

The *K-Means* Clustering Method

- ❑ *K-Means* (MacQueen'67, Lloyd'57/'82)
 - ❑ Each cluster is represented by the center of the cluster
- ❑ Given K , the number of clusters, the *K-Means* clustering algorithm is outlined as follows
 - ❑ Select K points as initial centroids
 - ❑ **Repeat**
 - ❑ Form K clusters by assigning each point to its closest centroid
 - ❑ Re-compute the centroids (i.e., *mean point*) of each cluster
 - ❑ **Until** convergence criterion is satisfied
- ❑ Different kinds of measures can be used
 - ❑ Manhattan distance (L_1 norm), *Euclidean distance (L_2 norm)*, Cosine similarity