erteyncpd

Janko and Marienka have their own way how to encrypt messages. Their method consist of several steps:

1. Decide how many columns will be used.
2. Write the message to columns. Each message will only contains lower case letters.
3. Use padding with random letters to align the message into a rectangular array. For example, the message “toto su techniky programovania jedna” with five columns will be written as

t	e	p	o	e
o	c	r	v	d
t	h	o	a	n
o	n	g	n	a
s	i	r	i	x
u	k	a	a	a
t	y	m	j	z

where ‘x’,’a’,’z’ at the end of the message are random letters used for padding.

4. Janko sends message to Marienka by writing letters following the row order and alternating between left-to-right and right-to-left direction. So the final encrypted message would be

```
tepoedvrcothoanangnosirixaaakutymjz
```

You decided to write program which will decrypt original message, including random padding letters.

Input

The input consists of multiple test cases. Each test case has two lines. The first line consists of one integer c, ($2 \leq c \leq 20$), that is the number of columns used for encryption. Second line stores string that is encrypted message in a form of lower case letters with maximum length of 200 characters. The end of input is indicated by a single 0.

Output

For each test case, output a single line with original plain message. This message is written in form of lower case letters (no spaces) and with characters used for padding (at the end of the message).

Sample Input

```
5
tepoedvrcothoanangnosirixaaakutymjz
3
ttyohhieneesiaabss
0
```

Sample Output

```
totosutechnikyprogramovaniajednaxaz
thisistheeasyoneab
```