Walmart Ad-Hoc Analysis: Insights for Business Optimization

This section highlights key business problems addressed through ad-hoc analysis of Walmart sales data. Each analysis is aimed at uncovering actionable insights to improve operations, customer satisfaction, and profitability.

Ad-Hoc Business Analysis Questions

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: Understand customer preferences for payment methods to optimize payment processing strategies.
2. **Identify the Highest-Rated Category in Each Branch**
   - Question: Which category received the highest average rating in each branch?
   - Purpose: Recognize and promote popular categories in specific branches, enhancing customer satisfaction and driving branch-specific marketing.
3. **Determine the Busiest Day for Each Branch**
   - Question: What is the busiest day of the week for each branch based on transaction volume?
   - Purpose: Optimize staffing and inventory management to accommodate peak traffic days.
4. **Calculate Total Quantity Sold by Payment Method**
   - Question: How many items were sold through each payment method?
   - Purpose: Track sales volume by payment type to gain insights into customer purchasing habits.
5. **Analyze Category Ratings by City**
   - Question: What are the average, minimum, and maximum ratings for each category in each city?
   - Purpose: Guide city-level promotions to address regional preferences and improve customer experiences.
6. **Calculate Total Profit by Category**
   - Question: What is the total profit for each category, ranked from highest to lowest?
   - Purpose: Identify high-profit categories to focus on expanding these products or refining pricing strategies.
7. **Determine the Most Common Payment Method per Branch**

- Question: What is the most frequently used payment method in each branch?
- Purpose: Understand branch-specific payment preferences to streamline payment systems and enhance customer convenience.

8. **Analyze Sales Shifts Throughout the Day**
   - Question: How many transactions occur in each shift (Morning, Afternoon, Evening) across branches?
   - Purpose: Manage staff shifts and stock replenishment schedules during high-sales periods.

9. **Identify Branches with Highest Revenue Decline Year-Over-Year**
   - Question: Which branches experienced the largest decrease in revenue compared to the previous year?
   - Purpose: Detect branches with declining revenue to address local issues and create strategies to boost sales or mitigate losses.