PS1: *Recursive Graphics (Sierpinski's Triangle)*

In this assignment, we were to create a Sierpinski triangle by using recursion to draw the triangle. We needed be able to plot the base triangle and then recessively drawing smaller or bigger triangles outside or inside the base triangle. (Depending if you choose to make the base triangle small or large. We would then create our own original shape doing the same procedure as the Sierpinski.

Sierpinski Triangle:

In the Sierpinski implantation, I created a class called Sierpinski that inherited the drawable library. This was used to be able to have a type convex shape to draw the base triangle and recursive triangle. The draw function was used to call each time we were to need to draw the function. When the user enter, I needed to set the point using the setPoint function in the sf::Convex Shape. In the recusrive function, I would draw the points by dividing the 2 points to get the middle point. After drawing it, I would set the top, left, and right to different points to get the next mid points. Then take the amount of recursion depth and recursively call the function until 0.

Original:

I did everything the same idea as the Sierpinski triangle but I instead used 4 points instead of 3. I also changed the coordinates of the square to fit the screen.

In this assignment, I learned to figure out how to better use the sf::Convex Shape library, using functions like setPoint, getPoint, setFillColor, etc. I was able to better understand recursion and use it with other functions. Also learned the full use of type Vector2f.