

Amazon Interview Experience for SDE-1

- Difficulty Level : [Medium](#)
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Hi everyone,

Hope everything is well with you. Today I'm going to share my amazon interview experience for the role of SDE-1. Hope it'll help you in preparing for your next coding interview. So without further ado let's get started.

I applied for the role of SDE-1 through amazon jobs portal. Next I got an invite for Online Assessment (OA).

Online Assessment: There are two parts of online assessment.

First part consisted of couple of questions based on data structures & algorithms

1. First question <https://leetcode.com/problems/maximum-units-on-a-truck/>
2. Second question <https://practice.geeksforgeeks.org/preview-problems/701942>

Second part consisted mainly on behavioral aspects.

Round 1: This round was mostly a discussion on previous company project that I worked on, some behavioral questions based on Amazon leadership principles, some technical questions.

Some of the questions that I could recall are as follows :-

- Difference between process & thread?
- What are deadlocks and what are the necessary conditions for deadlocks to happen?
- Some real life applications of thread & process
- Tell me about a time when the requirement was not clear to you? What you did and what was the final outcome?
- Let's discuss about a complex project that you worked on. What was the final outcome and what you learned? There were some follow up questions on web sockets based on my answer.
- Difference between synchronous I/O and asynchronous I/O?
- Some questions based on Node JS non blocking I/O

Round 2: This round was mixture of coding questions and behavioral questions.

1. The behavioral question was: Have you experienced pressure at work? Describe such situation
2. Lowest common ancestor in binary tree and then lowest common ancestor in binary search tree.

<https://practice.geeksforgeeks.org/problem-page.php?pid=700236>

<https://practice.geeksforgeeks.org/problem-page.php?pid=700221>

We discussed on edge cases like

- What if the input node values are not present in the tree
- one of the input node or both are null
- root node is null

3. Shortest unique prefix of all words in an array

<https://practice.geeksforgeeks.org/problem-page.php?pid=706447/>

we discussed on edge cases like:

- If input array is empty
- If any word is empty
- what if there are duplicate words in the input array (the interviewer told that all words are distinct)

Round 3: This round was mixture of coding questions and behavioral questions.

1. The behavioral question was: Tell us about a time when you missed a deadline or productivity target? What was the business impact and what you learned from it?
2. Given an increasing series first and then decreasing find the first element which starts decreasing

Let's say there's an array [0, 10, 20, 30, 40, 10, 5, 1] -> answer is 40 since from 40 it starts decreasing

We discussed on many edge cases like

- series is increasing only
- series is decreasing only
- decreasing series first and then increasing
- series where increasing first then decreasing and then increasing again and then decreasing

let's say an array [0, 10, 20, 30, 25, 20, 40, 60, 50, 30] -> firstly it increases, then decreases and then same repeats, so answer in this case will be 30

3. Given an array of integers, find maximal product triplet
- <https://practice.geeksforgeeks.org/problems/three-great-candidates0515/1>

Let's take an array [1, -4, 3, -6, 7, 0] -> answer will be 168 (-6 x -4 x 7)

We discussed on edge cases like

- If input array contains less than three numbers
- input array containing only negative numbers
- input array containing both positive and negative numbers

Round 4: This round consisted of coding questions, behavioral questions and some technical questions

1. The behavioral question was: Tell us about a time when you had to solve a complex task under strict timeline? What was your approach and how you solved it?
2. Given two strings s and t of lengths m and n respectively, return the minimum window substring of s such that every character in t (including duplicates) is included in the window. If there is no such substring, return the empty string.

<https://leetcode.com/problems/minimum-window-substring/>

Clarified on some questions like

- If length of string s is less than length of string t

- If either string s or t is empty
3. Find a triplet in an array whose sum is closest to a given number.

<https://practice.geeksforgeeks.org/problem-page.php?pid=702023>

Let's take an array say [-1, 2, 1, -4] and sum = 1 -> the triplet will (-1, 2, 1)

We discussed on edge cases like

- What will be the output if triplet is not present
- If there are multiple triplets, then which triplet to print (interviewer confirmed you can return any triplet)
- what will be the output if input contains less than 3 numbers

Technical questions:-

- Difference between child process & thread process
- What are the different transport layer protocols?
- Difference between TCP & UDP
- Real life application of binary search tree

Final Verdict: Selected

So I've few tips to share which are as follows:-

- Recall your previous work experience, your graduation days, achievements. This is required especially to answer behavioral based questions
- While answering behavioral questions use STAR method to answer.
 - S Situation (What was the situation)
 - T Task (What was the task undertaken)
 - A Action (What you did or what was your approach to solve the task)
 - R Result (What is the end result)
- Always discuss brute force approach first and then work your way up towards optimal solution
- Discuss time and space complexity of both brute force and optimal solution
- Discuss about the edge cases as well
- Having solid and excellent understanding of data structures will help you a lot in coding interviews
- Please practice 1 coding problem daily. Leetcode and Geeksforgeeks are really great platforms to practice coding problems
- Do not forget to add your achievements as well while in the interview
- Believe in yourself and you're half way there.
- Set short term goals as small step taken today yields to bigger step for tomorrow.

Finally I wish you all the best. Good luck. Thanks and take care.

My Personal Notes

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