Interview Experience

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Company: **Truminds**

Total Number of rounds: 3 [OA + Technical Interview + Leadership round]

Round 1

Overall time duration: 1 hour 15 minutes

17 questions [16 MCQs + 1 Programming Question]

The MCQs were based on CS fundamental along with some output based on questions. [50 marks]

One coding question was there. [50 marks]

Round 2

Technical Interview

Time duration: 1 hour

- The interview started with tell me something about yourself.
- He asked me to rate the three programming languages C++, JAVA and Python out of 10.
- Some questions from microprocessors subject were asked like what are its components, some questions related to clocks and buses.
- How many types of memory are there?
- When a program is compiled, what changes takes place in the memory?
- What are the memories used by a program? (stack memory, heap memory)
- What do we do in C++ program so that stack and heap memory gets allocated to it? (new keyword allocates heap memory (dynamic memory allocation), local variables in the program gets stack memory).
- Three coding questions were asked which are stated below:-

1. Given an integer as input, e.g. Input : 4500, write the digits of the integer one after the other in separate lines as shown for this example:-

Output:
4
5
0
0

2. Given a singly linked list and an integer n, display the nth node from the end of the singly linked list.

3. Given an unsorted array, find the second largest number from that array. Then its variant was asked, i.e., find the second largest number without sorting the array.

- What are the various types of trees?
- Time complexities of some data structures.
- At the end I was asked if I have any questions for them.

Round 3

Leadership Round

Time duration: 30 minutes

The interview panel had two interviewers. One was the CEO of the company and the other was the Vice President of Technology. They were friendly.

Questions asked by the Vice President of Technology:-

- The interview started with my introduction.
- What is a friend function in C++?
- To print hello world in C++ without writing anything in main function (can be done with the help of constructors and declaring the object of the class globally).
- What is operator overloading, give a real life example where it is used?
- One output based question was asked.
- Puzzle: 2 persons moving in the same direction with speed v1 and v2 respectively with v1>v2 in a circular path of radius r. If they meet for a total time period of T so how many times will they meet?
- What are AVL trees, time complexity for deletion in AVL trees, if we have 100 nodes in an AVL tree so approximately how many nodes will be searched to delete the

required node (answer: $\log_2 100$, solved manually to give them an approximate answer).

- Difference between singly linked list and doubly linked list, deletion of a node is faster in which singly linked list or in doubly linked list and why?
- We have a phone directory and we have to map names with the values so what data structure will you use (Hashmaps), how will this be done (hashing), what if more than one value map to the same key (Form a linked at that particular key).

Questions asked by the CEO:-

- Microsoft teams use what protocols during its meet?
- What is Inter Process Communication?
- Difference between TCP and UDP.
- What are sockets, asked if I did sockets programming.
- If I worked on Linux, what does top command do in Linux?
- What is MAC address, what is IP address, in what layers of the OSI model MAC address and IP address are present, how do we get MAC address from IP address?(ARP protocol)
- What are the 7 layers of OSI model?
- What happens when a program is compiled?
- What subjects do I like in computer science?
- Why Truminds?
- Where do I live, from which college I did my graduation, what was my CGPA in graduation, what was my CGPA in MSc first semester, who all are there in family and what do they do?
- They asked if I have any questions for them?

It's a good practice to ask questions from the interviewer related to the company as this shows your interest in their company.

Always stay calm and answer every question confidently.

My best wishes are with you.