

## C. Periodic integer number

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

Alice became interested in periods of integer numbers. We say positive  $X$  integer number is periodic with length  $L$  if there exists positive integer number  $P$  with  $L$  digits such that  $X$  can be written as  $PPPP \dots P$ . For example:

$X = 123123123$  is periodic number with length  $L = 3$  and  $L = 9$

$X = 42424242$  is periodic number with length  $L = 2$ ,  $L = 4$  and  $L = 8$

$X = 12345$  is periodic number with length  $L = 5$

For given positive period length  $L$  and positive integer number  $A$ , Alice wants to find smallest integer number  $X$  strictly greater than  $A$  that is periodic with length  $L$ .

### Input

First line contains one positive integer number  $L$  ( $1 \leq L \leq 10^5$ ) representing length of the period. Second line contains one positive integer number  $A$  ( $1 \leq A \leq 10^{100000}$ ).

### Output

One positive integer number representing smallest positive number that is periodic with length  $L$  and is greater than  $A$ .

### Examples

<b>input</b>	<a href="#">Copy</a>
3 123456	
<b>output</b>	<a href="#">Copy</a>
124124	

<b>input</b>	<a href="#">Copy</a>
3 12345	
<b>output</b>	<a href="#">Copy</a>
100100	

### Note

In first example 124124 is the smallest number greater than 123456 that can be written with period  $L = 3$  ( $P = 124$ ).

In the second example 100100 is the smallest number greater than 12345 with period  $L = 3$  ( $P = 100$ ).

### Bubble Cup 12 - Finals [Online Mirror, unrated, Div. 2]

Finished

Practice



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Language: GNU G++11 5.1.0

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