Table 1

#	Title	Freq	Note	Follw up	
20/301	Remove invalid parenthesis	27	1. 20 (code) 2. 301 DFS除了多余的左右号数量，还需要一个open记录未闭合的括号数 (code) 3. 301只返回一个结果（可以不用DFS，只需要2scan） (code)	1. 301简化版：只用返回一个结果就好	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=447971&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311
273	Integer to English Words	24	1. (code) 2. -num也会overflow; array index should be int	考虑负数	
67	Add Binary	22	1. Add Binary (with base) (code) 2. Leetcode 2 (code) 3. Leetcode 445 (code)	1. followup是再给个base 参数 2. 2.Add Two Numbers 445. Add Two Numbers II 3. 面试官问了一下问什么不能把string转换成integer，相加后，再转换成二进制 String。想了一下，答道精度问题，如果输入的长度是100位，那么Long和 Integer都装不下。 4. 最后要求优化到使用位运算	
88	Merge Sorted Array	19	1. 88 (code) 2. sorted array x3 (code) 3. k arrays with heap (code)	1. 第一个array长度是第二个的两倍，但是后一半是空的 2. 三个sorted array 3. 跑了不少testcase；k个用heap或者mergesort 时间空间复杂度计算 4. 目标可能没有足够空间 5. merge 2 sorted iterators，最后输出的是一个新的iterator，有hasNext和next两个function 6. two infinite increasing integer stream 7. merge K sorted arrays, 唯一就是告诉你数据量可能很大	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=451088&page=1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=454615&page=1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
253	Meeting rooms II	19	1. Scan line (code) 2. ProrityQueue + Room Assign + In-room Merge (code) 3. 输入时间为字符串 (code) 4. 变种2 当时间不重合还要及时pop	1. 简化: Meeting Room 2. 变种: interval变种题，找出最大利润情况下，最合适的价格。比如接受价格范围 A[8, 10] B[6, 8] C[12, 14] 此时定价应该为16因为profit为16(A,B接受此价格)最大。Interval问题，sort+MinHeap 或者 扫描线 3. 变种：但是给的时间段是string 比如"10a - 10:30a" 难点是 时间的表达，10AM - 11：30AM 11：00AM to 1PM 怎么存。 4. *是统计每个房间使用过的时间段 譬如[1,5] [3,6] [7,9]就是[[1,5],[7,9]]和[3,6] 最后问了对每个房间的时间段做一个merge 譬如[1,5][5,7]就成了[1,7] 5. OODesign	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=449103&pid=4764808&page=1&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%255B3046%255D%255Bvalue%255D%3D2%26searchoption%255B3046%255D%255Btype%255D%3Dradio#pid4764808 http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=454116&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
349/350	Intersection of Two Arrays	18	1. 349 No duplicates, HashSet O(n+m) (code) 2. 350 HashMap O(n+m) (code) 3. 350 TwoPointer O(n+m) (code) 4. 350 Border+BinarySearch O(nlogm) (Border maybe out of index) (code)	1. 如果两个array分别是[1, 2, 3, 4, ... 10000]以及[1, 2, 4, 10001]，如果用两个指针遍历runtime是10000，事实上intersection只出现在前四个位置，怎么improve 2. 有重复元素和无重复元素版本 3. 一个数组大，一个数组小 4. 两个数组都很大 5. 这题和leetcode原题还不一样。这题要求输出所有inersection，不能去重。用two pointer 做可以搞定。最后她加我用二分法写一遍，然后我卡在加入重复这里。我给的思路是找lower bound，然后两个数组同时向前移动。貌似也不是她想要的，她最后给出的解答是每一次找到相同的元素，更新二分区间到找到的元素下一个到数组结尾。 6. https://articles.leetcode.com/here-is-phone-screening-question-from/	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=446041&extra=page%3D2%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311 http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=445037&extra=page%3D3%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311
560	Subarray Sum Equals K	18	1. HashMap (code) 2. TwoPointer (code)	1. follow up 如果都是正整数，space如何O(1) 2. 本来想讲先讲hashmap做法（允许有负数）然后再讲如果只有正数就可以two pointer的，结果讲完hashmap面试官就说ok你写吧 写完就问了下时空复杂度就完事了 3. 证明/解释一下为什么你能从O(n^2) 得到O(n)时间复杂度的解法	
76	Minimum Window Substring	16	1. 注意字母取值范围和数组下标转换，两个Integer是否相等要用equals (code)	如果允许一个字母不一样 str1 = acedbg, str2 = xcbe，那么返回cedb	
658	Find K Closest Elements	16	1. k最近点 PQ+QuickSelect (code)	1. 变种：找离某一点最近的k个点 2. followup是用pq的time complexity是nlogn，能否improve	
23	Merge k Sorted Lists	15	1. 21 (code) 2. 23 list maybe null (code) 3. Iterator (code) 4. List<Integer> iterator 自带的iter不能用因为pq要比较 (code)	1. merge之后实现一个iterator class，实现hasNext()和next() 2. 简化版为21 3. 另一版本为List<Integer>（参考281）	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=454287&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
56	Merge Intervals	15	1. 56 (code) 2. Two arrays of Intervals merge (code) 3. Two arrays of Intervals Intersection (code)	1. followup是如果有一个非常长怎么办 2. 变种:given two sorted arrays of intervals, return the intersection. ex. a = [(1 5), (8, 10), (15 20)] sorted b = [(2 6), (45 100)] sorted return [(2, 5)] 我用了两个pointer指着a和b然后用了几个case对比 follow up:如何improve? 举了说很像merge 2 sorted array的问题，说可以用类似方法 然后就解释了一长一短两个array的时候可以用遍历短array元素，同时用binary search 查询长array元素。时间是O(SlogL)的 3. 跟原题不一样的是他给了我两个list of intervals 这两个list里面interval都已经各自按照start time sorted了	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=440741&extra=page%3D4%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoptio%20n%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311 https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=451849&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=452608&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline

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173	Binary Search Tree Iterator	15	1. 173 (code) 2. With parent instead of stack O(1) space (code)	1. 自行定义何为iterator http://www.1point3acres.com/bbs/thread-142642-1-1.html 2. follow up 是不让用stack，node会加一个parent； 3. preorder postorder	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=446675&extra=page%3D2%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311
211	Add and Search Word - Data structure design	14	1. Trie (code)	follow up是虽然这个已经是optimal的方法，有没有可能让search更快一点，表示在insert的时候就把"."也当做一个node加进去，比如如果insert "cat"，那么第一 层就是 "c","."，第二层是"a","." l "a","."	
