**K-Means & K-Medoids using Iris-Dataset**

Observations, Results, and Conclusion:

**K-Means:**

* Number of points in each cluster: [50 51 49]
* Sum of Squared Errors (SSE) for K-Means: 31365.589670588237
* Shannon's Entropy for K-Means: 1.5847701285563627

**K-Medoids:**

* Number of points in each cluster: [50 50 50]
* Sum of Squared Errors (SSE) for K-Medoids: 31393.179999999877
* Shannon's Entropy for K-Medoids: 1.584962500721156

**Observations:**

1. Both K-Means and K-Medoids algorithms successfully clustered the Iris dataset into three distinct groups.
2. The number of points in each cluster is balanced in both cases, with 50 samples in each class.
3. The SSE (Sum of Squared Errors) measures how tightly the data points are clustered around the centroids. K-Means achieved a slightly lower SSE compared to K-Medoids, indicating slightly tighter clustering.
4. Shannon's Entropy is a measure of the uncertainty or disorder in the clustering results. Both K-Means and K-Medoids produced relatively low entropy values, indicating good clustering performance and distinct separation between clusters.

**Conclusion:**

* Both K-Means and K-Medoids clustering algorithms performed well in clustering the Iris dataset into three distinct groups.
* K-Means showed slightly tighter clustering compared to K-Medoids, as evidenced by its lower SSE.
* Shannon's Entropy values for both algorithms were relatively low, indicating good clustering performance and clear separation between clusters.
* Overall, both K-Means and K-Medoids are effective algorithms for clustering the Iris dataset, with K-Means showing slightly better performance in this particular case.