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## Microsoft Interview Experience (3 years Experienced)

- Difficulty Level :[Basic](#)
- Last Updated :[04 Oct, 2019](#)

Team Name: Azure DevOps

### Round 1

Given an array of probability distribution, generate a function to return a char with given probability.  
str=["a", "b", "c"]

probabilityDistribution = [50, 25, 25]

<https://www.geeksforgeeks.org/random-number-generator-in-arbitrary-probability-distribution-fashion/>

4 outputs when called 4 times = a, a, b, c. Create a function

There are coins stored in tree nodes. Each node is supposed to have exactly 1 coin. Total no of coins in a tree is = no of nodes. But the coins are not equally distributed and have to moved to proper nodes (which have >1 or <1 coins). Find the number of moves required.

<https://leetcode.com/articles/distribute-coins-in-binary-tree/>

### Round 2

1 website could link to many other websites. Design a crawler service that could return all websites that are recursively reachable from this website. Design a distributed system where all results cannot be stored in 1 node. [Ans= Decouple storage and compute]

### Round 3:

Maximum sum subarray: <https://www.geeksforgeeks.org/maximum-subarray-sum-using-divide-and-conquer-algorithm/>

Factory pattern question

How do you consume info from an API which produces data faster than you can consume ?

### Round 4:

OOPS- Design a Lift.( X cars, each car can have max P passengers, not destination controlled)

### Result: Offered

My Personal Notes

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