Introduction to Computer Science

Lab 2.2 - Another Brick in the Wall

In this lab, you will use nested loops to draw a large brick wall using as little code as possible.

Content

Translation of design specifications into source code

In the following activity you are asked to implement design specifications, but you are now given any code to start with. It's your job to determine how you translate the design specifications into source code.

The good news is that you have completed a number of tasks that have provided you with the knowledge and skills to do this. You just have to figure out how to put them all together. Good luck!

Part 1 - Brick by Brick

1. Write a SNAP script to draw a single 20x10 "brick" in the lower left corner of the stage when the green flag is clicked.

2. Modify your code to draw two bricks side by side. The bricks should share a short edge, like this: 

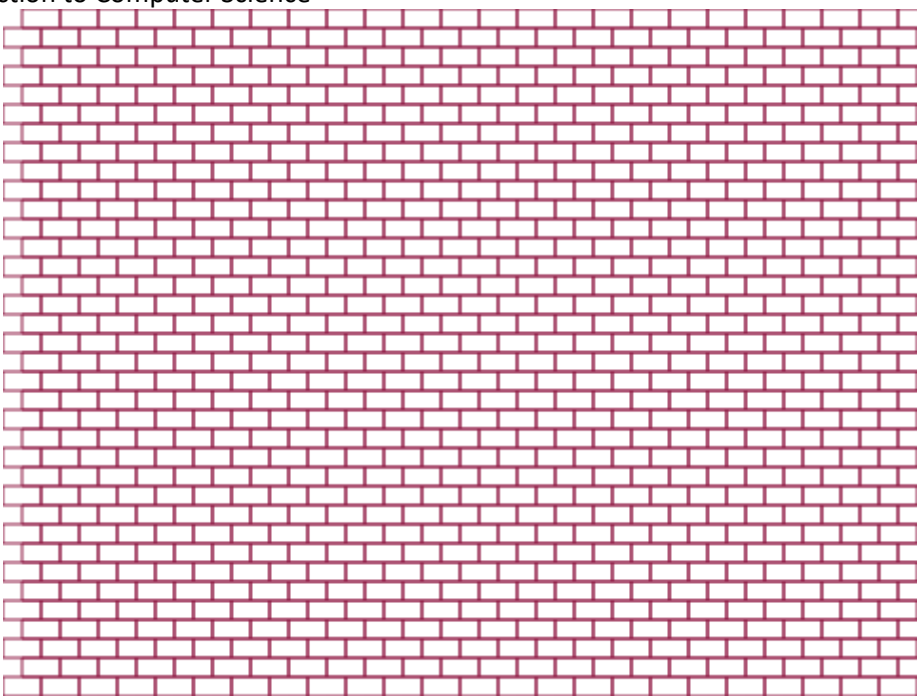
3. Now modify your code again to build a full row of bricks across the entire length of the stage. Use a loop to keep your code as concise as possible. Remember that the stage is 480 pixels wide.

Part 2 - Build a Wall

1. Now that you can build a row of bricks, add code to build a second row above the first row. The bricks in the second row should share a long edge with those in the first row, but should be "offset" so that the ends of the second row bricks are at the middle of the first row bricks, like this: 

2. Modify your code to build four total rows, alternating back and forth between the "regular" and "offset" rows. Use nested loops to keep your code concise.

3. Finish off the wall the by building alternating rows all the way to the top of the stage. Remember that the stage is 360 pixels tall. Your final wall should look like this:



Grading Scheme/Rubric

Lab 2.2 Criteria	
1.2 2 bricks bottom left	0.5 points
1.3 row on bottom	0.5 points
2.1 second row offset	0.5 points
3.3 complete wall	0.5 points
No extra bricks	0.25 points
Uses at least one loop	0.5 points
Minimizes redundancy	0.25 points
PROJECT TOTAL	**3.0 points**