Business Challenge Overview

A major retail company is aiming to gain deeper insights into its customers' shopping habits to boost sales, enhance satisfaction, and strengthen long-term loyalty. The leadership team has observed shifts in buying behavior across age groups, product categories, and sales channels (online vs. in-store). They are especially interested in identifying which elements—such as discounts, product reviews, seasonal trends, or payment methods—influence purchase decisions and encourage repeat business.

The central question to address is:

"How can the company utilize consumer shopping data to uncover trends, improve customer engagement, and refine marketing and product strategies?"

Expected Deliverables

1. **Data Preparation & Modeling (Python):** Clean, structure, and transform the raw dataset to make it ready for analysis.
2. **Data Analysis (SQL):** Organize the data into a relational format, simulate transactions, and run queries to extract insights on customer segments, loyalty patterns, and purchase drivers.
3. **Visualization & Insights (Power BI):** Develop an interactive dashboard that highlights major trends and behaviors, enabling decision-makers to act on data-driven insights.
4. **Report & Presentation:** Produce a clear report summarizing findings and recommendations, along with a presentation that visually conveys actionable strategies to stakeholders.
5. **GitHub Repository:** Maintain a well-structured repository containing all Python scripts, SQL queries, and dashboard files.