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Amazon Interview Experience | Set 306 (On-Campus)

- Difficulty Level :\nHard
- Last Updated :\n20 Jun, 2021

Amazon came for FTE as well as internship.\xc2\xa0
MCQ consisted of 20 questions.18 were related to mathematics and ds/algo. Everyone found ds/algo questions simple while maths questions were from topics like pipes/cisterns, distances, log, etc were quite complicated. I managed to get about 10 + correct and both coding questions correct to crack the online round.\xc2\xa0
The two coding questions were:\xc2\xa0
1) Largest subarray sum (O(n^2) was even getting accepted!)\xc2\xa0
2) Reverse individual words of sentence\xc2\xa0
eg-\xc2\xa0
i/p This is a game\xc2\xa0
o/p-game a is This\xc2\xa0

Round 1:\xc2\xa0
First round consisted of following questions:\xc2\xa0
1) Given an array of string and array of characters find the string with atleast one and the most occurrence of all characters in array of characters.If there is tie print first occurring string.\xc2\xa0
eg:vector<string> = {\xe2\x80\x9cabcda\xe2\x80\x9d, \xe2\x80\x9caaaaaaa\xe2\x80\x9d, \xe2\x80\x9cabcc\xe2\x80\x9d}\xc2\xa0
vector<char> = {\xe2\x80\x98a\xe2\x80\x99, \xe2\x80\x98b\xe2\x80\x99, \xe2\x80\x98c\xe2\x80\x99};\xc2\xa0
answer should be abcda\xc2\xa0
2) Check whether tree is balanced or not i.e check balance factor O(n) solution was expected\xc2\xa0
3) Given a string find longest substring with no repeating characters: O(n) solution was expected\xc2\xa0

I solved all of the q\xe2\x80\x99s in first round with best complexity and interviewer was quite impressed.\xc2\xa0

Round 2:\xc2\xa0
In round 2 following q\xe2\x80\x99s were asked\xc2\xa0
1) Given n points in 2 d space and two functions JOIN(A,B) and istransitvelyconnected(A,B).\xc2\xa0
Join assigns A,B to same set while istransitvelyconnected(A,B) checks whether belong to same set.Solved using disjoint set using path compression\xc2\xa0
2) Clone a doubly linked list with random pointer.\xc2\xa0
Got confused and stuck in this question..but somehow managed to solve with O(n) space using hashing..\xc2\xa0
Interviewer was not very impressed coz of 2nd q but still I managed to reach 3rd round.\xc2\xa0

Round 3:\xc2\xa0
Two questions were asked\xc2\xa0
1) Find path with root to leaf sum as equal to target.\xc2\xa0
2) Given an infinite string defined by function f(x)=x+\xe2\x80\x9d0\xe2\x80\xb3+f(complement x) find k\xe2\x80\x99th bit\xc2\xa0
Solved first one easily,got stuck in second one so solved using brute force\xe2\x80\xa6\xc2\xa0
However,managed to reach 4 th round\xc2\xa0

Round 4:\xc2\xa0

Interviewer was little arrogant to my surprise..he kept staring and grinning while I solved the problem..he also said since it is 12:30 I wont waste time asking to introduce you.although ALL other people had theoretical round involving OS,CN,DBMA concepts I was asked to solve coding problems again..\xc2\xa0

I was asked my favorite Data structure..I said tree..\xc2\xa0

1) [Find shortest distance between two nodes of binary tree..](#)after 2 mins. I said just find LCA in one traversal and then the path of the nodes in other traversal..\xc2\xa0
soln is O(n)..he asked me to write LCA code ..i wrote in O(1) space using recursion\xe2\x80\xa6maybe he wanted solution in 1 traversal..although he did not tell me that..\xc2\xa0

2) The RAM of pc is 4 gb and file is 40gb in size .File contain numbers..sort the numbers..I came up with dividing files and using heap to sort all the file..\xc2\xa0
Asked me to writ the data structure\xe2\x80\xa6gave something like this..

```
struct heap\n{\n  int element;\n  FILE *f;\n}\nheap arr[];
```

Got confused with complexity a bit\xe2\x80\xa6\xc2\xa0

Result came out after 1 hour.. I was not selected :(..We asked about internship they told they did not come for internship although they said this during their presentation the same morning!!But can\xe2\x80\x99t help..life is unfair\xe2\x80\xa6\xc2\xa0
Some of the students got rejected despite having excellent coding skills and\xc2\xa0
amazing profile at codeforces,topcoder,codechef,etc..\xc2\xa0
Questions asked from other people:\xc2\xa0
1. Flattening of tree\xc2\xa0
2. [Word break problem](#)\xc2\xa0
Thanx @geeksforgeeks!!\xc2\xa0

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[All Practice Problems for Amazon](#) !\xc2\xa0

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