

## Microsoft Interview Experience

- Difficulty Level : [Medium](#)
- Last Updated : 27 Jan, 2022

**Note:** It was through **Off-Campus Microsoft Engage Program**. After the coding assessment, you will be assigned a mentor where you will have to show your work case in a period of 3 weeks. If you do not perform well during the mentorship program, you may not be called for the interviews.

**Rounds:** 1 round on CV selection, 1 coding round, 3 weeks mentorship program (similar to an internship), and based on your performance in the mentorship, there would be interview rounds (normal 3 Technical rounds). Lucky me, I got a direct interview call after the coding round. All rounds (including interviews) were conducted on the **Codility** platform.

**Coding Round (90 minutes):** Two questions were there ranging between medium-hard types. I solved both of them within 40 minutes

1. Problem very similar to this one: <https://codeforces.com/problemset/problem/1027/F>

**Concept:** Use DSU or Graph.

2. Given N points (can be collinear) in the 2D plane. We are required to find 3 points such that the triangle formed by choosing these 3 points should not contain any other points inside the triangle.

**Concept:** You have to find the 3 closest points. Consider any point as a 1st point, then find the 2nd one which is closest to it using the [DISTANCE FORMULA](#). Now you have 2 points, find the 3rd one which is closest to both of them (using the same concept), and also keep in mind that points should not be [collinear](#) (you can easily do this by checking that the slope of points 1 and 3 should not be equal to the slope of points 2 and 3).

**Technical Round 1(based on DSA 1 hr):** The round was completed in 20 minutes only

- Find the cousins in a binary tree: <https://www.geeksforgeeks.org/check-two-nodes-cousins-binary-tree/>
- The concept was same: <https://practice.geeksforgeeks.org/problems/minimum-platforms-1587115620/1>

**Technical Round 2(DSA round 1 hr):** Took me almost 1 hour to write the full working code

- Find the next permutation: <https://practice.geeksforgeeks.org/problems/next-permutation5226/1>
- Find words in the matrix (for harder version, use Trie):  
Word Search 1: <https://practice.geeksforgeeks.org/problems/word-search/1> (or <https://leetcode.com/problems/word-search/>)  
Word Search 2: <https://leetcode.com/problems/word-search-ii/>

**Technical Round 3(Project and DSA round 1 hr):** 40 minutes for the project and rest for the coding problem

- Detailed discussion on any one of the projects: Stacks and techs used, why you made this app,

the problem faced, how did you manage to make your app efficient, database structure and schemas, functional and non-functional requirements, security, scalability, etc.

- <https://binarysearch.com/problems/Prefix-with-Equivalent-Frequencies>.

**Note:** Even if you are not able to write the complete and working code, show your approach. They tell you to write the code to see if you are able to write what you think.

**Be positive and aloud during interviews. Don't be nervous and in rush to answer the question. Take your time. Interviewers will help you whenever you will get stuck. Believe in yourself and always in God.**

Thanks to GfG, Leetcode, CodeChef, CodeForces, etc.

My Personal Notes

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