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APCS

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# Flag Problem

In this project, we created a flag to scaling proportions using java and ran the code on an Applet. Since the last progress report, I have managed to accomplish everything in the requirements. In these two weeks of time assigned for the project, I have learned a lot about java and its built-in functions. I found out that the stars could be created using trigonometry and arrays of integers for points. Furthermore, many polygons we see in daily life could be created by using basic trigonometry, such as other convex shapes.

One of the most important tasks of this assignment was to finish 50 stars. Basic trigonometry, knowledge of for loops and arrays were required to complete this task. After implementing my own code into Mr. K's template, I quickly realized that the arrays were meant to store the radius values of the stars. After rotating, or using trigonometry to find each value of the radius, the star could then be displayed on the applet.

The next step was to figure out how to code the stripes. I found the correct scaling proportion of the stripes and the custom color I wanted and used a for loop to generate 13 stripes. In addition to the red and white stripes, I added a black frame, or a hollow black rectangle to surround the stripes and flag.

After the stripes, came the blue flag of union. This part was the easiest part for me. I drew a blue rectangle with the correct proportions and made the x coordinate and y coordinate parallel to the stripes.

The last step of the flag project was to determine how to fill the flag to screen and scale the flag to its correct proportions by dragging the window. After realising that the flag would not stay in one position, I changed the x and y coordinates I set for the flag into an input for width and height. I made it so that the width of the flag would increase as the window width increased, and vice versa for the height.

Overall, I enjoyed my experience coding this flag. I learned a lot about the paint function in java and how to use trigonometry to draw complex polygons.