Business Problem Statement

A leading retail company is experiencing growing uncertainty around the stability of its revenue streams due to changing customer purchase behaviors and declining engagement among certain customer segments.

Management has identified that a significant portion of total revenue is dependent on customers who exhibit irregular purchasing patterns, low engagement frequency, or declining retention behavior. Without proactively identifying such customers, the business risks losing high lifetime-value customers, leading to revenue volatility and long-term profitability challenges.

The company aims to leverage customer transaction and behavioral data to:

- Identify customers at high risk of churn
- Quantify revenue dependency on at-risk customer segments
- Detect product categories contributing most to churn-risk revenue
- Evaluate the impact of subscription-based engagement on retention
- Prioritize high-value customers for targeted retention campaigns

You are tasked with developing a data-driven analytical solution to answer the following business question:

"How can the company proactively identify high-value customers at churn risk and implement targeted engagement strategies to stabilize long-term revenue?"

Deliverables

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

2. **Data Analysis (SQL):** Organize the data into a structured format, simulate business transactions, and run queries to extract insights on customer segments, loyalty, and purchase drivers.

3. **Visualization & Insights (Power BI):** Build an interactive dashboard that highlights key patterns and trends, enabling stakeholders to make data-driven decisions.

4. **Report and Presentation:** Write a clear project report summarizing your key findings and business recommendations. Prepare a presentation that visually communicates insights and actionable recommendations to stakeholders.

5. **GitHub Repository:** Include all Python scripts, SQL queries, and dashboard files in a well-structured repository.