Amazon Interview Experience for SDE-1 (Amazon Wow drive)

Difficulty Level :\nEasy

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I applied for role of SDE I through Amazon WOW drive 2020. There were a total of 5 rounds (1 coding test + 4 interviews). Originally interviews were supposed to be offline but because of coronavirus pandemic, I gave my interviews online.

Round 1: Round 1 was online coding round consisting of 2 coding questions and 28 MCQs based on C, C++, Java, data structures, algorithms and core subjects. The first coding question was to convert infix expression to postfix (https://www.geeksforgeeks.org/stack-set-2-infix-to-postfix) and the second was to find the mean, median and mode of the given array. This round was for 1 hour 30 minutes.

After getting shortlisted, a total of 4 interviews were to take place, each being eliminative in nature. The time for each was fixed to 60 minutes each and each of them involved writing the complete code on IDE link shared by interviewer. For each question, time complexity has to be told.

Interviews:

Interview 1: Interviewer started directly with giving coding questions.

Question 1: Alternate reversal of linked list in group of size k. Like first group should be reversed, second group should be same, third should be reversed, fourth should be same, etc.

Example:\xc2\xa0

Input: 1->2->3->4->5->6->7->8, \xc2\xa0k=2

Output: 2->1->3->4->6->5->7->8

Question 2: There are two strings given find matching and non-matching characters.

Example:

Input: $s1 = abc s2 = abd \times 2 \times a0$

Output: matching = 2 non-matching = 1

I was able to solve both the questions in around 55 minutes. Interviewer seemed satisfied. I got a mail for second interview after 2 days and the interview was scheduled after 2 days.

Interview 2: Started with the interviewer\xe2\x80\x99s introduction and then my introduction and then 2 coding questions.

Question 1: Reach from one start string to destination string in minimum number of steps provided some set of intermediate strings cannot be reached. String consists of numbers starting from 0 to 9 and it works like a suitcase lock where from 0 there can be two options 1 or 9, similarly from 1 we can go to 2 or 0. Hint: Use bfs constructing graph of strings.

Example:\xc2\xa0

Input:\xc2\xa0

Source = 123

Destination = 456

steps = 9

Question 2. Find maximum of difference between maximum and minimum of all subarrays of size k

In this interview, I was able to write code for both questions in just 25 minutes(Good luck may be????)

Got mail for third round same day and the interview was on next day.

Interview 3:\xc2\xa0

Question 1: Given a family of ants, in which female and male ants are there, interactions b/w family members is given i.e., it is given who interacts with whom, find if it is a good family and a family is good if only two different genders interact.\xc2\xa0

Example:\xc2\xa0

Input: number of ants = 6, Interactions = { 1-2, 3-4, 5-6}

Output \xe2\x80\x93 Good family

Input: number of ants = 6 Interaction = $\{1-3, 3-5, 1-5\}$

Output \xe2\x80\x93 Bad family

Question 3: Next greater element

And questions on os(Explain Banker\xe2\x80\x99s algorithm with example, Thrashing, Deadlock, Semaphore, etc), DBMS(ACID properties), oops and projects.

First question seemed very new to me. After thinking a lot I was able to get that the there shouldn\xe2\x80\x99t be any odd cycle in graph formed from interactions. I tried writing code but interview wasn\xe2\x80\x99t very much satisfied with code. Then he moved to next question. As second question is a very common question, I instantly started telling solution, by which interviewer asked do you know this question and I said yes. He asked me to write code in just 2 minutes without any bug, And I wrote it but he could find one bug out of it?????.

After this interview, I didn\xe2\x80\x99t expected a call for next interview. But luckily I got a mail after 6 days for next round to be scheduled next day.

Final Interview: Started with introduction, project questions and behavioural questions. Like Give an example where you spent some time and figured out something on your own.

Question 1: Given two arrays move element from one array to other only if average of both the arrays become greater than the previous average find which element can be moved

Question 2: Some bfs related questions don\xe2\x80\x99t remember exactly

Question 3: Minimum element in stack without using another stack

In first question I got nervous and couldn\xe2\x80\x99t come up with the approach. Interviewer was very friendly and helped me to understand the approach and then asked me to write the code. Next two questions I was able to solve.

After around 15-20 days, I got mail that I have been selected as a SDE at Amazon. I would suggests to be patient and calm during interview. Think out loud. Interviewer is there to help you out.

Best of luck!!

My Personal Notes\narrow_drop_up

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