import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

String teks;

teks = input.nextLine();

int nilai;

nilai = input.nextInt();

getPergeseran(teks, nilai);

}

static void getPergeseran(String teks, int nilai){

for (int a = 0; a < teks.length(); a++){

if (teks.charAt(a) >= 65 && teks.charAt(a) <= 90){

if (teks.charAt(a) + nilai > 90)

System.out.print((char)(teks.charAt(a) + nilai - 26));

else

System.out.print((char)(teks.charAt(a) + nilai));

}

if (teks.charAt(a) >= 97 && teks.charAt(a) <= 122){

if (teks.charAt(a) + nilai > 122)

System.out.print((char)(teks.charAt(a) + nilai - 26));

else

System.out.print((char)(teks.charAt(a) + nilai));

}

if (teks.charAt(a) == ' '){

System.out.print(' ');

}

}

}

}