## Back to Caesar Cipher

Algorithm: shift the alphabet of a certain number of positions

Key: the number of positions to shift

**Key space :** 25 possible rotations (~ 5 bits security)

## **Encoding:**

```
a b c d e f g h i j k l m n o p q r s t u v w x y z
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
```

Encrypting and decrypting one character is obtained as follows:

$$c = E(k,p) = (p + k) \mod 26$$

$$p = D(k,c) = (c - k) \mod 26$$

Cryptanalysis
Breaking the cipher