

Mirko's latest homework assignment is writing an essay. However, he finds writing essays so boring that, after working for two hours, he realized that all he has written are **N** long words consisting entirely of letters A and B. Having accepted that he will never finish the essay in time, poor Mirko has decided to at least have some fun with it by counting **nice** words.

Mirko is connecting pairs of **identical** letters (A with A, B with B) by drawing arches **above** the word. A given word is nice if each letter can be connected to exactly one other letter in such a way that no two arches intersect. Help Mirko count how many words are nice.

INPUT

The first line of input contains the positive integer **N** ($1 \leq N \leq 100$), the number of words written down by Mirko.

Each of the following **N** lines contains a single word consisting of letters A and B, with length between 2 and 100 000, inclusive. The sum of lengths of all words doesn't exceed 1 000 000.

OUTPUT

The first and only line of output must contain the number of nice words.

SAMPLE TESTS

| | | |
|---|--------------------------------------|-----------------------------|
| input 3 ABAB AABB ABBA | input 3 AAA AA AB | input 1 ABBABB |
| output 2 | output 1 | output 1 |