

Small Business Sales & Inventory Analysis

SQL + Power BI Project
Data Analytics Portfolio Project

Business Problem & Objective

Using data to support better business decisions

- The business wants to understand overall sales performance
 - Identify top-performing products and categories
 - Analyze customer behavior and repeat purchases
 - Monitor inventory and stock availability

Dataset Overview & Analysis Approach

- **Products table:** Product ID, Product Name, Category, Cost Price, Selling Price, Stock Quantity
- **Customers table:** Customer ID, Customer Name, City, Gender
- **Orders table:** Order ID, Order Date, Customer ID
- **Order_Details table:** Order ID, Product ID, Quantity
- The dataset was first cleaned and structured in **Excel**.
- **SQL** was used to analyze sales, product performance, customer behavior, and inventory levels.
- Key business questions were answered using SQL queries.
- Insights were then visualized using **Power BI dashboards** for better understanding.

Power BI Dashboard- Sales & Performance Overview

Sales & Revenue Overview

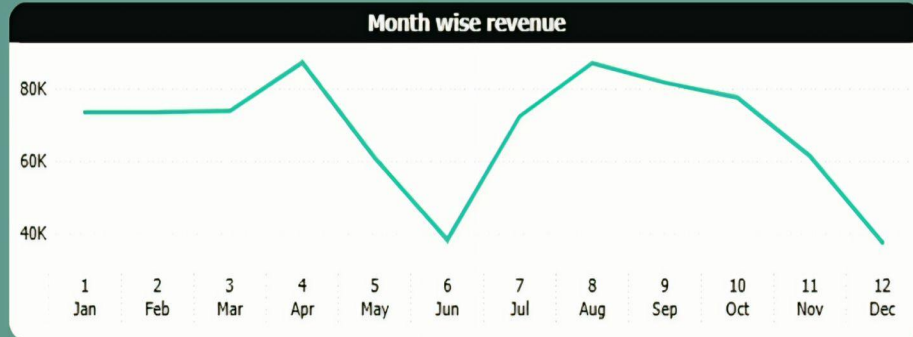
Total_revenue
1.21M

Total revenue shows overall
business performance

Total_order
350

Average_order_value
2.36K

Average order value indicates
customer spending
behaviour



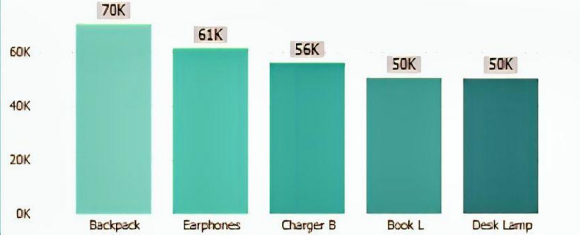
Monthly trend highlights seasonal sales patterns

- Created an interactive dashboard in **Power BI**
- Analyzed Sales, Products, Customers & Inventory
- Enabled insights using filters and slicers for better analysis

Product Performance Analysis

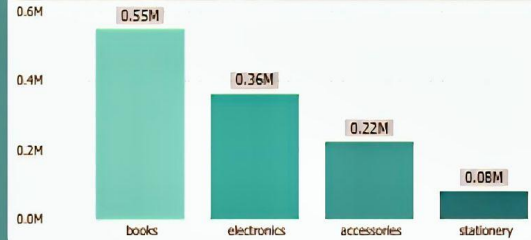
Product performance Analysis

Top 5 products by revenue



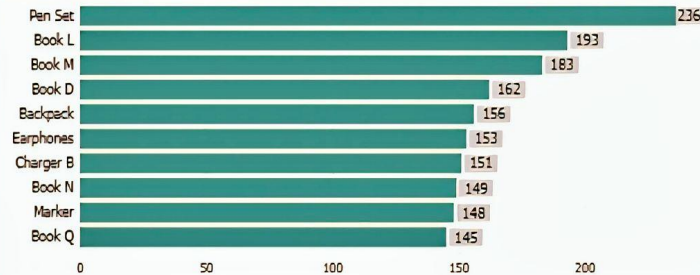
Top 5 products contribute major share of total revenue

Category wise revenue



Category wise sales show which categories perform best.

