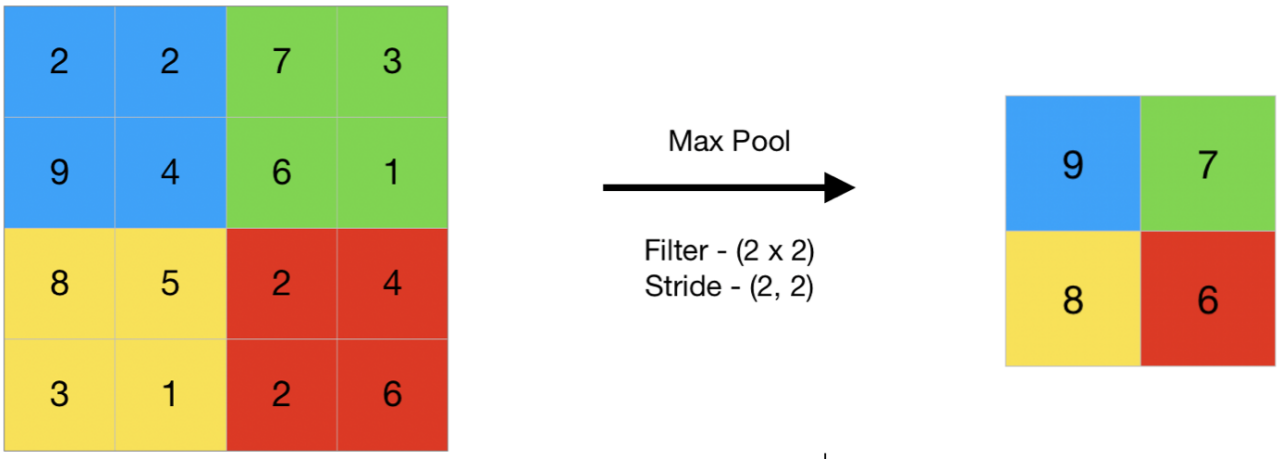
Problem F
Pooling I

Time limit: **3 seconds**
Memory limit: **1024 megabytes**

Problem Description

Pooling is a crucial concept in CNNs (Convolutional Neural Networks). It helps reduce the size of an image while preserving important features. One common pooling method is Max Pooling. In Max Pooling, we define a pooling window and a stride (步幅). The pooling window slides across the image from left to right and top to bottom using the given stride. At each position, it selects the maximum value from the window and stores it in the output matrix. The following figure illustrate this process.



Abbaton, a student in the ML course, was absent from the final exam and is about to fail the class. He approaches Professor Wizard to ask for a chance to make up for it. Fortunately, because he has consistently paid attention in class, Professor Wizard agrees to let him pass—on one condition: he must implement a CNN using Max Pooling.

Now, Abbaton needs your help!

You are given three integers n, m and p, which represent the size of the image $(n \times n)$, the size of the pooling window $(m \times m)$, and the stride p, respectively. You are also given the image in the form of a numerical matrix. Your task is to output the resulting matrix after applying Max Pooling.

Input Format

Your program is to read from standard input. The input may include multiple test cases. For each test case, the first line contains three integers n, m and p, whose meanings are described in the problem statement. The next n lines each contain n integers representing the image with size $n \times n$. The elements $A_{i,j}$ $(0 \leq i, j < n)$ in the $n \times n$ are integers between 0 and 9 The input ends when n, m and p are 0.

Output Format

Your program is to write to standard output. For each test case, please output the resulting matrix after applying Max Pooling. Print a blank line between two consecutive test cases. Please see the sample output.

Technical Specification

- $4 \leq n \leq 100$
- $1 \leq m \leq n$
- $0 \leq A_{i,j} \leq 9, 0 \leq i, j < n$
- p must be the common divisor of n and m.

Sample Input 1

```
4 2 2
2 2 7 3
9 4 6 1
8 5 2 4
3 1 2 6
4 2 1
2 2 7 3
9 4 6 1
8 5 2 4
3 1 2 6
0 0 0
```

Sample Output 1

```
9 7
8 6

9 7 7
9 6 6
8 5 6
```