

April 26–30, Palanga

sequence • EN

# Sequence

Adam wrote down on a blackboard a sequence of K consequtive positive integers starting with N. When he left, Billy came in and erased all but one digit from each number, thus creating a sequence of K integers between 0 and 9.

#### Task

Given the final sequence left on the blackboard, find the least possible value of N with which it could have occured.

#### Implementation

Write a function recreate\_sequence(K, B) that takes the following parameters:

- K the length of either sequence
- B a one–dimensional array that describes Billy's sequence, in the order in which it is written on the blackboard: A[i]  $(0 \le i \le K-1)$  is a digit of N+i

Function recreate\_sequence has to return the least possible value of N with which this sequence could have occured.

## Example

Let us consider the example where

$$\begin{array}{r}
 7 \\
 8 \\
 K = 6 \quad A = \begin{array}{r}
 9 \\
 5 \\
 1 \\
 2
 \end{array}$$

Then setting N = 47 would correspond to Adam's sequence being 47 48 49 50 51 52 from which Billy's sequence can indeed be obtained. As no smaller value of N would work, your function has to return 47.

## Scoring

Subtask 1 (? points).  $1 \le K \le 10$ 

Subtask 2 (? points).  $1 \le K \le 1000$ , correct answer does not exceed 1000

Subtask 3 (? points).  $1 \le K \le 1000$ 

Subtask 4 (? points).  $1 \le K \le 100000$ 

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#### Constraints

Time limit: ? s.

Memory limit: ? MB.