Homework-ch7.21

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import java.util.Arrays;

import java.util.Scanner;

public class BeanMachine {

static Scanner input = new Scanner(System.in);

public static void main(String[] args) {

System.out.print("Enter the number of balls to drop: ");

int balls = input.nextInt();

System.out.print("Enter the number of slots in the bean machine: ");

int slots = input.nextInt();

showAnswer(balls, slots);

}

public static void showAnswer(int balls, int slots) {

int position;

int[] Path = new int[balls];

int[][] printBalls = new int[slots][balls];

//Drop the balls one at a time

for (int i = 0; i < balls; ++i) {

//nails = slot-1

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

//Position means the way where the ball roll

//Use random to decide 0 or 1

position = (int) (Math.random() \* 2);

//When position = 0, then print out "L" ; When position = 1,

then print out "R"

//Use Path[i] to array how many times that the ball turn to right

if (position == 0) {

System.out.print("L");

}

else {

System.out.print("R");

Path[i]++;

}

}

System.out.println();

}

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

//printBalls[j][count] means how many balls from the bottom to the

top in the j slot

int count = balls - 1;

for (int i = 0; i < balls; ++i) {

if (Path[i] == j) {

printBalls[j][count] = 1;

count--;

}

}

}

//To show the result in different slots

for (int i = 0; i < balls; ++i) {

//nails = slot-1

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

if (printBalls[j][i] == 1) {

System.out.print("0");

}

else {

System.out.print(" ");

}

}

System.out.println();

}

}

}