Klovercloud Intern evaluation

Task 1: Project (40 Marks)

Scenario
You have a restaurant in Dhaka, which is very popular for Kacchi. In recent days, it has been a tough job for you to calculate the number of sold plates of different kacchi items and summarize the information at the end of the day. You're a programmer too, so what are you waiting for! Develop an application that provides necessary functions/methods to manage different kacchi items and store selling data.

- Your restaurant serves mutton and beef kacchi.
- You don't have to manage inventory.
- Develop functions/methods to add/update/delete different kacchi items. (10 marks)

  ```
  type {
          id,
          name,
          price
  }
  ```

- Develop function/method to store selling data. (10 marks)

  ```
  type {
          item_id,
          number_of_plates,
          total_price,
          date_time
  }
  ```

- Develop function/method to retrieve today's selling information. (For example, how many plates of beef kacchi were sold & total sale amount of the day?) (20 marks)

Note: You can use any language or framework. Make sure you store data in mysql/mongo/postgres.

Task 2: Problem solving (20 Marks)

Try to solve the following problem with maximum time and memory efficiency.

A small frog wants to get to the other side of a river. The frog is initially located on one bank of the river (position 0) and wants to get to the opposite bank (position X+1). Leaves fall from a tree onto the surface of the river.

You are given an array A consisting of N integers representing the falling leaves. A[K] represents the position where one leaf falls at time K, measured in seconds.

The goal is to find the earliest time when the frog can jump to the other side of the river. The frog can cross only when leaves appear at every position across the river from 1 to X (that is, we want to find the earliest moment when all the positions from 1 to X are covered by leaves). You may assume that the speed of the current in the river is negligibly small, i.e. the leaves do not change their positions once they fall in the river.

For example, you are given integer X = 5 and array A such that:

A[0] = 1 A[1] = 3 A[2] = 1 A[3] = 4 A[4] = 2 A[5] = 3 A[6] = 5 A[7] = 4

In second 6, a leaf falls into position 5. This is the earliest time when leaves appear in every position across the river.

Write a function:

class Solution { public int solution(int X, int[] A); }

that, given a non-empty array A consisting of N integers and integer X, returns the earliest time when the frog can jump to the other side of the river.

Task 3: Readability and writability check (20 Marks)

Read this medium article carefully and write a short overview within ~350 words.

Submission Process:
Push your code to any git, make your repository public and email repository link to **career@klovercloud.com**. Subject of your email should be **klovercloud_internship.**

Dateline: 20th October, 11:59 pm