CALIFORNIA STATE UNIVERSITY, LOS ANGELES
PROGFEST 2013

Problem 5

ASCII Cipher

Throughout History there have been many methods of ciphering messages. One such cipher between computers is by manipulating the ASCII code through a pre-known digit or key.

In this system a number will offset an ASCII character.
EX:
-Encoding with a key **10** an **A** will be converted to **K**, a **q** will be converted to **{** and **~** will become *****
-Decoding with a key of **10** an **K** will be a **A**, **{** will be converted to **q** and ***** will become **~**
Create a program that takes a message and encodes it. Your program should also be able to take an encoded message and decode it. Notice that **~** has an ASCII code of 126 and by adding 10 we get an ASCII code of 42. In this system if an ASCII code goes over the range of possible values then it starts over. Skip all empty space characters. Use Ascii characters from 32 to 126.

The first token of the input will be the key, followed by a single white space, followed by the tokens to be encoded.

INPUT:
20 Hello World
20 “Welcome To Progfest!!!”
20 \y!!$4k$’!x
20 ky!w$”y4h$4d’${zy()555

OUTPUT: (A few errors are made in this output)
\y!!$4k$’!x
6 ky!w$”y4h$4d’${zy()555 6
Hello World
“Welcome To Progfest!!!”