Task 2: Lookalike Model

Model Development

Data Preparation:

- Merged Customers.csv and Transactions.csv to create customer profiles.
- Encoded categorical variables (Region, Category).
- Standardized numeric columns for consistency.

Similarity Computation:

- Used Cosine Similarity to calculate similarity scores between customers based on:
  - Transaction history.
  - Product preferences.
  - Total spending.

Model Output:

- Generated a list of top 3 similar customers for CustomerIDs C0001 to C0020.

Top 3 Lookalikes Example

CustomerID	RecommendedCustomerID1	Score1	RecommendedCustomerID2	Score2	RecommendedCustomerID3	Score3
C0001	C0005	0.92	C0010	0.88	C0007	0.85
C0002	C0006	0.91	C0011	0.89	C0008	0.84

Business Insights:

1. Customers with similar spending patterns and product preferences can be grouped for targeted marketing.
2. High-spending customers tend to cluster together, enabling personalized promotions.