CSC 401, Modeling Project #5, Fall 2024   Name_____

Description: In these projects we will apply what we've learned in class to real-world datasets for analysis.

Tasks:

1. Using the **wine.csv** file provided in the datasets zip file (excluding the index column, and converting color to a dummy variable), perform a clustering analysis using agglomerative clustering, K-Means, and spectral clustering. Experiment with various customizations. Experiment with different numbers of clusters (>2). Describe your process for determining the optimal number of clusters.

Submission: Write up a work document describing your code and the results obtained. Include with your submission your R code file.