

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](#)

```
/*
 * 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](#)

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Last update: 2022-08-31 12:30