Quantity wise Best Selling Product



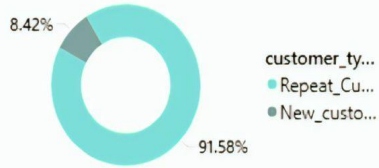
Best-selling product is identified based on quantity sold.

- Analyzed total revenue and total orders
- Identified month-wise sales trend
- Calculated average order value for business insights

Customer Analysis

Customer Insights

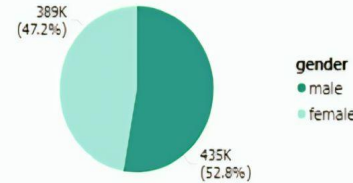
Repeat Vs New Customer



Customer base includes both new and repeat buyers.

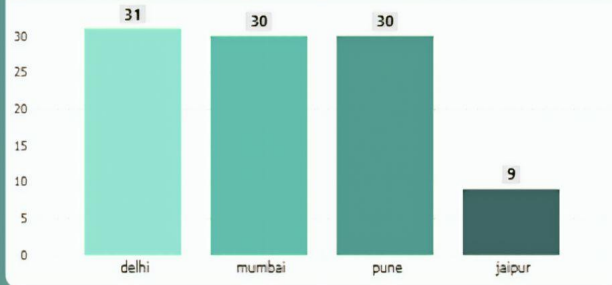
Total_customer
100

Gender wise sales



Gender-wise sales highlight customer purchasing patterns.

City wise customer



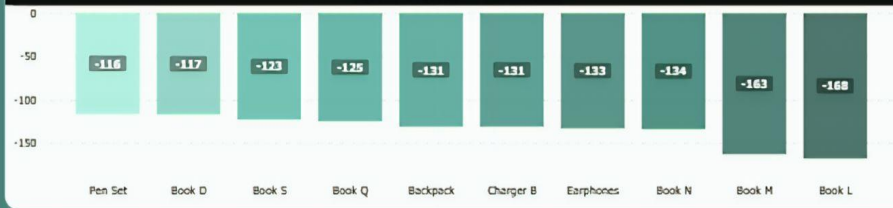
City-wise distribution shows key customer locations

- Analyzed customer behavior and purchasing patterns
- Identified high-value and repeat customers
- Helped in understanding which customer segments contribute most to sales

Inventory & Stock Analysis

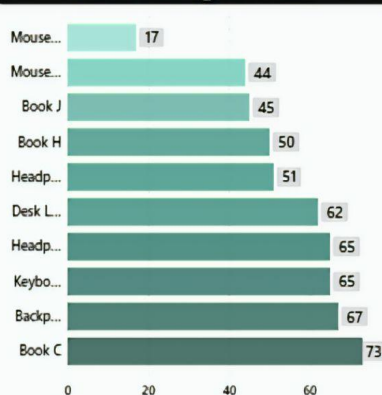
Inventory & Stock Analysis

Low Stock Products



Low-stock products need immediate attention.

Slow Moving Products



Slow-moving products indicate weak demand.

Remaining stocks

product_name	Remaining_stock
Book L	-168
Book M	-163
Book N	-134
Earphones	-133
Backpack	-131
Charger B	-131
Book Q	-125
Book S	-123
Book D	-117
Pen Set	-116
Total	-1341

Remaining stock help monitor inventory levels.

Negative values indicates stock sold more than available inventory.

- Analyzed stock levels across products
- Identified low-stock and high-stock items
- Helped in maintaining optimal inventory and avoiding stock-out situations

Conclusion

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- Completed end-to-end analysis using **Excel, SQL, and Power BI**
- Built interactive dashboards to analyze **sales, products, customers, and inventory**
- Transformed raw data into **meaningful business insights**

Recommendation

1.Top & Low-Performing Product

- Focus high-performing products
- strategize low-selling items → Higher revenue

2.Inventory Management

- Monitor stock
- fill remaining items → Avoid stockouts & overstock

3.Regional Sales Optimization

- Target promotions where ROI low → Cost-effective marketing

4.Customer Insights

- Target high-value/repeat customers → Better retention & profit margins

5.Data-Driven Decision Support

- Monitor trends & KPIs continuously → Informed business decisions