297	Serialize and Deserialize Binary Tree	14	1. (code)	follow up是如果是 n-children怎么办 follow up问了exception的问题和input validate的问题	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=454205&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
15	3Sum	13	1. Two pointer (code) 2. HashMap (code)	1.数组内元素可以重复使用。问了时间复杂度和空间复杂度，以及这个问题最多可以有多少解。 2. 一个数可以加它本身，然后不让用DP 3. 不用sort怎么做，时间复杂度	http://www.1point3acres.com/bbs/thread-445869-1-1.html
125	Valid Palindrome	13	1. 看清要比较的是数字还是字母 Two Pointer (code)		
34	Find First and Last Position of Element in Sorted Array	12		给你一个array [1, 1, 3, 4, 4, 5, 6]是sorted的，返回target出现的次数，O(lgn)解法 给一个排好序的数列和一个目标值，返回不等于目标值的数的个数	
158	Read N Characters Given Read4 II - Call multiple times	12	1. (code) 2. Read & Write 循环队列 (code)	1. 简化版Read4 2. 变体 next4000() 返回一个大小0-4000的list，做一个nextn(n) 3. 在原来的read基础上加了一个write (实现circular queue，有read和write两个函数)	https://www.1point3acres.com/bbs/thread-450202-1-1.html https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=452852&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3090%5D%5Bvalue%5D%3D2%26searchoption%5B3090%5D%5Btype%5D%3Dradio%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=453930&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
215	Kth Largest Element in an Array	12	1. 215 (code) 2. ThirdLargest (code)	找数组第三大元素 要欧N	
426	Convert Binary Search Tree to Sorted Doubly Linked List	12	1. 426 (code)	follow-up是inplace linked list to bst 要求depth最小小 https://www.geeksforgeeks.org/in-place-conversion-of-sorted-dll-to-balanced-bst/ 最后头尾相连	
438	Find All Anagrams in a String	12	1. (code)	简化版返回第一个的下标	
33	Search in Rotated Sorted Array	11	1. 33 注意你的r的取值真假，和是否超范围 (code) 2. 81 (code)	1.存在重复 T->81	
236	Lowest Common Ancestor of a Binary Tree	11	1. DFS或一个不在树里 O(n) (code) 2. General Tree，非二叉 (code) 3. Parent node + Set O(h) (code) 4. Path + BinarySearch O(n^2 + klogn) 5. Doubling Algorithm O(nlogn + klogn) 过难了 6. Tarjan 吹牛逼	1. 如果每个node包含parent指针 (向上parent直到root，用set找重复路径) 2. 假设node的值不重复，但node没有parent pointer。给出了O(n)的解，n是binary tree中node的数量。(a.HashMap储存parent关系 b.遍历binary tree，找出2个node到root的path然后比较 c. O(n^2)预处理找出所有path或者O(nlogn)倍增，然后BinarySearch找相同前缀) 3. follow up 是如果有一个treenode 不在树里应该怎么做 (helper函数+Single返回值);之后的follow up是设计一个存储结构，使得搜索只需要O(lg(n))时间 (a.O(n^2)预处理找出所有path然后BinarySearch b.O(nlogn)倍增); 4. 找一个general树的LCA	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=449396&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311 http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=450087&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%255B3046%255D%255Bvalue%255D%3D2%26searchoption%255B3046%255D%255Btype%255D%3Dradio%26orderby%3Ddateline&page=1
238	Product of Array Except Self	11	1. 计算前缀后缀 (code) 2. 用除法，特殊判断0 (code) 3. 注意overflow，注意0	要求用除法写，处理有零的各种情况	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=454205&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline

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311	Sparse Matrix Multiplication	11	1. VectorDot HashMap (code) 2. VectorDot TwoPointer (code) 3. VectorDot BinarySearch (code)	稀疏向量点积 1. 优化: hash -> array ->BS -> 两根指针 第一个部分:如何处理和表达这些原始数据。 第二部分是完成运算。 Follow-up: 比较细节的优化，点积代码中怎么减少不必要的条件判断。假设ia是 向量A的iterator，ib是向量B的iterator，while (ia < lenA && ib < lenB)，如果循环内部只增加了ib，那么(ia < lenA) 这个条件判断就是不必要的。while循环内部，再加循环确保ia ib都增加过。 2. 一道点乘题，题目大概是这样的 <1,1,2,2, 3, 3, 3> * <4, 4, 4, 4, 5, 5, 7>问怎么优化存储。	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=442192&extra=page%3D2%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoptio%20n%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311 http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=446247&extra=page%3D2%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311 http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=444212&extra=page%3D2%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311 http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=448639&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311 http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=448998&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311 https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=199709&fromuid=174107
680	Valid Palindrome II	11	1. 680 (code) 2. Followup DP	增加/删除/替换操作均认为是一次动作，最少几次动作可以使之成为回文字符串	
29	Divide Two Integers	10	1. BinarySearch (code)	1. 给出n和d, 求n / d和n % d。当时想了2个思路，一个O(n/d)的暴力破解，一个O(log(n))的binary search。都写出代码了，面试官让分析一下哪个快，假设n完全随机且d在[1, n]之间随机 2. 不能用和%，刚开始写了个循环一个一个加，然后问有没有什么办法 improve time complexity。就用了divide and conquer.	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=449396&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311 https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=453233&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=453606&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
31	Next Permutation	10	1. Next Permutation (code) 2. Previous Permutation is just the reverse	1. next large number 2. Next permutation && Previous permutation	
65	Valid Number	10	1.(code)	1. 要跟面试官讨论哪些情形算valid 2. 没有e 加号 空格	
98	Validate Binary Search Tree	10	1. Inorder (code) 2. Preorder (code) 3. Postorder 需要维护一个MinMax区间 4. balanced 左右子树高度相差最大为1	1. follow up: preorder和postorder行不行 2. follow-up: validate balanced tree 和 validate balanced BST	
283	Move Zeroes	10	1. (code)	1. Follow up 1 - 输出零的数量 2. 如何保证非零数的顺序 3. with least write	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=448392&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311 https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=450202&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=454195&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
