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Microsoft FTE Interview Experience 2019 | On Campus

- Difficulty Level :\nMedium
- Last Updated :\n06 May, 2021

Online Round :\xc2\xa0

Online Round was conducted on mettl platform\xc2\xa0

1. Simple Array manipulation question\xc2\xa0

2.\xc2\xa0https://www.codechef.com/problems/ENCD12\xc2\xa0

3. Simple dp question\xc2\xa0

Group Fly Round :\xc2\xa0

Run length Encoding of the string IN-PLACE\xc2\xa0

Tech Round I :\xc2\xa0

1.\xc2\xa0https://www.geeksforgeeks.org/connect-nodes-at-same-level/\xc2\xa0

2. He asked to optimize the above solution i.e., constant space solution\xc2\xa0https://www.geeksforgeeks.org/connect-nodes-at-same-level-with-o1-extra-space/\xc2\xa0

3. If RAM size is 4GB, if 4 processes of size 2GB are launched ! what happens ?(Virtual Memory)\xc2\xa0

4. Continuation of above question. if process size is not limited by size of main memory then what is its limitation (Logical Address Space)\xc2\xa0

5. Above written code has node->val ; Explain end to end how that memory location is accessed\xc2\xa0

6. Paging, Page Table, TLB ;\xc2\xa0Why Paging ?\xc2\xa0

7. Explain Semaphores, Mutex, Spinlocks and differences among them\xc2\xa0

8. what happens if while(1) is running continuously\xc2\xa0

Tech Round II:\xc2\xa0

1. Some simple question on binary trees\xc2\xa0

2. Add two linked lists with head pointer pointing to MSB digit of the number\xc2\xa0

https://www.geeksforgeeks.org/sum-of-two-linked-lists/\xc2\xa0

3. Explain Paging, page replacement Algorithms\xc2\xa0

4. Thread safe and thread unsafe functions\xc2\xa0

5. Continuation of above, how can you transform a thread unsafe function into thread safe

function\xc2\xa0

Hint: Explained above using rand() and rand_r() -> Reentrant Version of rand() ;\xc2\xa0

6. Query Optimisation in DBMS\xc2\xa0

7. Indexing in DBMS\xc2\xa0

Tech Round III\xc2\xa0 + HR :\xc2\xa0

1. Maximum subarray sum problem (Kadane\xe2\x80\x99s Algorithm)\xc2\xa0

2. Given a BST, find the kth largest element\xc2\xa0

3. Given an array containing 0\xe2\x80\x99s and other numbers. Rearrange the array IN_PLACE such that all zeroes come front without changing the ordering of other numbers\xc2\xa0

Ex: i/p arr = { 6, 2, 0, 5, 8, 9, 0, 56, 78};\xc2\xa0

o/p arr = { 0, 0, 6, 2, 5, 8, 9, 56, 78 };\xc2\xa0

Time Complexity O(n)\xc2\xa0

4. Given an array of size n + m where first n elements are sorted and rest m elements are not sorted ; Sort the whole array IN_PLACE !\xc2\xa0

Final Verdict : Selected!\xc2\xa0

Thanks to GeeksforGeeks for all the awesome articles.
\xc2\xa0

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