This project contains code that draws a scalable Flag in a JFrame. It is composed of 4 classes: Star, Union, Flag, and Main.

It fulfills the specification because it successfully draws a correctly proportioned flag within the frame. However, it falls short because the scalability is only reliant on the length of the JFrame, therefore, changes in height to the frame which should cause a change in scale do not actually scale the Flag.

As previously mentioned, the project is made of 4 classes. The Star class creates a single star using a bit of math, several lists, and the fillPolygon method. The Union class implements the Star class to create an array of stars on a blue rectangle (the Union section of the flag). It uses two loops to construct the different arrays of stars, and then scales their size based on the size of the rectangle. The Flag class then implements a single Union class and draws the stripes of the flag.

One major challenge I came across while creating the code was drawing the star. Initially, I had tried drawing the star using a loop that constructed each point in order. However, the math for that was complicated and didn't end up working out. Instead, I resorted to using the suggested technique of constructing each point using pentagon geometry.