

Task 3

Clustering Results Report

1. Number of Clusters Formed:

The optimal number of clusters determined during the clustering analysis is **9**.

2. Davies-Bouldin Index (DB Index):

The optimal Davies-Bouldin Index value corresponding to the chosen number of clusters (9) is **0.9098**. This indicates the compactness and separation of the clusters, with lower values being better.

3. Silhouette Scores:

The silhouette scores for cluster counts ranging from 2 to 10 are as follows:

- For 2 clusters: **0.2124**
- For 3 clusters: **0.3256**
- For 4 clusters: **0.3637**
- For 5 clusters: **0.3537**
- For 6 clusters: **0.3809**
- For 7 clusters: **0.3758**
- For 8 clusters: **0.3655**
- For 9 clusters: **0.3737**
- For 10 clusters: **0.3736**

The highest silhouette score of **0.3809** is observed with 6 clusters, but the chosen clustering configuration balances other metrics as well.