

ROHIT KUMAR (MCA 2021-24)

Hughes Systique Corporation Interview Experience

ROUND - 1 (Online Assessment)

(90 Mins)

Level - Easy - Medium

Total - 60 Points

Platform- Hacker rank (Offline at Department)

Online Assessment was of two sections MCQs + Coding Section .

1st Section :-

MCQ - 40 questions

(40 Points)

Correct Answer - +1 Point

Negative Marking - - 1/4 Point

- DBMS, OS, Linux, C++, DSA - 20 Questions ***Level - Medium***
- Quant, Reasoning, English - 20 Questions ***Level - Easy-Medium (Some Aptitude Questions were of medium level)***

In DSA there were questions like finding the time complexity , filling the code part which is missing .

In C, C++ mostly there were output based questions like based on pointer concept , conditional expression.

In OS ,Some of what I remember were based on symbolic link , type of linking in os , cpu scheduling effect on turnaround time, static and dynamic loading, fork ,page replacement topics .

In Reasoning topics were Blood Relation ,Seating Arrangement,statement conclusion,coding decoding

Rest were Aptitude+Reasoning+English All of them were easy to medium level questions.

2nd Section :-

- Coding Section **Level - Easy** **(20 points per que)**

There were two coding questions out of which we have to attempt only one

Question 1

Mary has baked K cakes and she wants to put numbered candles on top of each of them. She wants to put candles numbered 1,2,..., K on the cakes (one candle on each cake). She went to the store to buy candles. The candle shop has a stack of N candle boxes. The shopkeeper is lazy and will only sell the candle on top of the stack each time a customer comes. Mary does not want to spend too much extra money yet she wants to buy the candles she needs. What is the minimum number of candles that Mary has to buy in order to have at least the candles numbered 1, 2,..., K. Notes • All the boxes in the stack have one unique numbered candle. • candle[0] is at the top of the stack, whereas candle[N-1] is at the bottom of the stack

Input :

N=5

K=3

Candle =[2,1,4,3,5]

Output : 4 By buying [2,1,3,4] which have [1,2,3] that she needs according to the problem statement.

Question 2

You have some initial amount of money M with you and there are N items with some buying and selling prices. You can buy only one item at a time and to buy another you have to sell the item already bought. You can use profit money along with the initial amount to buy new items. Find the maximum profit you can make.

Verdict :- 20 / 65 Selected

Interviews

Interviews were scheduled for the next day.

Technical Interview (Round 2)

(40-45 Minutes)

Level - Easy-Medium

Before the interview starts make sure you are well relaxed and calm as when I get called for my turn I drink water and just sit aside for 20-30 seconds to get calm . I think that's very important in interviews because your first impression will tell a lot about you.

Then my interview got began :

Firstly there were greetings from both sides and then he confirmed my name. The Interviewer first gave me an introduction about himself and then asked me to introduce myself in which i mentioned my deep learning project .

But he asked me about another project based on Compiler (Parser Project) from my resume and asked about the Compiler phases of any programming language and also asked me about the working of the project. This was around 5-6 mins talk.

Make Sure you have good projects to talk about in interviews. By that interviewer will get impressed firstly and also this will help you to kill the interviewer's time.

He then quickly jumped to C++ language in which he asked me a lot of questions : -

- 1) Firstly he asked me to write the data types available in c++ and that too which are available in C++ but not in C.
- 2) Then he asked about the size of different data types .
- 3) Difference between 32 bit system configuration vs 64 bit system configuration.
- 4) Asked me about the endianness of the system
- 5) Difference between Little Endian and Big endian . Also how to convert from little endian to big endian . ***(Not the code)***
- 6) Then he Asked me about Bitwise Operators . Working of AND, OR & XOR Operator.
- 7) Difference Between Structure and Class in C++
- 8) Difference Between Structure in C and Structure in C++
- 9) Then he asked me Some Output based Questions on pointers

- 10) Difference between const pointer and pointer to const in which i have to give the output of given code snippet.

In this question I explained him wrong. I told him the concept of const pointer instead of pointer to const which he pointed to me but I told him there is always a confusion between the two and then he said that's ok .

- 11) How does C++ do run-time polymorphism?

Brief Discussion on this topic

- 12) Use of Virtual Functions , Virtual Tables and virtual pointers and also told me to write code snippets for this.

- 13) Compile time Polymorphism: how function overloading happens ?

- 14) Use of namespace in C++ .

- 15) Diamond Problem in C++

- 16) Memory layout in C++ like where global variables , static variables and local variables are stored ?

He also asked me about the text ,data,heap and stack section.

- 17) Also he asked me about scope and lifetime of static variable , extern variable.

- 18) Some basic Concepts of reference in c++

Meanwhile These questions he also asked me two basic DSA questions:

- 1) Reverse a number
I/P :1234 O/P: 4321
- 2) Add a node at the start of the linked list . (He wants to check my programming practice)
- 3) Also he gave me a code snippet based on conditional loop and asked me to predict the output . (Easy)

Then he told me he was done with his questions and praised me for good programming practice and also advised me to go deeper into c++ programming language which is used in industry .

Then he was asking me for my living. I told him about Punjab and then he told me that he has eaten saag and makki ki roti and also drank lassi (both were laughing). Also he asked me about my hobbies and how to manage my stress.

I asked him about sports and cooking .

Then he told me to prepare for the second round in the interview itself .

Verdict :- 14/20 selected

Technical Interview + HR Round (Round 3)

(35-40 Minutes)

Level - Easy-Medium

Firstly there was an online technical interview followed by an HR Interview .

In the Technical interview interviewer started by asking for my introduction in which I mentioned my projects and Programming language C++.

Then he asked me about the difference between C++ and Java in which in mentioned about that java is platform independent but C++ is not then he asked me some follow up questions:

How is Java Platform independent ? How does JVM work ? How can we make C++ platform independent? How are Byte Codes generated ?

Then he asked me about my favourite subject in which I mentioned deep learning and then asked me to explain my project .

Then i started explaining my project in which he asked me some questions about technologies used and asked me what is the accuracy of my model for which i mentioned 96% , he got impressed with that.

Then he told me that's it from his side and asked me if I had any , then we had a small talk about work culture at HSC and after that my HR interview began.

This was a purely behavioural round in which he ask me some question about

- 1) Family Background
- 2) Where do i see myself after 5 years
- 3) Why HSC?

Then he was done with questions and asked me to wait for the result to be announced..

Verdict :- Selected for internship + FTE

From Both C++ & Java 3 students got selected for internship + FTE offer.

Tips

- **Prepare well for CS Fundamentals , Your Programming Language . Lot of Questions will be asked from these .**
- **If You are Confident about some topics explain it in detail so that your follow up question would be from that topic only .**
- **If you don't know the answer just tell the interviewer that i don't know about that . Don't give wrong answers, it would give a bad impression.**
- **Don't hesitate in an interview. Take the interview as a professional talk in your mind .**
- **If you don't get a good interviewer don't get demotivated it's just not a good day for you . Soon you will get a good one. 😊**
- **Don't get Demotivated by rejections , try to learn from that experience. Have faith in yourself if your lucky day hasn't come yet.**

ALL THE BEST !!!