SDE3 – Full Stack Developer - Technical Assessment

Write the code in Javascript. Provide comments as needed. Write unit tests.

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1. A password is considered strong if the below conditions are all met:

- It has at least 6 characters and at most 20 characters.
- It contains at least one lowercase letter, at least one uppercase letter, and at least one digit.
- It does not contain three repeating characters in a row (i.e., "Baaabb0" is weak, but "Baaba0" is strong).

Given a string password, return *the minimum number of steps required to make password strong. if password is already strong, return 0.*

In one step, you can:

- Insert one character to password,
- Delete one character from password, or
- Replace one character of password with another character.

Example 1:

Input: password = "a"
Output: 5

Example 2:

Input: password = "aA1"
Output: 3

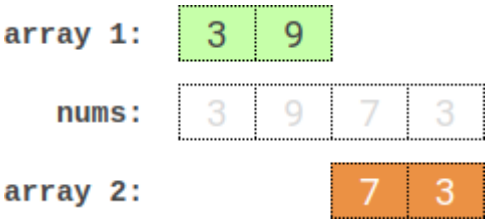
Example 3:

Input: password = "1337C0d3"
Output: 0

2. You are given an integer array nums of 2 * n integers. You need to partition nums into two arrays of length n to minimize the absolute difference of the sums of the arrays. To partition nums, put each element of nums into one of the two arrays.

   Return the minimum possible absolute difference.

   Example 1:

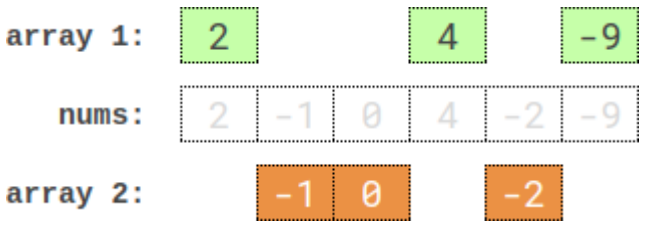


   Input: nums = [3,9,7,3]
   Output: 2
   Explanation: One optimal partition is: [3,9] and [7,3].
   The absolute difference between the sums of the arrays is abs((3 + 9) - (7 + 3)) = 2.

   Example 2:

   Input: nums = [-36,36]
   Output: 72
   Explanation: One optimal partition is: [-36] and [36].
   The absolute difference between the sums of the arrays is abs((-36) - (36)) = 72.

Example 3:



Input: nums = [2,-1,0,4,-2,-9]
Output: 0
Explanation: One optimal partition is: [2,4,-9] and [-1,0,-2].
The absolute difference between the sums of the arrays is abs((2 + 4 + -9) - (-1 + 0 + -2)) = 0.

3. Write a simple front end using React or (React Native or Flutter) to take input and print results in the following page. Save the results in a database preferably MongoDB. Please use good styling guidelines. You can just pick one program from the above (either #1 or #2).

4. Push your code to GITHUB public repository and share with us.