Optimal Number of Clusters:
The clustering analysis determined the optimal number of clusters to be **2**, based on the Davies-Bouldin (DB) Index.

Davies-Bouldin Index (DB Index):

- The DB Index for the optimal cluster count of 2 is **0.742**, which indicates a compact and well-separated clustering structure.
- A lower DB Index value suggests better clustering quality.

Other Clustering Metrics:

- The DB Index was calculated for cluster sizes ranging from 2 to 10. The results are summarized below:

Number of Clusters	DB Index
2	0.742
3	0.792
4	0.899
5	0.964
6	0.890
7	0.833
8	0.854
9	0.908
10	0.902

The clustering performance was optimal at **2 clusters**, as this value produced the lowest DB Index.

Interpretation of Clusters:

- The customers were segmented into two clusters based on their profiles and transaction behavior.
- The clusters represent groups of customers with distinct spending patterns, purchase diversity, and regional distribution.