Clustering Algorithm

→ k-means Clustering -

- Unsupervised learning algorithm
→ Hard Clustering, each pt. belongs to only 1 cluster.

k - no. of clusters.
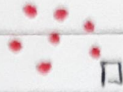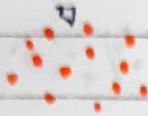
Example -

Given - list of customers who frequently order pizza.

Problem - where to open new store.

mq-

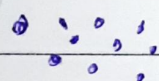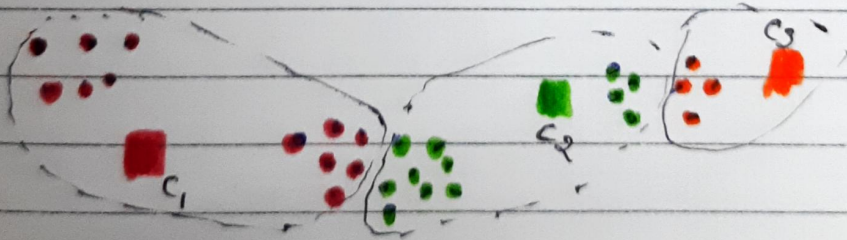$$k = 3$$

Step1 - Random initialisation of centers.

C_1 C_2 C_3

Step2 - Assign each point to nearest center.
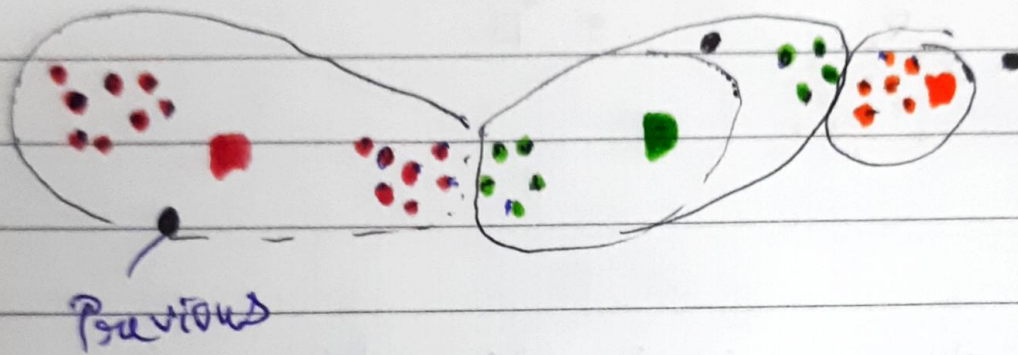

C_1 C_2 C_3

Step 3 – Update center location by taking mean.

Previous

Step 4 – Repeat ② & ③ until convergence

assign each pt. to center

update center