COEN 140
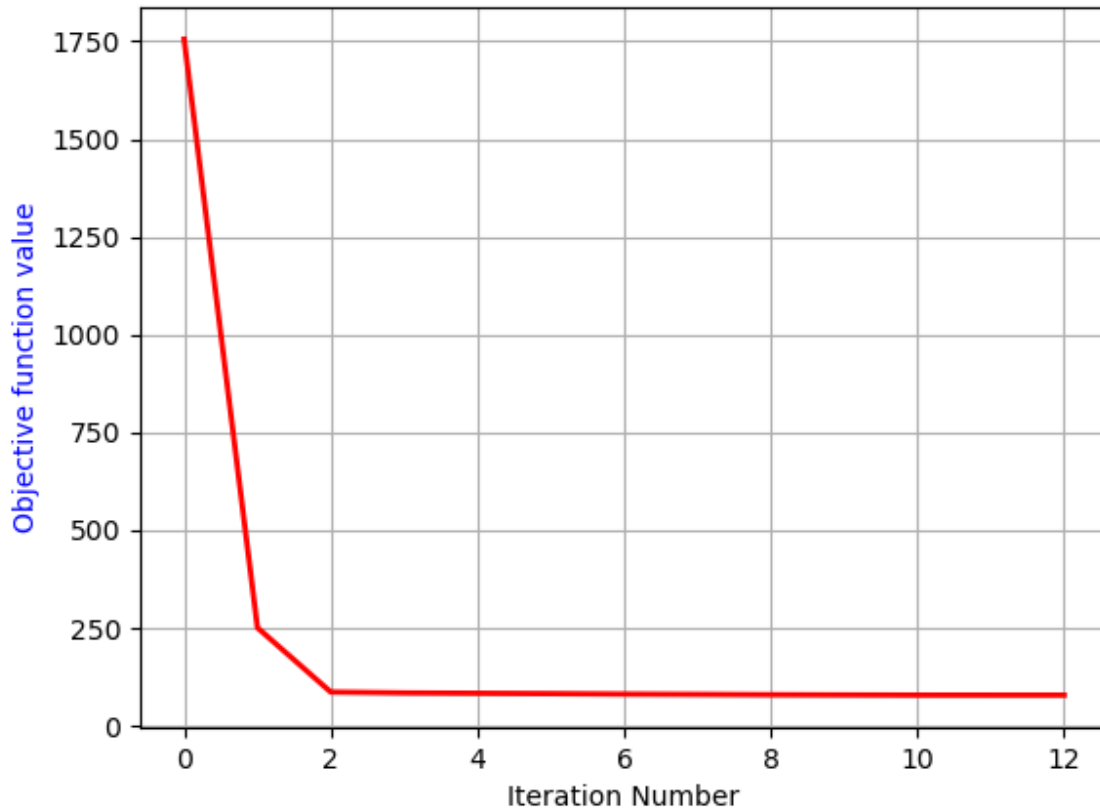**Lab 5 Report**
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J vs. Iteration number graph

As shown in the above figure, the value of the objective function J sharply decreases until the 2nd iteration where the rate slows. This is because the value of J eventually converges. At iteration 12, the algorithm terminates when the difference between the current iteration's J value and the previous iteration's value are less than the declared epsilon value (10^{-5}). The value of J is calculated as the sum of the squared distances between the cluster centers and their assigned data points.