

# 2075. Decode the Slanted Ciphertext

## Description

A string `originalText` is encoded using a **slanted transposition cipher** to a string `encodedText` with the help of a matrix having a **fixed number of rows** `rows`.

`originalText` is placed first in a top-left to bottom-right manner.



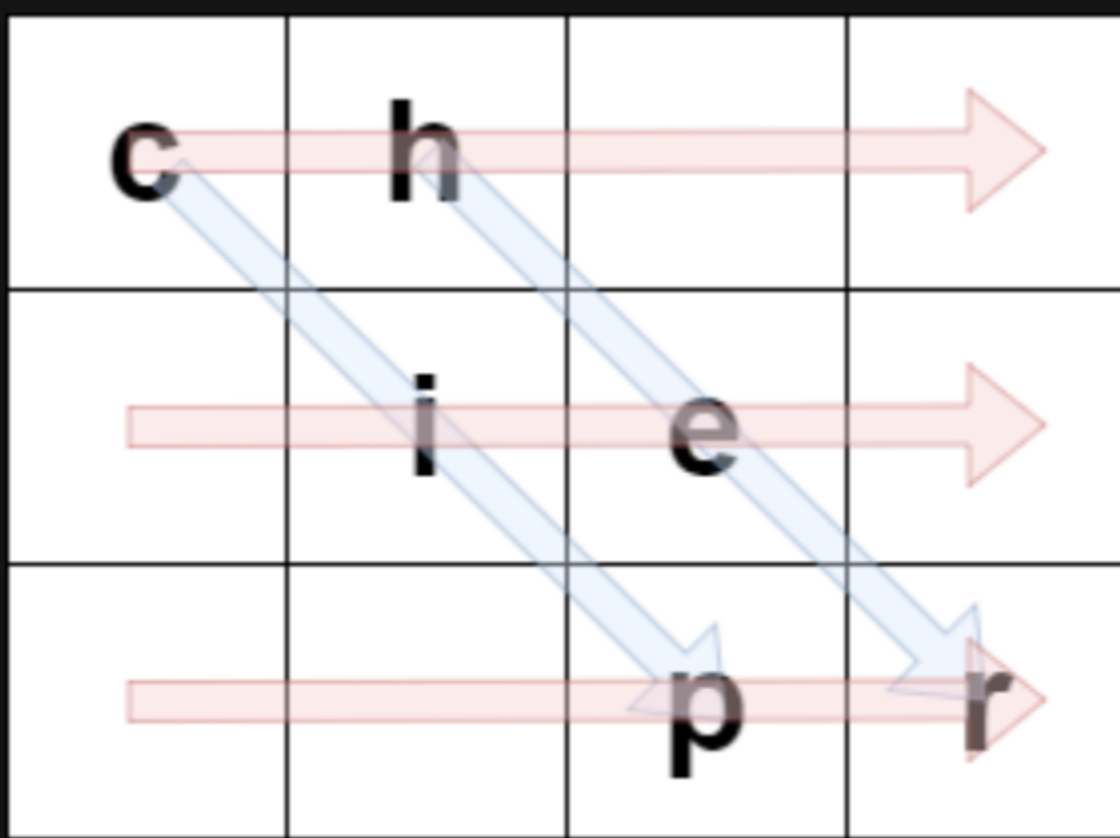
The blue cells are filled first, followed by the red cells, then the yellow cells, and so on, until we reach the end of `originalText`. The arrow indicates the order in which the cells are filled. All empty cells are filled with `' '`. The number of columns is chosen such that the rightmost column will **not be empty** after filling in `originalText`.

`encodedText` is then formed by appending all characters of the matrix in a row-wise fashion.



The characters in the blue cells are appended first to `encodedText`, then the red cells, and so on, and finally the yellow cells. The arrow indicates the order in which the cells are accessed.

For example, if `originalText = "cipher"` and `rows = 3`, then we encode it in the following manner:



The blue arrows depict how `originalText` is placed in the matrix, and the red arrows denote the order in which `encodedText` is formed. In the above example, `encodedText = "ch ie pr"`.

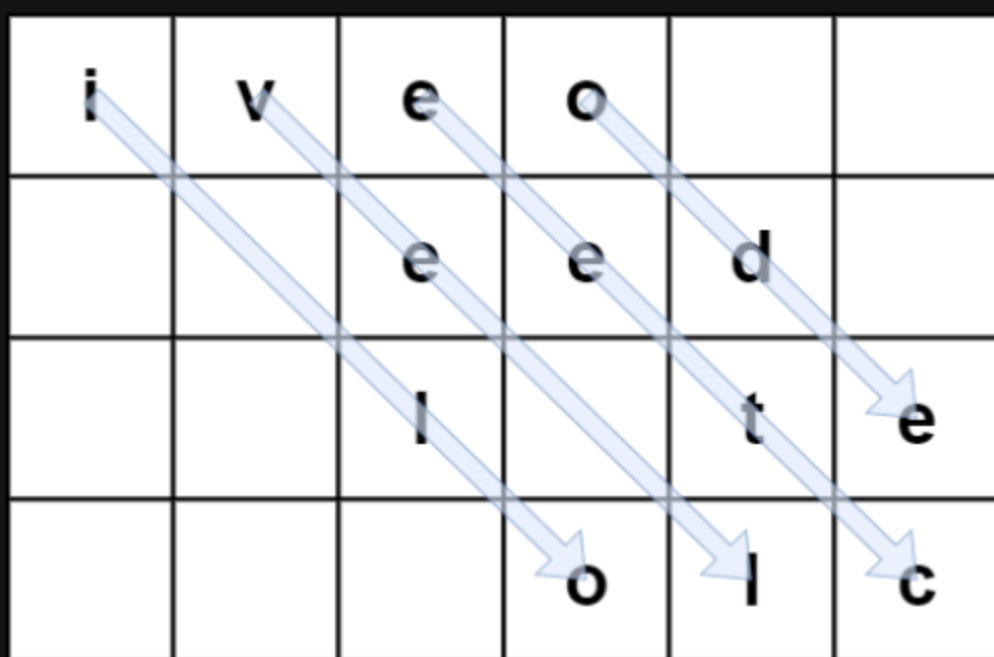
Given the encoded string `encodedText` and number of rows `rows`, return *the original string* `originalText`.

**Note:** `originalText` **does not** have any trailing spaces `' '`. The test cases are generated such that there is only one possible `originalText`.

### Example 1:

**Input:** `encodedText = "ch ie pr"`, `rows = 3`  
**Output:** `"cipher"`  
**Explanation:** This is the same example described in the problem description.

### Example 2:



**Input:** `encodedText = "iveo eed l te olc"`, `rows = 4`  
**Output:** `"i love leetcode"`  
**Explanation:** The figure above denotes the matrix that was used to encode `originalText`. The blue arrows show how we can find `originalText` from `encodedText`.

### Example 3:



**Input:** `encodedText = "coding"`, `rows = 1`  
**Output:** `"coding"`  
**Explanation:** Since there is only 1 row, both `originalText` and `encodedText` are the same.

### Constraints:

- `0 <= encodedText.length <= 106`
- `encodedText` consists of lowercase English letters and `' '` only.
- `encodedText` is a valid encoding of some `originalText` that **does not** have trailing spaces.
- `1 <= rows <= 1000`
- The testcases are generated such that there is **only one** possible `originalText`.

