Ps2: Pythagoras Tree

Assignment Description:

For this assignment we were tasked to create a recursive program that generates a fractal called a Pythagoras tree. This fractal starts with a square then off the top of that square 2 smaller squares angled 45 degrees and -45 degrees from the base square's rotation. These smaller squares then serve as the base for more squares and so on. The program we were tasked to write had to have a recursive function that performed the following algorithm. We also received extra points for making the program generate trees with different angles, for animation, and for color.

Key Concepts and Algorithms:

The basis for this assignment is a recursive function. The main algorithm that generates the next square's size is the original square's scale multiplied by 1 over the square root of 2. Unlike the other assignments in this semester this assignment didn't use a class or memory allocation to generate the end result.

What I learned in this assignment:

In the course of making this assignment I gained a greater understanding of recursive functions. I also learned about SFML rectangle shapes and other shapes in the SFML documentation that I read when completing this assignment.