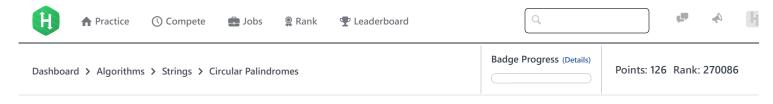
15/11/2017 HackerRank



Circular Palindromes



Problem Submissions Leaderboard Discussions

A palindrome is a string that reads the same from left to right as it does from right to left.

Given a string, S, of N lowercase English letters, we define a k-length rotation as cutting the first k characters from the beginning of S and appending them to the end of S. For each S, there are N possible k-length rotations (where $0 \le k < N$). See the Explanation section for examples.

Given N and S, find all N k-length rotations of S; for each rotated string, S_k , print the maximum possible length of any palindromic substring of S_k on a new line.

Input Format

The first line contains an integer, N (the length of S). The second line contains a single string, S.

Constraints

- $1 \le N \le 5 \times 10^5$
- $0 \le k < N$
- S is comprised of lowercase English letters.

Output Format

There should be N lines of output, where each line k contains an integer denoting the maximum length of any palindromic substring of rotation S_k .

Sample Input 0

13 aaaaabbbbaaaa

Sample Output 0

12 12

10

8

8

9

13

11

9

8

10

Sample Input 1

/ cacbbba 15/11/2017 HackerRank

Sample Output 1

Sample Input 2

12 eededdeedede

Sample Output 2

Explanation

Consider Sample Case 1, where S ="cacbbba".

The possible rotations, $\boldsymbol{S_k}$, for string \boldsymbol{S} are:

 $S_0 = \text{"cacbbba"}.$

 $S_1 =$ "acbbbac"

 $S_2 = \text{"cbbbaca"}$

 $S_3 = \text{"bbbacac"}$

 $S_4 = "bbacacb"$

 $S_5 = \text{"bacacbb"}$

 $S_6 =$ "acacbbb"

The longest palindromic substrings for each S_k are:

 S_0 : "cac" and "bbb", so we print their length (3) on a new line.

 S_1 : "bbb", so we print its length (3) on a new line.

 S_2 : "bbb" and "aca", so we print their length (3) on a new line.

 S_3 : "bbb", "aca", and "cac", so we print their length (3) on a new line.

 \emph{S}_4 : "aca" and "cac", so we print their length (3) on a new line.

 S_5 : "aca" and "cac", so we print their length (3) on a new line.

 S_6 : "aca", "cac", and "bbb", so we print their length (3) on a new line.

f ⊌ in

Submissions:840

Max Score:120 Difficulty: Advanced

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Current Buffer (saved locally, editable) & • •
                                                                                           Java 7
 1 ▼ import java.io.*;
 2 import java.util.*;
 3 import java.text.*;
 4 import java.math.*;
 5
   import java.util.regex.*;
 6
 7 ▼ public class Solution {
 8
        public static void main(String[] args) {
 9 ₹
            /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. */
10 ▼
11
12
   }
13
                                                                                                                    Line: 1 Col: 1
1 Upload Code as File
                     Test against custom input
                                                                                                        Run Code
                                                                                                                     Submit Code
```

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