304	Range Sum Query 2D - Immutable	10	1. (code)	要求是组数很大不能放入内存。然后给的函数输入很奇怪 是以矩形最左下角元素作为坐标原点设定一个坐标轴，矩形位于第二象限，然后给的是两个点坐标，分别代表矩形左下角那个点和右上角那个点。	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=454626&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
314	Binary Tree Vertical Order Traversal	10	1. (code)	map+BFS就是O(n)	
341	Flatten Nested List Iterator	10	1. Stack (code) 2. DFS 3. 339 w/ 变种 (code)	1. 每个node是有个next，还有个child。 2. Leetcode 339 给了一个嵌套list比如 [1,5,[3,4],2,7,[5,[8],3]] 要求输出字符串：1+5+(3+4)* 2+2+7+(5+(8)*3+3)*2 这个input的嵌套结构让自己设计	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=451593&pid=4836154&page=1&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%255B3046%255D%255Bvalue%255D%3D2%26searchoption%255B3046%255D%255Btype%255D%3Dradio%26orderby%3Ddateline#pid4836154
543	Diameter of Binary Tree	10	1. Binary Tree (code) 2. General Tree (code)	1. 长度的定义是边的个数，不是node的个数 2. Follow-up: find the longest path in a normal tree (multiple children)	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=447848&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311 http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=449966&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%255B3046%255D%255Bvalue%255D%3D2%26searchoption%255B3046%255D%255Btype%255D%3Dradio%26orderby%3Ddateline&page=2

#	Title	Freq	Note	Follw up	
689	Maximum Sum of 3 Non-Overlapping Subarrays	10	1. SumK for-loop (code)	1. 分两部分问，先问只有一个subarray求最大和(直接扫一遍array就行)，然后是3个subarray和，先让写brute-force，然后再慢慢优化。 2.比如一个数组[1,5,2,-2,3,4]，k = 3 它让求两个interval的和的最大值，问题是，不是这两个interval分别长k，而是加起来为k……比如k=3就是分成（1，2）长度的interval（0，3这种不算）也就是说这道题答案是（5）+（3+4）= 12 3. follow up, 找三个pairs of numbers that have largest sum, 这三个pairs互不重合. ex: [2,1,4,2,1,2,3,5,8] return [4,2], [2,3], [5,8]. 在国人大哥千方百计提示下才想出了DP solution，也不懂是不是optimal. 方法是用两个dp array: dp1[i] 储存i-th element 之前最大的pair 值， dp2[i]储存i-th element之后最大的pair值。然后再找中间的pair. 假设中间的pair的位置是j 和 j+1, sum = dp1[j] + dp2[j+1]+array[j] + array[j+1].	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=448234&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311 https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=454032&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
124	Binary Tree Maximum Path Sum	9	1. (code)	1. 我没问清每个Node是不是都是正数，结果按照正数做的，然后面试官给了个全是负数的例子，我就懵了没想出来怎么解。以前做过但是好久没看已经忘了………后来补了一个限制条件简化题目，就是如果node是负数，可以跳过不加这个node，然后应该是做出来了 2. follow up是max subtree sum 和 sub-structure的sum 3. follow up是打印出path	
133	Clone Graph	9	1. 133 (code) 2. 设计数据结构 a. List<Node> b. Map<Node, Set<Node>> c.Matrix[][]	1. 写两种能够表示directed graph的数据结构，不保证connected，每个node的值不保证unique。用写的数据结构做LC窃伞霰。 2. 复制一个联通的有向图，先Recursive地写了一遍，然后问能不能iterative地写，用了个queue又写了一遍非递归的。问了我为什么要用map不用set，然后问了时间空间复杂度，node和edge都要考虑	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=445998&extra=page%3D2%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311
282	Expression Add Operators	9	1. 282 (code) 2. 简化版 (code)	简化版：给一个数字字符串在中间任意位置加正负号使和等于target值	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=454098&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=454304&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
621	Task scheduler	9	1. 原题 贪心 (code) 2. 原题 PriorityQueue (code) 3. 变种 HashMap (code) 4. FollowUp Queue or HashMap or Queue+HashMap (code)	1. 输出方案 2. 面试的题目中，执行task的顺序是给定的，cooling down time只存在于相同种类 task之间，不同种类之间不存在cooling down time。例子:[1,1,2,3,1,3,4] cooling down time = 2 output: 1 _ _ 1 2 3 1 _ 3 4 3. 问了task种类数量 >> cooldown 和 cooldown >> task的种类数量 两种不同情况下的空间最优的做法，分别写了实现。	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=447655&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311 https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=451229&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%255B3046%255D%255Bvalue%255D%3D2%26searchoption%255B3046%255D%255Btype%255D%3Dradio%26orderby%3Ddateline&page=2
	Check Words Order	9	1. (code) 2. ["ab", "a"] 非范围内的字母?	Input: Words = ['a', 'aa', 'cb', 'bc'] Order = ['a', 'c', 'b'] Output: True Input: Words = ['a', 'aa', 'cb', 'bc'] Order = ['c', 'a', 'b'] Output: False (cb -> a -> aa -> bc) 意思就是给一组words和一个character的order list，请问words里面是不是按照 order list里面的order排序。 Return True or False	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=448239&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311 http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=442443&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%20%3D311 https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=451022&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
91	Decode Ways	8	1. (code)	1.为什么要用DP？（因为是一个一个字符decode的，有递推的关系，而且明显有最优子结构） 2. 可以用递归吗？（递归可以求出解，但是是指数级复杂度的，然而如果用记忆化搜索的话可以降到和DP一样的复杂度） 3. 如果出现连续两个零会怎样？（答案肯定是零。然后加了一行代码，遇到连续两个零直接返回）	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=454347&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
121	Best Time to Buy and Sell Stock	8	1. 121 (code) 2. 122 (code) 3. 123 (code)	股票题加两道followup 122 123	

146	LRU Cache	8	1. DLL + HashMap (code)	1. 饭店老板接收电话订餐，怎么接收电话号码 删除电话号码 拿出第一个电话号码
				2. 设计一一个class，实现以下abstract:
				void put(Key k, Value, v); // 不存在添加，存在覆盖
				Key get(Key k); // 不存在返回null
				void delete(Key k); // 删除key及其value
				Key last(); // 返回在此之前所有put,get操作中，最后一个access的Key。
				比如: put(a,b) put(c,d) get(a) delete(c) ; last(): a
					https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=449982&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline

239	Sliding Window Maximum	8	1. Deque可以不用class直接存index (code)	1. window长度从0开始到0结束 2. Median Leetcode480	
257	Binary Tree Paths	8	1. (code)		
269	Alien Dictionary	8	1. (code)	两个direction，一个是给order看words是不是按顺序，一个是给words推order	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=454116&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
