# Problem A. Namomo Subsequence

"gshfd1jkhaRaadfglkjerVcvuy0gf" said Prof. Pang.

To understand Prof. Pang's word, we would like to calculate the number of *namomo subsequence*s of it. The word by Prof. Pang is a string $s$ with $n$ characters where each character is either an English letter (lower or upper case) or a digit. The $i$-th character of $s$ is denoted by $s[i]$ ($1 \leq i \leq n$). A subsequence $t$ of $s$ is defined by a list of indices $t_1, \ldots, t_6$ such that $1 \leq t_1 < t_2 < \ldots < t_6 \leq n$. Let $compare(c_1, c_2)$ be a function on two characters such that $compare(c_1, c_2) = 1$ when $c_1 = c_2$ and $compare(c_1, c_2) = 0$ otherwise. $t$ is a namomo subsequence of $s$ if and only if for any $1 \leq i < j \leq 6$, $compare(s[t_i], s[t_j]) = compare(namomo[i], namomo[j])$, where $namomo[x]$ represents the $x$-th character of the string "namomo" ($1 \leq x \leq 6$).

Output the number of namomo subsequences of a given string $s$ modulo 998244353.

## Input

The first line contains a string $s$ with $n$ characters ($6 \leq n \leq 1000000$). $s$ contains only lower case English letters ('a' – 'z'), upper case English letters ('A' – 'Z') and digits ('0' – '9').

## Output

Output one integer – the answer modulo 998244353.

## Examples

| standard input | standard output |
|---|---|
| wohaha | 1 |
| momomo | 0 |
| gshfd1jkhaRaadfglkjerVcvuy0gf | 73 |
| retiredMiFaFa0v0 | 33 |