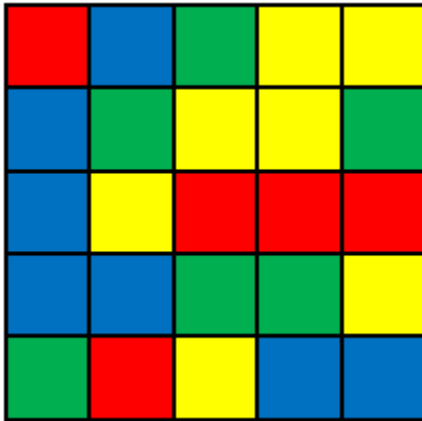


My open homework about algorithms:

We have  $n * n$  grid squares being colored with  $m$  colors. ( $n \geq 5$ ;  $n \leq 20$ ;  $m \leq 8$ )

For example (picture):



5,4
0,1,2,3,3
1,2,3,3,2
1,3,0,0,0
1,1,2,2,3
2,0,3,1,1

The first row displays squares' size and color's number.

From the second row, each row display assigned numbers for unit squares.

We define action rotation if we choose a small square in large square (small square's size is  $2k * 2k$ ) and rotate this small square by  $90^\circ$ ,  $180^\circ$ ,  $270^\circ$  angle. Of course, each unit square's color is also changed by this action.

For example; center rotation (2,3), size 4, angle 1 ( 1 -> $90^\circ$ , 2 -> $180^\circ$ , 3 -> $270^\circ$ )



So can anyone suggest the better algorithms?