

### **Sai Vardhan**

Started with project then wanted to ask Networking, DBMS, OS qns, but i said that they haven't been taught yet, asked some core qns of cse like differences between hashing and encryption. Then went to DSA qn, was asked to code in the last 10 mins, after discussing soln

### **Question**

Given a string of non zero integers. Find the number of ways to place zero or more commas so that the resulting list of integers is in non decreasing order.

### **Example**

**Input:** "573"

**Output:** 2

573

5,73

5,7,3

57,3

### **Kaushal Raj**

No intro, the interviewer asked some DSA Questions, networking system, DBMS, How browser work, Cloud system.

Algorithm question:

N villages are situated on a straight line. The villages are labeled from 1 to N.

You are given the population -  $P[i]$ - and location  $L[i]$  of each village. You need to construct K post offices on K different villages such that the average time taken by a person to go to the nearest post office - is minimized.

4

1 2 3 7

1 1 1 1

$k = 2$

### **Mihir Sahu:**

Asked OS, DBMS, Networking questions first (around 3-5, probably had more)

Q) A catches B if the Manhattan distance between A and B  $\leq 1$ .

A is at  $(0, 0)$ , B at  $(x, y)$  initially. ( $|x|, |y| < 1000$  and grid is infinite)

B moves in response to A's movement according to given mapping (input):

eg. if  $\text{dir}['N'] = 'S'$  then B moves south when A moves north

'd' and  $\text{dir}[d]$  belong to the set {'N', 'S', 'E', 'W'}. (Note that the mapping may be many-to-one)

Find the minimum time for A to catch B or report it's impossible.

## **Suyog**

Asked about projects then, various ques related to web dev, some basic ques related to oops.

Q) You are given a array arr and interval size k;

For each element  $arr[i]$ ,  $temp[i] = \max(\text{abs}(\text{max(interval)} - arr[i]) - \text{abs}(\text{min(interval)} - arr[i]))$  for each interval  $arr[i]$  lies in.

Return the sum of all  $temp[i]$ .

E.g-  $arr=\{1,2,3\}$ ,  $k=2$

intervals are: {1,2} and {2,3}

1 lies in {1,2} for which  $(\text{abs}(\text{max(interval)} - arr[i]) - \text{abs}(\text{min(interval)} - arr[i])) = 1$   
 $temp[0] = 1$

2 lies in {1,2} for which  $(\text{abs}(\text{max(interval)} - arr[i]) - \text{abs}(\text{min(interval)} - arr[i])) = -1$

2 also lies in {2,3} for which  $(\text{abs}(\text{max(interval)} - arr[i]) - \text{abs}(\text{min(interval)} - arr[i])) = 1$   
 $temp[1] = \max(-1, 1) = 1$ ;

3 lies in {2,3} for which  $(\text{abs}(\text{max(interval)} - arr[i]) - \text{abs}(\text{min(interval)} - arr[i])) = -1$   
 $temp[2] = -1$

$\text{sum} = temp[0] + temp[1] + temp[2] = 1 + 1 - 1 = 1$ ;

## **Shubham Ghodke**

### **Round 1:**

Q1. You are given an array of integers and you can delete any subarray(contiguous) in which all elements are alike, if you delete a subarray of size k, then your score would increase by  $k^2$ . Perform operations on the array till no elements remain. calculate the maximum score you can obtain.

Arr = {1,2,2,1,1,2,2}

ans=21

Delete 1,1 ans=ans+2\*2

Delete 2,2,2,2 ans=ans+4\*4

Delete 1 ans=ans+1\*1

ans=4+16+1=21

Q2. Worst case and best case complexity of quicksort, how would you optimize your approach(calculate median). What could be the methods to calculate median?

### **Round 2:**

Some real world problems like how would you manage the traffic in a server, how would you manage a database, some discussions about projects and one easy puzzle.

More of an interactive session than an interview.