Etude Seven Report

For this etude, I began by using regex to make two lists:

1. A list for just the numbers in the user entered coordinate(s)
2. A list for every part of the user entered coordinate(s)

First, my program affirms that the coordinates entered are correct, that is, it checks that the coordinates have either 2, 4, or 6 numbers (any other number of coordinates will return an error). It then makes sure is only one latitude and one longitude specified, if specified at all.

If the user input passes all the checks, the program officially begins.

In the case where there are 2 numbers, the coordinates get sent to the function decimalDegrees. This function begins by finding a label in the user input, returning an empty string if there is none. It goes on to specify which coordinate number is the latitude number and which is the longitude based on which side specifies the latitude and which, the longitude. If there is no specification, the program will assume the input is latitude then longitude.

In the case where there are 4 numbers, the coordinates get sent to the function degreeMins. This function begins the same way – finding the label in the user input, and returning an empty string if there is none. The program then finds the order of the degrees and minutes by parsing through the coordinates to see which nums have the associated degrees and/or minutes symbols. The degrees and minutes are then converted into decimal degrees again and once again goes on to specify which side specifies the latitude and which, the longitude.

Finally, in the case where there are 6 numbers, the coordinates get sent to the function degreeMinSec. This function once again, does the same thing, except it assumes the coordinates inputted are already in the right order and will parse through accordingly.

Finally, the latNum, longNum, and label are all returned to the main function where a string variable holds all the information necessary to create the .json file once the user types “done”.

I used geojson.io to display my coordinates.