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Microsoft IDC Bangalore Interview | Set 153 (O365 Team)

- Difficulty Level :\nHard
- Last Updated :\n18 Dec, 2018

For experienced profile

Round 1:

General discussion on career so far.

1. Difference between process and thread
2. Given a long string and a small pattern, find whether any permutation of the pattern in present in the string (Working Code\xc2\xa0 and a dry run expected, not pseudocode). Find the space and time complexity.
3. Toughest technical challenge faced in career so far

Round 2:

1. Given an array of integers, write pseudocode to find the smallest non-negative integer not present in the array (can use additional space)
2. Consider a n*n grid. Suppose each cell in the grid has a value assigned.\xc2\xa0 We can go from each cell in row i to a diagonally higher cell in row i+1 only [i.e from cell(i,j) to cell(i+1, j-1) and cell(i+1, j+1) only] . Write a pseudocode to find a path from bottom row to top row such that the maximum value is obtained.
   Similar Question : GeeksforGeeks Link

Round 3:

1. Suppose you have a binary tree. What is the best way to serialize and send this information such that the receiver can construct the tree correctly. Code not asked.
   Solution : GeeksforGeeks Link
2. Given a n*n grid where most cells are cubicles and m cells (m << n^2) are pantries. There can be walls between two cubicles through which we cannot have a path. Given the locations of walls and pantries, for a given cubicle find the nearest pantry. Working code expected.
3. Interviewer interrupted purposefully while coding Q2 and asked 2 rapid questions
   1. time complexity to find 10th largest number in a heap
   2. time complexity to find 10th largest number in an array

Round 4:

Open ended questions:

1. Consider twitter. The requirement is to show the top 10 trending hashtags at a given time. How will you analyze/store the twitter feed to show this data.
2. Design an elevator system for a building where number of elevators can be increased later.

Round 5:

Hiring manager round:

1. Write a C function that takes a string and delimiter as input, splits the string based on the delimiter and returns a list of resulting sub strings.
2. OS question \xe2\x80\x93 Suppose the current program running has an infinite loop, can you run

another program.

Overall experience : Very quick process. The interview took place in their office and was finished in around 5 hours.

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