Cvent Interview Experience

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1 Round 1: Aptitude Test

- Number of Questions: 30
- Time: 1 Hour
- The questions were based on C/C++/Java, DBMS, OOPS, SQL Queries, and basic Aptitude.
- The time given was more than enough. Most of the questions were easy, just basic knowledge is enough. There was no negative marking in this round.

2 Round 2: Coding Test

- Time: 1 Hour
- Platform: Codility

Problem Statement Given a rectangular grid containing houses built in some cells, find the number of empty cells at a distance of at most K to every house.

A retail store chain wants to expand into a new neighborhood. To maximize the number of clients, the new branch should be at a distance of no more than K from all the houses in the neighborhood. A is a matrix of size N x M, representing the neighborhood as a rectangular grid, in which each cell is either an integer 0 (an empty plot) or 1 (a house). The distance between two cells is calculated as the minimum number of cell borders (regardless of whether the cells on the way are empty or occupied) that one has to cross to move from the source to the target cell (without moving through corners). A store can be only built on an empty plot. How many suitable locations are there?

For example, given K = 2 and matrix A = [[0, 0, 0, 0], [0, 0, 1, 0], [1, 0, 0, 1]], houses are located in cells with coordinates (2, 3), (3, 1) and (3, 4). We can build a new store on two empty plots that are close enough to all the houses. The first possible empty plot is located at (3, 2). The distance to the first house at (2,3) is 2, the distance to the second house at (3, 1) is 1, and the third house

at (3, 4) is at a distance of 2. The second possible empty plot is located at (3, 3). The distances to the first, second and third houses are respectively, 1, 2 and 1.

A[1] = 0000, A[2] = 0010, A[3] = 1001. Cells at a distance of less than or equal to 2 from all houses are marked in yellow.

Write a function:

def solution(K, A)

which, given a positive integer K and matrix A of size N x M, returns the number of empty plots that are close enough to all the houses.

Examples:

Given K = 2 and A = [[0, 0, 0, 0], [0, 0, 1, 0], [1, 0, 0, 1]], the function should return 2, as explained above.

Given K = 1 and A = [[0, 1], [0, 0]], the function should return 2. We can build a store on empty plots at (1, 1) and (2, 2).

A[1] = 01, A[2] = 00. Cells at a distance of less than or equal to 1 from all houses are marked in yellow.

Given K = 4 and A = [[0, 0, 0, 1], [0, 1, 0, 0], [0, 0, 1, 0], [1, 0, 0, 0], [0, 0, 0, 0]], the function should return 8. Stores can be built on the following plots: (1, 1), (1, 2), (2, 1), (2, 3), (3, 2), (3, 4), (4, 3) and (4, 4). A[1] = 0001, A[2] = 0100, A[3] = 0010, A[4] = 1000, A[5] = 0000. Cells at distance of less than or equal to 4 from all houses are marked in yellow.

Write an efficient algorithm for the following assumptions:

· K is an integer within the range [1..800];

· N and M are integers within the range [2..400];

· each element of matrix A is an integer within the range [0..1];

· there is at least one house.

3 Technical Interview Round 1

3.1 question 1

- Find element in rotated sorted array.

3.2 question 2

- Reverse a LinkedList in groups of size K.

3.3 question 3

- Find all unique triplets with given sum.

4 Technical Interview Round 2

4.1 Implement a Phone Book

- I needed to implement a phone book, where names and the contact numbers need to be stored.
- I also needed to implement the search and delete feature
- There can exist multiple names with different contact numbers.
- Firstly, I gave a straightforward approach using hashtable, but he wasn't satisfied.
- Then, I gave solution using binary search tree but again he wasn't satisfied.
- Then finally I gave Trie based Solution which he asked me to code.
- Once I was done coding, He asked me to execute the code on codility platform.

4.2 Puzzles

4.2.1 Puzzle 1

- https://www.geeksforgeeks.org/puzzle-1-how-to-measure-45-minutes-using-two-identical-wires/

4.2.2 Puzzle 2

- https://www.geeksforgeeks.org/puzzle-18-torch-and-bridge/

4.3 Project Discussion

- He asked me to describe two of my projects.
- Some cross questions were asked.

5 CCAT: Criteria Cognitive Aptitude Test

It was divided in two sections:

5.1 Aptitude Test(22 Minutes, 50 MCQs)

- It covered basic verbal, math and logic, and spatial reasoning.
- No negative marking. Try to attempt as many questions as possible.

5.2 Personality Test(no time limit, 140 MCQs)

- Questions will repeat, so do not lie while answering.