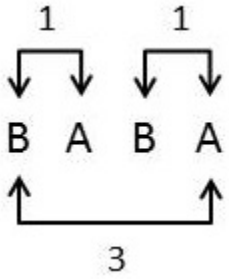
Problem E
K-Inversions

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 $s[i] = \textbf{B}$, $s[j] = \textbf{A}$ 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	Sample Output 1
BABA	2 0 1

Sample Input 2	Sample Output 2
BBBBBAAAAA	1 2 3 4 5 4 3 2 1