Santosh Kumar Roy (MCA 2022-24)

(C/C++ Profile)

There were 2 profiles: C/C++ and Java.

Online assessment (60 min)

- There were 2 types of question sets for C/C++ profile.
    a) First set contains 3 coding questions(easy/medium).
    b) Second contains 45 MCQ from core subject (C, CPP, Operating System, Computer Network) And Aptitude.

    I was allotted the set with 45 MCQ

Interview -1

- Interview started with introduction
- Then she asked some question from projects.
- Then she direct came to DSA and asked two questions.
    - **Tokenize the string.**
        - Make a string tokenizer. A string with its length and token character will be given, now return a 2D array which contains substring of that string separated by that character and stored at different rows of the array.
        - Ex- “I am good” and here character is space,
            - so now return
              I
              Am
              good

              This should be in a 2D array but No Extra Space Should be used

        (Hint- Use an array of pointers where each pointer in the array point to variable length string).

    - **Find Unique Binary String**
        - Given an array of string nums containing n unique binary strings each of length n, return a binary string of length n that does not appear in nums. If there are multiple answers you may return any of them.
        - Example
            - Input: nums=[“01”,”10”]
            - Output: “11”
            - Here “00” is also be the correct answer you can return any of these two.

- And she asked some question on pointers.
  dangling pointers, create dynamic 2D array and also write code to delete the memory of dynamically allocated 2D array.

Interview -2

- He introduces himself and directly comes to DSA question.
  - **Compressions**
    - Given a string str. you have to compress it using rule
      - Append the consecutive repeating character count of that character then append the character itself.
      - Character followed by the count of the occurrence of that in the string till that index.
    - Example: “AAAABBCBBDDDDD”.
    - Output: “4A4 2B2 1C1 2B4 5D5”.
  - **Encode string**: https://leetcode.com/problems/decode-string/description/

- asked how would you allocate memory using malloc.
  then the follow up question was if I want to allocate N number of memory block then (Answer: using **calloc**()), write the code for this.
- Then he asked if you have to change the number of memory blocks which you have already created using **calloc**() (Answer: using **realloc**()).
  and he asked some question on **realloc**().
- And at the end he asked some question on pointer (ex- const int *a, int *(const a)) and gave me 4 output-based questions in C language, all based on pointers.

He was done with his questions and asked me if I had any, then I asked regarding the work culture of Ciena, and the tech on which he is working currently.

Verdict: Selected for Internship + FTE offer

14 students were given an internship + FTE offer.

Tips:

- Study C and CPP in depth and have a good grip on DSA will help you to crack the interview. Also read the core subjects (OS, CN, OOPs).

All The Best!