**SABRE SAMPLE INTERVIEW QUESTION**

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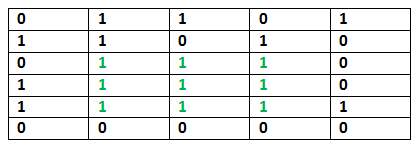
1.Given two arrays A & B of integers of size “m” and “n” respectively, find the sum of all the elements present at “k” points distance from each other and check if this sum can be represented as the sum of “k” prime numbers. If yes print the union of the two arrays if not, print the intersection of the two arrays.

2. You are given a 2-D array of integers of size M X N. If the array is not a square array then make it one by filling the remaining positions with 1. Check if all elements present in the left diagonal occur in the matrix (apart from their occurrence in the left diagonal) strictly more than k times, where “k” is an integer provided as an input. If yes, print “Present” else print “Not Present”.

3. **Shortest distance between two cells in a matrix or grid(asked)**

* Given a matrix of N\*M order. Find the shortest distance from a source cell to a destination cell, traversing through limited cells only. Also you can move only up, down, left and right. If found output the distance else -1.   
  s represents ‘source’   
  d represents ‘destination’   
  \* represents cell you can travel   
  0 represents cell you can not travel   
  This problem is meant for single source and destination.

**4.Maximum size square sub-matrix with all 1s(asked)**

* Given a binary matrix, find out the maximum size square sub-matrix with all 1s.
* For example, consider the below binary matrix.
* 
* 5. **Minimum number of jumps to reach end(asked)**
* Given an array of integers where each element represents the max number of steps that can be made forward from that element. Write a function to return the minimum number of jumps to reach the end of the array (starting from the first element). If an element is 0, they cannot move through that element. If the end isn’t reachable, return -1.

# 6. Find maximum length Snake sequence(asked)

# Given a grid of numbers, find maximum length Snake sequence and print it. If multiple snake sequences exists with the maximum length, print any one of them. A snake sequence is made up of adjacent numbers in the grid such that for each number, the number on the right or the number below it is +1 or -1 its value. For example, if you are at location (x, y) in the grid, you can either move right i.e. (x, y+1) if that number is ± 1 or move down i.e. (x+1, y) if that number is ± 1. For example, ****9****, 6, 5, 2  ****8, 7, 6, 5****  7, 3, 1, ****6****  1, 1, 1, ****7****

# 7. Minimum number of Appends needed to make a string palindrome

Given a string s we need to tell minimum characters to be appended (insertion at the end) to make a string palindrome.

**8.coin change dynamic problem**.

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.

# 9. Gold Mine Problem

Given a gold mine of n\*m dimensions. Each field in this mine contains a positive integer which is the amount of gold in tons. Initially the miner is at first column but can be at any row. He can move only (right->,right up /,right down\) that is from a given cell, the miner can move to the cell diagonally up towards the right or right or diagonally down towards the right. Find out maximum amount of gold he can collect.

# 10. Minimum Number of Platforms Required for a Railway/Bus Station

Given the arrival and departure times of all trains that reach a railway station, the task is to find the minimum number of platforms required for the railway station so that no train waits.   
We are given two arrays that represent the arrival and departure times of trains that stop.