Amazon Interview Experience | Set 348 (For SDE II)

Difficulty Level :\nHard

Last Updated :\n09 Jul, 2019

Recently, I was interviewed by Value Added Services team for SDE II position at Amazon Hyderabad campus.

Telephonic Round: 1:15 Hours

- 1. Given a set of words, print anagrams.
- 2. Questions about sorting algorithms.

\xc2\xa0\xc2\xa0\xc2\xa0\xc2\xa0\xc2\xa0 i) What sorting algorithm should be used for sorting strings?

\xc2\xa0\xc2\xa0\xc2\xa0\xc2\xa0\xc2\xa0\i) When merge sort is preferred over quick sort?

 This question is based on <u>Topological sorting</u>. Question was framed over working of Maven/Gradle. Given the dependencies of the packages to be installed. For example,

A -> B, C, D (Which means A depends upon B, C & D. Hence, B,C & D should be installed before installing A)

B -> F

D -> E

Print the order in which packages should be installed.

Later this question is modified and asked:

Given an order of packages, tell whether with the given dependencies, is it possible to install packages in the given order or not.

Round 2: (Face to Face) 1:20 Hours

Each of the f2f interviews were taken by the two interviewers. One was asking questions and other was observing the behavior of the candidate \xf0\x9f\x99\x82

This round almost covered everything from Current Project to Data Structures and Problem solving to Behavioral questions to High level designing.

Asked the architecture of the product that I am currently working on. Asked me to draw the block diagram and the interactions among the different components for 20mins. Later moved to Data Structures and Problem solving questions.

Eater meves to Bata Structures and Fresher coming questions

- Given an array find the maximum contiguous sum. Array can have +ve and -ve elements.
- Sum of two linked lists and store the result in the third one.

Behavioral Questions:

- How did you help your colleague?
- Tell an instance when you proposed some approach but your team lead did not like and how did you convince him.

Design question: <u>Design BookMyShow</u> website. Asked me, how will I design UI pages? What things I did not like about BookMyShow? And then designing of DB, tables, constraints, etc. I nailed this round completely.

Round 3: (Face to Face) 1:30 Hours

Asked about my current project.

This round of mine did not go well. It was a purely about Data Structures.

1. Given a binary tree, find the maximum BST subtree with the root of the max BST. GeeksforGeeks Link

I gave initial approach where I wanted to traverse the tree in Inorder and store it in an array. After that find the subarray where elements present in increasing order. Interviewer showed some issues with that approach.

Later modified the approach to bottom-up approach. Approach was fine but I could not write clear and running code.

2. Interviewer was confused whether to send me to the next round or not. He asked me one more question:

Given an sorted array of alphabets find the count of each element. Told him the approach with Binary search and he was satisfied.

GeeksforGeeks Link

Round 4: (Face to Face) 1:30 Hours

Asked about my current project.

This round was totally on designing.

- 1. Given a piece of paper with some Java code. I need to review the code and provide the comments as a reviewer.
- 2. Design survey monkey like website.

More emphasis was on Admin related activities of creating/editing a survey, showing all the surveys created by the admin user.

Generate a unique link to each of the survey created by the admin.

Started from UI pages designing to what information should be sent through Ajax calls to server for each of CRUD operations on survey.

Structure of each table to store the survey information. How will I as a developer create a layered architecture at server side.

Layered architecture: Ajax -> Servlet -> Class for CRUD operations on surveys $\xe2\x80\x93$ > Transaction Handler $\xe2\x80\x93$ > Persistence layer

This round was very satisfying round and everything happened properly.

Round 5: (Face to Face) 1:00 Hour

This round was taken by the manager of Value Added service team.

He was very friendly and gave his own introduction.

Asked about my current project.

1. Given an array of alphabets and a dictionary of english words.

I need to find the maximum possible valid dictionary word can be formed from these alphabets. I went through Trie approach of storing the dictionary words.

GeeksforGeeks Link

2. Design Outlook meeting request handler, a low level design question. I gave some solution and he seemed to be satisfied.

3. Behavioral Question: Tell some instance, when you proposed some idea and it was rejected by your Product Manager.

Reason for the rejection of the idea.

For SDEII, more than Data Structure and Problem solving, Amazon looks for designing and approach.

All the interviewers were very friendly and they help during the interview process.

Always try to understand what interviewer is looking for from the given question. If it is not clear, ask them clearly with no heistation.

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All Practice Problems for Amazon!

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