



Laugh Analysis

Russian scientists are working on several perspective themes. One their research is about the quality of laugh. In this research they analyse the human speech and extract the laugh from it.

The scientists already made the software which parses the human speech to text. They consider the laugh to be a string of alternating letters “h” and “a”. For example, strings “**ahahaha**”, “**hah**” and “**a**” are laugh, but “**abacaba**” and “**hh**” are not.

You are given a string s containing the parsed speech. Find the length of the longest substring which can be considered as laugh.

Implementation details

You should implement the following function (method):

- `int longest_laugh(string s)`. This function should return the length of the longest substring of s which can be considered as laugh.

Examples

Example 1

- $s = \text{“ahaha”}$

The whole string is a laugh, so the answer is 5.

Example 2

- $s = \text{“ahahrnawayahhsofasthah”}$

The largest substring is “**ahah**”, so the answer is 4.

Example 3

- $s = \text{“ahahaahaha”}$

The largest substring is “**ahaha**”, so the answer is 5.

Subtasks

Here $|s|$ means length of s .

1. (21 points) $|s| \leq 20$,

2. (26 points) $|s| \leq 5000$,

3. (53 points) $|s| \leq 10^5$.

Sample grader

The sample grader reads the input in the following format:

- line 1: String s .

Language Notes

Please use the provided template files for details of implementation in your programming language.