

AMAZON -

1. 20 MCQs - OS, DS ALGO, DBMS, APTI (Indiabix for quant) (20 mins)
2. Coding Questions (70 mins)
 - Print Size of the maximum and minimum sized connected component in a graph.
 - <https://www.hackerrank.com/challenges/greedy-florist>
 - Given number n and an array of non decreasing n integers representing the size of memory partitions. Given a file size , Get the memory partition size that best fits the given file.
Ex: n=8
array=2 2 5 6 9 12 13 15
File size=7
Ans=9;
 - Enter numbers in a n*n square matrix A starting from 1 to n*n(n-square) in spiral order. Right => down => left => up. Now given an integer k print locations (i,j) such that $A[i][j] \% k = 0$. printing should be done in increasing order of $A[i][j]$ values
Similar question : <http://www.spoj.com/problems/PRINTSPIRAL/>
 - Remove nodes with odd value in linked list
 - Return the most frequent string in reverse lexicographical order from an array of strings.
 - You are given an array of N integers and K. You need to print the sum of integers in window of size K, starting it from [0,k-1] and sliding the window by one element.
 - Magic strings, A string can consist only of characters{a,e,i,o,u} with the condition that ;.

Condition 1: 'a' can only be followed by 'e'

Condition 2: 'e' can only be followed by 'i' or 'o'

Condition 3: 'i' can only be followed by 'a', 'e', 'o', or 'u'

Condition 4: 'o' can only be followed by 'i' or 'u'

Condition 5: 'u' can only be followed by 'a'

Input : N length of string????, Output : number of such strings possible.

Will generating all possible strings work??

Is the answer $5 * \text{pow}(2, n-1)$?

My approach: make a dp of $5 \times n$. $\text{Dp}[i][j]$ will denote j length strings ending with character $v[i]$; $v = \{a, e, i, o, u\}$. Eg: $\text{Dp}['a'][j] = \text{Dp}['i'][j-1] + \text{Dp}['u'][j-1]$; Is this correct? yes.:)

<http://www.geeksforgeeks.org/count-number-binary-strings-without-consecutive-1s/>
(similar approach)

Nope. Solve using dp :) $O(n)$

We can solve this in $O(5^n)$. Just write a recursive function with parameters i(position) and last characters. Based on last character, add the possibilities and solve for the sub problem. $O(5^n)$.

- 1) Can you please clarify the question? All are standard questions, what is there to clarify ? Most online solutions are finding longest palindromic substring in single string. This one asks for two strings?

- 2) Given diagonally opposite points of two rectangles, find whether they overlap or not. **k same** ? No nothing
- 3) <http://www.geeksforgeeks.org/clone-linked-list-next-arbit-pointer-set-2>
- 4) <http://www.geeksforgeeks.org/given-a-sequence-of-words-print-all-anagrams-together-set-2/>
- 5) <http://www.geeksforgeeks.org/minimum-cost-make-two-strings-identical/>

<http://www.geeksforgeeks.org/lexicographic-rank-of-a-string/>

<http://www.geeksforgeeks.org/josephus-problem-set-1-a-on-solution/>

<http://www.geeksforgeeks.org/reverse-words-in-a-given-string/>

<http://www.practice.geeksforgeeks.org/problem-page.php?pid=384>

1. Return row,col in a spiral matrix of size $n \times n$ of elements divisible by k
2. Simple binary search problem
3. Given random array, find two elements with sum closest to zero. If multiple elements, find the one which has lowest minimum value.
<http://www.geeksforgeeks.org/two-elements-whose-sum-is-closest-to-zero/>
4. Given a 2D matrix, find the Kth element in spiral order.

15. In OOP, which of the following is used to achieve runtime po... + 1.0

16. Which of the following is an inorder traversal of a tree who... + 1.0

17. If T is a binary search tree with the smaller elements in t... + 1.0

18. Hash tables can contribute to an efficient average-case solu... + 1.0

19. A circular linked list is used to represent a Queue. A singl... + 1.0

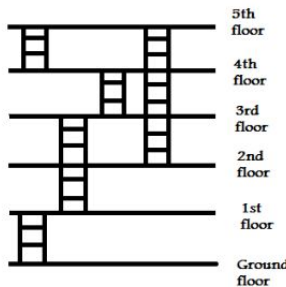
20. An operating system uses FIFO policy for page replacement. I... + 1.0

2 Programming Questions

21. Ladders + 100.0

22. Walls + 100.0

Explanation



We can reach 1st floor using only 1 ladder.
2nd floor can be reached using 2 ladders.
3rd floor can be reached using 2 ladders.
4th floor can be reached using 3 ladders.
5th floor can be reached using 3 ladders.

Note: Your code should be able to convert the sample input into the sample output. However, this is not enough to pass the challenge, because the code will be run on multiple test cases. Therefore, your code must solve this problem statement.

