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MSC 2021-2023

TRUMINDS INTERVIEW EXPERIENCE (INTERNSHIP + FTE)

ROUND-1: ONLINE ASSESSMENT (120 MINS) ------18 MCQ+ 1 coding question

1. 18 MCQ questions include: output type questions, oops concept, CS fundamentals, Java, OS, aptitude, time complexity.

2. CODING QUESTION

    Strange Range Sum:

    You are given with N ranges of the form [L,R](inclusive).The ith range of the form L[i],R[i]. You are also given with an integer K.

    Let $f(i1,i2,.....iN)=(i1|i2|...iK) XOR (iK+1 \& iK+2,...\&iN)$ where |denotes bitwise OR,& denotes bitwise AND.

    TASK:- determine the sum:

    R[1]   R[2] …   R[N]

    I1=L[1]i2=L[2].......iN=L[N]

     Example: N=3,ranges=[[2,3],[3,4],[1,2]],K=2

      You need to determine:-

       f(2,3,1)+f(2,3,2)+f(2,4,1)+f(2,4,2)+f(3,3,1)+f(3,3,2)+f(3,4,1)+f(3,4,2)

       f(2,3,1)=(2|3)XOR 1 =2

        f(2,3,2)=(2|3)XOR 2=1

        f(2,4,1)=(2|4)XOR 1=7………………sum all outputs will result 28.

ROUND 2------Technical Round (1 hour)

Virtual interview on Microsoft Teams

1. Introduction

2. Define virtual memory. How data stored in virtual memory.

3.   Difference between Process and Thread. How threads communicate?

4.   Linux command to find virtual memory occupied by the process?

5.   What are sockets? Their types? Uses Of them?

6.   What is TCP and UDP….types of sockets used by them.

7.   How packets are transferred in TCP. What those packets contain.

8.   What are IP address and MAC address. Their Difference?

9.   How Client and Server communicate.

10. What are pointers?

11. He showed me one example based on pointer I need to give him the output.

12. What are static variables? What happens when we create an object static type.

13. He showed me an example based on static instance of a class ,I need to give him an output of the program.

14. What are constructors?

15. Implement Linked List .He stopped me in between and said to implement the code to insert a node at the starting of a linked list. I implemented the code in ideone plat form.

16. WAP to print the frequency of each character in a given string. Asked for optimized approach and to code it.

17. Any question that I want to ask him?

     I asked him to introduce himself as I wanted to know about the projects he is working on currently.

     Note: try to have depth knowledge about the domains like networking, oops concept, CS fundamentals and OS.

ROUND 3 ----Leadership Round (20-25 MINS)

   Virtual interview on Microsoft Teams with CTO

1.   Asked about my academics during 10th,12th, bachelors and masters.

2. Asked me to explain project that I did. What it was based on and how it works.

3. What are pointers? How a pointer can store the value of other pointer?

4. Scenarios where we make our pointers null? What are dangling pointers and wild pointers?

5. How we can implement interfaces in C++? I told him the concept of pure virtual function in C++ as it was close to the question he asked.

6. Any question that I want to ask? I asked for the feedback.

   Note: In this round, basically he checked my in-depth language command and cs fundamentals.

VERDICT: selected

TIPS:

1. Coding was easy and medium level. Focus was more on CS fundamentals.

2. If you don't know the exact answer of any question, then try to explain about the topics that are close to the question.

3. Good Communication is required.

4. Be confident while answering any question…whether it is difficult or easy.

5. Try to think of some seconds to answer any question so that you can answer them properly.

ALL THE BEST!