**J2 ==> Bullcode**

As an excellent and maybe slightly paranoid programmer, Ivancho does everything possible to hide his passwords. He has made a program called Bullcode, with which he can generate a password with a given string *P* of length *N*. He does that with the help of another string made up of exactly 26 characters - *C*. Both strings contain only lowercase latin letters and *C* contains each letter only once.

In order to get the password, he transforms P by performing the following operation: each symbol in it turns into C[1] if it is “а’, into C[2] if it is “b”, into C[3] if it is “c”, etc. (the indices start from 1 here, not from 0). **But since he is afraid of people finding his password, his program does that K times.**

Unfortunately a professional hacker under the name of peter\_pan7 managed to sabotage his computer. Now Ivancho can’t find his program and asks you to make a program bullcode, which does exactly the same.

**Input**

At the first line of the file bullcode.in , the two integers *N* and *K* - the length of *P* and how many times the operation will have to be executed - can be read. At the second line there is the string *P*. At the third line - the string *C*.

**Output**

At the first and only line of the file bullcode.out the program must print a string - the resulting password.

**Constraints**

1 <= N <= 1000

1 <= K <= 1000000 (10^6)

**Example**

|  |  |
| --- | --- |
| **Input (bullcode.in)** | **Output (bullcode.out)** |
| 9 2  redpandas  thefivboxngwzardsjumpqckly | nxvfmtvmp |