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## Amazon Interview | Set 1

- Difficulty Level :[Hard](#)
- Last Updated :13 Jun, 2019

Please find the details of my amazon interviews below.

**Date of Interviews:**22nd August 2012

**No of Rounds:** 1 Written + 4 PI

**Type of Interviews:**Campus Interview for freshers

**Written Test (Time): 90 Minutes**

20 Objective Questions: Aptitude and basic C objective problems.

2 Subjective Questions:

I.[To find if there is any root to leaf path with specified sum in a binary tree.](#)

II.Some question based on sorting.

**Interview Round 1(60-70 Minutes):**

Technical Interview

**Question 1:**[Check if a character link list is palindrome or not.](#)

**Question 2:**[A sorted array has been rotated r times to the left. Find r in least possible time.](#)

**Question 3:**[Clone a singly link list whose nodes contain, apart from next pointers, an extra pointer to any random node. The random pointer of a node N could be after N, before N or the node N itself.](#)

**Interview Round 2(50-60 Minutes):**

Technical Interview

**Question 1:**There is a big file of words which is dynamically changing. We are continuously adding some words into it. How would you keep track of top 10 trending words at each moment?

**Question 2:**Write code for minHeapify() operation.

**Question 3:**Design a data structure for the following operations:

I.Enqueue

II.Dequeue

III.Delete a given number(if it is present in the queue, else do nothing)

IV.isNumberPresent

All these operations should take O(1) time.

**Question 4:**Write a function that returns the length of the longest leaf-to-leaf path in a binary tree.

**Interview Round 3(60-70 Minutes):**

Technical Interview

**Question 1:**There is a binary tree of size N. All nodes are numbered between 1-N(inclusive). There is a N\*N integer matrix Arr[N][N], all elements are initialized to zero. So for all the nodes A and B, put Arr[A][B] = 1 if A is an ancestor of B (**NOT** just the immediate ancestor).

**Question 2:**[Find an element in a sorted rotated integer array.](#)

**Question 3:**There is a N\*N integer matrix Arr[N][N]. From the row r and column c, we can go to any of the following three indices:

I.Arr[ r+1 ][ c-1 ] (valid only if c-1>=0)

II.Arr[ r+1 ][ c ]

III.Arr[ r+1 ][ c+1 ] (valid only if c+1<=N-1)

So if we start at any column index on row 0, what is the largest sum of any of the paths till row N-1.

#### Interview Round 4(40-50 Minutes):

Bar Raiser Round

Interviewer asked HR Questions Initially, then a sort of puzzle.

Two robots land with their parachutes on an infinite one-dimensional number line. They both release their parachutes as soon as they land and start moving. They are allowed only to make use of the following functions.

I. `moveLeft()` // robot moves to left by 1 unit in 1 unit time

II. `moveRight()` // robot moves to right by 1 unit in 1 unit time

III. `noOperation()` // robot does not move and takes 1 unit time

IV. `onTopOfParachute()` // returns true if the robot is standing on top of either of the parachute, else false

V. `didWeMeet()` // returns true if the robot meets to the other robot, else false

Write a function in order to make the robots meet each other. Robots will be executing the same copy of this function.

**HIRED!!**

#### Tips / Advice:

Each time you write a code, check for the edge cases.

Do not assume anything. Keep asking questions if there are any doubts.

This article is compiled by **Akash Nawani**. Many Many congratulations to Akash for his selection in Amazon. If you like GeeksforGeeks and would like to contribute, you can also write an article and mail your article to [contribute@geeksforgeeks.org](mailto:contribute@geeksforgeeks.org). See your article appearing on the GeeksforGeeks main page and help other Geeks.

[All Practice Problems for Amazon !](#)

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