K-means Clustering

Dataset:

- ➔ Find your dataset here

Algorithm:

- ➔ Choose the number of clusters (k).
- ➔ Initialize k centroids randomly from the dataset.
- ➔ Assign each data point to the nearest centroid based on distance (e.g., Euclidean distance).
- ➔ Calculate the new centroids by finding the mean of the points in each cluster.
- ➔ Repeat the assignment and centroid update steps until the centroids do not change.
- ➔ Evaluate the final clusters

Instructions:

- ➔ You are provided with a dataset containing multiple features
- ➔ Your task is to apply the K-Means Clustering algorithm on this dataset using various values of k (k = 3, 4, 5, 6, 7).
- ➔ For each k, visualize the resulting clusters with different colors for different clusters and plot the corresponding results.
- ➔ Make sure that your program has a lower number of loops and doesn't use any built-in library.