

B. Choosing Symbol Pairs

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

There is a given string S consisting of N symbols. Your task is to find the number of ordered pairs of integers i and j such that

1. $1 \leq i, j \leq N$
2. $S[i] = S[j]$, that is the i -th symbol of string S is equal to the j -th.

Input

The single input line contains S , consisting of lowercase Latin letters and digits. It is guaranteed that string S is not empty and its length does not exceed 10^5 .

Output

Print a single number which represents the number of pairs i and j with the needed property. Pairs (x, y) and (y, x) should be considered different, i.e. the ordered pairs count.

Examples

input
great10
output
7

input
aaaaaaaaa
output
100