4. Chinese Valentine's Vay

Timelimit: 1000MS Memorylimit: 64M

Problem Description:

Recently, God Liu has been so absorbed in the Pac-Man game that he has even neglected his young fans.So before Chinese valentine's day，in order to have time for him to accompany the girls, while God Liu went to the bathroom, Lao Zhao hid his computer, and told him that computer had been hidden near the date place.But Lao Zhao can't tell him where the computer has been hidden.

Lao Zhao tell God Liu n numbers, the answer is the sum of all the numbers that have appeared in n numbers(mod 9982443553).For example, in 123 there are 1,2,3,12,23,123。

Gao Liu are so excited,he decides to pick up the computer after the date night.But he is too busy,sou he ask you to help him。Do you know the answer?

Input requirements:

In the first line there is an positive integer N, which means there are N numbers.

The next N line, each line is contains one number.

The digit sum of all numbers does not exceed 1000000.

Output requirements:

One integer after mod 9982443553.(An occurrence in a number is defined as the number of substrings, and repeated occurrences are counted only once)

Sample input:

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3
1
12
123
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Sample output:

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164
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Hint:

Of all the numbers that have ever appeared 1,2,3,12,23,123, so the sum is 164.