

# Polish Language

Russell can't wait to know Poland. As he waits he decided to learn a little of the Polish Language. To do this in a funny way he intends to use an old Polish dictionary and play a game he learned from the old Carl.

Given a word  $s$  in the dictionary, Russell is interested in sequences of suffixes of  $s$ . But not just any one! Russell considers amusing sequences of suffixes with the following properties:

- The suffixes appear in increasing sizes.
- The suffixes appear in lexicographic order.

As an example, if  $s = ABACA$  then the sequences  $(ABACA)$ ,  $(A, CA)$  and  $(A, ACA, BACA)$  please Russell but  $(ABACA, ACA)$  or  $(CA, ACA)$  doesn't.

Help Russell find the number of amusing sequences of suffixes of a given word  $s$  modulo  $1000000007 (10^9 + 7)$ .

## Input

The input consists of several test cases. Each test case consists of only one line containing a string  $S$  with 1 to 100000 ( $10^5$ ) uppercase latin letters (A - Z).

## Output

For each test case output a single line containing the number of amusing sequences of suffixes of  $S$  modulo  $1000000007 (10^9 + 7)$ .

## Example

### Input:

ABACA  
NIE  
PIJ  
WODY  
CAMPINAS

### Output:

11  
7  
5  
8  
20