Longest Repeated Substring

Problem Statement

Longest Repeated Substring (LRS) is defined as: Given a string, we want to find the longest repeated non-overlapped substring. For example: if the input is BANANA, the possible LRS are AN (B<u>AN</u> <u>AN</u>A), and NA (BA<u>NA</u> <u>NA</u>). ANA is NOT LRS, because the last 'A' is overlapped. (B<mark>AN</mark><mark>ANA</mark>)

Input

There are multiple test cases. For each test case, there is a string whose length is n ($0 < n < 10^7$). All the characters are uppercase.

Input ends with EOF.

Output

For each case, output the **lexicographically smallest** longest repeated substring separated by a space. Print "No LRS is found." if there is no LRS found in the input.

Sample

Input	Output
BANANA	AN
GATTACA	A
GAGAGAG	GAG
GATTACAGATTACA	GATTACA
TGAC	No LRS is found.
TGTAC	T
TTGGAACC	A