**Problem #1 Image Rotate**

In this task, you have to right rotate a image n times (0 <= n <= 109). Each pixel of the image is represented by an integer that represents its color. See the following example where a 5X5 image is right rotated (i.e. rotated 90 degrees clockwise) once:

|  |  |
| --- | --- |
| 7 3 5 8 9 | 0 5 2 6 7 |
| 6 4 8 2 6 | 1 2 3 4 3 |
| 2 3 7 1 5 -->RR(1)--> | 5 6 7 8 5 |
| 5 2 6 0 4 | 9 0 1 2 8 |
| 0 1 5 9 3 | 3 4 5 6 9 |

The first line of input contains r, c and n. r and c represents the rowcount and columncount of the image in pixels (1 <= r,c <= 10). Then r lines follow, each containing c space separated integers, representing the pixel colors of the image.

You need to output the pixels of the image that results from right-rotating the input image n times.

|  |  |
| --- | --- |
| Sample Input(s) | Corresponding Output(s) |
| 5 5 1 | 0 5 2 6 7 |
| 7 3 5 8 9 | 1 2 3 4 3 |
| 6 4 8 2 6 | 5 6 7 8 5 |
| 2 3 7 1 5 | 9 0 1 2 8 |
| 5 2 6 0 4 | 3 4 5 6 9 |
| 0 1 5 9 3 |  |
| 5 5 3 | 7 3 5 8 9 |
| 0 5 2 6 7 | 6 4 8 2 6 |
| 1 2 3 4 3 | 2 3 7 1 5 |
| 5 6 7 8 5 | 5 2 6 0 4 |
| 9 0 1 2 8 | 0 1 5 9 3 |
| 3 4 5 6 9 |  |
| 5 4 1  1 2 3 4  5 6 7 8  9 10 11 12  13 14 15 16  17 18 19 20 | 17 13 9 5 1  18 14 10 6 2  19 15 11 7 3  20 16 12 8 4 |

**Problem #2 Longest common substring**

In computer science, the longest common substring is the longest string that is a substring of two or more strings.

Given two strings ‘X’ and ‘Y’. Find the longest common substring and its length.

|  |  |
| --- | --- |
| Sample Input | Sample Output |
| GeeksforGeeks  GeeksQuiz | The longest common substring is "Geeks" and is of length 5. |
| abcdxyz  xyzabcd | The longest common substring is "abcd" and is of length 4 |
| zxabcdezy  yzabcdezx | The longest common substring is "abcdez" and is of length 6 |