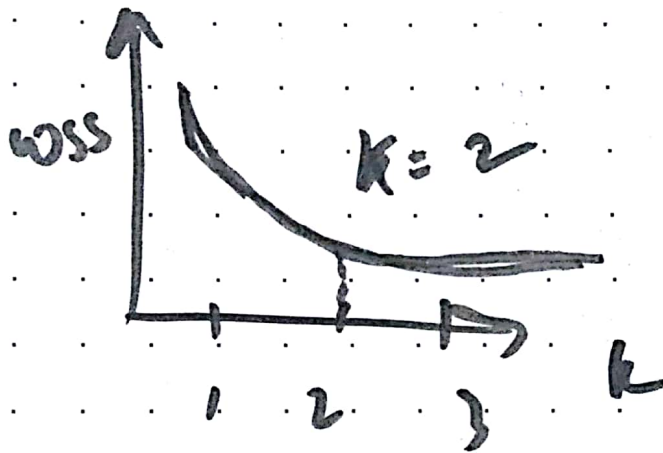


# K-Means :

Finding value of  $k$ : elbow method.

$k$  with least WSS (within Sum of Squares)



Date :

Mo Tu We Th Fr Sa Su

Q) Big Societies are marked you need 2 branches of restaurant to serve all societies easily. Find location for branches.

Algorithm:

- 1) Pick k Random cluster's centroid.
- 2) Points with lowest distances are referred.
- 3) Take avg of assigned points.

$$c_i = \frac{1}{|S_i|} \sum_{x \in S_i} x$$

$S_i$  : Set of points assigned to  $i^{th}$  cluster