My Solution on Assignment 2 - Problem 1

This is my Solution of Assignment 2 - Problem 1 from the Computer Science Course CS106A of Prof. Mehran Sahami at the STANFORD University.

Pyramid.java

```java
/*
 * File: Pyramid.java
 * Name:
 * Section Leader:
 * -----------------
 * This file is the starter file for the Pyramid problem.
 * It includes definitions of the constants that match the
 * sample run in the assignment, but you should make sure
 * that changing these values causes the generated display
 * to change accordingly.
 */

import acm.graphics.*;
import acm.program.*;
import java.awt.*;

public class Pyramid extends GraphicsProgram {

/** Width of each brick in pixels */
    private static final int BRICK_WIDTH = 30;

/** Height of each brick in pixels */
    private static final int BRICK_HEIGHT = 12;

/** Number of bricks in the base of the pyramid */
    private static final int BRICKS_IN_BASE = 14;


    public void run() {
        CalculateCanvasDataAndSetVars();
        for( int ROW = 0; ROW <= BRICKS_IN_BASE; ROW++ ) { // for each
ROW...
            // Calculate the Number of Bricks on this ROW and ...
            int BricksOnThisRow=BRICKS_IN_BASE-ROW;
            for(int BRICK=0; BRICK<=BricksOnThisRow ; BRICK++) { // for
each BRICK on that ROW...
                //Calculate Bricks Starting Coordinate X,Y
                int X=MiddleX-
((BricksOnThisRow*BRICK_WIDTH)/2)+BRICK*BRICK_WIDTH;
                int Y=CanvasY-ROW*BRICK_HEIGHT;
                drawBrickAt(X,Y);
            }
```

```
        }
    }


    public void CalculateCanvasDataAndSetVars() {
        /*
         * Gets Canvas Sizes (Height and Width) and stores Data in
public Class Variables
         * so any following Method can access Data. Also Calculates and
Stores the Middle of the
         * X-Axis for convenience and readability.
         */
        CanvasY = getHeight();
        CanvasX = getWidth();
        MiddleX = CanvasX/2; // determine Canvas middle of X-Axis, just
for better readability.
        println("Canvas is " + CanvasX + " x " + CanvasY + " pixels.");
        println("Canvas X/2 is:" + MiddleX);
    }


    public void drawBrickAt(int X, int Y) {
        /*
         * Draws (and also adds) a Brick at X,Y using the given
Constants
         * to the Canvas.
         */
        add( new GRect(X,Y,BRICK_WIDTH,BRICK_HEIGHT) );
    }

    // Some Class Variables i want access to from any Method.
    public int CanvasX,CanvasY,MiddleX;


}
```

— *[Axel Werner](#) 2011-02-06 15:06*

[java](#), [karel](#), [stanford](#), [university](#), [cs106](#), [computer](#), [science](#), [learning](#), [programming](#)