

## **Walmart Business Problems – Data Analysis Objectives**

This document outlines 15 business questions addressed through the Walmart dataset using SQL and data visualization tools. Each question is designed to extract meaningful insights that can drive decision-making across sales, customer experience, profitability, and operational efficiency.

### **Q1. Analyze Payment Methods and Sales**

**Question:**

What are the different payment methods, and how many transactions and items were sold with each method?

**Purpose:**

To understand customer preferences for payment methods and optimize payment processing strategies.

### **Q2. Identify the Highest-Rated Category in Each Branch**

**Question:**

Which category received the highest average rating in each branch?

**Purpose:**

To promote well-rated categories in specific branches, improving customer satisfaction and marketing.

### **Q3. Determine the Busiest Day for Each Branch**

**Question:**

What is the busiest day of the week for each branch based on number of transactions?

**Purpose:**

To manage peak-day staffing and inventory more effectively.

### **Q4. Analyze Category Ratings by City**

**Question:**

What are the average, minimum, and maximum ratings for each category in each city?

**Purpose:**

To tailor promotions and product strategies for regional customer preferences.

### **Q5. Calculate Total Profit by Category**

**Question:**

What is the total profit for each category, ordered from highest to lowest?

**Purpose:**

To identify the most profitable categories for pricing and inventory focus.

**Q6. Determine the Most Common Payment Method per Branch**

Question:

What is the most frequently used payment method in each branch?

Purpose:

To help streamline branch-level payment processes.

**Q7. Analyze Sales Shifts Throughout the Day**

Question:

How many transactions occur in each shift (Morning, Afternoon, Evening)?

Purpose:

To optimize staff shifts and restocking plans by time of day.

**Q8. Identify Branches with Highest Revenue Decline Year-Over-Year**

Question:

Which 5 branches saw the largest drop in revenue from 2022 to 2023?

Purpose:

To investigate declining branches and plan recovery actions.

**Q9. Top 3 Performing Categories Overall**

Question:

What are the top 3 categories by total revenue across all branches?

Purpose:

To prioritize and promote high-performing product lines.

**Q10. Find Average Profit Margin per Branch**

Question:

What is the average profit margin in each branch?

Purpose:

To assess profitability and refine pricing or cost strategies by location.

**Q11. Monthly Revenue Trend for 2023**

Question:

How does total revenue vary each month in 2023?

Purpose:

To spot seasonality and forecast revenue patterns.

**Q12. Top 5 Branches with Highest Revenue per Transaction**

Question:

Which 5 branches generate the most revenue per transaction?

Purpose:

To identify high-efficiency branches and adopt best practices elsewhere.

### **Q13. Hourly Sales Trends**

**Question:**

How do transaction count and revenue vary by hour of the day?

**Purpose:**

To support time-based promotions and staffing optimization.

### **Q14. Top Category by Profit in Each City**

**Question:**

Which category brings the highest profit in each city?

**Purpose:**

To guide location-specific inventory and marketing strategies.

### **Q15. Transaction Volume Growth Rate per Branch (Month over Month)**

**Question:**

What is the month-over-month transaction growth rate for each branch in 2023?

**Purpose:**

To monitor performance trends and spot early signs of decline or growth.