# Microsoft IDC Interview Experience | Set 68 (For SDE)

Difficulty Level :\nEasy

Last Updated :\n02 Sep, 2015

Hi, Following is my interview experience for SDE position in Bing Team.

#### \xe2\x80\x93 Online Round:

## \xc2\xa0\xc2\xa0\xc2\xa0\xc2\xa0\xc2\xa0 Total questions 2.

- 1. The question was big, like a story but it ultimately boils down to Longest Common Subsequence.
- 2. Don\xe2\x80\x99t remember the question but it was a mix of level order traversal + searching.

### \xe2\x80\x93 Onsite: Round 1: Duration around 1 hour

- 1. Given a binary tree, connect all node in the same level. Node structure is: left, right, data, next. Each level next should point to the next right node in the level. For last node in each level, next should be NULL
  - Then, the question was extended: Toggle the linking every K level. Means, you will be given a tree root node and a number K. For first K level, you should link to next right node. Next K you should link to next left and so on.
- 2. Given a city containing n people, a mayor candidate is one who does not like anybody but everybody else likes him. You are given a function Likes(x,y), where x and y are people in the city.
  - Likes(x,y) = 1 if x likes y, O otherwise.
  - Question was to find the mayor candidate. O(n) solution was required.
- 3. Some discussion on app based taxi booking services, overall idea about how they are implemented, how it can be improved. Just general idea.

#### \xe2\x80\x93 **Onsite**: **Round 2**:

- 1. Discussion about MTech project, previous work, my contribution etc.
- 2. What could you have done better in the last round?
- 3. How can you transfer a binary tree from one machine to another. How will you dump it efficiently in a file. How you will encode and decode it. Long discussion of different approaches.
- 4. Designing a parking lot system, how will you design the databases etc.
- 5. Reverse every alternate quarter of a linked list. For example, if the list has 12 nodes, then 1-2-3, 7-8-9 should be reversed, rest remains same. Code with all edge cases checked requited. Test cases for the same.

#### \xe2\x80\x93 Onsite: Round 3:

- 1. Discussion about previous work. Challenges faced.
- Given a 2 D array of size mxn (say) and a location (i,j), write a function TraverseSpiral(arr,m,n, i, j) which will traverse the array spirally starting from location and moving clockwise.
  Working code with edge cases checked required.
  - Test cases for the same
- 3. Stream of words are coming: ate, geek, tea, for, sam, eat. Build a data structure to store these such that, if a query was made to search a word: sat tea, it should return all the

anagrams: tea, ate, eat present in the store. Long discussion on possible approaches.

## \xe2\x80\x93 Onsite Round 4: With Bing team GM

- 1. Long discussion about dissertation, previous work. With stress given to contribution and challenges faced and how did I decided to resolve them
- Why do I want to leave present company?
- Some discussion about UI, what are the things to keep in mind while designing a mobile APP like amazon or flipkart. Which is better among them. What would you like to do to make them more user friendly.
- Some discussion about multi thread system and synchronisation among them. Various approaches and their trade-off discussed.
- High level discussion on how India Railway reservation system works catering to millions of request at a time.
- Any questions from my side \xe2\x80\x93 I asked various aspects of work being done in Bing team. I emphasised on scenarios where a bing search gives more relevant results than a google search.

Overall, it was a great experience. Great food and snacks throughout the day. The interviewers were friendly, giving hints and all. I would also like to thank geeksforgeeks for being there always. I have been greatly benefited hence I am taking time in sharing a detailed and thorough description of the process from my perspective.

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#### **All Practice Problems for Microsoft!**

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