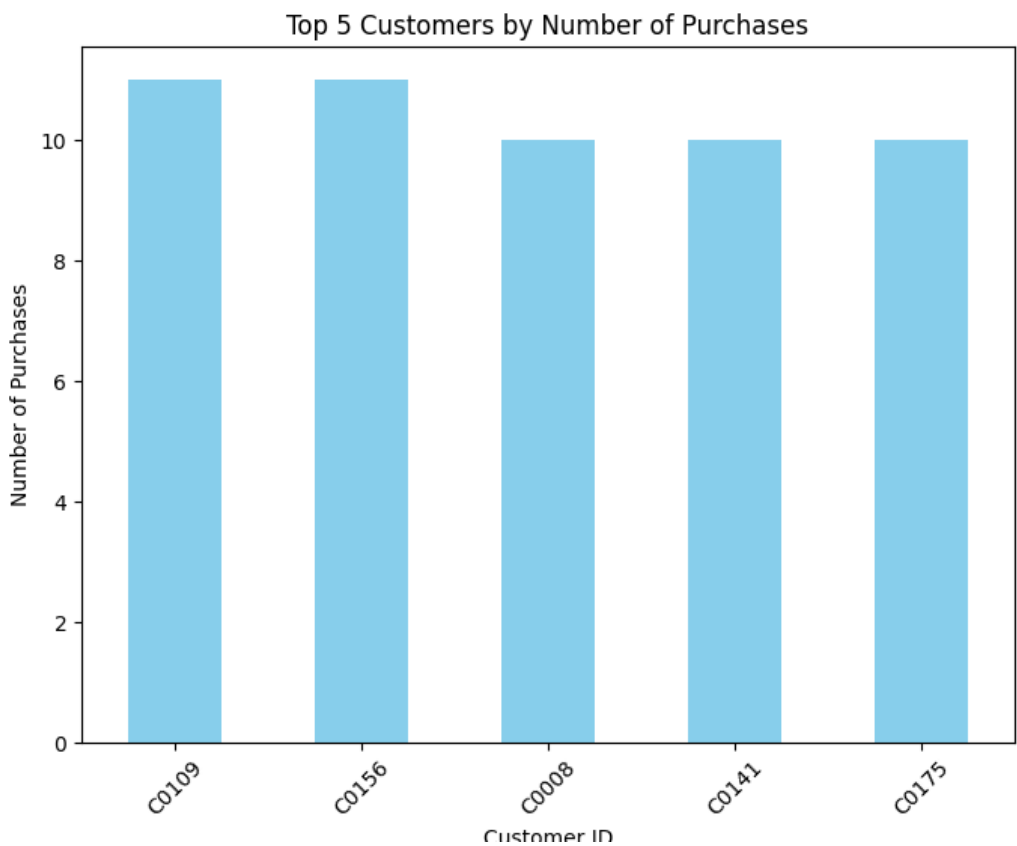


Insights from Transactions Data Analysis

1. Top Customers by Number of Purchases

Analyzing the transactional data revealed the customers with the highest number of purchases. The top 5 customers account for a significant portion of total transactions, indicating their importance to the business. These high-value customers are ideal candidates for loyalty programs or targeted marketing campaigns to retain and increase their spending.

