Collect Beads

You have many beads on a thread of a necklace Each bead has a lowercase letter from the English alphabet written on it. You can break the thread at any point and collect all the beads one by one by sliding them out through one and at the thread. You use only one end of the thread reputedly will all the beads are collected in a straight line You try all possible breakages and collecting the trends in other clockwise or anti-clockwise order and wife down the final string representing the collected beads How many unique final strings do you write down? You are given a sing representing the beads in clockwise order starting from an arbitrary point.

Function Description:

Complete the rotateEasyfunction() in the editor below. It has the following parameters

Name : S

Type   : STRING

Return : The function must return an integer denoting the number of unique final strings you write down

Constraints:

1 <= len(S) <= 10^3

Input Format For Custom Testing

The first line contains a string. S denoting the beads in clockwise order starting from arbitrary point.

Sample Cases:

Input 1 : aba

Output 1 : 3

Description : By breaking before 'b' and collecting the beads in clockwise order, you get "baa". By collecting in anti-clockwise order, you get "aab". Apart from these two, you can get original string "aba" by breaking before first 'a' and collecting in clockwise order.

Input 2 : abcd

Output 2 : 8

Description : The possible strings you write down are: ["abcd", "bcda", "cdab", "dabc"] and their reverse strings.

Input 3 : aabbbbaaaabbbbaaa

Output 3 : 17