review: Divide And Conquer Problems               |
| 18  | # backtracking          | Review: Backtracking Problems                     |
| 19  | $\# \mathrm{unionfind}$ | Review: Union Find Problems                       |
| 20  | #greedy                 | Review: Greedy Problems                           |
| 21  | $\#\mathrm{gcd}$        | Review: GCD Problems                              |
| 22  | $\# { m interval}$      | Review: Interval Problems                         |
| 23  | # combination           | Review: Combinations and Permutations Problems    |
| 24  | $\#\mathrm{sql}$        | Review: SQL Problems                              |
| 25  | $\#\mathrm{sqrt}$       | Review: sqrt Problems                             |
| 26  | # bucketsort            | Review: Bucketsort Problems                       |
| 27  | $\# { m countsort}$     | Review: Countsort Problems                        |
| 28  | # topological sort      | Review: Topological Sort Problems                 |
| 29  | $\#\mathrm{random}$     | Review: Random Problems                           |
| 30  | #rectangle              | Review: Rectangle Problems                        |
| 31  | #multithread            | Review: Multi-threaded Problems                   |

## 1.3 More Resources

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Updated: November 26, 2019