Problem I
ICPC Hardest Problem

Given a positive integer N with at most 10^5 digits. Find a positive integer M such that:

- N is a substring of M^2,
- M has at most $10^5 + 10$ digits.

An integer x is a substring of y if x appears in a contiguous subsequence of y.
For example:

- 33 is a substring of 33,
- 34 is a substring of 1345,
- 14 is **not** a substring of 1234.

Input

The input contains a single positive integer N ($1 \le N < 10^{10^5}$).

Output

Output a single positive integer M ($1 \le M < 10^{10^5+10}$) satisfying the given conditions.

Sample Input 1	Sample Output 1
1	1