3. A+B=C

|  |  |
| --- | --- |
| Time limit | 1 second |
| Memory limit | 64Mb |
| Input | aplusb.in |
| Output | aplusb.out |

It is often offered to solve the case “A+B”, where you need to find the sum of the given integers A and B, when you take part in a trial round of an Olympiad in informatics.

The chairman of the jury decided to prepare tests for the city Olympiad in informatics himself. He used his original methods: first they prepare correct solutions and then they select input files that are suitable to correct solutions.

Let’s have number C, that contains n decimal digits and does not begin with 0. Now we need to take positive integers A and B so that their sum is equal to C and each of A and B contains n decimals and does not begin with 0. Moreover, the chairman tries to select A and B so that each of them is beautiful. Beautiful means a number that does not contain 2 equal numbers in a row. For example, 1272 is a beautiful number, 1227 is not a beautiful number.

You need to create a program that selects pairs of beautiful positive numbers A and B for a given natural number C (their sum). As the number of pairs of beautiful numbers cab be big, you need to present the remainder from dividing this number C by *109+7*.

Input format

The input file contains 1 positive integer C. Number C does not start with 0. Number of digits in number С does not exceed 100 000.

Output format

The output file has to contain 1 integer – the remainder from dividing the number of given pairs of A and B by *109+7*.

Sample 1

| **Input** | **Output** |
| --- | --- |
| 22 | 2 |

Sample 2

| **Input** | **Output** |
| --- | --- |
| 200 | 0 |

Sample 3

| **Input** | **Output** |
| --- | --- |
| 1000 | 0 |

Sample 4

| **Input** | **Output** |
| --- | --- |
| 239 | 16 |

Notes

Number 22 can be presented as the sum of two-digit numbers in 3 ways: 10 + 12, 11 + 11, 12 + 10. First way 11 + 11 is not successful as number 11 is not beautiful. So the solution for the number 22 is 2.

Number 200 can be presented as the sum of three-digit numbers only in 1 way: 100 + 100. This way is not successful. So the solution for number 200 is 0.

Number 1000 cannot be presented as the sum of four-digit numbers. So the solution for number 1000 is 0.