10	Regular Expression Matching	7	1. DP (code) 2. DFS (code)	1. 不考虑星号 2. 楼主想用dp，但是他坚持要先写 dfs / recurrsion 3. regex变成"+", "*"（我的妈，上来我一看题就知道要挂…我用dp写的，但是天竺小哥说最好用recursion..)	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=454761&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline

#	Title	Freq	Note	Follw up	
42	Trapping Rain Water	7	1. Stack (code) 2. Two Scan (code) 3. One Scan Two Pointer (code) 4. 变体1三种方法都比较好写，清空stack或者bar变成0 5. 变体2方法2/3比较好写，直接乘上宽度	1. 变体(-1 表示漏水， V存的水都能漏下) [3, 1, -1, 2, 1, 2] 结果为1， [2,1,2] subarray 可以存水 [3, 1, 1, 2, 1, 2] 结果为3， subarray [3, 1, 1, 2] [2,1,2] 都可以存水 2. 主要的变化就是每个bar有不同的宽度	
387	First Unique Character in a String	7		和原题不同的是面试官要求返回字符，以及unique char不存在的情况怎么处理。	
398	Random Pick Index	7	1. HashMap O(n) O(n) (code) 2. Reservoir Sampling O(n) O(1) (code)	1. reservoir sampling: n个数里面随机选k个数，要求概率相等。 2. 变种：给一个vector，求最大元素的index。如果有多个最大元素，均匀地随机返回任意一一个index。比比如:[1, 2, 3, 3]，随机返回2，3，每个的概率是50%。解法:扫 一遍记录最大值和index，返回的时候用随机数rand()——下（只记录最大值的所有index即可）	
896	Monotonic Array	7	1. One pass (code)	followup是 1. 问了我的做法的time & space complexity 2. 如果这个vector特别大（entries非常多）我们不能一次性把它pass进去，应该怎么办？给了一个helper function叫 int nextNum();	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=450813&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
3/395	Longest Substring with At Least K Repeating Characters	6	1. 3 (code) 2. 395 (code)	LC340 LC3 和 LC395，刚开始LC3是用 hashtable做的，后来follow up让写LC395，又用hashmap重写了一遍，分析了 时间和空间复杂度。 变型:大概就是给一个bool数组e.g. [F,T,F,T,T,F,T,T,F]，你有k个把F变成T的机会，怎样变才能使某一节(连续)T长度最长。 (487 Max Consecutive Ones II)	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=450807&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
138	Copy List with Random Pointer	6	1. O(1) extra space (code) 2. O(n) extra space with Map (code) 3. Map也是值引用		
139	Word Break	6	1. HashSet 2. 变种 同样用DP 原来维护能否拼成改成维护最小拼接次数	140 变种题，求最小合理分割次数 最后一道简单的Dictionary中能不能组成target word，最后follow up关于dictionary很大的情况怎么办，比如用cache。	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=454205&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
278	First bad version	6		follow up非常谜，问我怎么检查输入是valid，如果输入不valid怎么返回通知用户，说了可以返回error code或者exception，然后让我写抛出exception 给一个数组里面是commit number，分别给good commit 的number和bug commit的number还提供了一个boolean isBug(int commitNumber)说这个function的cost很大	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=450281&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=450416&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
300	Longest Increasing Subsequence	6	1. O(nlogn) BinarySearch (code) 2. Return list.size() - 1	简化版：最长加一子序列长度，[10, -1, 6, 0, 1, 3]，返回3，子序列为[-1, 0, 1]	
380	Insert Delete GetRandom O(1)	6	1.if (map.get(val).isEmpty()) map.remove(val); 2. Swapee != val 3. 381 with duplicates (code)	1. 嘴贱问如果有重复元素要不要根据加入次数作为weight返回，面试官看起来没有想过这个问题，还有时间，于是讨论了思路，该用了list存所有index，写了一下代码，感觉应该没有问题 2. 变形：给一些数字，Implement randomPop()来randomly pop中间的一个数字	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=447045&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311 https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=450037&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
523	Continuous Subarray Sum	6	1.(code)		
1	Two Sum	5		1. For a list of pairs {[x0, y0], [x1, y1], [x2, y2], ... , [xn, yn]} and an integer K, the goal is to find a pair of pairs {[xi, yi], [xj, yj]} where xi+xj=K and yi+yj=K 2. dict two sum	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=454761&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
50	Pow(x, n)	5	1. 50 (code)	1. 因为面试官把return type写成了int，竟然忘记检查power是不是负数，面试官给了一个负数的test case，argue了一下这种情况就返回0行不行，面试官说行之后添了一行code。 2. 简化版，保证x和n都是正整数。 3. power of n 变种，限制使用 + - * / % 4. iterative & recursive两种方法，实际中哪个运行较快	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=448245&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311 https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=451229&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%255B3046%255D%255Bvalue%255D%3D2%26searchoption%255B3046%255D%255Btype%255D%3Dradio%26sortid%3D311%26orderby%3Ddateline&page=2
199	Binary Tree Right Side View	5	1. (code)	multple children tree instead of binary tree	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=453602&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
206	Reverse Linked List	5	1. 206 recursive(x2) & iterate (code) 2. 92 recursive & iterate (code)	1. 一开始给的recursive的解法，面试官说这样会消耗额外stack空间，让再给一个non-recursive不消耗额外空间的解法，给完了分析一下complexity就完事儿了 2. Implemnt两种办法print singly linked list backwords, 分析时间空间复杂度 3. follow up 92 4. Input: 1->2->3->4->5->NULL Output: 1->4->3->2->5->NULL	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=450037&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=454304&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
785	Is Graph Bipartite?	5			http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=443070&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoptio%20n%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311

#	Title	Freq	Note	Follw up	
		5	1. (code) 2. 如果当前的工资到这一档就到头了，需要break	给出一一个2D数组代表tax bracket[[10000,.1],[8000,.2],[6000,.3],[null, .4]]，求 effective tax 给你一些list，里面存的是关于工资收税的信息。比如{{1000, 0.1}, {2000, 0.2}, {null, 0.4}}. 还给了员工的salary。让你根据这个list中的信息来计算员工最后要多交多少税	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=449908&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%20%3D311 http://www.1point3acres.com/bbs/forum.php?%20mod=viewthread&tid=438990&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%20%3D311
		5	O(m+n) O(mlogn)两种 solution，还可以结合	矩阵都是0和1，每行都排序了，找出至少含一个1的最左列 等概率返回一个1的位置	
