Ciena Interview Experience (C Language)
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1) **Online Assessment:**

Platform: Codility
Duration: 75 minutes
The online assessment consisted of 6 sections:
A) Logical
B) Aptitude
C) Output
D) Debug (Single Line modification allowed)
E) Debug (Dual Line modification allowed)
F) Coding Question (Question: Given a number N whose digits sum to S, find a number greater than N, such that whose sum of digits is 2S)

This was an elimination round, around 40 students (including Java and C) were shortlisted for interviews.

2) Interview 1:

The interview started with basic greetings and introduction, then he asked me about my exams.
Then we moved to discuss regarding my internships and projects. The discussion was solely focused on my tasks as an intern, and my role and contribution in the projects. We discussed some of the key terms mentioned in my resume regarding my project. Then I was asked, if I have done a project in C/C++, I explained the project assignment done in 2nd semester for Advanced Operating Systems, File Handling.

Then we moved to theory and conceptual questions. He asked me about
A) File System in Linux
B) Data structures involved in File Handling. (Quite long discussion, involved system calls)
C) How you can create your own printf() function? (It included the discussion to create a duplicate fd for default fd0 then use it to write on to tty, rather than a function, which involves string formatting, he wanted an internal working)
D) Constructors/ Destructors
E) How does constructor work internally?
F) About delete and free, how do they differ?
G) About semaphore and mutex, how do they work and what is their difference?
H) What are abstract classes, virtual classes?
I) How do we resolved parent class function ambiguity, if a class has multiple paths to reach to an ancestor function?
J) 2 Linked List Questions
   ● Find middle element of the linked list
   ● Delete an node from the linked list, given the node in O(1) time.

Some more questions. Interviewer gave me some hints whenever I got stuck in any question.

3) Interview 2:

The interviewer asked me to introduced myself. After introduction, he asked me about my goals. He discussed some field from my resume. Then he gave me 3 coding questions. He gave me the choice to write the code in either of languages among C and C++.

Questions:
1) [Reverse the order of characters of each word in a given sentence](#)
2) [Reverse words given in a sentence](#)
3) [Reverse a linked list and return new head](#)

Then he asked me, if I have a question, I asked him how it is working at Ciena? The discussion went quite long, we discussed how Ciena in enhancing communication throughout the world. We also discussed, the embedded chips, and why are we using C. We slightly touched the topic, of using Rust programming language.

The interview ended.

Tips:
1) Study core computer science topics, such as Operating Systems and Computer Networks.
2) Do programming questions for static(array, strings) as well as dynamic (linked lists, trees) data structures.
3) Answer the question, if you don't know admit it. Don't waste your own time.

That's all

All the best.