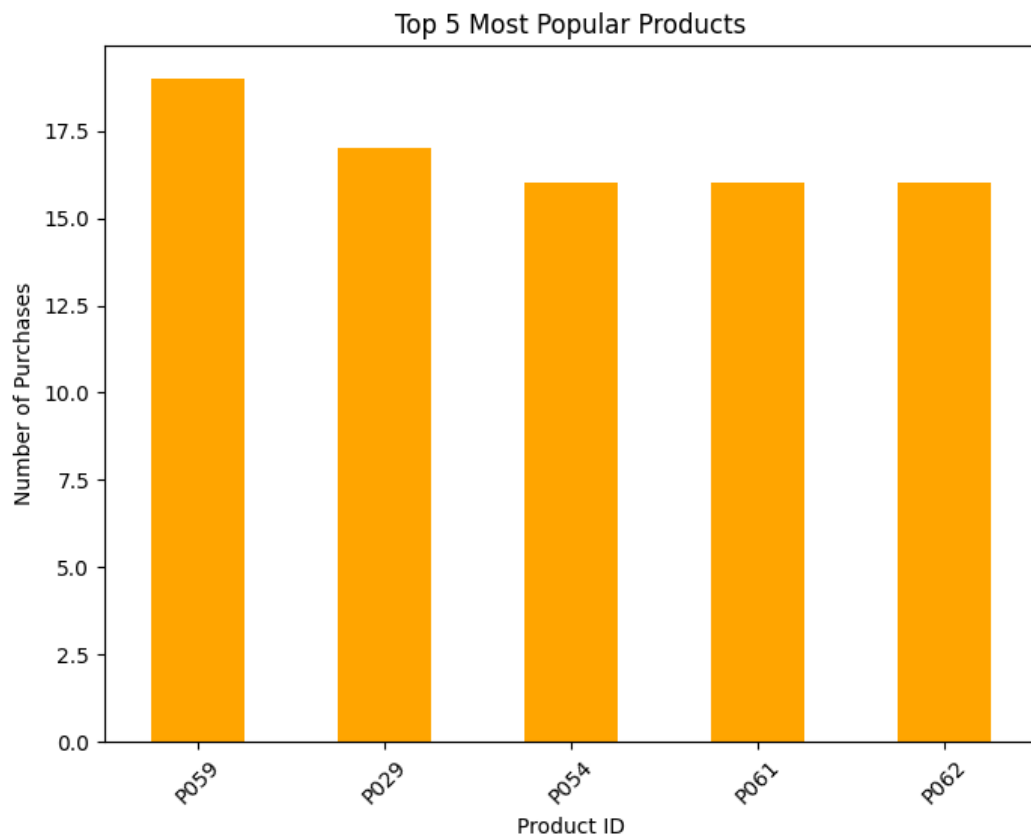
Visualization Insight: A bar chart showing the number of purchases for the top 5 customers highlighted their contribution relative to others.



2. Most Popular Products

Product popularity analysis identified the top 5 most frequently purchased products. These products represent customer preferences and could be leveraged for promotional campaigns or inventory optimization. Maintaining adequate stock for these products is essential to prevent missed sales opportunities.

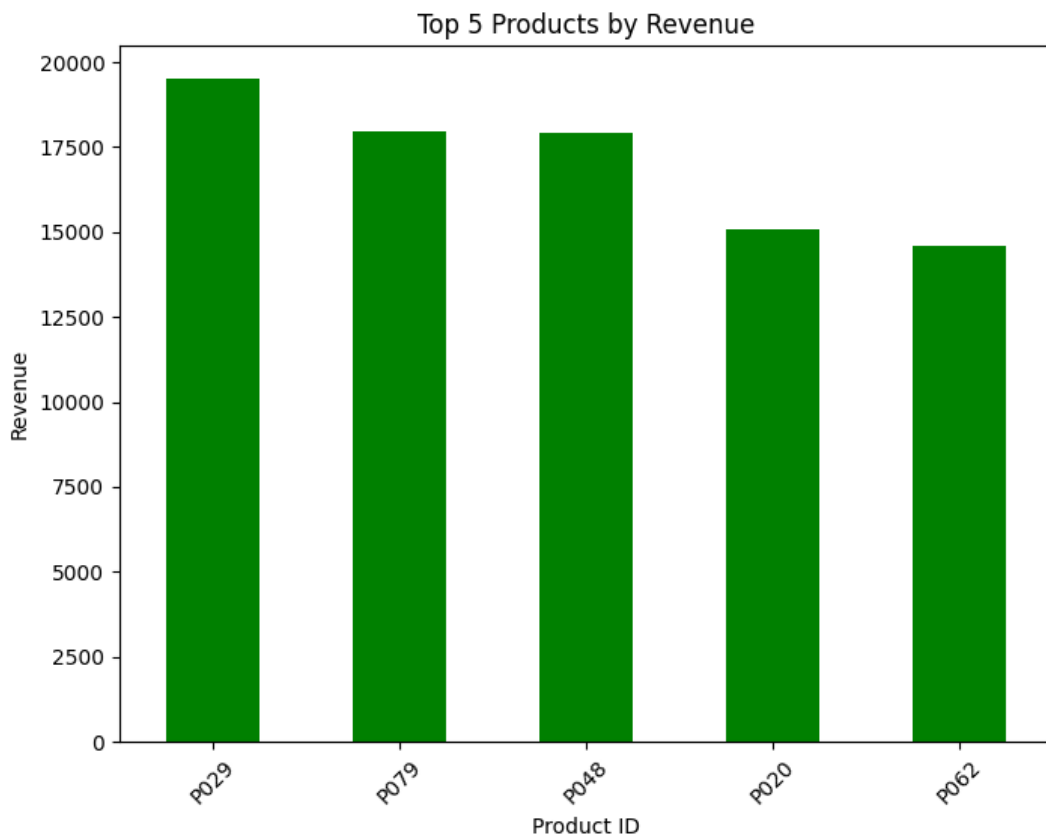
Visualization Insight: A bar chart of the top 5 products demonstrated their dominance in purchase frequency.