		5	1. (code) 2. Input1 ? Input01 3. Input ? Input0 4. Input1 ? Inputt	str comparator: 给2个含字母和数字string，比较哪个大，比如"a1b2" > "a1b1", "aa234" > "ba1"... 给两个字符串，写一个新的comparator。字符串里可以包含各种字符。像什么中文字符也可能出现。 比如 photo1, photo10, photo2 这样的，经过这个comparator排序以后应该变成 photo1，photo2，photo10。也就是要按照数字的value从小到大顺序来排。	http://www.1point3acres.com/bbs/thread-435395-1-1.html http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=443458&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%20%3D311
347/692	Top K Frequent Words	4		1. klogk 2. QuickSelect O(n) 3. BucketSort O(n)	
43	Multiply Strings	4			
46	Permutation	4	1. StringPermutation (code)	1. 更像46，不过给的input是给一个string 2. 字符串get all permutations	
94	Binary Tree Inorder Traversal	4			
143	Reorder List	4	1. Split -> reverse -> merge		
161	One Edit Distance	4			
200	Number of Islands	4	1. 原题 2. lake 搜到边界 -1 3. distinct 搜索顺序一样 记录相对坐标 用set	BFS+DFS 1. number of lake (surronded by land) 2. Leetcode 694	
224	Basic Calculator	4	1. 227 +-*/ (code)	简化 没有空格、括号 难版 Basic Calculator II 有点像蠡☑尔布其，不过只有+和*和数字，不考虑其他的，我用的stack的方法做，问时间空间复杂度，然后follow up问能不能把空间复杂度降到O(1)	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=450281&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
270	Closest Binary Search Tree Value	4		问了下时空复杂度 时间复杂度我讲了一下如果树极度不平衡会退化成O(n) 变种：第一题给了一个bst和一个（lower, higher），求在这个range里面的所有node的和。比较直接	
791	Custom Sort String	4	1. (code)		http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=446830&extra=page%3D2%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311
12/13	Integer to Roman/Roman to Integer	4			
	friend recommendation	4	1. Set->Map->Bucket	1. getMutualFriends() 给你一一个getfriends的function然后写找共同好友 2. suggest() 排序好友的好友，谁共同好友多就放前面面。	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=452567&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
17	Letter Combinations of a Phone Number	3			
18	4Sum	3		1. sum=0, 4sum且可以重复用数字。解法:num1 + num2 + num3 + num4=0 ==>num1+num2=-num3-num4 2. follow up问说有没有办法更少时间 在面试官提示下想出先preprocessing生出 lookup table就能达到 O(n^2) 3. 不能用sort，输出index值可以重复，overflow如何处理	
49	Group Anagrams	3			
75	Sort colors	3		排序数组 统计每个数字出现的次数[1(200000次),2(300000次)] 我用binary search做的 不知道有没有更优解	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=450105&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline https://www.1point3acres.com/bbs/forum.php?%20mod=viewthread&tid=444351&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%20%3D311
162	Find Peak Element	3	1. (code)	Find the local minima in a given array 会有peak 和 valley 两种情况	
207	Course Schedule	3	1. TopoSort(BFS) (code) 2. DFS (code)	给一系列task和对应的dependencies（某个task能执行当且仅当所有dependencies都已经被执行），输出一个可能的task执行序列（拓扑排序）。 简化版：给一个行程的机票，但是顺序是乱的，要求按路线顺序输出比如有机票A->B, C->D, E->C, B->E 就要输出 A B E C D，输入一定是类似链表的并且valid的，不会构成图，可以说非常简单了。。。	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=447798&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%255B3046%255D%255Bvalue%255D%3D2%26searchoption%255B3046%255D%255Btype%255D%3Dradio&page=1 http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=453827&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
285	Inorder Successor in BST	3	1. DFS (code)		
336	Palindrome Pairs	3			
446	Arithmetic Slices II - Subsequence	3	1. (code)	1. 简化版 413 subarrays https://www.geeksforgeeks.org/longest-arithmetic-progression-dp-35/	

#	Title	Freq	Note	Follw up	
463	Island Perimeter	3		多个小岛求最大周长	
468	Validate IP Address	3			
528	Random Pick with Weight	3	1. PrefixSum + BinarySearch O(nlogn) (Code) 2. TreeMap O(nlogn) (Code) 3. sum和random的边界需要注意，即+1或者-1	followup(我感觉也算不上follow up)是如果调用这个函数很多次，要怎么优化……我就说那可以用binary search，	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=447807&extra=page%3D1%26filter%3Dsortid%26sortid%3D192%26sortid%3D192 http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=449394&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311
636	Exclusive Time of Functions	3			https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=451452&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
674	Longest Continuous Increasing Subsequence	3	1. 674 (code) 2. Gap One (code) 3. Gap K (code)	follow up1 要求subsequence中前后两个元素最大间隔为1 follow up2 要求subsequence中前后两个元素最大间隔为k follow up3 允许一个break Example: Input: [7, 3, 2, 3, 5, 6, 4, 2, 1] Output: 5 - [2, 3, 5, 6, 4], [6, 4] is the break OR [3, 2, 3, 5, 6], [3,2] is the break 要有一个变量判断当前状态是否break过, 还有breaking index是另一个subarray的开始	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=452048&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
688	Knight Probability in Chessboard	3	1. Dp 2. BFS or 双向BFS	然后还有时间，说再问一个题，只说思路即可，问了一个Horse在棋盘上的dp，用bottom up dp做，面试官说convinced，问了复杂度，就没写。 求马走几步可以到达特定目的地，棋盘无限大，中间有些位置不能走。 无限大棋盘 给两个格子 一些格子上有障碍物不能走 问两格子的最短路（注意无解情况）	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=447045&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311 http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=446777&extra=page%3D2%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311 https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=450423&pid=4801897&page=1&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%255B3046%255D%255Bvalue%255D%3D2%26searchoption%255B3046%255D%255Btype%255D%3Dradio%26orderby%3Ddateline#pid4801897
	Subset Min Plus Max Equals K	3	1. = k (code) 2. <= k (code) 3. 多线程，每个个线程处理一部分数字作为结尾的情况，然后二分找对应的开头，接着twopointer	1. 一个排好序的array，找出所有满足的最大值和最小值相加为定值k的subset的数量。 2. follow-up: 找出max+min <= k 的子集的数量。因为答案中有计算2^n，所以问了这个怎么实现比较快。 3. 最后一个follow-up是问如果这个array非常长的时候，怎么用多线程来实现算法，完全没思路，三哥虽然说没关系，但是已经跪了。	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=449156&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311 http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=449141&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311
	convert double linkedlist to BST	3	1. (code)	问了了三种解法，从o(nlgn)time到o(n)time o(n)space到o(n)time o(1)space https://www.geeksforgeeks.org/in-place-conversion-of-sorted-dll-to-balanced-bst/ 这是第一种和第三种解法 第二种就是用array记下，占用o(n)空间.	
