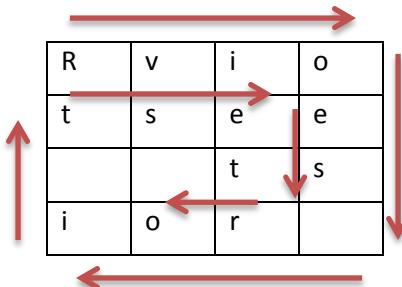


Problem 14 – Matrix Shuffle

You are given an **input string** which you should **fill in a square spiral matrix** with a given **size**. After filling up the matrix you should move through it and **extract** from it **all the letters in a chessboard pattern**.

Your next task is to **check** if the newly formed **sentence**, read in **lowercase** and with all **non-letter characters removed**, is a **palindrome** (reading it from **left to right** is the **same** as reading it from **right to left**).

Example: You are given the string “**Rvioes roi tset**” and a size of **4**. You fill the matrix in a **spiral** as shown below.



After filling it up, **extract** all letters in a **chessboard pattern**. First extract all **white squares**, after that all **black squares**.

R	v	i	o
t	s	e	e
		t	s
i	o	r	

→ “Rise to ” +

R	v	i	o
t	s	e	e
		t	s
i	o	r	

→ “vote sir”

Result: “**Rise to vote sir**”.

After obtaining the string we must **check** if it is a **palindrome**. “**ris etov ot esir**” == “rise to vote sir”. They are equal so we found a palindrome. The **output** consists of a single “**<div>**” tag which holds the found sentence. If the sentence is a **palindrome** the “**div**” tag’s **background** should be **#4FE000**. If the sentence is **not** a palindrome its background should be **#E0000F**.

Input

The input will be read from the console. The first line will hold a number – the **size** of the matrix. The second line will hold the **text**. The input data will always be **valid** and in the format described. There is no need to check it explicitly.

Output

The output should be an **HTML <div> tag** that shows the newly found sentence, colored by changing its background to **#E0000F** (see the examples below) if the sentence is not a palindrome or **#4FE000** if the sentence is a palindrome. **Follow strictly the sample HTML output format below.**

Constraints

- The **text** is a non-empty text field.
- The **size** is an integer in the range [1 ... 9].
- Allowed working time: 0.1 seconds. Allowed memory: 16 MB.

Examples

Input

```
4  
Rvioes roi tset
```

Output

```
<div style='background-color:#4FE000'>Rise to vote sir </div>
```

Input

```
7  
Soovfetonetem sssadroedw atrneahr dyri aUhi stv
```

Output

```
<div style='background-color:#E0000F'>Software University has moved to another  
address </div>
```