3. Top Revenue-Generating Products

Revenue analysis by product highlighted the top 5 products contributing the most to overall revenue. Interestingly, some of these products were not among the most popular, suggesting that higher-priced or premium products play a significant role in revenue generation. Understanding this balance between volume and value can guide pricing and promotional strategies.

Visualization Insight: A bar chart showed the revenue contribution of the top 5 products, underlining their financial importance.



4. Total Revenue Insights

The total revenue generated during the analysis period was calculated by multiplying price and quantity for each transaction. This metric provides a benchmark for evaluating business performance over time. Additionally, grouping revenue by products allowed for targeted strategies to enhance profitability.

Key Figure: The calculated total revenue serves as a critical metric for business performance assessment.

Top 5 Products by Revenue:

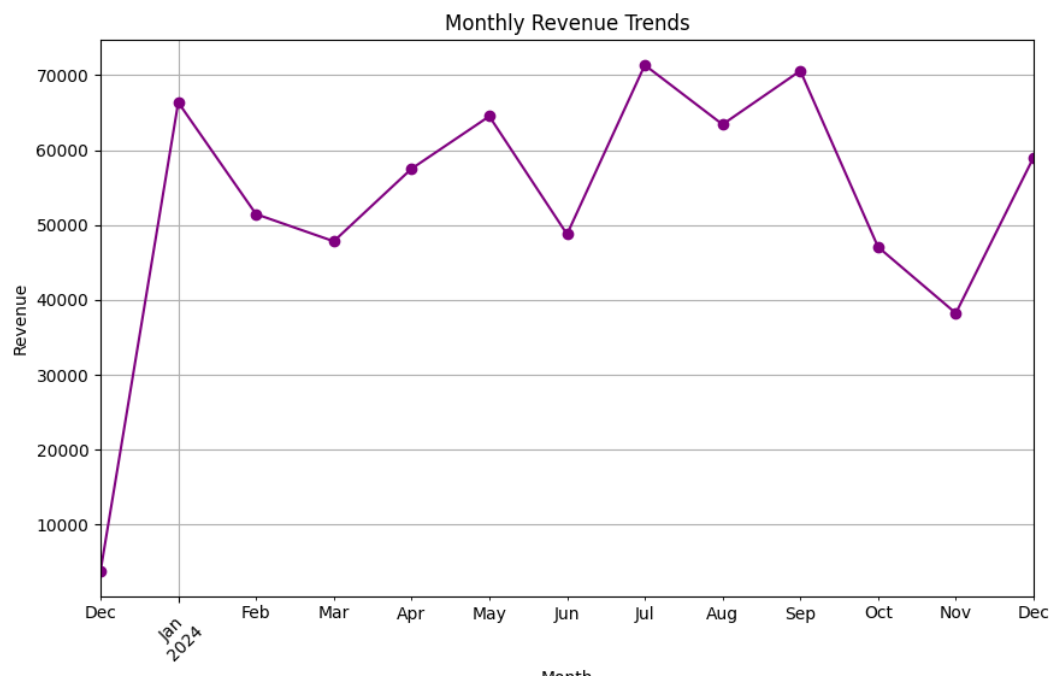
| productid | |
|-----------|----------|
| P029 | 19513.80 |
| P079 | 17946.91 |
| P048 | 17905.20 |
| P020 | 15060.92 |
| P062 | 14592.24 |

5. Monthly Revenue Trends

Monthly revenue trends revealed seasonal patterns and growth opportunities. Grouping transactions by months uncovered variations in customer spending habits, highlighting peak

and low-demand periods. Businesses can align marketing campaigns, discounts, and inventory with these trends to maximize profitability.

Visualization Insight: A line chart of monthly revenue trends showed a clear visualization of revenue fluctuations, aiding in forecasting and strategy development.



Recommendations:

1. Develop targeted loyalty programs for high-value customers.
2. Focus on maintaining inventory for popular products to prevent stockouts.
3. Leverage premium products' revenue contribution through specialized marketing.
4. Analyze low-performing months and plan promotions to drive revenue.
5. Use insights from revenue trends to prepare for seasonal fluctuations.

Conclusion: The insights gained from this transactional data analysis provide actionable intelligence for improving business operations and revenue growth. Visualizations further clarify key patterns and trends, ensuring data-driven decision-making.