

AYUSH RANJAN

Given an array of permutation of n numbers calculate the no. of tuples (i,j,k,l,m) such that  $i < j < k < l < m$  and  $a[i] < a[k] < a[j] < a[m] < a[l]$ .

Simple intro , told he would give only one question and have to implement the code in last 10 mins

Omkar

You are given four strings whose characters are all English letters.

You may permute the strings however you like.

You wish to create a trie using the permuted strings.

You want to permute the strings such that the number of nodes in the trie created are as few as possible.

(Interviewer cared about the answer, and didn't care if I was communicating with him or not.)

Aradhya

same for me as well

Unique

Same as omkar ques

1111

Aabb

Abcd

Abaa

abbb

**Vishesh Jain:**

Given a string, deduce the value of the boolean expression represented by it.

$\text{Expr}[i] == 't'$  represent True

$\text{Expr}[i] == 'f'$  represent False

$!(\text{Expr}[i])$  represent 'NOT' of  $\text{Expr}[i]$

$\&(\text{Expr}[i], \text{Expr}[i+1], \dots, \text{Expr}[k])$  represents that you have to perform an 'AND' operation on  $\text{Expr}[i], \text{Expr}[i+1], \dots, \text{Expr}[k]$

$!(\text{Expr}[i], \text{Expr}[i+1], \dots, \text{Expr}[k])$  represents that you have to perform an 'OR' operation on  $\text{Expr}[i], \text{Expr}[i+1], \dots, \text{Expr}[k]$

$^(\text{Expr}[i], \text{Expr}[i+1], \dots, \text{Expr}[k])$  represents that you have to perform a 'XOR' operation on  $\text{Expr}[i], \text{Expr}[i+1], \dots, \text{Expr}[k]$

Example:      Input:  $!(^(\&(t,f,t,t),!(t,f)))$

Output: False

**Time Complexity :  $O(n)$  is must**

(Interviewer cared about the answer and didn't care if I was communicating with him or not.)

### **Akshat Porwal**

Given array 'A' of n numbers and a number T find segment (i..j) of A such that

$|A_i + A_{i+1} + \dots + A_j - T|$  is minimum.

You have to answer this for M different values of T.

Also he asked about CS fundamentals like DBMS, SQL commands, difference between binary search tree and sorted array. He intended to ask questions on Operating System, computer networks and Web development but I refused that these topics are not in my course.

Tanushree

Round 1: There are n items with cost given in an array and you have x rupees. You have 2 options. You can either buy 1 item by paying its full price or you can buy k items and pay the price of the most expensive item. You have to maximize the number of items bought. How many maximum items can you buy with x rupees?

Input: 2 4 1 3

k=2 x=7

Output: 4

Round 2: Given an  $m \times n$  matrix, return whether a square submatrix with sum of the matrix elements equal to k exists. All the elements in the matrix are positive.

I gave an  $m \times n \log(\min(m,n))$  approach using binary search but the interviewer wasn't satisfied. He wanted an  $m \times n$  solution.

