**Input:**  
If your student id is: ABCD-E-FG-HIJ  
The dataset would be:  
(-1, A), (7, B),(2, C),(0, D),(9, E),(-3, F),(5, G),(8, H),(-6, I),(4, J)   
  
**Output:**  
Optimum number of clusters for the given (input) dataset using Elbow Method.  
  
**Submission:**  
a) A typed document with a complete demonstration of the step-by-step execution of k-means or k-medoid for different values of K, the chart/diagram depicting the plot of K-values and SSE.   
**OR**  
b) A python program showing each step of elbow method. A step consists of k-medoid or k-means algorithm with different value of K. It should also consist of the input clusters in terms of points with cluster centroids and resulting clusters in terms of points and cluster centroids, and distance matrix and a python based plot illustrating the elbow.