Exploratory Data Analysis and Business Insights for E-commerce Transactions Dataset

Business Insights:

1. **Top Revenue by Region**:

   o South America generates the highest revenue ($219,352.56), followed by Europe ($166,254.63), and North America ($152,313.40). Asia contributes slightly less ($152,074.97). This indicates South America is the most profitable region.

2. **Top Categories by Quantity Sold**:

   o The "Books" category is the most sold (681 units), followed by "Home Decor" (639 units), "Electronics" (627 units), and "Clothing" (590 units). Despite being frequently purchased, "Books" might not be the highest revenue generator.

3. **Signup Trends**:

   o Customer signups are increasing, with 79 new signups in 2024 compared to 64 in 2022 and 57 in 2023. This trend suggests growing interest and customer acquisition.

4. **Most Frequent Customers**:

   o The top five customers (IDs: C0156, C0109, C0141, C0175, and C0008) completed 10-11 transactions each, indicating a highly engaged customer segment.

5. **Monthly Transaction Trends**:

   o January sees the highest number of transactions (107), while November has the lowest (57). This highlights seasonal trends and potential opportunities for targeted marketing in low-transaction months.