

Security - Message Space and Ciphertext Space | Security Question | HackerRank

Thursday, July 21, 2016 1:42 PM

To better understand *Message Spaces* and *Cipher Spaces*, we will first explain the *alphabet of definitions*.
denotes a finite set called the *alphabet of definition*. For example, is the *binary alphabet*. It is a frequently used alphabet of definition.
denotes a set called *message space*. consists of strings composed of symbols from an alphabet of definition.
denotes a set called the *ciphertext space*. consists of strings composed of symbols from an alphabet of definition which might or might not differ from that of .
For example, consider the following encryption: You get a message composed of lowercase English characters only. For any letter in the message, you shift it one time and create a new message that you then transmit. If you get "" then you transform it to "".
Here, is "", "", ..., "".
Both and are sets of all strings composed of lowercase English characters.
For example:
and
(corresponding to the strings in)
For every possible string in , there is a string in .
In this task, your alphabet of definition is .
and are both sets of all strings consisting of decimal digits. Given a coded message, you need to find the new message you obtain if you shift each digit in the message string. You must shift to the right, and it is cyclic.

Constraints

Length of the string

Input Format

Input consists of a single line that contains the string.

Output Format

Output a single line, the shifted string.

Sample Input

982

Sample Output

093

Inserted from <<https://www.hackerrank.com/challenges/security-message-space-and-ciphertext-space>>