Business Problem Statement

A leading retail company is looking to better understand how customers shop, with the goal of improving sales, satisfaction, and long-term loyalty. Recent shifts in customer behavior across demographics, product categories, and shopping channels (online and in-store) have raised questions about what truly drives purchase decisions. Management wants clarity on the role of discounts, product reviews, seasons, payment preferences, and other behavioral factors.

You are asked to analyze the company's customer shopping dataset to answer the key question:

"How can the company use consumer shopping data to identify trends, improve engagement, and optimize marketing and product strategies?"

<u>Deliverables</u>

1. **Data Preparation & Modeling (Python):**
   Clean and transform the raw dataset to prepare it for analysis.

2. **Data Analysis (SQL):**
   Structure the cleaned data inside PostgreSQL, simulate business-style queries, and extract insights on customer segments, loyalty patterns, and purchase behavior.

3. **Visualization & Insights (Power BI):**
   Build an interactive dashboard that shows key metrics, trends, and customer-level insights to support data-driven decision-making.

4. **Report and Presentation:**
   Write a clear project report summarizing findings and business recommendations. Present results visually through a stakeholder-friendly presentation.

5. **GitHub Repository:**
   Store all Python scripts, SQL queries, and Power BI files in a structured GitHub repository for versioning and public reference.