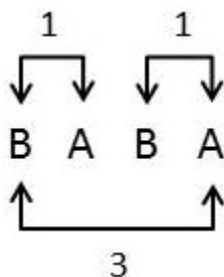


## Problem E

### K-Inversions

You are given a string  $s$  consisting only of upper case letters **A** and **B**. For an integer  $k$ , a pair of indices  $i$  and  $j$  ( $1 \leq i < j \leq n$ ) is called a  $k$ -inversion if and only if  $s[i] = \mathbf{B}$ ,  $s[j] = \mathbf{A}$  and  $j - i = k$ .

Consider the string **BABA**. It has two 1-inversions and one 3-inversion. It has no 2-inversions.



For each  $k$  between 1 and  $n - 1$  (inclusive), print the number of  $k$ -inversions in the string  $s$ .

### Input

Each input will consist of a single test case. Note that your program may be run multiple times on different inputs. The input will consist of a single line with a string  $s$ , which consists of only upper case **A**s and **B**s. The string  $s$  will be between 1 and 1,000,000 characters long. There will be no spaces.

### Output

Output  $n - 1$  lines, each with a single integer. The first line's integer should be the number of 1-inversions, the second should be the number of 2-inversions, and so on.

#### Sample Input 1

BABA

#### Sample Output 1

2  
0  
1



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## Sample Input 2

BBBBBAAAAA

## Sample Output 2

1  
2  
3  
4  
5  
4  
3  
2  
1