Microsoft Interview Experience (On-campus internship)

Difficulty Level :\nMedium
Last Updated :\n20 Dec, 2018

Online round:

It was conducted on Cocubes. It consisted of 3 questions:

- 1. 2 marks: Average of ascii characters of string.
- 2. 3 marks: Reverse alternate k nodes
- 3. 5 marks: Cousin sum in a binary tree.

Other questions were:

- 1. Infix evaluation
- 2. Given an array of numbers, find the smallest number after n deletions
- 3. Next palindrome.

Of 200 students about 60 were selected for next pen and paper round. We had one ds question detect and remove loop from a linked list and 6 short questions based on C.

At the end of each round I was asked the question \xe2\x80\x9cDo you have any question for me?\xe2\x80\x9d.

Round 1:

First I had to explain my approach, then write the entire code and test cases for each problem.

Reverse a sentence.

Input:\xe2\x80\x9dThis is a test\xe2\x80\x9d

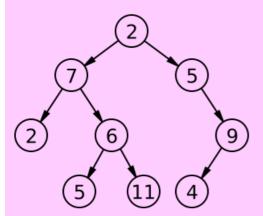
Output:\xe2\x80\x9dtest a is This\xe2\x80\x9d

Reverse the sentence preserving whitespaces.

Input:\xe2\x80\x9dThis is\xc2\xa0 \xc2\xa0a\xc2\xa0 \xc2\xa0 test\xe2\x80\x9d

Output:\xe2\x80\x9dtest a\xc2\xa0 \xc2\xa0is\xc2\xa0 \xc2\xa0 This\xe2\x80\x9d

• Identify whether given nodes of a binary tree are directly connected or not.



INPUT\xc2\xa0 \xc2\xa0 \xc2\xa0OUTPUT

2\xc2\xa0 \xc2\xa0 \xc2\xa0 \xc2\xa0 \xc2\xa0 \xc2\xa0 \xc2\xa0 \xc2\xa0 \xc2\xa0

- 5, 4, 9\xc2\xa0 \xc2\xa0 \xc2\xa0 \xc2\xa0 \xc2\xa0 \rue

Round 2:

- There are two types of characters one of 1 byte and another of 2 bytes, I had to delete the last character.
- Design a remote just like\xc2\xa0 keypad of old phones, and display all corresponding channels in TV.

INPUT:
22223377
OUTPUT:
а
b
С

ad

а

ae

aep

aeq

And we have to display channels with output as prefix.

Round 3:

First I was asked \xe2\x80\x9cTell me about yourself.\xe2\x80\x9d then \xe2\x80\x9cWhat I wanted to do in life?\xe2\x80\x9d and 2 coding questions, just logic no implementation.

- 1. Popultate right pointer in a binary tree.
- 2. Given a file print all the anagrams together.

Finally, I was selected. It was one of the best moments of my life.

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