Caesar cipher

In <u>cryptography</u>, a **Caesar cipher**, also known as **Caesar's cipher**, the **shift cipher**, **Caesar's code** or **Caesar shift**, is one of the simplest and most widely known encryption techniques. It is a type of substitution cipher in which each letter in the plaintext is replaced by a letter some fixed number of positions up/down the alphabet. The method is named after Julius Caesar, who used it in his private correspondence.

The encryption can also be represented using modular arithmetic by first transforming the letters into numbers, according to the scheme, A = 0, B = 1,..., Z = 25. Encryption of a letter by a shift n can be described mathematically as,

$E(x)=(x+n) \mod 26$

Input:

The input starts with an alphabet and continues until newline. The string is Uppercase and at most 100 characters long.

Output:

For each test case print the result.

Sample Input/Output:

| Sample Input | Sample Output |
|---|---|
| THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG | WKH TXLFN EURZQ IRA MXPSV RYHU WKH ODCB GRJ |

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