Implement K-mean Clustering Algorithm on Wine Data

The data set (wine.xlsx) that you are going to analyze in this lab is a result of a chemical analysis of wines grown in a particular region in Italy but derived from three different cultivars. The analysis determined the quantities of 13 constituents found in each of the three types of wines. The attributes are: Alcohol, Malic acid, Ash, Alcalinity of ash, Magnesium, Total phenols, Flavanoids, Nonflavanoid phenols, Proanthocyanins, Color intensity, Hue, OD280/OD315 of diluted wines, and Proline. The data set has 178 observations and no missing values. Your goal is to try to group similar observations together and determine the number of possible clusters (region).