

Page on vdome.com

Input file: *standard input*
Output file: *standard output*
Time limit: 2 seconds
Memory limit: 512 mebibytes

On the website `vdome.com`, each new user is assigned a page with an address of the form `vdome.com/idK`, where K is the sequential number of this user, starting from the creation of the site. For example, the site creator has the address `vdome.com/id1`, and his assistants and friends have addresses like `vdome.com/id2`, `vdome.com/id6`, and so on.

The site quickly gained popularity, and now, years later, it has about 10^9 users. Therefore, owners of pages with small numbers are periodically contacted by strangers asking to buy their page, the smaller the number, the more attractive the address. Moreover, some have managed to change `vdome.com/idK` to a letter address of the form `vdome.com/namelogin`. Therefore, there are some “gaps” in the row of numeric addresses.

John decided to find himself an address with the smallest possible number among those currently available. To do this, he obtained a database of all active user addresses of the form `vdome.com/idK` from the darknet, and is trying to find the smallest number missing from it. Since there are too many records in the received database, he wrote a simple program for searching. But John is just a beginner programmer, and therefore, when he took a slice from the string-address of each record, he accidentally reversed the string, and only then read it as an integer. As a result, for example, from the string `vdome.com/id12345` he got 54321, from `vdome.com/id67500` he got 576, and so on. That is, all numbers were written backwards, leading zeros disappeared, and among what was obtained, John is looking for the smallest number.

He could have avoided all this if he knew that, even if a user has a letter address, any page on `vdome.com` can still be accessed by its number, and therefore all the numbers from the first to the N -th were in the database, without gaps. But John didn't know any of this. Therefore, for a given N (the number of address records in the database), answer what is the smallest missing number his program will output.

Input

The first line specifies an integer N —which represents the number of records in the database ($1 \leq N \leq 10^9$).

Output

Print the page number that John's program will output.

Examples

<i>standard input</i>	<i>standard output</i>
5	6
10	10

Explanations

In the first example, the database contained records `id1`, `id2`, `id3`, `id4`, `id5`. After processing, they turned into a list of numbers 1, 2, 3, 4, 5: single-digit numbers remained unchanged when reversed. The smallest missing number among them is 6.

In the second example, the database contained records `id1`, `id2`, `id3`, `id4`, `id5`, `id6`, `id7`, `id8`, `id9`, `id10`. After processing, they turned into a list of numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, 1: `id10` first transformed into 01, and when converted into an integer, it became the number 1. The smallest missing number among them is 10.