HARSHAVARDHAN M

Clustering Report

1. **Number of Clusters**:

   o Grouped the customers into **5 clusters**. This number was chosen using the Elbow Method, which shows the best balance between cluster size and accuracy.

2. **Davies-Bouldin Index**:

   o The **Davies-Bouldin Index** is **1.016**. This score tells us how well the clusters are separated. A lower value means the clusters are better, and this score shows the clusters are fairly good.

3. **Silhouette Score**:

   o The **Silhouette Score** is **0.326**, which is an average score. It means the clusters are somewhat distinct, but there could be some overlap.

4. **Cluster Visualization**:

   o A scatter plot to show how customers are grouped using "History" (purchase history) and "Quantity" (items bought). Each cluster is shown in a different color, making it easy to see the groups.

5. **What the Clusters Mean**:

   o Each cluster represents a group of customers with similar buying habits. For example, some clusters may represent frequent buyers, while others represent customers who shop occasionally. These groups can help businesses plan better strategies for marketing and sales.