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Amazon Interview Experience | Set 403 (On Campus for Full Time)

- Difficulty Level :\nHard
- Last Updated :\n11 Jul, 2019

Codding round (90 min):
20 objectives from DS, OS, DBMS, Networking and 2 coding questions:

1. https://www.hackerrank.com/contests/dakshonline/challenges/yule-ball
2. https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/i-demand-trial-by-combat-13/

ROUND I:

1. Given a binary string (e.g. 01, 101, 011), in each iteration 0 becomes 01 and 1 becomes 10, find kth character in the string after nth iteration. GeeksforGeeks Link
   \xc2\xa0\xc2\xa0simple approach, time complexity, express time complexity in terms of n only
   \xc2\xa0\xc2\xa0efficient approach, explanation, time complexity
2. Given n ropes of different lengths, connect them into one rope. cost to connect two ropes is equal to sum of their lengths. connect the ropes in minimum cost :
   \xc2\xa0 GeeksforGeeks Link
3. When and why merge sort is preferred over quicksort \xe2\x80\x93 time/space complexity

ROUND II:

1. Project discussion
2. Make binary tree symmetric \xe2\x80\x93 which all cases are possible, which traversal is used and why
3. Make half of the linked list reverse (iterative, recursive) and some questions from linked list
4. Recursion, data structure that is used in recursion
5. C++ string, overloading of + operator in string class

ROUND III:

1. Design a data structure to show most frequently purchased item to a customer, show items that are frequently purchased in a given time span GeeksforGeeks Link
2. Priority_queue, map/unordered_map, sliding window concept
   - Priority Queue
   - Sliding Window Technique
   - Unordered Map
3. Search a given word in a dictionary (approach, time complexity, cost of insertion/deletion of new word in different data structures) GeeksforGeeks Link
4. Binary search tree, AVL tree (Rotation, Insertion, Deletion), Trie data structure
   - BST
   - Avl tree (Insertion)
   - Avl tree (deletion)
   - Trie
5. Search a pattern in given string (Simple approach & Using KMP algorithm), handle all the cases GeeksforGeeks Link
6. LRU Cache Implementation

ROUND IV:

1. Introduce Yourself
2. Project discussion
3. Convert a given Integer to its corresponding Roman numeral GeeksforGeeks Link
4. Hamiltonian cycle & few graph questions (Cycle in directed/undirected graph) GeeksforGeeks Link

In between they asked some questions from OS, DBMS, Networking:
\xc2\xa0 \xe2\x80\x93 Belady\xe2\x80\x99s Anomaly, Context Switching, Conflict Serializability, Functions of some OSI-layers etc..

This article is contributed by **Abhinav**. If you like GeeksforGeeks and would like to contribute, you can also write an article using contribute.geeksforgeeks.org or mail your article to contribute@geeksforgeeks.org. See your article appearing on the GeeksforGeeks main page and help other Geeks.

Please write comments if you find anything incorrect, or you want to share more information about the topic discussed above.

All Practice Problems for Amazon !

My Personal Notes\n*arrow_drop_up*

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