

Microsoft Interview Experience | Set 51 (For SDE Intern)

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Recently Microsoft visited our campus for SDE intern. The process took over 4 months.

Round 1 (Online MCQs)

Time-30 mins

This round consisted of 25 questions on C,C++,Aptitude(Probability) and OS.

60 students out of 150 were shortlisted for the next round.

Round 2 (Online Coding Round)

Time-90mins

1) Write a function to check whether the string is valid or not.(Check Balanced Parenthesis {}, [], ()).
/header Stack.h was added in C++/

<https://www.geeksforgeeks.org/check-for-balanced-parentheses-in-an-expression/>

2) Write a recursive function to form a list containing intersection of two given linked list without creating new nodes.

<https://www.geeksforgeeks.org/intersection-of-two-sorted-linked-lists/>

<https://www.geeksforgeeks.org/union-and-intersection-of-two-linked-lists/>

Students who solved both the questions were selected and some who solved one question were selected too.

37 students were shortlisted for the next round.

Round 3 (Telephonic interview)

Time-27 Min

-Firstly , the interviewer introduced himself. Then asked me to do the same.He asked to me bring a pen and a paper.

-He asked me to briefly describe everything I had written in my resume.

-Questions on my project

-Random Function

-Questions on Sql and Oracle

-What difficulties I faced during my project

-Asked me to whether I would like to answer Question on DS or puzzles.I said both.

-DS

-Height of tree in $O(n)$.

- Find the minimum level where leaf node is found.

-When would height of tree and minimum level leaf node be equal.

-What is a height balanced tree.

-Puzzle

-Given a tray of red and blue balls.Separate red on left and blue on right with minimum swaps.

-Solve the same with Red, blue and green balls.(traversing only once!)

Only 9 were shortlisted for the further interviews. I was lucky enough to be one of them.

We were called to Microsoft India Development Center, Hyderabad. There were total 23 students from IIT indore, IIT hyderabad,

IIT hyderabad and some other institutes.

There were 3 f2f interviews.

Round 4 (Technical) (30 mins)

1)Resume discussion.

2)Write an algorithm to merge two sorted linked list in place.I wrote an algorithm then he asked me to

\xc2\xa0\xc2\xa0\xc2\xa0\xc2\xa0 -do it without using double pointer.

\xc2\xa0\xc2\xa0\xc2\xa0\xc2\xa0 -without a dummy node

\xc2\xa0\xc2\xa0\xc2\xa0\xc2\xa0 -asked me how would i test my solution.

\xc2\xa0\xc2\xa0\xc2\xa0\xc2\xa0 -all possible test cases and how would my code respond to them.

<https://www.geeksforgeeks.org/merge-two-sorted-linked-lists/>

General discussion about project.

\\Simplest round!

Soon after the fourth round some of us were called for the next round.

Round 5 (Technical) (35 mins)

1)Nodes at K distance from the root.He asked me to write the test cases. I wrote around 15.He was satisfied.

2) What is deadlock?

\xc2\xa0\xc2\xa0\xc2\xa0\xc2\xa0 Conditions of deadlock.

\xc2\xa0\xc2\xa0\xc2\xa0\xc2\xa0 Write a code to show deadlock.

\xc2\xa0\xc2\xa0\xc2\xa0\xc2\xa0 Explain Bankers Algorithm.

3)Given a column number, find its corresponding Excel column name.

<https://www.geeksforgeeks.org/find-excel-column-name-given-number/>

He told me That i have good coding skills.

Round 6 (Was supposed to be HR but Technical!!) (30 mins)

He asked me how my previous interviews went.

Asked me terms like

-Garbage collector

-Unicode

-Ascii etc.. (around 10!)

1)Given n (no. of elements of array){1,2,3,4,5,6,7,8} , K (no of elements in one row or column as specified)(eg. 3)

and A boolean variable Col & Row. When Col =True We have to print elements of array like-

1 4 7

2 5 8

3 6

And when row= True

1 2 3

4 5 6

7 8

2)Assume a computer screen.All the pixels are colored black. Given (x1,y1) and (x2,y2) you have to color the line joining these

two points Black.

(Hint:The line is not always going to be a diagonal straight line. Sometimes we may have to go vertically up and then sideways)

The interviewer was helpful and patient.

The experience was Grand! The people were so down to earth ! Every interview felt like a simple peer to peer conversation.

All i would suggest is Geeks For Geeks And u need Nothing to do \xf0\x9f\x98\x80

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[All Practice Problems for Microsoft !](#)

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