

Ciena Interview Experience (Embedded Software Engineer)

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Course : Msc CS

First Round(OA)

The first round was an online assessment conducted on codility while on a zoom call. There were 3 types of OA -

- C/Fundamentals MCQ questions
- C++ coding questions
- Java coding questions

The type of OA for a student was determined by the company. I received MCQ questions.

MCQ questions consist of OS, Networking, Aptitude and C mcq questions.

There were no coding questions.

Second Round (Technical Interview)

Time taken - 60 - 90 Minutes.

Students who cleared the OA were selected for technical interview rounds.

My first interview consisted mostly of C conceptual, output questions and one puzzle question. Interviewer had a sheet on which he wrote the questions.

Detailed record of question is as follows:

- Compilation stages of a C program
- A simple recursive function to print numbers from 1 to 10 in reverse.
- What are Storage classes in C and explain all four of them (auto, register, static, extern)
- Various questions of header file and include in C and conditional compilation and its use cases.
- pointer to a constant and constant pointer in C.
- Inline functions and their properties in any language.
- Static functions in C. Given we have 10 objects of a class how many static function copies will be made in memory.

- Conditional compilation questions (because I used it while making a header file example)
- Output question on :
 - returning a pointer to a local variable in C
 - Assigning a pointer to string literal
- Extern use cases, and how is it used between 1 or 2 files.
- Static use cases, its scope and example.
- three bulbs puzzle

Third Round (2nd Technical Interview)

Time taken - 60 - 90 Minutes.

Second Interviewer mostly asked C questions with some CS fundamentals and project questions. Further at the end of the interview he also asked some personality questions.

List of question is as follows:

- Write a C program which takes N number and K bit , If kth bit is set in N number then unset it and if it is unset then set it (use bitwise operator).
- Make a C structure with integer and character variables.
- Follow up: Consider we need to add another character Variable to structure, where will we add it(before int variable or after char variable) and why.
- Explain your understanding of following variables:
 - static variable
 - const variable
 - volatile constant variable
 - pointer variable
- What are some ways of interprocess communication
- What is deadlock
- Difference between a 32 bit machine and 64 bit machine
- What are mutex lock and semaphores (counting and binary)
- Question regarding system call to open a file in C. And what does this system call return? (Project Related)
- Can we open the same file from two different processes?
- What is your family background and where do you live?
- Why choose msc over mca?

After all round 14 students were selected for intern + FTE.

Profiles were assigned by the company after the interviews and selection.

Out of them 2 were embedded software engineers (myself included), 1 was middleware engineer and the rest were C++ developers.

General Tips:

- Be honest with what you know and do not know.
- Always be confident in what you are saying.
- Only say things(or use terms) you actually know otherwise follow up questions can be difficult.