

Amazon Interview Experience | (FTE) On Campus

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Amazon visited our campus (BIT Mesra) on 10th August 2019 for FTE and a 6-month internship.

Process: 1 online coding round, 4 F2F Technical Interviews.

Online coding round: (90 minutes)

The test was conducted on mettl platform, on 7th August 2019.

There were 2 coding Q and 28 MCQs.

- Given an array find the inversion count.
- Postfix evaluation.

MCQs were based on c++, DSA, operating system, input/output.

Coding Qs were easy, hence MCQs played a major role in Round 1 shortlisting.

30 students were shortlisted for the further interview process.

Round 1: (90 minutes)

He went through my resume and asked me to explain one of the projects I mentioned, hence the first 15 minutes were spent on project discussion.

After that, he asked 2 coding Questions:

- Given an array which is rotated n times from left or right, find the largest element of the array. (**Expected time complexity $O(\log N)$**)
- The interviewer asked this Q in typical Fashion, basically, the Q was similar to finding the min element in a given stream of numbers.

He was initially checking my approach. After that, he asked me to code on paper.

The interviewer was really helpful, I got stuck once while implementing but he gave me a hint and after that, I was able to code correctly handle all corner cases.

Around 20 students were selected for the next round.

Round 2: (60 minutes)

This was purely coding round. Initially, the interviewer introduced himself and after that asked me to give a brief introduction of myself.

He asked me 3 coding Questions:

1. <https://www.geeksforgeeks.org/construct-bst-from-given-preorder-traversal/>
2. <https://www.geeksforgeeks.org/pairwise-swap-elements-of-a-given-linked-list/>
3. <https://www.geeksforgeeks.org/print-nodes-distance-k-given-node-binary-tree/>

I was able to solve all the three problems optimally and he asked me to code them on paper.

After that, he asked me another coding Q (extension of 3rd Q),

To print all nodes which are at a distance of given range [a, b].

He just wants to check my approach for this Q, and I was able to crack the same.

The interviewer was looking for the most optimized approach for all the questions.

After this Round, 12 students were selected for a 6-months internship and 4 were shortlisted for further rounds.

Round 3: Technical round, This round lasted for nearly 2 hrs.

The round started with a project discussion (20 mins).

After that, he asked me a few coding questions:

1. Modular exponentiation.
2. A simple dynamic programming Q(I don't remember the actual Q)
3. Implementing queue from 2 stacks and vice versa.
4. Merge sort, quick sort, heap sort.

There were a few more Q based on Data structure, which I don't remember. After that, he asked me some theoretical questions on c++, as I mentioned in my resume.

Then he asked me the concepts of oops. Some of the questions that I remember are:

1. What is dangling pointer?
2. Reference variable VS pointer.
3. Garbage collector, memory leak.
4. Virtual function and polymorphism.
5. verflow and underflow etc\xa6

Finally, the interviewer shared his experience in Amazon and asked me if I have any questions to ask.

3 of us were selected for the next round.

Round 4: (Bar Raiser) This round was held on Amazon chime, The round lasted for 90 minutes.

1. Tell me about yourself.

After that, he asked me to explain my machine learning project, I gave him a detailed explanation of the same. Luckily the interviewer had worked on some ML projects, so explaining my project logic was easy to him. There was a 30 mins discussion on my project which involved several cross-questions like, why CNN, what technology I used, how I trained such a huge dataset, discussion on the model that I implemented, how did I analyzed and preprocessed the images, etc. After that, he asked me for the recent blogs I have read. After this he asked a coding question:

1. Given a Linked list find if there is a loop in it, if yes find the starting point of the loop and also the total nodes that are outside the loop.

I gave him 3 approaches to solve this problem. He asked me the proof of the Floyds cycle algorithm. I did the proof by writing all the required diagrams and equations and he was satisfied with it and then I wrote the code.

Result: Selected for FTE \x9f\x99\x82

My Personal Notes\ *narrow_drop_up*

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