# Microsoft Interview Experience | SDE \xe2\x80\x93 2018

Difficulty Level :\nHard

Last Updated :\n06 Nov, 2019

A big thanks to\xc2\xa0GeeksForGeeks! Here is a small contribution from my side.

This is regarding On campus placements, from an Indian Institute of Technology.

### **Round 1: 3 Coding Question**

- <a href="https://www.geeksforgeeks.org/segregate-even-and-odd-elements-in-a-linked-list/">https://www.geeksforgeeks.org/segregate-even-and-odd-elements-in-a-linked-list/</a>\xc2\xa0 (5 Marks)
- <a href="https://www.geeksforgeeks.org/maximum-sum-such-that-no-two-elements-are-adjacent/">https://www.geeksforgeeks.org/maximum-sum-such-that-no-two-elements-are-adjacent/</a>\xc2\xa0(5 Marks)
- Character decoding. For Example: for AA# we have to print 550 something like that. The pattern was given and we were supposed to convert. (3 Marks)

These were the questions from my set. Everyone had\xc2\xa0 a different set and the platform was Cocubes. Everyone who did around 10 Marks was selected. Around 90 people were selected. The platform is pathetic for first timers. Time management is important.

## **Round 2: Group Fly**

- https://www.geeksforgeeks.org/print-binary-tree-vertical-order-set-2/
- <a href="https://www.geeksforgeeks.org/minimum-time-required-so-that-all-oranges-become-rotten/">https://www.geeksforgeeks.org/minimum-time-required-so-that-all-oranges-become-rotten/</a>

Everyone who did both the questions, with the most optimal solution, was selected. Here people were divided in groups of 6 and each group had a mentor. We were supposed to convince the mentor with the solution and jot it down on paper. Around 30 people were selected. They were judging problem solving ability as well as communication skills.

## Round 3: System Design + Technical

- https://www.interviewbit.com/problems/design-url-shortener/
- <a href="https://www.geeksforgeeks.org/boundary-traversal-of-binary-tree/">https://www.geeksforgeeks.org/boundary-traversal-of-binary-tree/</a>
- <a href="https://www.geeksforgeeks.org/diameter-of-a-binary-tree-in-on-a-new-method/">https://www.geeksforgeeks.org/diameter-of-a-binary-tree-in-on-a-new-method/</a>
- https://www.geeksforgeeks.org/reverse-a-linked-list/

They were searching for the most optimal solution. Every code has to be written on a paper. Some of the solutions provided in GFG are not as optimal as they were expecting. And the worst time complexity for them was linear(if possible) with constant space. Moreover they wanted more than one solution for a given problem. Regarding system design, be confident about whatever you say, since the topic is gigantic.

#### **Round 4: Technical**

- https://www.geeksforgeeks.org/median-of-stream-of-integers-running-integers/
- <a href="https://www.geeksforgeeks.org/perfect-sum-problem-print-subsets-given-sum/">https://www.geeksforgeeks.org/perfect-sum-problem-print-subsets-given-sum/</a>
- <a href="https://www.geeksforgeeks.org/median-two-sorted-arrays-different-sizes-ologminn-m/">https://www.geeksforgeeks.org/median-two-sorted-arrays-different-sizes-ologminn-m/</a>

Here too they were looking for most optimal solutions with almost constant space(if possible). They were asking to write the code on paper. Usually interviewers are very friendly and they readily help. But they appreciate if you don\xe2\x80\x99t need the help.

#### Round 5: Technical + HR

Here I was facing the head of the team. The person was very polite and well spoken. He asked me my favourite project and asked me to explain it. He asked my interests. He asked me about my other projects. My open source contributions. Why I switched from ECE to CSE(I am from MTech CSE). Then he asked a few basic CS fundamental questions. At the end I asked him about my review, he told he was very pleased with my performance and eventually I was selected.

Practice writing code on paper and debug it. Practice trees, graphs and linked-lists very well. Be familiar with system design concepts. Know everything you put on your resume. And be confident. Best of luck!

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