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Amazon Interview SDE 2 (5 year exp)

- Difficulty Level :\nHard
- Last Updated :\n16 Jul, 2019

Online Assessment Round :

Question 1. [Given a matrix of 1 & 0. Where 1 is a valid path piece. Given a src and dst also. Need to find out minimum number of steps to reach destination from Source.](#)

Question 2. Amazon transport centre ships there items in trucks of some size. And each item take some space. And for safety purpose we have to keep a some given space empty in truck.

We are given a array of size of items[10,20,30,40], size of truck(100) and safety space(40). We have to find a pair of items which can be shipped safely and utilising maximum space in truck.

So in given example we will ship pair(20 & 40) with keeping 40 space.

Round 1: Telephonic:

Question 1. [Given a matrix of 1 & 0. Where 1 is a valid path piece. Given a src and dst also. Need to find out minimum number of steps and path also to reach destination from Source.](#)

Question 2. Given a function f(x) =y, where 0<x<10000 & if x1<x2 then y1 < y2 for every x. Now we have to write f(y) = x function. Which will take input as some y and will return x.

Round 2: Design LLD + HLD:

Question 1. Asked about my project and we discussed deeply about it\xe2\x80\x99s challanges for its features.

Question 2. Social Media Platform design. He asked me to give only 4 features. Post(Private and Public), Follow a user and Search.

It was HLD + LLD design. Asked me various approches by giving multiple scenarios of follower and followee. Went deep in Microservices architecture design.

OOD Code was expected.

Round 3: Coding and Problem Solving.

Question 1. Given a map where. 1->a, 2->b, 3->c and so on till 26->z.

Now we are given a number lets say 123. We need to print all possible way to print it in alphabetical form using the map.

ex: for 123 we have (abc, Lc) where 12->L.

Question 2. [We are given a number lets say 45312. We need to find next greater number with same integers.](#)
Ex. for 45312 next number is 45321.

Question 3. [We are given multiple sorted arrays. We have to merge these.](#)
Round 4: DS and Algo.

Question 1. [Given a Tree, Find Kth distance nodes from a node.](#)

Question 2. Given a Tree, Find cousin some of a given node.

Question 3. [Given sorted row and sorted coloumn matrix. Find a number in o(row size) complexity.](#)

Round 5: Design Round.

It was an open discussion on my project and any other project which i previously discussed.

After discussion, Interviewer asked me to design a Multiplayer Chess Game with scale around 10 Million users and world wide popularity. Discussion went very long for various Database schema and HLD design of Master slave and (Consistent Hashing)Ring Design for Database.

Round 6: Hiring Manager.

He asked me about difficult project i have worked on. I chose my latest project to discuss.

Then we discussed deeply about its features. My project discussion went for aorund 30 mins.

After it, He asked me a file upload and changes done on one of the devices and sync on multiple device design problem.

Round 7: Bar Raiser.

It was a telephonic round. Interviewer introduced himself and asked me about project.

There were many behavioural questions. like Why Amazon ? Why are you leaving previous company ?

Apart from these asked me to implement Decorator Design Pattern for my project.

And asked Amazon Principle related questions like

\xe2\x80\x9cTime when you had to push back customers requirement\xe2\x80\x9d

\xe2\x80\x9cTime when a feature request was not feasiable.\xe2\x80\x9d

At last he asked me a algo question \xe2\x80\x9cThere is a sentence find all the anagram word in it.\xe2\x80\x9d Asked me complexity also.

that\xe2\x80\x99s it.

After 2 days i got call from HR that i am selected.

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I would like to give some suggestions for Amazon interviews. You must think about customers before answering and designing anything in interview.

Amazon is the world\xe2\x80\x99s most customer centric company and they expect engineers to be the same.

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