

Just a Number Encryption

Time Limit: 1 s

Memory Limit: 256 MB



Description

Omeng is a package courier at one of the expedition companies. Every day, Omeng delivers packages to the Mengcity post office. However, there are often cases where packages that are sent are picked up by someone other than the intended recipient. This happens because there is no strict security in place to retrieve the packages; anyone can pick up a package as long as they can correctly state the recipient's name. Therefore, Omeng has been instructed to encrypt the packages he sends so that only those who know the code can retrieve the package.

To encrypt each package, Omeng is given a series of numbers with a length of 1 - 100 digits. Omeng's task is to encrypt the code by multiplying each digit of the number (starting from the last digit) with the digit that follows it. If the code obtained after encryption contains less than 30% odd prime numbers, then it is unlikely to be cracked. However, if there are odd prime numbers between 30% - 60%, then the code is considered secure. If it's equal to or more than 60%, then the code is weak.

$$\begin{array}{ccccccccc} 1 & 2 & 3 & 4 & 5 & & & & \\ & \leftarrow & \leftarrow & \leftarrow & \leftarrow & & & & \\ & 1 \times 2 & 2 \times 3 & 3 \times 4 & 4 \times 5 & & & & \\ & & & & & & 1 & & \\ & & & & & & 2 & & \\ & & & & & & 6 & & \\ & & & & & & 12 & & \\ & & & & & & 20 & & \\ & & & & & & \hline & & & & & & 12740 & & \end{array}$$

Input

- The Input is the **CODE**

Output

- First Line, print Your Package Code: **ENC_CODE** Where **ENC_CODE** is the encrypted code
- Second Line, print:
 - The Code is Unhackable! If the number of Odd Prime is less than 30%
 - The Code is Safe, but it's still hackable! If the number of Odd Prime is in between 30% (including) and 60% (excluding)
 - The Code is Weak, it's better to change the code! If the number of Odd Prime is Greater than or equals to 60%

Constraints

$1 \leq \text{Digits Length of } \mathbf{CODE} \leq 100$

Examples

#1

Input
12345
Output
Your Package Code: 12740 The Code is Unhackable!

#2

Input
131715
Output
Your Package Code: 133775 The Code is Weak, it's better to change the code!