B. Center Alignment

time limit per test: 1 second

memory limit per test: 64 megabytes

Almost every text editor has a built-in function of center text alignment. The developers of the popular in Berland text editor «Textpad» decided to introduce this functionality into the fourth release of the product.

You are to implement the alignment in the shortest possible time. Good luck!

Input

The input file consists of one or more lines, each of the lines contains Latin letters, digits and/or spaces. The lines cannot start or end with a space. It is guaranteed that at least one of the lines has positive length. The length of each line and the total amount of the lines do not exceed 1000.

Output

Format the given text, aligning it center. Frame the whole text with characters «*» of the minimum size. If a line cannot be aligned perfectly (for example, the line has even length, while the width of the block is uneven), you should place such lines rounding down the distance to the left or to the right edge and bringing them closer left or right alternatively (you should start with bringing left). Study the sample tests carefully to understand the output format better.

Examples

input	Copy

```
This  is

Codeforces
Beta
Round
5
```

output	Copy

```
************
* This  is *
*          *
*Codeforces*
*   Beta   *
*  Round   *
*    5     *
************
```

input	Copy

```
welcome to the
Codeforces
Beta
Round 5

and
good luck
```

output	Copy

```
****************
*welcome to the*
*  Codeforces  *
*     Beta     *
*   Round 5    *
*              *
*     and      *
*  good luck   *
****************
```

Codeforces Beta Round 5

Finished

Practice

→ **Virtual participation**

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ **Clone Contest to Mashup**

You can clone this contest to a mashup.

Clone Contest

→ **Submit?**

Language: GNU G++23 14.2 (64 bit, ms ⌄

Choose file: Choose File   No file chosen

Submit

→ **Last submissions**

Submission	Time	Verdict
323372382	Jun/08/2025 13:40	Accepted

→ **Problem tags**

implementation   strings   *1200

No tag edit access

→ **Contest materials**

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