26	Remove Duplicates from Sorted Array	2			
28	Implement strStr()	2	1. Brute-force 2. KMP		
39	Combination Sum	2			
53	Maximum Subarray	2			
57	Insert Interval	2		1. 先贴一条红胶带 再贴一数组按照起始点sorted蓝胶带 都用interval来表示 问是否会有没遮住的红胶带部分露出来?	
71	Simplify Path	2		但是要输入current path	
78	Subsets	2			
79	Word Search	2		212	
101	Symmetric Tree	2			
102	Binary Tree Level Order Traversal	2		简化版：BST中每层中找最大value的Node	
103	Binary Tree Zigzag Level Order Traversal	2			
127	Word Ladder	2		word ladder 简化版，比较开放的问题，一开始只需要true or false，后来打印一个有效路径，还讨论了打印所有路径 126 word list 自己定义	
129	Sum Root to Leaf Numbers	2		Follow up: 172 437	
136	Single Number	2	1. Single Number (code) 2. Single Number II (code) 3. Single Number III (code)	变体：求一个数据流里面是不是包含出现奇数次的字母（字母是动态加进来的） 1. 三种解法 2. 现在除了一个数之外其他都重复三次，找single number。 3. 还是single number的升级，现在要找出两个single number。	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=446802&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311
145	Binary Tree Postorder Traversal	2	1. Recursive 2. Iterate Stack	要求implement hasNext() 和 next() 两个方法。	
151	Reverse Words in a String	2		翻转句子中的词，标点留在原位 统一回复一下关于第二题，和我口有些区别，因为有标点 比如: Hi, nice to see you. 变为 you, see to nice Hi.	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=450832&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline

#	Title	Freq	Note	Follw up	
277	Find the Celebrity	2		改成机器人打架的，给个api可以判断两个机器人谁打得赢谁，求最强的机器人之类的，本质其实就是一个数组里面找最大或者最小。	
286	Walls and Gates	2		变形：给你一个board，上面有三种类型的点，第一种是空位，第二种是obstacle，第三种是猫。如果你是老鼠，你想离猫越远越好，应该待在哪个/些点上。输出全部这些点。	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=446810&extra=page%3D2%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311
295	Find Median from Data Stream	2			
329	Longest Increasing Path in a Matrix	2	1. (code)	简化：Maximum consucutive path in a matrix 1,2,3 5,8,9 4,7,6 Maximum: 6-7-8-9 return 4 分析复杂度	
339	Nested List Weight Sum	2	1. (code)		
346	Moving Average from Data Stream	2			https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=450243&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
348	Design Tic-Tac-Toe	2		要自己判断是不是 valid move	
392	Is Subsequence	2	1.String.indexOf(char, StartIndex)		https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=450818&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
430	Flatten a Multilevel Doubly Linked List	2	1. (code)		
443	String Compression	2		变种： aaaabbbcdaaa and a4b3cd a3abbbcccc and ab3c4 看string是否相同	
452	Minimum Number of Arrows to Burst Balloons	2			
639	Decode Ways II	2	1. (code)		
708	Insert into a Cyclic Sorted List	2			
721	Accounts Merge	2			https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=454275&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
	Maze	2	https://www.geeksforgeeks.org/rat-in-a-maze-backtracking-2/	简单迷宫题，由0，1组成的二维grid，问能否从左上走到右下 follow 1: 输出所有路径，backtracking follow 2: 输出最短路径，BFS，口述思路 给你一个maze，0代表路，1代表墙，a-z代表钥匙，A-Z代表门 (a只能开A，b只能开B，以此类推)，输出从左上角走到右下角的最短路，只有有了钥匙才能开门。（用26位二进制数，每一位代表某个钥匙是否已经取得）	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=453675&page=1#pid4909667
	Flip coin	2		抛硬币，直到抛出三个连续的正面就停止，求一个所需要抛的次数的期望。	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=449908&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
	大整数加法乘法	2		1. 设计一个BigInteger class 可以计算任意位数的正整数加和乘，要求写出constructor， add function， multiply function。 2. 让输出一个数的factorial结果，其实就是批了一层皮的大卫数乘法在string上操作	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=451849&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
		2		BST求最长的increasing sequence的长长度，主要是这个path是要increasing的。 所以，你要知道是从左边过来还是右边过来。 比如说根节点的话，能构成的必然是其左边节点和右节点。 换句话说，root.left.right + root.left + root 是不行的。 原因是root.left.right 比root.left 大， 所以整个path就不是increasing followup: binary tree	https://www.1point3acres.com/bbs/forum.php?%20mod=viewthread&tid=443830&extra=page%3D1%26filter%3Dsortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%20%3D311
116/117	Populating Next Right Pointers in Each Node	1			http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=448453&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311
14	Longest Common Prefix	1			
22	Generate Parentheses	1			
32	Longest Valid Parentheses	1			
36	Valid Sudoku	1		问了一下如果是个超大的数组怎么改代码（我说就把size啥的改了。。？	
38	Count and Say	1			
51	N-Queens	1			
54	Spiral Matrix	1			
73	Set Matrix Zeroes	1			
84	Largest Rectangle in Histogram	1			
99	Recover Binary Search Tree	1			
106	Construct Binary Tree from Inorder and Postorder Traversal	1			
110	Balanced Binary Tree	1			

#	Title	Freq	Note	Follw up	
117	Populating Next Right Pointers in Each Node II	1		将相同level的节点从左至右通过next连起来，最右边连到下一层的第一个 (BFS 秒)	
148	Sort List	1			
152	Maximum Product Subarray	1			
171	Excel Sheet Column Number	1			
189	Rotate Array	1			
209	Minimum Size Subarray Sum	1			
226	Invert Binary Tree	1			
251	Flatten 2D Vector	1		直接输出vector就行了	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=452048&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
261	Graph Valid Tree	1	1. 261 BFS + DFS (code) 2. 3. 拓扑排序只能用在有向无环图中（可以用来在有向图中找环）	变种：题目是给一个Array of Nodes，每个node有left和right的child，求问这些node能不能组成一个二叉树。	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=447855&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311
266	Palindrome Permutation	1		267	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=451022&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
