# Amazon Interview | Set 117 (On-Campus for Internship)

- Difficulty Level :\nHard
- Last Updated :\n21 Nov, 2019

Recently Amazon India visited our campus for 2 months internship. There were four rounds.

## 2 online coding questions + 20 MCQ:

MCQs had 15 questions(not exactly) on OS (to my surprise), one aptitude(probability) and rest on c/c++

#### 2nd Round ( Group Interview / Written round):

21 were selected for the second round. We had 2 questions.

- 1. Given two strings, find whether they are anagrams of each other. (too easy).
- 2. Given a n-ary tree, Convert it into an array and return it. Construct the same n-ary tree from that array again. (DFS is better here as reconstruction is necessary) \xe2\x80\x93

Push the root to a stack. \xe2\x80\x9cpop the stack.store the value of the root node and the number of children it has in the array.push all the children to a stack from right to left\xe2\x80\x9d.. do this until the stack becomes empty.. the array will have dfs along with the number of children of each node.

For reconstruction,pass \xe2\x80\x9ci\xe2\x80\x9d by reference( i is for iterating through the array) take the value at index 0 .. make it has root. increment i. for all the children of the root, recursively call the same function. return root. (I hope this works:P)

#### 3rd round (Face to Face):

Only 5 were selected. I was asked only one question and i didnt do well. Find the square root of a number. i answered that this can be done using Babylonian method. (<a href="https://www.geeksforgeeks.org/square-root-of-a-perfect-square/">https://www.geeksforgeeks.org/square-root-of-a-perfect-square/</a>) or binary search method. He asked me to implement Binary Search method. I did a mistake. then he asked me to correct it.. i corrected it. I wasn\xe2\x80\x99t able to impress him much.

Remember the floating point arithmetic limitations.. this is where i failed.

### 4th round (Face to Face):

I was called for 4th round. (Only i had 4th round because of my bad performance in the 3rd round). The interviewer asked a lot of questions. They were easy

- 1. Given an array of 0s and 1s sorted. Find the first occurrence of 1 (Binary Search)
- 2. Given an infinite array of 0s and 1s. (sorted) . Find the first occurrence of 1
- 3. Given a matrix sorted in ascending order both row and column wise. Search an element. This is O(n+m). He asked me a better solution. I tried and he helped me a lot.. Though i wasn\xe2\x80\x99t able to deliver.
- 4. Given a tree, print the max sum path from root to leaf.
- 5. Given a tree, print spirally the column order of a tree.

ex:  $1\r\$  / \\\r\n 2  $3\r\$  \\\\ / \\\\r\n

- 6. Implement a stack using array. Implement two stacks using an array. Implement 3 stacks.
- 7. You are given an array . You have to create a stack when the user wants to do so and delete a stack when the user says. You wont be given the number of stacks that will be created.

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All Practice Problems for Amazon !

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