**Homework 6 Report**

I have created the data points with given parameters.

I have plotted the data points.

Then by using lab11 code I have created and updated centroids and memberships.

For checking the data I also used visualization code from lab11.

Then for k=5 and N=300 I have itareted the centroids.

I have created Gaussian from first 2 iteratians of cntroids and tried to update the Gaussians for 100 iterations but I have been interupted by matrix multiplication of numpy. It needed to create 2 by 2 matrix but it created 2 by 1.