DEPARTMENT OF COMPUTER ENGINEERING
[NBA Accredited]

EXPERIMENT 10

Title :	Implementation of Clustering algorithm (K-means).
Theory:	K-Means Clustering is an Unsupervised Learning algorithm, which groups the unlabeled dataset into different clusters. Here K defines the number of pre-defined clusters that need to be created in the process, as if K=2, there will be two clusters, and for K=3, there will be three clusters, and so on. The working of the K-Means algorithm is explained in the below steps: Step-1: Select the number K to decide the number of clusters. Step-2: Select random K points or centroids. (It can be other from the input dataset). Step-3: Assign each data point to their closest centroid, which will form the predefined K clusters. tep-4: Calculate the distance and place a new centroid of each cluster. Step-5: Repeat the third steps, which means reassign each datapoint to the new closest centroid of each cluster. Step-6: If any reassignment occurs, then go to step-4 else go to FINISH. Step-7: The model is ready.
Performance:	Test Data Data set {2, 4, 10, 12, 3, 20, 30, 11, 25} Number of clusters = 2
Deliverables:	Program Code Results for given test data
Conclusion:	Write conclusion in your own words