

## 13097 **Tobby and the LED display**

Tobby got his first job! Being a lazy puppy, the work that he has found is not very demanding and it consists of observing a LED display during  $T$  minutes and reporting the status of the LED display once this time runs out. The LED display is capable of displaying  $N$  characters and the text can move in two directions, Left or Right. In every minute the character that occupies the  $i$ th position moves to the  $(i - 1)$ -th or  $(i + 1)$ -th position, depending on the direction in which the text moves in the LED display.

The LED display works in a circular way, therefore, if the character that occupies the  $i = 1$  position moves to the left its new position will be  $i = N$ , moreover, if the character that occupies the  $i = N$  position moves to the right its new position will be  $i = 1$ .

i.e. if Tobby got the board shown below where  $N = 10$ ,  $T = 3$  and the direction in which the text moves is Right, the following will happen:

```
Minute 0
+-----+
| | | |T|o|b|b|y|!!!|
+-----+
```

```
Minute 1
+-----+
|!!| | | |T|o|b|b|y|!|
+-----+
```

```
Minute 2
+-----+
|!!!! | | |T|o|b|b|y|
+-----+
```

After 3 minutes, Tobby should report the board shown below.

```
+-----+
|y|!!!! | | |T|o|b|b|
+-----+
```

As it has been said, Tobby is very lazy and wont spends his time on this boring task, that's why he is willing to give you a bone from his first payment as reward :).

### **Input**

The input consists of several test cases and must be read until EOF.

The first line of each test case contains two integers  $N$ ,  $T$  ( $1 \leq N \leq 50000$ ,  $1 \leq T \leq 10^{14}$ ), and one character  $D$  ( $D = 'L'$  or  $D = 'R'$ ), here  $N$  indicates the number of characters that the LED display can show,  $T$  shows the number of minutes that Tobby must wait to report the LED display state and  $D$  is the direction in which the LED display will work **L = Left** and **R = Right**.

Then, there will be 3 lines and each one has  $(2*N) + 1$  characters. The first and third line are the upper edge and the lower edge respectively of the LED display, The second line shows the initial content of the LED display.

## Output

For each test case the output must consist of 3 lines each one will have  $(2*N) + 1$  characters. The first and third line are the upper edge and the lower edge respectively of the LED display and the second one will show the LED display state after  $T$  minutes.

## Sample Input

```
10 3 R
+-----+
| | | |T|o|b|b|y|!|!|
+-----+
```

## Sample Output

```
+-----+
|y|!|!| | | |T|o|b|b|
+-----+
```