Tesla Cracker Sheet

Note: [To Use this sheet optimally go and watch the "Cracking the Tesla coding interview🔥: The definitive prep guide" video on Debug Buzz Channel.
Link - https://youtu.be/66S6YQGoDaw]

Q)

Given a circular array of N integers (that is, A[0] and A[N - 1] are adjacent to each other), what's the maximum number of adjacent pairs that you can form whose sum are even? Note that each element can belong to at most one pair.

For example, if we have [5, 7, 9, 6, 3], then you should pair (5, 3) and (7, 9) to achieve the answer of two. Also, if we have [1, 1, 1, 1, 1, 1], then the answer is 3 (pair each adjacent element without wrapping around)

Q)

https://molchevskyi.medium.com/microsoft-interview-tasks-min-moves-to-make-string-without-3-identical-consecutive-letters-abe61ed51a10

Q)

https://leetcode.com/problems/minimum-deletion-cost-to-avoid-repeating-letters/

Q)

Given list of test cases. We need to go throw all test cases and if all the test cases succeeded return true else return false.

Q)

https://leetcode.com/problems/minimum-path-sum/

Q)

System Design - Table Tennis Game

Q)

Determine which bounding boxes are the same and return a list of their ids for each timestamp. If the boxes are different, give the box a unique id

Input: list of timestamps that contains a list of bounding boxes of [x, y, width, height] [[x, y, w, h], [x, y, w, h], ...]

Q)

PriorityExpirationCache with LRU

1 If an expired item is available. Remove it. If multiple items have the same expiry, removing any one suffices.

2 If condition 1 cant be satisfied, remove an item with the least priority.

3 If more than one item satisfies condition 2, remove the least recently used one.

4 Multiple items can have the same priority and expiry.

Q)
https://leetcode.com/discuss/interview-question/398035/

Q)

Given two classes and an interface, implement the interface.

Q)

Lets say you have a receipt from a retail store. Design a database schema to capture all the details on the receipt. Follow up, you have coupons to manage, how would you change your database schema.

Q)
https://leetcode.com/problems/move-zeroes/

Q)

Q)

Explain ER diagram of a project that you've worked on.

Q)

What is SOLID, DI, Factory, Singleton, etc..

Q)

Implement a 3d convolution function. you can find this with a simple google search.

```
# given
input.shape = (n, c, h, w)
weight.shape = (h, w, c_i, c_o)

output = conv_3d(input, weight, kernel_size, stride)

# you're asked to compute h_o, w_o in your function
output.shape = (b, c_o, h_o, w_o)
```