

CIENA INTERVIEW EXPERIENCE

(C/C++ Profile)

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ROUND 1 - ONLINE ASSESSMENT

Assessment was based on the language (C/C++ or Java) applied for.

I was given 45 MCQ Questions on C/C++ , OS, Aptitude and Reasoning.

The Question level is easy.

ROUND 2 - Technical Interview I [50-60 mins]

The Interviewer took a look at my resume. I gave my introduction and few small detail about my projects and interests. He asked Some questions on my project.

Q1. Why Did You Use a Realtime Database ?

Q2. Design the architecture of your app.

Now he started asking question:

Q1. `write code to insert a node in the already sorted linked list.`

I wrote the code while explaining what I was doing . He asked me to dry run on a given input. (Did It.)

Q2. `Write code to find if the number is odd or even without using any arithmetic operator and loop.`

This question was asked before by this company so I knew the answer.

```
return (!(n&1))
```

Q3. `write code to check kth bit is set.`

This question was also asked before by this company so I knew the answer.

```
return (n&(1<<k))
```

Q4. What are OOPs?

Q5. What are the concepts of OOPs?

Q6. What is Class?

Q7. What is Polymorphism?

Q8. What is run-time polymorphism and compile-time polymorphism ?

Q9. How can you achieve runtime polymorphism?

I explained everything.

Then he wrote two codes and asked me where you can see runtime polymorphism.

Q9. What is the Diamond problem in C++? And how to solve it.

Q10. What is a V-Table?

Q11. What is the compilation process in C?

Q12. How can you link a function defined in other file into your main file where only its declaration is given ? (Answer is Extern keyword.)

Q13. Then he gave me a sheet to calculate the size of each data type (it had structure and union.)

For structure I simply add the size of each data type inside the structure.

For union I take the size for the largest data type.

Two out of three were correct and one was wrong.

C has a concept of Bit Padding, He asked me

Have you heard of Bit padding ? I said no, Then he explained this concept.

Q15. Then he asked me to write code to add two numbers but the function should accept any numerical type value and while writing the code explain to me the deadlock.

I wrote the function using template. And also explaining him deadlock 😞.

Q16. What are the conditions for deadlock?

Q17. How to achieve mutual exclusion in OS?

Q18. What is the difference between Binary Semaphore and Mutex?

Q19. Explain each layer of the OSI model.

Ok!! Now he said I'm done by my side. Do you have any questions for me?

I asked him, " Sir, this is my first technical Interview and I need to Improve in myself so can you suggest some changes and give me any feedback".

He Said: FEEDBACK IS THAT YOU SHOULD WAIT FOR THE FEEDBACK AND PREPARE FOR THE SECOND ROUND.

WARNING: Don't ask this, not suggested by many seniors, But I took the Risk.

ROUND 3 - Technical Interview II [50-60 mins]

He Introduced himself and asked for my introduction. While He Was looking in my resume. He didn't ask me any questions on my resume.

First he asked me to rate myself in C/C++

I said 5,6,7. 😊

Then he said on OS.

I said 5,6,7. 😊

He said for CN.

I said 5,6,7. 😊

Now he asked me to write code to implement Class in C++. 😊

Then he asked me to create an object for the class. 😊

Now he asked to write code to have a 5X5 matrix dynamically and initialize it with value 0.

I wrote code using malloc.

He asked me if I knew about calloc, and I explained it. Then he asked me if there was any memory leak in the code. I said yes. And handle it.

Then he asked me when we override a copy constructor in Class, and write an example code.

- When we have a pointer inside class as a data member and we want the two object members to point to different addresses but with the same value. (Deep copy)

- Q. What are pointers? Difference between free and delete.
- Q. What are the concepts of OOPs?
- Q. Types of inheritance?
- Q. What is the Diamond Problem in C++ ? How to handle it ?
- Q. What is polymorphism? Explain Runtime Polymorphism.
- Q. Write Algorithm for searching an element in a sorted array. What is its time complexity?
- Q. What is Deadlock? Conditions for Deadlock.
- Q. What are threads? Difference between Process and Threads?
What is shared by threads and processes?
What are the types of threads? Write code to create thread in C.
- Q. What are Sockets?
- Q. What is TCP ? Difference between TCP and UDP?
- Q. Explain Three way Handshake.

At last he said do I have any questions for him?

This time I asked about the work Ciena does, and What as an intern we have to do.

Some of us didn't have our HR round as it was too late. So our HR Round was skipped.

Tips -

1. Be Humble and Genuine with your answers.
2. Be confident and have patience while answering.
3. If you don't know the answer, say it. Dont lie. They are experienced and they will catch you lying.