

ALTERNATING CHARACTERS

GIVEN:

String = AABAAB; where String $\in \{A, B\}$

And it cannot have matching adjacent characters
And you can delete 0 or more characters

FIND:

The minimum number of character deletions so that the String has no matching adjacent (Side-by-Side) characters

CONSTRAINTS: $1 \leq \text{String queries} \leq 10$

$1 \leq |\text{string length}| \leq 10^5$

VISUALIZE PROBLEM

MATHEMATICAL MODEL:

*(INTERVAL PROBLEM)

Set index: 0, 1, 2, 3, 4, 5

EVENT FINDER EYE:



Set = { A, A, B, A, A, B }

Counter:



last_char_to_check = [A]

*Where the Counter increments Starting @ index 0.

And the Event Finder waits for counter to get to index 1 and then begins to check for an Event as it increments and "Handles" it, Starting @ index 1, Just as it's stated below. last_char_to_check holds the previous characters value.

DOMAIN OF DISCOURSE :

1D Linear Traversal (of a Set - "Universe") of $\forall \in \text{Set}$

EVENT BEING FOUND :

Checking if previous char is Similar to the Current one

EVENT HANDLER :

Count the found comparison as a "deletion".

(i.e. the letters that repeat while adjacent to another letter that's the same)

ALGORITHM: Mathematical Model Explanation

First, grab the char at index 0 and Store it into a **char**, **last-char-to-check**

Begin traversing the rest of the **String** Set and compare the current **Char** to **last-char-to-check**.

As you move to a new index, update **last-char-to-check** with the current **Char**.

IFF the current **Char** is the same as **last-char-to-check** then count it as a "deletion" before you update **last-char-to-check** with the current **Char**.
Else, disregard the current **char** and keep traversing.

Once you're done traversing **return** the count of the number of "deletions" found