

Problem C

The Integer All-time Champ

Input: standard input

Output: standard output

Time Limit: 30 seconds

As Alan Turing and his friend David Champernowne gave the name “The All-time Champ” number (as a joke with the David surname) to the transcendental constant **0.1234567891011...** obtained by concatenating the positive integers and interpreting them as decimal digits to the right of a decimal point, let us nominate “All-time Champ Integers” to the numbers constructed by concatenating the digits of a set of consecutive integers.

Given two natural numbers $0 < m \leq n$, there is a such integer, but there are other natural numbers that contain, as substrings, all the numbers between m and n , both included. For example for $m=1$ and $n=13$, possible solutions are **12345678910111213** (the corresponding “Champ”), **1011213456789** or **1101213456789**. We can see that the last two numbers have only **13** digits as against the **17** of the “Champ”.

Your task is to find out the shortest such integer.

Input

The input file contains several lines of input. Each line contains two natural numbers m and n ($0 < m \leq n < 100$). Input is terminated by end of file.

Output

For each line of input produce one line of output. This line contain the shortest integer that contains as substring all the numbers between m and n (both included). There may be more than one solution. We will accept any one of the solutions.

Sample Input:

```
1 13
1 4
13 14
11 12
```

Sample Output:

```
1101213456789
1234
1314
112
```