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## Amazon Interview | Set 108 (On-Campus)

- Difficulty Level : \nHard
- Last Updated : \n20 Jun, 2019

Dear, I just got hired by Amazon in my campus placement drive. Below are the details of my selection process with amazon.

### Fist Round(Online):

20 MCQ questions and 2 Coding Questions .

## Coding Questions :

1. [Merge overlapping intervals](#) (Very well known repeating problem).
2. [Given a singly linked list you have to subtract the value of first node from the last node and so on until you reach the middle node.](#)

Eg: Input: 5 -> 4 -> 3 -> 2 -> 1

Output: 4 -> 2 -> 3 -> 2 -> 1

### F2F-1:

- 1) [Given a sorted circular link list and a pointer to random node, now insert a new node. I did it , but i used if and else for some special cases in my code so he asked me to do it without if else for special cases](#) (generic & simple code ).

- 2) Given a pointer to node in tree and a root pointer. Print all the nodes which are at a distance k from the given node.

**F2F-2:**

- 1) He gave me task scheduling problem:

Given a set of modules, some modules depend on previous modules and can only be executed, if the requirements of that module is complete.

```
\r\nEg: module A depends on module B,C \r\n      module B depends on module C and D\r\n      module C depends on E\r\n      modu
```

so he asked me to give a schedule for above modules such that when a module is executed then all requirements of that module are complete.

so answer would be D E C B A

- 2) Given a string of letters from alphabet. Remove all pairs(2 consecutive same character) of characters which occur consecutively. And do it recursively on remaining string.

\r\n Eg given string abcd aad h h h h z p p z l \r\n then output string should be : abch l

Hint: He asked me to use some data structure for it .

- 3) Given a binary tree set the sibling pointers . I told him that i already know the question so he said code it .

- 4) He asked me about hashing .

- 4.1 He asked me about complexity . I told him about  $O(\log n)$  and  $O(1)$  .  
4.2 Then he asked me about how do you get  $O(1)$  . I told him my approach . He said how will you rehash it when required . I told him that i will use extra memory and copy the hash map . Then i Optimized and did it in-place using a Boolean field.  
4.3 Then he took this question to OS and asked me to do it using threads .  
4.4 Asked me what all problems you will need to take care about this problem while using threads and give solution to it.

- ## 5) Discussion on my projects

**F2F-3:**

He gave me 3 coding questions :

- 1) Given a number n find the number of valid permutations of a string formed using characters '(' and ')' . A string is valid if it has matching opening and closing parenthesis .

Eg: given  $n=2$  so you can have 2 possible permutations which are valid  $(( ))$  and  $()()$ .

- 2) Given a singly link list reverse every 3 nodes and if nodes are less than 3 then reverse them also.

```
\r\nEg: Input:  1->2->3->4->5->6->7->8\r\n      Output: 3->2->1->6->5->4->8->7
```

- 3) Given a string of letters from alphabet insert frequency of each character in the string.

```
\r\nEg: Input:  aaabbbccdefgggaaa\r\n      Output:  a3b3c2d1e1f1g3a3
```

Time Complexity Required  $O(n)$  Space Complexity Required  $O(1)$

### Fourth Round (Bar Raiser):

It was a telephonic round with a collabedit screen shared on our laptops.

- 1) Tell me something about yourself .

- 2) He saw that i had given a seminar on cloud computing and sky computing so he started with cloud computing .Then he asked me why didn't cloud computing exist 15 years ago .

- 3) What do you understand by 32 bit and 64 bit OS ? . He asked for explanations in terms of hardware and software . Then he asked me that will a 16 bit program run on 64 bit OS without any problem . He asked me what can be the reason for problem faced .

- 4) What happens when you type [www.amazon.in](http://www.amazon.in) in your browser ? . He asked me for the set of activities that take place during this time . Then he went into asking how do you get to know the IP address of your ISP . Then after a lot of discussion he was satisfied .

- 5) Some questions about Complexity of a algorithm . Asked me to prove complexity of few sample codes .

- 6) Some questions about storage space of a variable( data segment , stack , heap , BSS ). Some questions about Macro preprocessors and there problems & solutions .

- 7) Some questions about error in sample code given (like returning non compatible pointer type or returning address of a local variable etc )

- 8) In DOS and Linux shell when we press the up arrow we get the recently used commands . He asked me to implement this facility. Then he asked me to do it if memory bound was very tight .

- 9) This was a question to check my analytic skills . We have customers using [www.amazon.in](http://www.amazon.in) for buying phones. Let say we have a user who visits [www.amazon.in](http://www.amazon.in) for buying mobile phone . He selects a mobile then fills his address details and then when he finally goes for payment then he gets to know that

this phone is not available . So how can you improve the over all user experience . Then he asked me that will you suggest redirecting the user to some other site if the product is out of stock .

10) Some HR Questions like What are your areas of your Weaknesses ? What are you doing to improve on them ?

It was an amazing experience. Thanks a lot to GeeksforGeeks for helping me get my dream job \xf0\x9f\x99\x82

#### **Suggestions/Tips :**

- 1) Discuss your approach as many times as possible.
- 2) Don't start Coding the problem until the interviewer asks you to do it.
- 3) Tell everything that you are thinking about the problem. They are more interested in knowing how you are approaching the problem.
- 4) Asks for hints if you are stuck up. They will help you.
- 5) If you don't know answer to a question then please say it directly. It will save time for other questions.
- 6) First be confident about your approach then only code it.

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[All Practice Problems for Amazon !](#)

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