Time Limit: 2.0 sec(s) for each input file
Memory Limit: 256 MB
Source Limit: 1024 KB

Marking Scheme: Marks are awarded if any testcase passes

Allowed Languages: Bash, C, C++, C++14, Clojure, C#, D, Erlang, F#, Go, Groovy, Haskell, Java, Java 8, JavaScript(Rhino), JavaScript(Node.js), Julia, Kotlin, Lua, Objective-C, OCaml, Octave, Pascal, Perl, PHP, Python, Python 3, Racket, Ruby, Rust, Scala, Swift, Swift-4.1, Visual Basic

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2 Programming Questions	
21. Ladders	+ 100.0
22. Walls	+ 100.0

number of ladders required to reach given floor.
Initially, you are on the ground floor.

Input Format:

The first line contains an integer T , indicating the number of test cases.

For each test case:

The first line contains an integer N , indicating number of floors in the building.

Next line contains N space separated positive integers which denote the length of ladder at each floor (First integer corresponds to ladder length on ground floor, second integer corresponds to ladder length on first floor and so on).

Next line contains an integer Q , indicating number of questions.

Following Q lines contain an integer each, denoting the floor number for which answer is to be computed.

Output Format:

For each question, print the least number of ladders required required to reach given floor.

Answer for each question should come in a new line.

Input Constraints

$$1 \leq T \leq 10$$

$$1 \leq N, Q \leq 10^5$$

$$1 \leq \text{ladder length} \leq N$$

$$1 \leq \text{query value} \leq N$$

Sample Input

```
1
5
1 2 3 1 1
5
1
2
3
4
5
```

Sample Output

```
1
2
2
3
3
```



<https://www.geeksforgeeks.org/minimum-number-platforms-required-railwaybus-station/> (Same question - 100 marks)

<https://www.geeksforgeeks.org/count-integral-points-inside-a-triangle/> (For a polygon instead of a triangle - 100 marks)

20 MCQ (5 marks each) - OOPS(4-5), Networks(5-6), OS(3-4), Data Structures (5), Algorithms (2-3)

String Parsing Question. ([URLify](#))

2. Infix to Postfix

3. Postfix Evaluate

4. Alien Dictionary

5. Sort numbers when rank of each number in decimal system is changed. (Could anyone please elaborate the question or give some link

of this question on some website) as per my understanding when each number is

mapped to another number for eg. 1 has rank

4, 2 has 9, etc and then you have to sort the modified number system.

6. Inversions in array.

7. Longest Common Subsequence.

8. Longest increasing Subsequence What order solution passed +1 Same Doubt

9. <https://www.geeksforgeeks.org/dice-throw-dp-30/>

10. Longest decreasing subsequence.

11. MEAN, MEDIAN, MODE OF AN ARRAY .

12 You are given a String S made of lowercase English Alphabets. Find the length of smallest substring with maximum number of distinct characters.

$1 \leq |S| \leq 10^5$, where $|S|$ denotes the length of the String.

<https://www.geeksforgeeks.org/length-smallest-sub-string-consisting-maximum-distinct-characters/>

13. <https://www.geeksforgeeks.org/count-possible-decodings-given-digit-sequence/>

14. Replace every element with the smallest element on the right side

15 Right, Left, Top, Bottom view of the tree.

please mention the platform ?

String Parsing Question. ([URLliffy](#))

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Infix evaluation (using 2 stacks)

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2 questions from this list: [Amazon Online Assessment Questions list](#)

<https://www.geeksforgeeks.org/merge-two-sorted-linked-lists/>

<https://www.geeksforgeeks.org/a-linked-list-with-next-and-arbit-pointer/>

Favorite Genre (<https://leetcode.com/discuss/interview-question/373006>)

Merge two sorted lists

Search for a Tree in another tree

Critical Connections (leetcode DFS) (Being asked a lot)

count distinct pairs with a target sum

<https://www.geeksforgeeks.org/merge-two-sorted-linked-lists/>

Q2) <https://www.geeksforgeeks.org/clone-linked-list-next-arbit-pointer-set-2/>

Q3)

<https://www.geeksforgeeks.org/search-in-row-wise-and-column-wise-sorted-matrix/>

(Brute force was passing all the test cases)

Q4) <https://leetcode.com/problems/two-sum/>

Q5) <https://leetcode.com/problems/>

All Debugging questions from this list Only (This link Contains Some Chinese Language Also Translate it to English)

<https://www.evernote.com/client/snv?noteGuid=d0047552-4cff-4c29-b305-b8aa2d33f364¬eKey=636f07d57c2eb3ea&var=b&sn=https%3A%2F%2Fwww.evernote.com%2Fshare%2Fs683%2Fsh%2Fd0047552-4cff-4c29-b305-b8aa2d33f364%2F636f07d57c2eb3ea&exp=ENB3907&title=Amazon%2BOA1%2BDebugging>

<https://www.geeksforgeeks.org/merge-two-sorted-linked-lists/>

Q2) <https://www.geeksforgeeks.org/clone-linked-list-next-arbit-pointer-set-2/>

Q3)

<https://www.geeksforgeeks.org/search-in-row-wise-and-column-wise-sorted-matrix/>

(Brute force was passing all the test cases)

Q4) <https://leetcode.com/problems/two-sum/>

Q5) <https://leetcode.com/problems//>

<https://imgur.com/a/BQ3jDAg>