

A Attendance Fraud

At TJ, everyone want to be first in everything, including attendance. Some students have started changing their nmes just to be first! To make sure the teachers don't notice, students only perform a cyclic shift of their name. For example, justin could make his name justin, ustinj, stinju, tinjus, injust, or njusti. Given a student's name, print out the version that appears first in alphabetical order.

SHORT NAME: fraud

INPUT FORMAT:

The input will be one string, consisting of lowercase characters a-z, followed by a newline. The string will contain less than 2000 characters.

OUTPUT FORMAT:

Print the version of the given name that the student should use.

SAMPLE INPUT:

hannah

SAMPLE OUTPUT:

ahhann