b'

Microsoft Interview Experience | Set 124 (On Campus for IDC)

- Difficulty Level :\nMedium
- Last Updated :\n13 Aug, 2017

Microsoft IDC Interview experience

ONLINE ASSESSMENT

Platform: CoCubes
Format: 3 coding questions
Time: 90 minutes

Q1) complete the following function:

```
\r\n  int findMax(Treenode arr[], int size_of_array){\r\n    // code goes here\r\n  }
```

Where Treenode is a structure defined as:

```
\r\nstruct Treenode{\r\n   int feet;\r\n   int inches;\r\n};
```

The function should calculate (12*feet+inches) for all the array elements and return the maximum value.

Q2) complete the following function:

```
\r\n    Treenode* findInorderSuccessor( Treenode * root ,Treenode* node){\r\n        // code goes here\r\n    }\r\n\r\n
```

The function should return the pointer to the inorder successor of the \xe2\x80\x98node\xe2\x80\x99 provided in the function. If does not exist, return NULL.

Q3) complete the following function:

```
\r\nNode * findIntersection( Node* head1, Node*head2){\r\n   // code goes here\r\n}\r\n\r\nWhere node is the structure
```

Return the head pointer to the intersection of the two linked lists. It was mentioned that no extra space to be used and implementation should be recursive.

GROUP FLY ROUND:

40 candidates were shortlisted for the group fly round.

The candidates were roughly divided in a group of 4-5 and a mentor was in charge of each group. We were given a question and we were asked to write a function-solution in any high level language (scripting languages like Ruby, php, python were not allowed). We were allotted maximum 45 minutes.

Ques: Given two character arrays(not strings) of same length, and their length as a parameter to the function. We have to find whether the first string is a rotation of the other. We should not use any extra space. The time complexity may be quadratic.

The mentor kept coming to everyone. He first asked what i was thinking. I told him the approach with an example. Then I wrote the code, sample test cases and a basic approach section in bullets. Though, they demanded only the code.

ROUND 1:

Around 50% candidates were selected after the group fly round.

I was given two coding questions:

Ques 1) given a tree, print all the edges of the tree such that both the following conditions are satisfied:
Only print the node whose right child is NULL,
The node is a leaf node.

I gave a recursive approach. I later realised while explaining that it failed in certain conditions. I asked for some time to rectify it. I finally gave him a code and he seemed fine about it.

Ques 2) given a matrix, traverse the matrix in a zig-zag manner:

```
\r\n    Ex:  \r\n        1 2 3 4\r\n        5 6 7 8\r\n        9 1 1 2\r\n\r\nTraversal: 1 2 5 9 6 3 4 7 1 1 8 2
```

I gave an approach of time complexity O(N X M). He asked me if i can do it in lesser time complexity. I may use extra space. I could not come up with anything very concrete. My round was done.

ROUND 2:
The interviewer asked how was my group fly round. Then he explained to me a situation that I have a fixed 2-D space of NXM. I have been given a set of random numbers(not in running). I have to find an efficient way to store them and such that I can retrieve each element in least time complexity.

With hit and trials we reached an approach where I can store the numbers in such a way that each row is sorted, and the order across the rows is also increasing. Now we can just apply binary search on 1st column to find the appropriate row , and then binary search the number in the obtained row. Time complexity: logM+logN. He asked me to code it. That was it for the second round.

The interviewer was very helpful and jolly.

ROUND 3: (FINAL)
I was called for round 3 after 15 minutes. It was supposed to be HR but it was predominantly technical. I was asked about all my projects and my role in them.

Then he gave me a question and said that we would discuss only the approach ,and there was no need to code it.

The problem was similar to the below geeksforgeeks problem:https://www.geeksforgeeks.org/divide-and-conquer-set-7-the-skyline-problem/

I struggled a bit but he helped me. Then we discussed the final solution and approach.
Since it was 8:30 pm, I was done for the day. After the round was over, I was told that I am done with all the rounds and need not come the other day.

If you like GeeksforGeeks and would like to contribute, you can also write an article using contribute.geeksforgeeks.org or mail your article to contribute@geeksforgeeks.org. See your article appearing on the GeeksforGeeks main page and help other Geeks.

My Personal Notes\n*arrow_drop_up*

Add your personal notes her

Save

'