

# Ciena Interview Experience (C Profile)

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It was a 3 round process which consisted of 1 Online Assessment and 2 Technical rounds. All the rounds including OA were held offline in the campus itself.

## Online Assessment (75 mins) (Easy/Medium Level):

There were 2 different assessments set up according to the profile for which the student had applied (One for C profile and the other for Java profile).

- Java Profile assessment consisted of 2 programming question.
- C/C++ Profile assessment contained 6 sections out of which the first 3 sections were of *Aptitude and Reasoning*, the next 2 sections contained *error correction* questions in which we were required to correct one or two lines (specified in the question) in the given code so that it gives correct output for all the test cases. The last section contained a *coding question*.

*Ques: Find the smallest number greater than  $n$  whose sum of digits is double, the sum of digits of the given number  $n$ . (Ex:  $n = 99$ , Sum of digits = 18, so answer = 9999, sum of digits of answer = 36)*

This round can be easily cleared with a decent knowledge of Aptitude and Reasoning along with basics of coding.

**Note:** Read the question carefully and only answer what is required.

# Interview Process

## Round 1: (40 – 50 Mins)

The interviewer started by asking about OA how it went and how was the level of the questions in OA.

He proceeded by asking me the detail of the project mentioned in my resume that I did in C++ which was a file compression and decompression using Huffman.

He then modified the problem, to implement a file compression decompression system with input being a pathname of file to be compressed and also the location (cloud, a local folder etc.) where you would be storing the compressed file for the compression part, for the decompression part the inputs were a compressed file name and again a location, he wanted the number of classes that would be required for solving this and also to write the class structure (instance variables, methods, constructors etc.) of the required classes. I gave him structure of 2 classes, he told me to combine the 2 classes in 1 class, which I did with the help of 2 constructors, we further had a small discussion around the solution during which I was also continuously updating my solution alongside, then he asked me to do it with 1 constructor which I tried using different ways, he guided me to use abstract class to optimize it further I gave him a verbal solution, he acknowledged it and also asked me to think further about it later.

Then he asked me about other projects that I mentioned in resume and also the projects that I did throughout the year in C/C++.

He also asked my favorite subject, I replied ML. He then, first asked what is segmentation fault and the various reason of its occurrence.

Further he wanted me to list the steps required to make a ML algorithm which finds out whether the given code would result in segmentation fault and also the location where the segmentation fault could occur. I cleared the specification and proceeded by listing the few basic steps but I just blanked out later, he dropped the question after a bit of discussion.

He further asked a question on thread.

Ques: Three threads are executing the same method concurrently, containing single instruction `i++`, what is the value of `i` after completion of the program and how could the race condition be avoided to get the correct result.

He was done with his set of questions and asked me if I had any question, I tried asking for my feedback, he just replied performance to sabki achi hoti hai.

## **Round 2: (25 – 30 Mins)**

The interviewer started by asking my introduction, he too asked the brief of my projects listed in my resume and then proceeded with the questions.

- What is Polymorphism?
- Write the code explaining polymorphism in both C and C++.
- Write a code representing recursion.
- What do you understand by stack overflow?
- Write a code to stop the recursive calls after 100<sup>th</sup> recursive call to avoid stack overflow.
- Write a code representing a class student with data members as name, roll number, class-section and its constructors in C++.
- Write a code to implement the similar functionality of a student class in C.
- How would you dynamically allocate the character array for name in C?
- Have you heard of Internet and Intranet. If yes, define them?
- Have you heard of NP problems. If yes, define them?
- Can you give an example of the NP problem?
- Write a SQL query for finding the address of the college to which the student with name "ABC" belongs too using the given 2 relations (A(Roll No : int, Name : varchar, College : varchar), B(College Id : int, College : varchar, Address : varchar))

He was done with his questions and asked me if I had any, we then had a small talk regarding the work culture of Ciena, what he is currently working on and few other things. He answered all my questions very nicely.

*From both profiles combined 12 students were given Intern + FTE offer.*

**Note:**

- Don't hesitate and be positive and confident with your answers and try giving examples.
- Tell the approach that you are thinking and keep trying different approaches, they will guide you by giving feedbacks.
- Revise the basic concepts of your preferred language and also of OS, CN and what you have done in your projects thoroughly, my first interview was almost completely from my projects.
- If you need time to formulate your answer, simply ask them to give you a minute or two.

*All the best!*