# Walmart Business Problems: A Data-Driven Analysis

This document outlines several key business questions for Walmart, along with their purpose, to be answered through data analysis. The insights gained will help optimize operations, enhance customer experience, and improve profitability.

**1. Analyze Payment Methods and Sales**

* **Question:** What are the different payment methods, and how many transactions and items were sold with each method?
* **Purpose:** This analysis helps to understand customer preferences for payment methods, which can inform strategies for payment system optimization, reducing transaction friction, and potentially negotiating better terms with payment providers.

**2. Identify the Highest-Rated Category in Each Branch**

* **Question:** Which category received the highest average rating in each branch?
* **Purpose:** By identifying top-rated categories in specific locations, Walmart can recognize popular products and tailor marketing campaigns, promotions, and inventory to enhance customer satisfaction and drive sales at a branch level.

**3. Calculate Total Quantity Sold by Payment Method**

* **Question:** How many items were sold through each payment method?
* **Purpose:** Tracking the total sales volume by payment type provides a deeper understanding of customer purchasing habits. This data can be used to inform marketing efforts, particularly for encouraging the use of specific payment methods.

**4. Analyze Category Ratings by City**

* **Question:** What are the average, minimum, and maximum ratings for each category in each city?
* **Purpose:** Analyzing regional differences in ratings helps in customizing city-level promotions. This allows Walmart to address specific regional preferences and improve the customer experience by focusing on products that resonate most with local customers.

**5. Calculate Total Profit by Category**

* **Question:** What is the total profit for each category, ranked from highest to lowest?
* **Purpose:** Identifying the most profitable categories is vital for strategic decision-making. This information can help Walmart focus on expanding high-margin product lines, fine-tuning pricing strategies, and allocating resources more effectively.

**6. Determine the Most Common Payment Method per Branch**

* **Question:** What is the most frequently used payment method in each branch?
* **Purpose:** This information helps to understand branch-specific payment preferences. It can be used to streamline payment processing systems, potentially by adding more terminals for the most popular payment methods, thereby improving checkout efficiency.