

ROUND 1 : ONLINE ASSESSMENT (75 MINS)

Platform – HackerEarth

- a. 16 MCQ questions based on aptitude , time complexity , output questions on C# and Java , OS and CS fundamentals.

- b. CODING QUESTION :

You are given a list that contains N strings of lowercase English alphabets. Any number of contiguous strings can be grouped together to form a new string. The grouping function accepts two integers L and R and concatenate all strings between indices L and R (inclusive) and returns a modified string in which the alphabets of the concatenated string are sorted.

Task is to find the K-th character in the concatenated string.

Example:

- N=3
- Str=[abcc,trea,zape]
- L=2 , R=3 , K=5
- Concatenated string : treazape , in sorted order : aaeeprt
- 5th character is e

ROUND 2 : TECHNICAL ROUND (1 HOUR)

Virtual interview on Microsoft Teams

1. The interview started off with me introducing myself.
2. Then we moved onto discussion on my projects. The interviewer asked about my projects in great detail and we discussed about them for about 20 mins.
3. Questions on CS fundamentals and oops were asked like :
 - a. Types of constructors
 - b. Need to create a copy constructor when compiler already creates it.
 - c. Virtual function and explain vptr and vtable.
 - d. Static variables and how are they different from global variables.
 - e. References vs Pointers
4. Questions on python were asked as one of my projects was in python:
 - a. Different data structures in python and difference among them.
 - b. Negative indexing in lists
 - c. What data structure is identical to python's list in c++?
 - d. Lambda function

5. OS questions :
 - a. Threads vs Processes
 - b. Interprocess Communication and various ways processes communicate
 - c. I mentioned sockets while explaining IPC, so he asked me whether I knew Socket Programming. I didn't know the implementation but I knew the steps at client and server side so I explained them and he was happy with that.
6. I was asked about the data structures I was familiar with. Then he asked me to explain BST.
7. Coding Questions :
 - a. Recursive preorder traversal of binary tree (only function)
 - b. Level order traversal of binary tree (only function)
 - c. Find frequency of elements present in an array (only approach)
8. Then he said the interview was over but I had some questions for him like which projects he is currently working on and the working environment.

ROUND 3 : TECHNICAL AND LEADERSHIP ROUND (40 MINS)

Virtual interview on Microsoft Teams

The interviewers were CTO and VP of Engineering of the company

1. The interview started off with me introducing myself.
2. They asked me about my school and marks from 10th till masters.
3. What subjects I have studied in MSc and they asked many questions on Information Security (as it was one of my subjects but I didn't know answers to a lot of questions so I politely told them that I have not studied the subject in depth).
4. Explain HTTPS. Can HTTPS be hacked?
5. Questions on Interface and Abstract classes :
 - a. What if all methods of Interface are not overridden?
 - b. Can abstract class be instantiated?
 - c. Can abstract class have constructor?
6. Super keyword
7. Call by value vs call by reference. Explain it by coding.
8. What is memory leak? Give one reason for memory leak.
9. Output of a C program. (related to pointer to an array)
10. Interprocess Communication
11. Web technologies I am familiar with.

12. Briefly explain Cloud Computing
13. Family background and preferred location
14. In which domain I would like to work?
15. Any questions for them (I asked about the internship , company's current projects and feedback)

TIPS:

1. You should have in-depth knowledge about topics related to your projects.
2. Coding was of easy to medium level, and the focus was more on the concepts like CS fundamentals, OS and networking so you should have strong grasp on these concepts.
3. Think out loud. If you are going in wrong direction or don't know exact answer, just speak out what you are thinking, the interviewer will give you the right direction.
4. It's ok not to know answers to all the questions, just have a positive outlook.
5. Have good communication especially with CTO or CEO in the leadership round.

ALL THE BEST !!