

## Problem 2 – String Matrix Rotation

You are given a **sequence of text lines**. Assume these text lines form a **matrix of characters** (pad the missing positions with spaces to build a rectangular matrix). Write a program to **rotate the matrix** by 90, 180, 270, 360, ... degrees. Print the result at the console as sequence of strings. Examples:

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### Input

The input is read from the console:

- The first line holds a command in format "**Rotate(X)**" where **X** are the degrees of the requested rotation.
- The next lines contain the **lines of the matrix** for rotation.
- The input ends with the command "END".

The input data will always be valid and in the format described. There is no need to check it explicitly.

### Output

Print at the console the **rotated matrix** as a sequence of text lines.

### Constraints

- The rotation **degrees** is positive integer in the range [0...90000], where **degrees** is **multiple of 90**.
- The number of matrix lines is in the range [1...1 000].
- The matrix lines are **strings** of length 1 ... 1 000.
- Allowed working time: 0.2 seconds. Allowed memory: 16 MB.

### Examples

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