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Amazon Interview Experience | 6 Months Intern for SDE-1 (On-Campus)

- Difficulty Level :\nMedium
- Last Updated :\n28 Sep, 2020

Round 1(online) :

Consisted of 5 sections:

1) 10 debugging questions

2) 2 coding ques :- i) https://www.geeksforgeeks.org/search-in-row-wise-and-column-wise-sorted-matrix/

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3) Personality questions

4) Logical Reasoning questions

Round 2(Technical 1) \xe2\x80\x93 remotely \xc2\xa0 :

1) Introduced myself

2) 2 coding questions were asked

i) https://www.geeksforgeeks.org/minimum-steps-to-make-the-product-of-the-array-equal-to-1/

Basically you have to find operations to change each non-negative element to 1 & negative element to -1. Count the operations for each element by taking absolute diff. If count of negative numbers is odd and no zeros are there then increase the operations by 2.\xc2\xa0

ii) In a binary tree, find a path between 2 nodes. There was a modification that the height of the tree is infinite and the tree is not in memory.

\xc2\xa0 The structure of tree is like :- \xc2\xa0 \xc2\xa0 \xc2\xa0 1

\xc2\xa0 \xc2\xa02 \xc2\xa0 \xc2\xa0 \xc2\xa0 3

\xc2\xa0 \xc2\xa04 \xc2\xa0 5 \xc2\xa0 6 \xc2\xa0 7\xe2\x80\xa6.. We are given 2 long ints as inputs and we return a vector which is path between them.

I discussed with him to go from \xe2\x80\x9cnode to root\xe2\x80\x9d instead of general \xe2\x80\x9croot to node\xe2\x80\x9d. He asked me how and I found out LCA using map and stack.

\xc2\xa0 He said the approach is right but he does not want to use map/stack or any derived DS. Use only primitive DS. Solved it using arrays. \xc2\xa0I gave a case where the map-stack approach

would be more optimized. So he told me to analyze both the approaches w.r.t. time and space and explain why it is so.

Time and space for both approaches were O(log(n)) for the worst case. For average cases and in runtime map-stack would be more optimized and he agreed on it. He asked me to code any of the 2 approaches. I coded the array one as it was simpler to implement. Then he asked if I had any ques and concluded the interview.

Round 3(Technical 2) \xe2\x80\x93 remotely :\xc2\xa0

No intro, no small talk, straight to coding

1. https://www.geeksforgeeks.org/count-distinct-elements-in-every-window-of-size-k/

\xc2\xa0 No constraints on k & N and was told to handle all possible corner cases.

\xc2\xa0 Discussed approach -> coded it -> approved -> discussed time complexity and why it is O(n)

2. https://www.geeksforgeeks.org/convert-a-given-tree-to-sum-tree/

\xc2\xa0 Explained approach -> she asked which traversal will be used and why -> postorder as we calculate left and right child first and then process root -> coded it -> approved

3. https://www.geeksforgeeks.org/trapping-rain-water/

\xc2\xa0 Gave the solution with 2 arrays i.e. left-max & right-max. She told me to do it in a single extra array. Did after taking 5 mins. Then she told me to do it in constant space. \xc2\xa0

\xc2\xa0 I didn\xe2\x80\x99t think that was even possible. After trying for 10-12 mins I told her I am getting nowhere. She told me to code the single-array approach.

\xc2\xa0 Coded it -> had some logical mistakes -> she gave a direction what the error can be and did a dry run together -> solved it after some time and code was approved.

\xc2\xa0 She told me we have some time to think about how to do it in constant space. 10 mins later, the time was up I did not come up with anything and the Interview was over,

\xc2\xa0 NO projects, subjects, HR questions

Verdict :- Selected

My Personal Notes\n*arrow_drop_up*

Add your personal notes her

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