Print Lower triangular matrix (15 july)

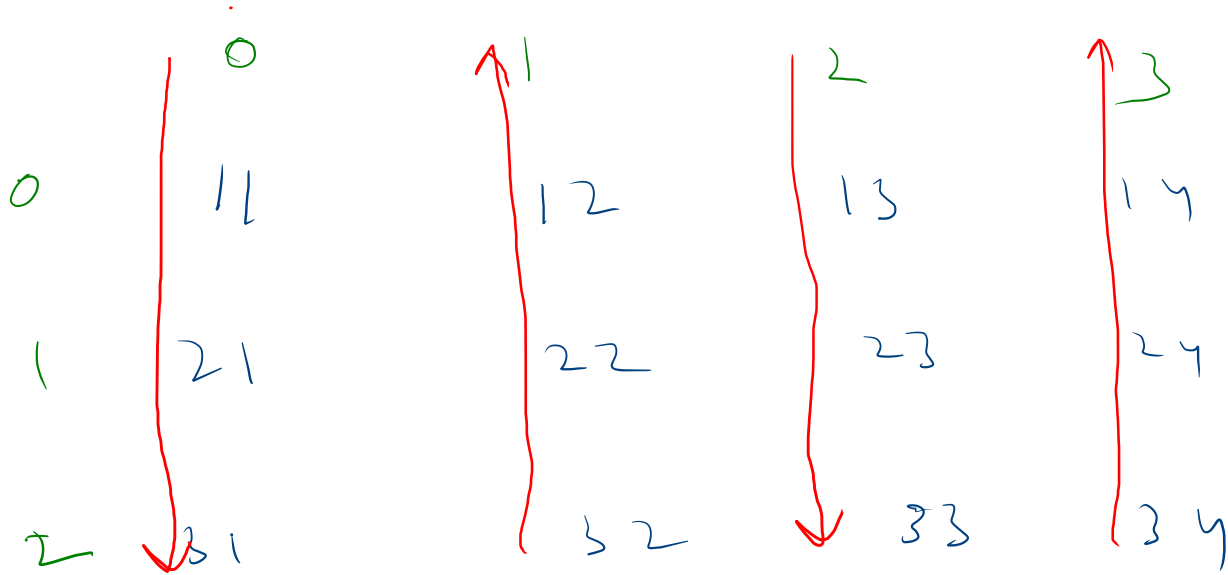$M = ①$ $i=0 ; i < 2 ; i++$

$j=0 ; j \leq i ; j++$

$M.4$ $row \geq col$

	0	1	2	3	4
0	1_{00}	2_{01}	3_{02}	4_{03}	5_{04}
1	7_{10}	8_{11} 9_{12}		10_{13}	11_{14}
2	13_{20}	14_{21}	15_{22}	16_{23}	17_{24}
3	18_{30}	19_{31} K	20_{32}	21_{33}	22_{34}
4	23_{40}	24_{41}	25_{42}	43 6	44_{2}

Print Pattern (15 july)

```
        0                1                2                3
  0    11          ↑    12          ↓    13          ↑    14
  1    21          |    22          |    23          |    24
  2  ↓ 31          |    32          ↓    33          |    34
```

even Col → top to bottom
odd col → bottom to Top

Rotate By 90 Degree

The diagram shows a 4×4 matrix rotation by 90 degrees.

Original matrix (rows indexed 0,1,2,3):

	0	1	2	3
0	11	12	13	14
1	21	22	23	24
2	31	32	33	34
3	41	42	43	44

Rotated (columns become rows):

	0	1	2	3
0	41	31	21	11
1	42	32	22	12
2	43	33	23	13
3	44	34	24	14

Transpose →

$$\begin{bmatrix} 11 & 21 & 31 & 41 \\ 12 & 22 & 32 & 42 \\ 13 & 23 & 33 & 43 \\ 14 & 24 & 34 & 44 \end{bmatrix}$$

Reverse → Col's now row by now →

$$\begin{bmatrix} 41 & 31 & 21 & 11 \\ 42 & 32 & 22 & 12 \\ 43 & 33 & 23 & 13 \\ 44 & 34 & 24 & 14 \end{bmatrix}$$

```
        0         1          2       3
  0  ⌈ 11       12 01      13 02     14       ⌉          11      12      31        41
  1  |  21       22        23        24 03     |          
  2  |  21 10                                  |          21      22
  3  |  31       32        33        34        |    →     13              33
  4  ⌊  41 20    42        43        44        ⌋          
     30                                                   14              44
```

Transpose ⟸ Swap (i,j) & Swap (j,i)