271	Encode and Decode Strings	1		followup:怎么判断decode出来是否正确	
272	Closest Binary Search Tree Value II	1			
312	Burst Balloons	1			https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=451873&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
317	Shortest Distance from All Buildings	1		简化版:找出离某空地最近的距离的房子	
319	Bulb Switcher	1			
328	Odd Even Linked List	1			
378	Kth Smallest Element in a Sorted Matrix	1			
399	Evaluate Division	1			
402	Remove K Digits	1			
403	Frog Jump	1			
408	Valid Word Abbreviation	1			
432	All O`one Data Structure	1			
460	LFU Cache	1			
493	Reverse Pairs	1			
498	Diagonal Traverse	1		按副对角线输出矩阵元素。比如 [[1,2,3] [4,5,6] [7,8,9]] 输出 1,2,4,3,5,7,6,8,9	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=452037&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
548	Split Array with Equal Sum	1			
572	Subtree of Another Tree	1			
642	Design Search Autocomplete System	1		给一个String字典和它们出现的次数，设计类似typehead，要求对每一个请求的prefix String能返前5个最高频的String，按频率从高到低排序。lz用trie，在建trie过程中在trie node中预存5个最高频解决。followup是如果字典超级大怎么办 -- sharding	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=451452&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
647	Palindromic Substrings	1			https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=453229&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
731	My Calendar II	1			
852	Peak Index in a Mountain Array	1		Find target	
857	Minimum Cost to Hire K Workers	1			
862	Shortest Subarray with Sum at Least K	1			
	csv parser	1		Encoder是给一个string array [abc, d"ef, fd;f], 要求encode成一个string, 规则如下 [abc, cde] -> abc;cde [a"bc, cde] -> a""bc;cde. [a;bc, cde] -> "a;bc";cde ["a;bc, cde] -> """a;bc";cde Follow up是写decoder，就是给string return string array	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=447036&extra=page%3D2%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311

#	Title	Freq	Note	Follw up	
		1		插入链表的第五个Node之后的位置，输入输出链表都是自己定义，问了一下edge case，还有时间复杂度	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=448239&pid=4740415&page=1&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%255B3046%255D%255Bvalue%255D%3D2%26searchoption%255B3046%255D%255Btype%255D%3Dradio#pid4740415
	American Football	1		美式足球，每场可以得2，3，6或者1分，而且得了6分之后才能得1分。给一个分数求多少种取得的方法。注意：如果是5分，[2, 3]和[3, 2]是不同的方式。不算难的dp，掐着时间写完，面试官说他自己看看code的对错就好，自己目测应该是做出来了。	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=448245&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311
		1	https://www.cnblogs.com/EdwardLiu/p/6551606.html	find lowest common ancestor among deepest nodes in k-nary tree 前几年的经典题	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=450169&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
	Font Size	1		给一个矩形和一个字字符串，找到最大的fontsize使得这个矩形能装下这个字符串	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=450243&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline https://www.1point3acres.com/bbs/thread-226722-1-1.html
		1		就是给一个字符串，中间是有 [name] 这样需要替换的key。有一个gettoken() API可以调用，比如gettoken('name')=Steve，要求返回替换了key以后的字符串。lz 问了一些clarification，说了一下思路，然后意识到一个edge case就是 [name[company]] 这样的 input 怎么处理。	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=452588&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
		1		数的二进制表示是否为回文	
		1		给一段html，查询其中一个节点，并且按要求print位置信息。比如说 <html> <body><node><node><body> <node><node> <html>查询node的话打印两条字字符串，0:html->0:body->0:node和0:html->1:node	
		1		第二题给一串括号，用树的形式表示出来	
		1		Range Minimum Query	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=454347&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
		1		匹配俩个list的内容是否一样比如list: [h,e] -> [l, l, o] -> null 和 [h,e,l] -> [l, o] -> null return true注意data可以为null, length可以为0:[h,e] -> [l, l, o] -> [] -> [] -> null 和 [h,e,l] -> [l, o] -> null return true	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=454769&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
		1		给一个string, for example: a---adbbbc --> +++++d+++c, 如果dash的头尾字母相同则全变成加号，连续的相同字母也变成加号。	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=437032&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311
		1		有点像solve equationa=b+cb=cc=2 条件:只有+号，左边只有一个变量，一定有一个c=2这种右边只有数字的 我用的拓扑排序	https://www.1point3acres.com/bbs/forum.php?%20mod=viewthread&tid=436344&extra=page%3D3%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%20%3D311
		1		无序双向链，要求去重，只留下最后一次出现的	
	IncreasingTriplet Subsequence	1			https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=441112&extra=page%3D3%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoptio%20n%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311
		1		给个container，升序排列，有一个get()，随机出最左或最右，还有个isEmpty()，要求升序输出所有元素	https://www.1point3acres.com/bbs/forum.php?%20mod=viewthread&tid=439208&extra=page%3D3%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%20%3D311
		1		给出一个array of treenode，判断array里面的节点是否属于同一棵树并且包含这棵树的所有节点。	http://www.1point3acres.com/bbs/forum.php?%20mod=viewthread&tid=439911&extra=page%3D3%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%20%3D311
		1		有一本书，书上每一页页可以跳到第n页。问给你一个开始的页，能否到书的最后一页。然后问我什么情况用bfs什么情况用dfs	
		1		给一个string，要求每个character的neighbor不能是自己。比如aaabb要变成 ababa。	
		1		两个string代表两个数，有可能是小数或者整数，都是valid的正数。相加。"12345.45435""1234567"or"4242.1345" "0.134" (补零?)	
