This code manually implements the steps that are used in K-means clustering, where K is the number of clusters that you want the selected data to be be placed into.

1. First, the features of a data that we want to base our clustering on are selected. In this case, the features are the length and width of the sepal of a flower.
2. K random centroids are selected and placed somewhere within the range of data in the feature space.
3. Each point in the dataset is plotted in the feature space and assigned to the centroid that is closest to itself, using Euclidean distance.
4. The mean of every datapoint assigned in each centroid is calculated. Each of the Centroids are then moved to the position of those new means.
5. The process repeats, with each datapoint being assigned to its nearest centroid. The centroids are moved to the new mean.
6. This process continues until the datapoints are stable and stop moving between centroids with each iteration. After stability has occurred, the set of points belonging to each centroid are named clusters.

This code manually implements the steps that are used in K-means clustering. Instead of using the built in sklearn function for k-means, I have coded the mathematical steps behind the algorithm. I tested the algorithm on the Iris dataset.