Microsoft Interview Experience for SE-2

Difficulty Level :\nHard

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After flooding the Microsoft careers page with more than 20 applications I finally got lucky to interview with them. There were a total of 5 rounds of interviews. The first four rounds were technical and were about 70 to 80 minutes long. The last round was techno-managerial and it went for about 40 minutes.

Round 1: The interview started with the introduction and resume discussion for about 10 minutes and then 2 problem-solving questions were discussed.

- https://www.geeksforgeeks.org/strobogrammatic-number/
- The second question was around Binary search where we need to find the least number of API calls to achieve a certain result.

Round 2: The interview started with a detailed resume discussion and discussion on the architecture of frameworks like React, Elastic Search, the difference between SQL and NoSQL databases as these were the few terms on my resume, this went for about 20 minutes and then 1 problem was discussed.

• Problem \xe2\x80\x93 We have a 2D room with infinite points and we are given a list of points of motion sensors (x, y, r) where x and y represent the location and r represent the radius in which the motion sensor is capable of detection. We have to find whether it is possible to start from one end of the room and reach the other end without being detected by the motion sensor.

I came up with a BFS solution after discussing it for about 20 minutes and then time complexity and space complexity was discussed.

Round 3: The interview again started with the introduction and discussion on previous projects and questions like the most challenging project so far, learnings from the previous projects and then 1 DS related and 1 design related question was discussed.

- https://www.geeksforgeeks.org/lru-cache-implementation/
- Design a logging system \xe2\x80\x93 This was an open-ended low-level design question where
 the interviewer was interested in discussing more about the OOPs concepts and design
 patterns. I created the classes and common functions of the system and I discussed about the
 singleton pattern to keep a centralized logging system.

After this, the interviewer took 10 minutes time to discuss about the team that I was getting hired for and the kind of learning experiences I can expect.

Round 4: The interview again started with the introduction, resume discussion and discussion on previous projects, questions like the most challenging project, the problems I faced during that project and what solution I came up with. Heavy discussion around SQL and NoSQL databases followed by a High-level Design related question.

Design a reminder app \xe2\x80\x93 It was an open-ended design question where we both
discussed the requirements and basic design components that should be in place. Design
should be such if mobile is offline then the notification should be posted on other connected
devices like laptops, speakers, smart-watches etc. I discussed concepts like long polling,
message queue systems to solve the problem.

Round 5: This was the last round. It was short and precise. Like other rounds, it also started with the introduction and some discussion on previous projects. Then encryption techniques were asked followed by a design-related question.

• Design a search autocomplete system for windows file search \xe2\x80\x93 I discussed it with Trie data structure and then the interviewer asked questions around optimizing the updates and insertion of trie nodes.

The entire process took around 20 days time. All the interviewers were very friendly and comforting and they give you hints if you are stuck somewhere, so it is very important to listen carefully and catch those hints. I got the offer letter from them 2 days after the 5th round.

That\xe2\x80\x99s all about my dreamy experience with Microsoft. All the very best guys for your dream interview!!

My Personal Notes\n <i>arrow_drop_up</i>	
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