

Question 1

Suppose you are given the following pairs. You will simulate the k-means algorithm. You are given the initial assignment cluster centre as {**cluster1: C1**} and {**cluster2: C2**}.

Point	X	Y
A1	0.4	0.53
A2	0.22	0.38
A3	0.35	0.32
A4	0.26	0.19
A5	0.08	0.41
A6	0.45	0.3
C1	0.22	0.38
C2	0.35	0.32

a.	Categorise your data using the k-means algorithm. Indicate the final categorical groupings. (Show all the steps as marks will be awarded for all centroids, distance and group matrix table calculations.)	[15]
b.	Plot the data on a graph and cluster it.	[5]