

Amazon Interview Experience for SDE Internship | AmazeWoW 2020

- Difficulty Level : \nMedium
- Last Updated : \n04 Mar, 2022

Round 1 (Online Test): Online test was conducted on Mettl platform. The duration was for 1hr 30 min. It was webcam proctored and consisted of 28 MCQs and 2 coding questions. MCQs were based on data structures, predict output, C++, and algorithms.

Round 2: The interview started with \xe2\x80\x9ctell me about yourself\xe2\x80\x9d. After that, he asked coding questions.

1. Find the longest substring containing distinct characters.

Ex:

Input: abbabcbdd \r\n **Output:** 4

Reference: <https://www.geeksforgeeks.org/length-of-the-longest-substring-without-repeating-characters/>

2. Given preorder and pre_LN that contains whether the node is leaf nodes or not, \xe2\x80\x9dconstruct a binary tree.

Ex:

pre = {1,2,45,3,5} pre_LN={N, N, L, L, L} \r\n Tree: \r\n 1 \r\n / \r\n \\\r\n 2 5 \r\n / \r\n \\\r\n 4 5

Reference: <https://www.geeksforgeeks.org/construct-a-special-tree-from-given-preorder-traversal/>

The duration was for **1 hour**.

Round 3: The interview started with \xe2\x80\x9ctell me about yourself\xe2\x80\x9d.

1. A bag contains magic balls. \xe2\x80\x9dEach ball has a specific weight. \xe2\x80\x9dEvery time, balls with two highest weight are removed (let the balls be X and Y) and collision which may or may not result in a new ball following the given constraints :
 - o Case 1: If $X > Y$ then they result in a new ball of weight $X - Y$
 - o Case 2: If $Y > X$ they result in a new ball of weight $Y - X$
 - o Case 3: $X = Y$ No new ball
 - o Example: [2,4,6,8]
 - o Pick 6,8 \xe2\x80\x93 New ball=2 -> Array becomes [2,4,2]
 - o Pick 4,2 -> New ball=2 -> Array becomes [2,2]
 - o Pick 2,2 -> Array is empty -> return 0
 - o Example2: [3,10,17]
 - o Pick 10,17 \xe2\x80\x93 New ball=7 -> Array becomes [3,7]
 - o Pick 3,7 -> New ball=4 -> Array becomes [4]

Since the array contains only 1 ball, return its weight -> return 4

2. There are n workers, each having some capacity. The workers are given rotis based on their capacity, \xe2\x80\x9di.e workers with a higher rating will get a more number of rotis. A worker can only know the rotis and capacity of two of his neighbors, one on the left and other on the right. Given an array specifying the capacity of workers, find the minimum rotis that should be given for each worker, \xe2\x80\x9dso that no worker feels unfair.

Example:

Input: 1 3 5 4 (ratings for 4 workers) \r\n **Output:** 1+2+3+2 = 7

Example:

Input: 5 3 4 2 1 6 \r\n **Output:** 2+1+3+2+1+2 = 11.

3. Since there was time left, \xe2\x80\x9dhe asked ACID properties in DBMS and mutex, semaphores, deadlocks (operating system concepts).

The duration was for 1 hour.

Result: Selected

GeeksforGeeks has been very helpful for my preparation. \xe2\x80\x9dThanks a lot!!\xe2\x80\x9d

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