

2483. Minimum Penalty for a Shop

Medium

You are given the customer visit log of a shop represented by a **0-indexed** string `customers` consisting only of characters `'N'` and `'Y'`:

- if the i^{th} character is `'Y'`, it means that customers come at the i^{th} hour
- whereas `'N'` indicates that no customers come at the i^{th} hour.

If the shop closes at the j^{th} hour ($0 \leq j \leq n$), the **penalty** is calculated as follows:

- For every hour when the shop is open and no customers come, the penalty increases by `1`.
- For every hour when the shop is closed and customers come, the penalty increases by `1`.

Return the **earliest** hour at which the shop must be closed to incur a **minimum** penalty.

Note that if a shop closes at the j^{th} hour, it means the shop is closed at the hour j .

Example 1:

Input: `customers = "YYNY"`
Output: `2`
Explanation:

- Closing the shop at the 0^{th} hour incurs in $1+1+0+1 = 3$ penalty.
- Closing the shop at the 1^{st} hour incurs in $0+1+0+1 = 2$ penalty.
- Closing the shop at the 2^{nd} hour incurs in $0+0+0+1 = 1$ penalty.
- Closing the shop at the 3^{rd} hour incurs in $0+0+1+1 = 2$ penalty.
- Closing the shop at the 4^{th} hour incurs in $0+0+1+0 = 1$ penalty.

Closing the shop at 2^{nd} or 4^{th} hour gives a minimum penalty. Since `2` is earlier, the optimal closing

Example 2:

Input: `customers = "NNNNN"`
Output: `0`
Explanation: It is best to close the shop at the 0^{th} hour as no customers arrive.

Example 3:

Input: `customers = "YYYY"`
Output: `4`
Explanation: It is best to close the shop at the 4^{th} hour as customers arrive at each hour.

Constraints:

- $1 \leq \text{customers.length} \leq 10^5$
- `customers` consists only of characters `'Y'` and `'N'`.

Seen this question in a real interview before? 1/4

Yes No

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Hint 1

Hint 2