HW1-Python. Due 3/12/19

Notes

(i) Submit your solution (pdf) and python files as single zip

1. (10 points) K-Means Clustering
   (a) Objective: Find optimal number of clusters through elbow plot.
   First learn to use any existing K-Means clustering in Python. Do K-Means clustering on any multivariate data set (play with several datasets that you can get from UCI-ML repository), play with varying K (for min K=2 through max K = 15 or some suitable number), generate elbow plot (using SSE) and mark optimal number cluster (include the plot in solution pdf file). Submit your code to generate elbow plot using SSE.
   (b) Objective: Find optimal clustering using Bisecting K-Means. Implement in Python.
   Using existing K-Means clustering, implement bisecting K-Means in python. Apply your algorithm with optimal number clusters found through elbow plot above. Include your answer (comparison between the two clustering and any insights you gained in this exercise) in pdf file. Submit python code for Bisecting K-Means.