Data Mining (CSE 4052)

Clustering the Data points in 2D plane

A researcher has obtained some of his research findings in the form of points represented in a cartesian 2D plane. But he is not able to categorize the findings in to groups. The experimenter knows the number of such categories, that is 3(three). Help the researcher by writing the PYTHON Code for the following clustering algorithms, which would segregate his findings into suitable clusters. Take Euclidean distance as the distance measure for clustering. Take the initial cluster centres through a random function. Also establish a comparative analysis among the given methods.

Method I: *k*-means clustering,

Method II: *k*- medoids clustering.

P_1(2,10), P_2(4, 7), P_3(3,12), P_4(5,11), P_5(2,5), P_6(6,13), P_7(4,7), P_8(7,14), P_9(8,12), P_{10} (3,10), P_{11}(9,6), P_{12}(5,7), P_{13}(4,13), P_{14}(6,16), P_{15}(8,15)