

Practice problems aimed to improve your coding skills.

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Fill in the Square

LAB-PRAC-06 LOOPS

Fill in the Square [10 marks]

Problem Statement

The entire Cartesian plane has been divided into unit squares. Squares in the 1st and 3rd quadrant are filled with 0 and squares in the 2nd and 4th quadrant are filled with 1 as shown below.

	1	1	1	1	1	14	0	0	0	0	0	0	
	1	1	1	1	1	1		0	0	0	0	0	
	1	1	1	1	1	1	0	0	0	0	0	0	
	1	1	1	1	1	1	_	0	0	0	0	0	
		_	_			_	-	_	_			_	
-6	0-5	0-4	0-3	0-2	0-1	0 °	1 ¹	1 ²	1 ³	14	1 ⁵	1 ⁶	
-6 —	0-5	0-4	0-3	0-2	0-1	0 ₁		1 ²	1 ³	14	15	1 ⁶	
-6 	Ū	0-4							1 ³ 1			1 ⁶ 1	
-6 	Ū	0 ⁻⁴ 0 0 0		0	0	0-1	1	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	1	1	

You are given the side length (**always a non-negative integer**) of a square and the **integer** coordinates of its bottom left corner. You have to show us in your output, what that square looks like. For example if the side length is 4 and the bottom-left corner is (-2,-2), then the square looks like

						1						
						1						
				1	1	1~	0	0	0			
				1	1	1 [¬]	0	0				
-6	0-5			O ⁻²	0-1	00	1 ¹	1 ²	1 ³	1 ⁴	1 ⁵	1 ⁶
-6				0 ⁻²				1 ²	1 ³			1 ⁶
-6		0-4	0-3			0,	1					1 ⁶ 1
-6		0-4	0-3	0	0	0,	1	1				1 ⁶ 1 1 1

In this case you have to print

1100

1100

0011

0011

Notice that there are not spaces anywhere and no extra new lines. As another example, if the side length is 4 and the bottom-left corner is (0,0), then the square looks like

						1 [†]	0	0	0	0		
						1	0	0	0	0		
						1~	0	0	0	0		
						1	0	0	0	0		
-6	0-5	0-4	0-3	0-2	0-1	00	1 ¹	1 ²	1 ³	1 ⁴	1 ⁵	1 ⁶
-6	0 ⁻⁵	0 ⁻⁴	O ⁻³		0-1	0 .		1 ²	1 ³	1 ⁴	1 ⁵	1 ⁶
-6	0 ⁻⁵ 0	0 ⁻⁴ 0										1 ⁶ 1
-6	O ⁻⁵ O O	0 ⁻⁴ 0 0			0	0						1 ⁶ 1 1 1

In this case you have to print

0000

0000

0000

0000

Caution

- 1. Remember, side length can be any non-negative integer, not just 4 as in the visible test cases. Coordinates can be negative or positive integers and can even be zero.
- 2. Be careful about extra/missing lines and extra/missing spaces.
- 3. Be very careful, even though the evaluation may give you marks for extra spaces and newlines, the autograder will give you zero marks for any extra spaces or new lines.

EXAMPLE:

INPUT

4 -2 -2

OUTPUT:

1100

1100

0011

0011

Grading Scheme:

Total marks: [10 Points]

There will be no partial grading in this question. An exact match will receive full marks whereas an incomplete match will receive 0 points. Please be careful of missing/extra spaces and missing/lines (take help of visible test cases). Each visible test case is worth 1 point and each hidden test case is worth 2 points. There are 2 visible and 4 hidden test cases.

¥¶ Start Solving! (/editor/practice/6110)