353   Pesky Palindromes

A palindrome is a sequence of one or more characters that reads the same from the left as it does from the right. For example, Z, TOT and MADAM are palindromes, but ADAM is not.

Your job, should you choose to accept it, is to write a program that reads a sequence of strings and for each string determines the number of UNIQUE palindromes that are substrings.

Input and Output

The input file consists of a number of strings (one per line), of at most 80 characters each, starting in column 1.

For each non-empty input line, the output consists of one line containing the message:

`The string ´input string´ contains nnnn palindromes.`

where *input string* is replaced by the actual input string and *nnnn* is replaced by the number of UNIQUE palindromes that are substrings.

For input string ADAM, the UNIQUE palindromes are A, D, M and ADA so the correct output would be

`The string ´ADAM´ contains 4 palindromes.`

Sample input

```
boy
adam
madam
tot
```

Sample output

```
The string ´boy´ contains 3 palindromes.
The string ´adam´ contains 4 palindromes.
The string ´madam´ contains 5 palindromes.
The string ´tot´ contains 3 palindromes.
```

Note

The 3 unique palindromes in 'boy' are 'b', 'o' and 'y'.
The 4 unique palindromes in 'adam' are 'a', 'd', 'm', and 'ada'.
The 5 unique palindromes in 'madam' are 'm', 'a', 'd', 'ada', and 'madam'.
The 3 unique palindromes in 'tot' are 't', 'o' and 'tot'.