

## // Electronic Quilt

In this exercise you will write a program that repeats a pattern made of primitive shapes such as lines, rectangles, triangles and ellipses to create an electronic quilt that fills a 500 x 500 sketch

Start with a 100 x 100 design (something that will look great with repetition). Keep the design simple but attractive

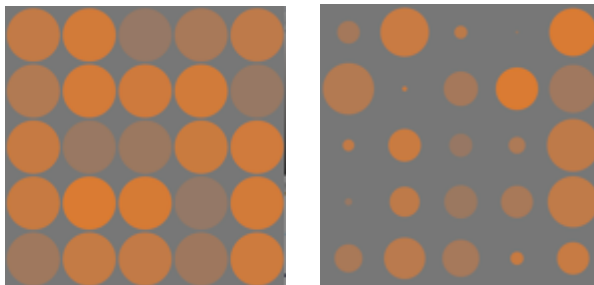
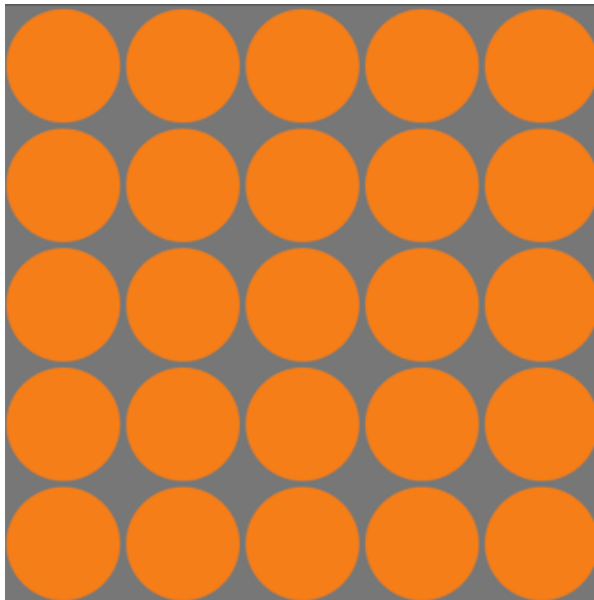
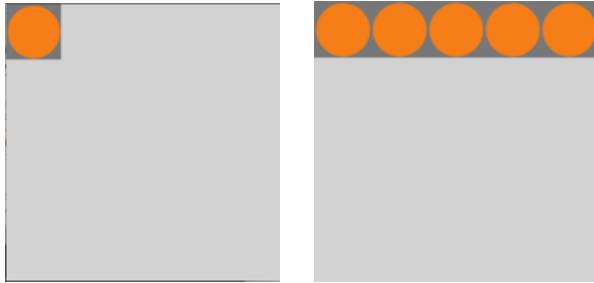
Sketch each design on graph paper first. Look for values that have a mathematical pattern that can become variables

Use a while or for loop to repeat the pattern for the width of the sketch

Use a second loop to repeat the pattern along the second row of the sketch (or a nested loop within the first loop), and so on

Option: Use a nested loop to display in rows and columns with fewer lines of code or to vary the pattern

Begin all sketches with comments that include a description of the sketch, name and date



Sample Quilt

**Helpful code :**

**while loop:**

```
init statement
while (boolean exp) {
    // statements
    final statement
}
```

**for loop:**

```
for (init statement; boolean exp; final
statement) {
    //statements
}
```

**// Iteration**

Create 3 versions of your quilt (ex 3\_1.pde, ex 3\_2.pde, ex 3\_3.pde)

**//Challenge (optional)**

Turn your quilt into a kaleidoscope by repeating your pattern with rotation (read Ch 14 first)

**// Digital Submission**

A folder to the class files (in SCC 2102) titled **FirstNameLastInitial\_ex3** with all 3 sketch folders (with pde files)

**// Analog submission**

Graph paper sketches, code printouts, screen shots of all sketches

**// Note**

We will view and discuss this exercise when it is due. Check Canvas for the specific due date.

Try to make the drawing based on variables that are then updated in the FOR loop, See Example 4.7, page 57

Your work must be complete before class. Be prepared to discuss your ideas and results.