Transformation

Problem Description
Given a 2 dimensional matrix, output the final state of the matrix after performing the given operations. There are 2 valid operations:

1. **Rotate X**
- Rotate the matrix by X degree, X can be 90, 180, or 270 **clockwise**.

2. **Reflect x**
- Reflect the matrix across the x-axis.

3. **Reflect y**
- Reflect the matrix across the x-axis.

Input
The first line of the input contains one integers, **N** (1 <= **N** <= 100). The next line is an array with size **N** x **N**. The next line is an integer **K** (1 <= **K** <= 100), where **K** is the number of operations performed. The next line is the query with format "Rotate **x**", (**x** ∈ **{90, 180, 270}**), "Reflect x" or "Reflect **y**".

Output
The output is the final state of the matrix.

Sample Input
3
1 2 3
4 5 6
7 8 9
3
Rotate 90
Reflect x
Reflect y

Sample Output
3 6 9
2 5 8
1 4 7

Explanation
1. Initial matrix:
   1 2 3
   4 5 6
   7 8 9
2. After 90° rotation:
   7 4 1
   8 5 2
   9 6 3
3. After reflection across x axis:
   9 6 3
   8 5 2
   7 4 1
4. After reflection across y axis:
   3 6 9
   2 5 8
   1 4 7

Note
Your solution must be in the source file Transformation.cpp.