

Rotational Cipher

One simple way to encrypt a string is to "rotate" every alphanumeric character by a certain amount. Rotating a character means replacing it with another character that is a certain number of steps away in normal alphabetic or numerical order.

For example, if the string "Zebra-493?" is rotated 3 places, the resulting string is "Cheud-726?". Every alphabetic character is replaced with the character 3 letters higher (wrapping around from Z to A), and every numeric character replaced with the character 3 digits higher (wrapping around from 9 to 0). Note that the non-alphanumeric characters remain unchanged.

Given a string and a rotation factor, return an encrypted string.

Signature

```
string rotationalCipher(string input, int rotationFactor)
```

Input

```
1 <= |input| <= 1,000,000  
0 <= rotationFactor <= 1,000,000
```

Output

Return the result of rotating input a number of times equal to rotationFactor.

Example 1

```
input = Zebra-493?  
rotationFactor = 3  
output = Cheud-726?
```

Example 2

```
input = abcdefghijklmNOPQRSTUVWXYZ0123456789  
rotationFactor = 39  
output = nopqrstuvwxyzABCDEFGHIJKLM9012345678
```