

2464. Time Needed to Rearrange a Binary String

Difficulty : Medium

<https://leetcode.com/problems/time-needed-to-rearrange-a-binary-string>

You are given a binary string s . In one second, **all** occurrences of "01" are **simultaneously** replaced with "10". This process **repeats** until no occurrences of "01" exist.

Return *the number of seconds needed to complete this process*.

Example 1:

Input: $s = "0110101"$

Output: 4

Explanation:

After one second, s becomes "1011010".

After another second, s becomes "1101100".

After the third second, s becomes "1110100".

After the fourth second, s becomes "1111000".

No occurrence of "01" exists any longer, and the process needed 4 seconds to complete, so we return 4.

Example 2:

Input: $s = "11100"$

Output: 0

Explanation:

No occurrence of "01" exists in s , and the processes needed 0 seconds to complete, so we return 0.

Constraints:

- $1 \leq s.length \leq 1000$
- $s[i]$ is either '0' or '1'.

Follow up:

Can you solve this problem in $O(n)$ time complexity?