Cvent Interview Experience 2018 August

Day 1 on Campus :

Round 1 : Online Aptitude Test

- 30 questions : CS fundamentals(sockets, networks, os, dbms) + aptitude questions + code snippets
- 45 minutes
- Time was sufficient and questions were easy, no negative marking

Round 2 : Online Coding Round

- 1 basic question on 'Codility' platform. The requirement is to solve the problem, not the time complexity.
- 60 minutes, any language
- Question : An airplane ticket booking system in which given certain rows from 1 to n, there are A to K columns. We need to find the number of continuous 3 seats that can be booked in that plane.

	A	B	C		D	E	F	G		I	J	K
1												
...												
n												

ABC can be booked together only.
DEF or EFG can be booked together.
IJK can be booked together.
Also, certain seats can be booked in this system.

Input : 3 A3 B2
That is , the system has 3 rows and seat A3 and B2 are already booked.

Output : 7
Explanation :

	A	B	C		D	E	F	G		I	J	K
1	1				2					3		
2					4					5		
3					6					7		

7 sets of three continuous seats is formed in the system with A3 and B2 booked.

Day 2 at Cvent, India Office :

Pre-Interview Assessment Test :

- An aptitude test was conducted before interview as a pre selection of candidates, those who qualified were allowed to sit for the interviews.
- 50 questions of pure aptitude
- 22 minutes
- No negative marking
- NOT permitted to use calculators
- The aptitude test was followed by 140 personality questions

Interview Round 1 :

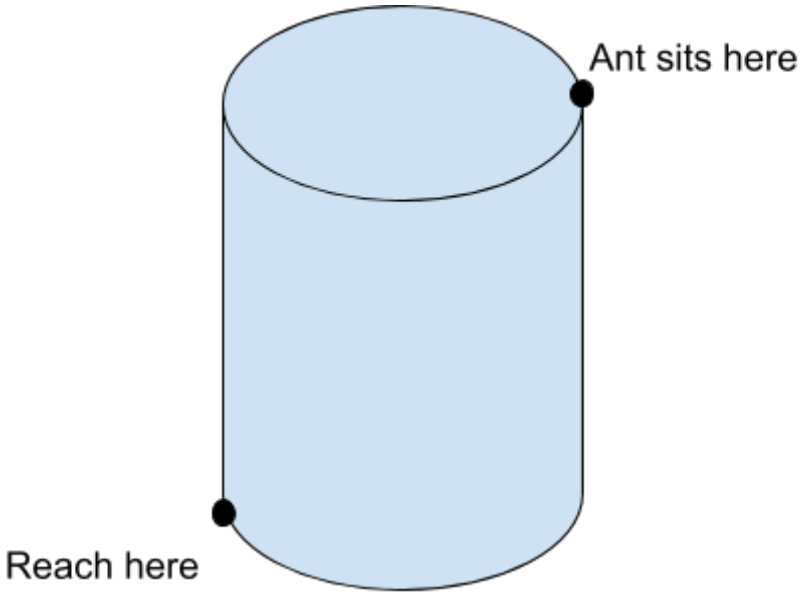
- Print the given square matrix in spiral form.
    - Given :1 2 3
      4 5 6
      7 8 9
      Output : 1 2 3 6 9 8 7 4 5
- The cost of a stock on each day is given in an array, find the max profit that you can make by buying and selling in those days.
    - For example, if the given array is {100, 180, 260, 310, 40, 535, 695}, the maximum profit can earned by buying on day 0, selling on day 3. Again buy on day 4 and sell on day 6. If the given array of prices is sorted in decreasing order, then profit cannot be earned at all.
    - Solution : https://www.geeksforgeeks.org/stock-buy-sell/
- What is indexing ? What are primary and secondary indexes in dbms ? Why do we use secondary indexes ?
- There are 3 baskets each containing 4 balls - 1 each of red, blue, yellow and green. You are blindfolded and told to draw one ball from each basket. What is the probability that you will draw exactly 2 red balls?
- Puzzle : A and B are sitting across a round table and they have an unlimited supply of coins . Draw out a strategy such that B always wins. (Hint : a line draw through any point in a circle passes through the center)

Interview Round 2 :

- Some Project and language preference question.(Non Technical)
- Given an array, and 2 sizes k1 and k2. Find two non-overlapping subarrays of sizes k1 and k2 such that the sum of those two arrays is maximum.
    - For example in an array : 1 3 3 1 3 3 3 1, k1 =2 and k2 = 3
      The 2 sub array : [3,3] , [3,3,3]. Hence , the maximum sum is 15.
- Consider a heavily visited website like Facebook. Assume that a lot of IP addresses visit that website. Let the IP addresses and the time be stored in the file. The most recent time of hit appears first in the file.
    - For example :
      123.1.12.1 10:00
      145.34.45.1 9:30

123.1.12.1 8:30
Suggest a data structure to store only the ip and the most recent time of access. (Ans : Hash Map)
Cross Question : What are hash maps? How do you implement them ?
How can you hash IPs ?
Techniques of hashing IPs > discussion over collision and its resolution.

- Implement a queue using stack.
  Cross Question : Improve the complexity considering the data to be considered in millions.
  Complexity Improvement techniques and improvement amount that actually takes place.
- Consider a cylinder. An ant sits on the top circumference edge of the cylinder. It wants to reach the bottom circumference edge of the cylinder. Suggest the smallest path.
  Figure:



Performed the proof of which path would be better. (1. Radius and then height or 2. Follow the inner diagonal)