

INTERVIEW EXPERIENCE - ARCESIUM

Name - **Tushar Jani**
Company - **Arcesium**
Designation - **Software Engineer - 2019**
Location - **Hyderabad**

Arcesium visited our college last year for hiring for the year 2019. The interview consisted of the following rounds :-

Online Round

There were 3 sections - Quantitative(15 questions 20 minutes), Technical Aptitude(15 questions 15 mins) and Coding(2 questions 45 mins). All were of easy-medium difficulty. I was able to solve 5 questions from quant and 10-11 questions from the technical aptitude. One question which I was able to solve was related to dfs with some modifications.

After this round, 15 were selected for the 2nd round.

Technical Interview-1

My panel consisted of 1 interviewer. He was cool and accommodating. So the interview went on like this:-

- What is the difference between Malloc, Calloc, Realloc.
- Where is the Function's memory created in a program - heap or stack.
- Basics on pointers.
- He then switched to OS. He asked me about the Fragmentation. What is the difference between Segmentation and Paging. Explain both. Explain page replacement algorithm. Synchronization.
- Then he asked about OOPS. Explain Copy constructor. Explain about abstraction. Diamond problem. How to solve for multiple copies of same function from parent classes. Virtual functions.
- Then he switched to coding question. He asked me about level order traversal of a tree. He then added some constraints in the previous question.
- Vertical order traversal of tree. I was expected to print a tree in a column wise fashion.
- He then asked me about adding two linked list for which I gave him an approach which we needed to reverse lists and then add them. So he modified the question and asked me to solve it without modifying the list.

Overall, the interview was easy-medium and went on for 45 mins. I was not able to answer most questions on OS. But i handled the OOPS and Coding part pretty decently. 6 people were shortlisted for the next round.

Technical Interview-2

This was the toughest interview in the entire process. It consisted of two interviewers. Questions were like this:-

- Introduce Yourself
- Detailed discussion about my minor project(as i have mentioned it in my resume)
- Discussion about a project i worked on during Smart India Hackathon. He asked me about all the features. After that, he asked me to design the database for the project. He asked me to create ER diagram for the same. Then he asked me to get a result by writing a sql query for the same. He asked me to write inner queries, join based queries for it. He then asked some concept about joins. Then he asked about the complexity of the queries and determine the order of queries in terms of their execution time.
- Then He asked me about multi-threading and multi-processing.
- After this, he asked me to write a code to find all the paths in a tree with the sum of values of nodes as k. The paths can be from any parent node to root node.
- Another question related to tree was asked.
- Then he asked me about real life based scenario related to dns and caching.

Overall, this was really hard for me except the coding part as i didn't study much about the projects and DBMS. It lasted around 1 hrs 45 mins. They were really keen about the logic as well as the code for queries as well as coding questions.

HR Interview

The interview lasted for 20 mins. The interviewer was good and accommodating.

It started like:-

- Introduce yourself
- Past internships
- Family background
- Interests and hobbies.
- Asked me to rate the interview process
- Then she asked me about the offer(s) in hand. I told about JPMorgan Chase. Then she asked me about why i chose to go with a bank instead of a product company.
- Why switch to Arcesium instead of JPMorgan. She wanted to be sure that I won't be joining JPMorgan if offered job from them.
- 2 good and 2 bad aspects of working at JPMorgan.
- What I think of Arcesium
- Any questions from my side.

They were checking the confidence and the experience i gained from the interview. This wasn't the last interview. One more was conducted after this.

Technical Interview-3

This was the easiest round and lasted about 20 mins. The interview went on like this:-

- There is an array of bubbles. We need to color alternate bubbles starting from the 1st bubble till we reach the end. Then we remove the colored bubbles and again repeat the process. I needed to calculate the position bubble of array which will be colored last. I needed to calculate it without traversing it.
- A sorted array of non-negative numbers is given. We needed to calculate the minimum positive integer which cannot be formed from sum of the elements of any of the subsequences of the arrays

I was expected to crack the logic of the questions only.

Advice to Juniors

- The problem is the hype created about the interviews. You need to believe that these interviews can be cracked
- Prepare OS, OOPS and DBMS completely. You are expected to answer everything about it. Coding and DS&A should also be very well. Absolutely no chances of error for this.
- Never lie in your resume. Interviewers are really smart.
- Do not lose hope at any point of time during interview. Interviewer will give you some hint. And you'll be able to solve the problem at one stage.
- It's good you're working on Web Development, Data Science, Blockchain, AI, Cloud and other "big" things. But don't forget the power of basics. Stick to them always. The all need are good logical thinkers and not developers. You have to be a good programmer first.
- At last, it is not about solving maximum questions, it is only about your attitude and your capacity to think.
- Good luck and believe in your TPO.