## Microsoft Interview Experience | On-Campus for Internship

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## **Round 1: Online Coding Test**

I was in my T.Y. B.Tech. (Sem 5), when Microsoft visited our campus for offering 2 months summer internship.

First Round was online coding test on CoCubes Platform. Difficulty level of questions were easy to medium. 3 Coding questions were to be solved. Questions Were

- 1. A Number plate problem where only odd and even number plate vehicles can go out on a weekday. Given numbers of vehicle and schedule of odd/even on weekday, find maximum number of vehicles that can go out on a day.
- 2. A problem based on BFS of Graph. Similar to Rotten Oranges Problem.
- 3. Given a Singly Linked List, Reverse the linked list in place using O(1) space.

Some Other Questions were

- 1. Reverse a Linked List in groups of size K
- 2. Some traversal problem based on BST and graph.

Nearly 25 students passed this round.

## **Round 2: On Paper Coding Round**

Groups were formed and each group was assigned a mentor. We were supposed to explain the approach of problems given to our mentor and code on paper. Questions Were:

- 1. Check if a given Binary tree is a BST without using extra space.
- 2. Finding second maximum element of the array.
- 3. Find Depth of BST.

I found inorder traversal of the tree for first problem but no extra space was to be used. I reduced the space complexity to O(1) but time complexity was O(n). I found depth of BST using Recursion.

Nearly 15 students were selected for Face to Face interviews. I was one of them.

## Round 3: Face to Face Interview \xe2\x80\x93 1

Questions asked during my interview were :

- 1. Write on paper code for Binary Search
- 2. Implement a Queue data structure using Stack data structure.
- 3. Write a code to heapify a array. It was basically a Heap Data Structure problem but I messed up here.
- 4. Asked about Dynamic Programming and a question to find longest palindromic subsequence.
- 5. ACID property of DBMS.

Only 5 people cleared this round and I was rejected after this.

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