

# Hidden Digits

Input file:            **standard input**  
Output file:        **standard output**  
Time limit:         5 seconds  
Memory limit:      512 megabytes

You are given a sequence of  $n$  digits  $d_0, d_1, \dots, d_{n-1}$ . Find the minimum positive integer  $x$  such that for all  $0 \leq i < n$ , the decimal representation of number  $x + i$  contains the digit  $d_i$ .

## Input

Each test contains multiple test cases. The first line contains the number of test cases  $t$  ( $1 \leq t \leq 10^5$ ). The description of the test cases follows.

The first line of each test case contains a single integer  $n$  ( $1 \leq n \leq 10^6$ ).

The second line contains a string of  $n$  digits  $d_0 d_1 \dots d_{n-1}$  ( $0 \leq d_i \leq 9$ ).

It is guaranteed that the sum of  $n$  over all test cases does not exceed  $10^6$ .

## Output

For each test case, print a single integer  $x$  — the smallest positive integer such that the decimal representation of  $x + i$  contains the digit  $d_i$  for all  $0 \leq i < n$ .

## Example

standard input	standard output
6	1
5	10
12345	92
5	45296
01234	701
3	10367486
239	
9	
998244353	
10	
1000000007	
20	
18446744073709551616	