

**Approach**

I initiated the required points, then concatenated these points in a single X matrix. Then I randomly picked 5 points from the boundaries of the sample. I counted these points as the initial centroids and applied k-means algorithm for two times. I obtained new means and covariance matrices as the initial parameters for EM algorithm. Finally, I iterated the EM algorithm for 100 iterations and plotted the clusters.

> means

	[,1]	[,2]
[1,]	2.5267026	-2.3820619
[2,]	0.1701195	-0.1164361
[3,]	-2.5951608	2.4944013
[4,]	-2.5272549	-2.4661019
[5,]	2.5785522	2.3805793

