Decipher the cipher! (50 Points)

ZPRAC-16-17-Lab3

After losing to Rachita, Rohan the Gardener and the useless person (Still not useful enough to deserve an introduction) start pondering over the secret to getting full marks in tests. They finally realize that the secret lies in a rotation cipher. But Rohan being a gardener and the useless person being useless do not know how to crack it. They come to you asking for help. Help them implement the cipher according to the rules given below.

Formally:

You're given three integers $0 \leq k1, k2, k3 \leq 100$ as input (separated by whitespaces). The next line contains a character which needs to be changed according to the following rules,
If the character is a lowercase alphabet [a-z], rotate it by k1 places
If the character is an uppercase alphabet [A-Z], rotate it by k2 places
If the character is a digit [0-9], rotate it by k3 places

Input:
Input consists of 2 lines
The first line consists of k1, k2 and k3, all space-separated
The second line contains the character

Output:
The character obtained after the rotation

Example:
Input:
2 3 4
A
Output:
D
Input:
1 4 3
9
Output:
2