# Problem 3 – Matrix Shuffle

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

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 if reading from **right to left**).

**Example**: You are given the string “**Rvioes roi tset** ” and a size of **4**. You fill in a matrix by **moving like a spiral** shown on the bottom picture.

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

After filling it up, **extract** all letters like a **chessboard**. Frist all **white squares**, after that all **black squares**.

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

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

“Rise to” + “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. Your **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 set to **#4FE000**. If the sentence is **not** a palindrome its background should be **#E0000F**.

### Input

The input will be read from an **HTTP GET** **request** holding parameters named **size** and **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 a **HTML <div> tag** that shows the newly found sentence, colored by changing it’s 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. There might be punctuation marks and leading or trailing whitespaces which you **should** keep in the output.
* The **size** is an input field, holding **non-empty value** and will be in the range [1…9].
* Allowed working time: 0.1 seconds. Allowed memory: 12 MB.

### Examples

|  |  |
| --- | --- |
| **Input** | |
| size | 4 |
| text | “Rvioes roi tset ” |
| **Output** | |
| <div style="background-color:#4FE000">Rise to vote sir </div> | |

|  |  |
| --- | --- |
| **Input** | |
| size | 7 |
| text | “Soovfetonetem sssadroedw atrneahr dyri aUhi stv” |
| **Output** | |
| <div style="background-color:#E0000F">Software University has moved to another address </div> | |