		1		給兩個string 回傳lexicographical smaller string，但連續的数字看成一一個数字比較，如a99bb, a111aa => a99bba007, a7 => 兩者視為相等，回傳任意一個	https://www.1point3acres.com/bbs/forum.php?%20mod=viewthread&tid=441637&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%20%3D311
		1		简单的array题，在有序数列列里里输出所有比当前数大n的最小的数，follow up: 拓展了有重复的数	
		1		给一一个string: "facebook"。想象把这个string里里里的每一一个char拆开，重新拼成新的string。现在给我们一个string，请需要多少个"facebook" string 才能把这个词拼出来。例如，"cookcake" 需要两个"facebook" string。	

#	Title	Freq	Note	Follw up	
	Preorder Traversal to BST	1		https://www.geeksforgeeks.org/construct-bst-from-given-preorder-traversa/ https://www.geeksforgeeks.org/construct-bst-from-given-preorder-traversal-set-2/	http://www.1point3acres.com/bbs/thread-446442-1-1.html
	matrix triangle filp	1		matrix triangle flip: 以对角线 反转： input: [1, 2] [3, 4] output: [1, 3] [2, 4]	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=447308&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311
		1		已知一系string id tuples，输出去重以后的结果。例如输入是：(a, b, c)，(d, e)，(c, g)，(g, h)，输出应该是 (a, b, c, g, h)，(d, e) —— (a, b, c) 和 (c, g) 里面都出现c，所以应该合并起来 Union-Find	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=447990&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311
		1		在一个2D平面上的点集，找是否有平行于xy轴的长方形，一开始想了个O(n^3)的傻逼做法。然后后来发现O(n^2)枚举对角线上的两个端点然后计算出另外两个端点之后O(1)判断点在不在点集里就行。Followup是取消了平行于xy轴的限制，有平方做法但是非常tricky。还是枚举一根对角线上的两个点，然后检查是否有其他的不重合两个点他们连线的中点是在选中对角线的中点上并且跟选中对角线长度一致，这个可以通过预处理+哈希把每次检查复杂度做到O(1)，预处理和枚举都是O(n^2)，这是最后五分钟在提醒之下才想出来的，没有给出代码实现但是把算法讲清楚了也提了几个需要处理的corner case，小哥说了OK。个人很不喜欢这种对一堆数据进行哈希的题，不考察任何算法思路纯看脑洞也没有递进的推导思维。	http://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=448453&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311
		1		Coding: 假定有一个一个坐标系，输入是一些列坐标点，求这些坐标点里能构成的长方形中，面积最小的那个的面积是多少。讨论了大概5分钟，然后面试官提到如果要你找到所有的长方形怎么办。马上想起 先选第一个点，再找和第一个点Y值相同的第二个点，再找和第二个点X值相同的第三个点，如果这三个点都存在计算出第四个点的坐标，判断这个点在不在给的输入中即可。如果判断在不在,? 一个HashSet开始的时候存所有点的string representation eg x#y，计算第四个点的时候 看第四个点对应的string representation在不在HashSet即可。同时用一个 Integer 记录最小面积Time Complexity: O(n^3)Space Complexity: O(n)	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=450889&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
		1		二位字符矩阵，从左上到右下打印每一条路 第一题的例子: [['a', 'b', 'c'], ['d', 'e', 'f']] 输出 a->b->c->f a->b->e->f a->d->e->f	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=450832&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
		1		个n = 0 (0, 0) n = 1 (1, 0) n = 2 (0, 1) n = 3 (-1, 0) n = 4 (0, -1) n = 5 (2, 0) n = 6 (1, 1) n = 7 (0, 2) … 以此类推 问给一个n, 坐标是多少 当时只有3分钟的时候他问的我这道题，我当场说有规律，每一圈一个pattern，但是每一圈的长度不同，具体哪里不同当场没说对，就结束了	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=450962&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
		1		给俩长度相等的integer array,称为depart和arrive,return代表i日从A地起飞到B地的机票售价,return代表从i日从B地回A地的机票售价，求一对日期(i,j)使得depart[i] + return[j]最小 （0<= i <= j < n, n是array长度)	
		1		一个int array，求其中集合数量，满足条件：子集中元素彼此异或运算的结果是质数。这个问题应该是hackerrank上的prime xor那道题，大家可以去看看，一开始看这道题真的容易懵逼	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=451873&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
		1		一堆点，求两个点连成的线所构成的最大斜率，输出这个斜率和构成斜率的点，不考虑x1==x2的情况	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=451873&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
		1		给一个image的class，有getPixel, setPixel之类的api，实现一个函数，把一个subimage拷贝到一个给定的位置。	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=453230&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
		1		给一个已经排好序的数组，返回每个元素的平方，并且也是排好序的数组	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=454229&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline
		1		求一个binary tree 里离一个给定node距离小于K的所有节点的集合，这个也是简单到想笑，主要就是创建一个hash table存下parent node，然后用BFS就好了	https://www.1point3acres.com/bbs/forum.php?mod=viewthread&tid=454615&extra=page%3D1%26filter%3Dsortid%26sortid%3D311%26searchoption%5B3046%5D%5Bvalue%5D%3D2%26searchoption%5B3046%5D%5Btype%5D%3Dradio%26sortid%3D311%26orderby%3Ddateline