

# k-means clustering

K means is an iterative clustering algorithm that aims to find local maxima in each iteration, and do it in 5 steps:

**Step1:** Select the number of clusters (**k** in k-means clustering) that wanted to identify in the data.

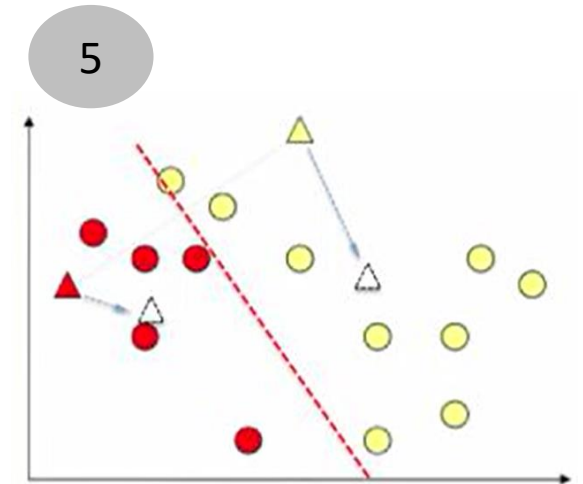
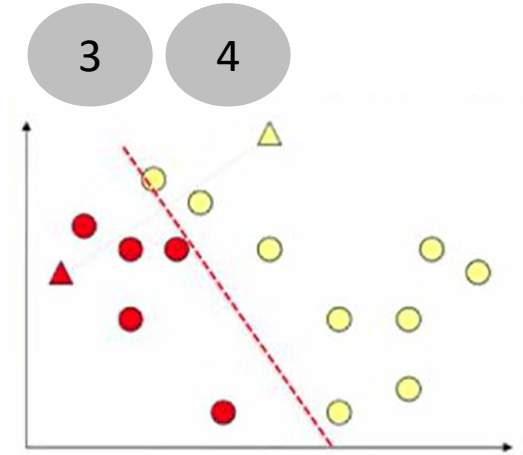
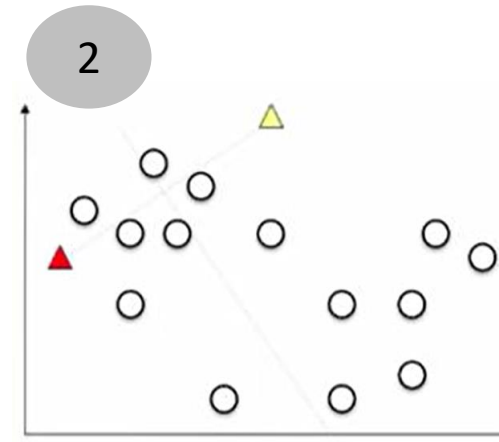
**Step2 :** Placing centroids (k) in randomly location

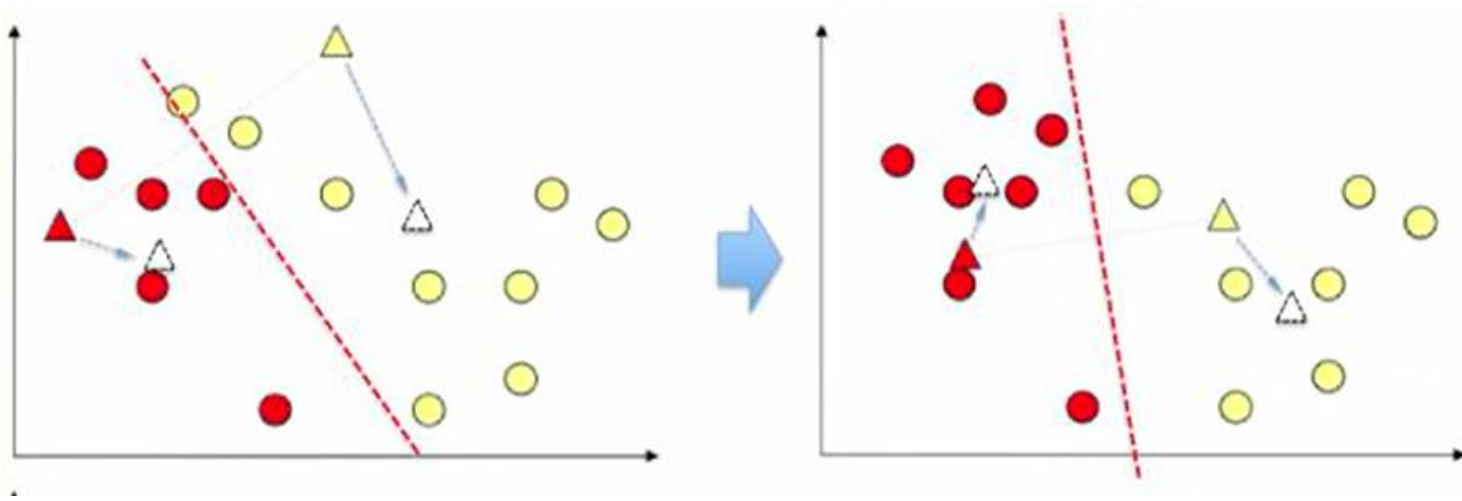
**Step3 :** Will be measured the distance for each point to the centroid clusters

**Step4 :** Assignment of each point to the closest cluster centroid

**Step 5: Recompute the centroid values**

1. Calculate the mean for each cluster
2. Replace the centroid cluster for the mean value





**Algorithm is converged:**

No point is going to move from one cluster to another

