**6 kyu**

**Checkerboard Generation**

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C#

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**Checkerboard**

Write a method checkerboard/Checkerboard which takes an integer size and returns a checkerboard of dimensions size x size. There are two colored squares on the checkerboard. Red squares are represented by the string [r] and black squares are represented by the string [b]. You MUST use the newline character \n to insert a newline at the end of each row.

* The top left corner should be a red square.
* Each row should have alternating squares in the row.
* The starting square on each row should also alternate.

Assumptions

* Sizes up to 5,000 by 5,000 may be tested. Make sure your solution is performant.
* You can assume you are given an integer size.
* You cannot assume positive values.
  + Thus you should return an empty string for negative sizes and a size of 0. (An empty string does not have a newline ending).
* You should assume the newline character used is \n.
* You MUST leave a newline character at the end of the full checkerboard thus allowing the board to be on its own if you were to run in a terminal.

Examples

Kata.Checkerboard(8) =>

"[r][b][r][b][r][b][r][b]\n" +

"[b][r][b][r][b][r][b][r]\n" +

"[r][b][r][b][r][b][r][b]\n" +

"[b][r][b][r][b][r][b][r]\n" +

"[r][b][r][b][r][b][r][b]\n" +

"[b][r][b][r][b][r][b][r]\n" +

"[r][b][r][b][r][b][r][b]\n" +

"[b][r][b][r][b][r][b][r]\n";

What We're Testing

We're testing loops and conditionals and aiming at beginners. There are many ways of achieving the solution so the correct solution will present a fairly basic version that should be more advanced than typical loop examples and has some extra challenge to the problem with the alternating on columns and rows.

<https://www.codewars.com/kata/checkerboard-generation/csharp>

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace ConsoleApp1

{

class Program

{

public static string Checkerboard(int size)

{

StringBuilder tipoA = new StringBuilder();

tipoA.Append("[");

StringBuilder tipoB = new StringBuilder();

tipoB.Append("[");

bool flag = false;

for (int j = 0; j < size-1; j++)

{

if (!flag)

{

tipoA.Append("r");

tipoA.Append("][");

tipoB.Append("b");

tipoB.Append("][");

}

else

{

tipoA.Append("b");

tipoA.Append("][");

tipoB.Append("r");

tipoB.Append("][");

}

flag = !flag;

}

if (!flag)

{

tipoA.Append("r");

tipoB.Append("b");

}

else

{

tipoA.Append("b");

tipoB.Append("r");

}

tipoA.Append("]\n");

tipoB.Append("]\n");

int cont = 0;

StringBuilder sb = new StringBuilder();

while (true)

{

if (cont < size)

{

sb.Append(tipoA);

cont++;

}

else break;

if (cont < size) {

sb.Append(tipoB);

cont++;

}

else break;

}

return sb.ToString();

}

static void Main(string[] args)

{

Console.WriteLine(Checkerboard(12));

Console.ReadLine();

}

}

}