## Microsoft Internship Interview Experience | On-Campus 2021

Difficulty Level :\nEasy

Last Updated :\n07 Oct, 2021

Round 1: This was an online coding test held on the codility platform.\xc2\xa0

- It had two questions.
- One question was from string and one question was from greedy.

Round \xc2\xa02: 48 students were shortlisted for the face-to-face interviews. All the rounds were mostly DSA based. Question asked:\xc2\xa0

Divide the LinkedList into k segments and print the segments in reverse order. First I gave him
the brute force approach and then he told me to optimize the space complexity of the code and
finally code the solution. He also asked me to dry run on few test cases. eg:1-2-3-4 k=2
output:3-4-1-2 (<a href="https://www.geeksforgeeks.org/reverse-a-list-in-groups-of-given-size/">https://www.geeksforgeeks.org/reverse-a-list-in-groups-of-given-size/</a>)

Round 3: After 2 hours I was called for the next round. The interviewer gave me a problem:\xc2\xa0

1. There are n cities and there are roads between the pair of cities. Find if there is a path between the two given cities. This was a simple graph-based question I just needed to find if source and destination lie in the same component or not. He was satisfied with my solution and asked me to code out. Then he extended the problem and told me to find the path if it exists and asked to dry run for few test cases. (<a href="https://www.geeksforgeeks.org/find-if-there-is-a-path-between-two-vertices-in-an-undirected-graph/">https://www.geeksforgeeks.org/find-if-there-is-a-path-between-two-vertices-in-an-undirected-graph/</a>)

Round 4: After 3 hours I was called for the final round.\xc2\xa0

- The interview began with a brief discussion on my projects.
- Then he gave me a problem that there are two rectangles in the x-y plane with given dimension
  and coordinate of one vertex given you have to find the dimension of the overlapped rectangle if
  there is an overlap I had to explain all the conditions when there will be partial overlap, complete
  overlap, no overlap and finally code out the solution.

## My Advice

- Know the basics of every DS- implementation, complexity, etc.
- Start with brute force and then build the optimal solution.
- Practice writing entire programs, not just functions.
- Keep interacting with the interviewer. Think out loud.
- Have some good projects on your resume.

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