

# Microsoft Interview Experience | Set 145 (Pool Campus \xe2\x80\x93 Internship)

- Difficulty Level : \n[Medium](#)
- Last Updated : \n18 Dec, 2018

## Online coding Round \xe2\x80\x93

**550** students sat for the online coding round and CGPA cut off was 7. Three coding questions were asked to us and we were given 90 minutes to solve three questions.

## Round 1 \xe2\x80\x93 Online assessment \xe2\x80\x93

Platform \xe2\x80\x93 \xc2\xa0cocubes.com

Duration \xe2\x80\x93 \xc2\xa090 minutes

Format \xe2\x80\x93 \xc2\xa03 Coding Questions

Maximum Score \xe2\x80\x93 \xc2\xa010 marks

1. Complete the following function \xe2\x80\x93

```
int findMax(TreeNode arr[], int size_of_array)
{
    \xc2\xa0\xc2\xa0
    \xc2\xa0\xc2\xa0\xc2\xa0\xc2\xa0 // code goes here
}
\xc2\xa0\xc2\xa0
// Where TreeNode is a
// structure defined as:
struct TreeNode {
    \xc2\xa0\xc2\xa0
    \xc2\xa0\xc2\xa0\xc2\xa0\xc2\xa0 int feet;
    \xc2\xa0\xc2\xa0\xc2\xa0\xc2\xa0 int inches;
};
```

The function was supposed to return the maximum value of TreeNode. This was supposed to be done by calculating (12\*feet+inches) for each element. It constituted of 2 marks.

2. We have been [given two sorted linked lists and we had to combine both inksed lists such that the combined list is also in sorted but in descending order](#). For Example: \xe2\x80\x93  
List 1: \xe2\x80\x93 1 -> 3 -> 5 -> 7  
List 2: \xe2\x80\x93 2 -> 4 -> 6  
Result: \xe2\x80\x93 7 -> 6 -> 5 -> 4 -> 3 -> 2 -> 1
3. We had been given a linked list and we had to segregate its even and odd position nodes in such a way that odd position nodes before even positioned nodes and even positioned nodes had to be appended after odd positioned nodes but in a reverse order. We were not allowed to use any extra space.  
Ex \xe2\x80\x93 linked list: \xe2\x80\x93 1 -> 2 -> 3 -> 4 -> 5 -> 6  
Output: \xe2\x80\x93 1 -> 3 -> 5 -> 6 -> 4 -> 2.

**10** students were selected for further rounds of interview from our college.

**Group Fly round \xe2\x80\x93** It was a Microsoft pool drive so around 120 students from different colleges came for the pool drive. We were asked 2 programming questions and we were given 45

minutes to solve those questions.

1. We are given three sorted arrays and we had to find three elements from three sorted arrays such that the difference between the maximum and minimum of those three elements should be minimum. All the elements should be from different arrays. For Example: \xe2\x80\x93

A [] = {1, 4, 10}

B [] = {2, 15, 20}

C [] = {10, 12}

Output: 10 15 10

10 from A, 15 from B and 10 from C

**Solution:** <https://www.geeksforgeeks.org/find-three-closest-elements-from-given-three-sorted-arrays/>

2. We have been given a number which is represented in the form of a linked list and we have to add one to the number and return the modified linked list after addition.

For Example: \xe2\x80\x93 num = 123 {1 -> 2 -> 3}

Result: \xe2\x80\x93 124 {1 -> 2 -> 4}

**Solution:** <https://www.geeksforgeeks.org/add-1-number-represented-linked-list/>

4 students from our college were selected from the group fly round out of 10 for further technical rounds of interview.

### Technical Interview (Round 1) \xe2\x80\x93

1. He asked about my introduction as he went through my resume and asked me to introduce myself and then shifted on to technical questions.
2. Given a value N, if we want to make change for N cents, and we have infinite supply of each of S = {S1, S2, Sm} valued coins, how many ways can we make the change? The order of coins doesn't matter.

For example, for N = 4 and S = {1, 2, 3}, there are four solutions: {1, 1, 1, 1}, {1, 1, 2}, {2, 2}, {1, 3}. So, output should be 4. For N = 10 and S = {2, 5, 3, 6}, there are five solutions: {2, 2, 2, 2, 2}, {2, 2, 3, 3}, {2, 2, 6}, {2, 3, 5} and {5, 5}. So, the output should be 5. It was a dynamic programming problem and I tried to solve it although I was not aware of the optimized approach.

**Solution:** <https://www.geeksforgeeks.org/dynamic-programming-set-7-coin-change/>

3. Given two integers x and n, write a function to compute  $x^n$ . We may assume that x and n are small and overflow doesn't happen. For Example: \xe2\x80\x93

Input: x = 2, n = 3

Output: 8

Input: x = 7, n = 2

Output: 49

It was also a dynamic programming problem but I started with a brute force approach and then a recursive solution but I was not able to reach to the optimized approach.

**Solution:** <https://www.geeksforgeeks.org/write-a-c-program-to-calculate-powxn/>

Only 1 out of 4 students from our college made it to the second technical interview.

Unfortunately, I was also rejected after my first technical interview from my college.

The interview experience was quite good and they focused on all the core computer science subjects. Geeks for geeks was a lot of help to me as it helped me in my placement preparation and provided almost all content that was necessary for placement preparation.

[All Practice Problems for Microsoft !](#)

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