

Amazon Sales

Data Analysis

Product, Sales, and
Customer Insights

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Product Tour

Product Tour

Share your own customer images

On this page:

Compare Kindles

Project Overview

Objective: To gain insights into Amazon's sales data and understand factors affecting sales across different branches.

Branches Analyzed: Mandalay, Yangon, Naypyitaw

Data: 17 columns, 1000 rows including sales transactions, customer details, product lines, and more.

Data Overview

Data Description:

- **Invoice ID:** Unique identifier for sales transactions
- **Branch:** Location of sales
- **Customer Type:** Type of customer (e.g., Member, Normal)
- **Product Line:** Category of product sold
- **Quantity:** Number of units sold
- **Total:** Total sales amount
- **Date & Time:** Timestamp of transaction
- **Payment Method:** Mode of payment (e.g., Cash, Credit Card)
- **Rating:** Rating the product by user.

Data Quality: Ensured no NULL values through database constraints

Feature Engineering

- **New Columns Added:**
 - **timeofday:** Categorized as Morning, Afternoon, Evening
 - **dayname:** Extracted day of the week
 - **monthname:** Extracted month of the year
- **Purpose:** To identify patterns in sales over different times and days

Product Analysis

- **Objective:** To understand performance across different product lines.
- **Key Findings:**
 - **Best Performing Product Line:** Electronic accessories (Sales of 971)
 - **Needs Improvement:** Health and Beauty (Sales of 854)
 - **Top Product Line by Revenue:** Food and Beverages (\$ 56144.844)

Sales Analysis

- **Objective:** To analyze sales trends and effectiveness of sales strategies.

- **Key Findings:**

- **Monthly Revenue:** January (\$ 116291.868)
- **Sales Peak Time:**

timeofday	Total_Quantity	Total_Sales(in \$)
Afternoon	2946	172468.56
Evening	1526	88699.38
Morning	1038	61798.81

- **Highest Sales Month:** January (Sales of 1965)
- **Cost of Goods Sold Peak:** January (\$ 110754.16)

Customer Analysis

- **Objective:** To segment customers and analyze their purchasing behaviour.
- **Key Findings:**
 - **Most Frequent Customer Type:** Members
 - **Highest Revenue Contributor:** Member (\$ 164223.444)
 - **Predominant Gender:** Female

Customer Analysis

- Key Findings:
 - Branch-wise Gender Distribution:

Branch	Gender	Count	Distribution (%)
A	Male	179	52.65
A	Female	161	47.35
B	Male	170	51.20
B	Female	162	48.80
C	Female	178	54.27
C	Male	150	45.73

Work Video

- **Video Content:** Overview of the analysis process, key insights, and findings.
- **Purpose:** To provide a visual and engaging summary of the work done.

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree, which includes 'amazon', 'crime_DB', 'margdarshan', 'sakila', 'sqlite3test', 'sys', and 'world_x'. The main area is titled 'ODIN SCHOOL_PROJECT_SQL' and contains the following SQL code:

```
1 • use amazon;
2
3 -- To View the Data
4 DELIMITER //
5 • CREATE PROCEDURE GetSalesData()
6 BEGIN
7     SELECT *
8     FROM sales;
9 END //
10 DELIMITER ;
11
12 • CALL GetSalesData();
13
14 -- To check for missing values
15 • SELECT
16     *
17     FROM
18         sales
19     WHERE
20         'Invoice ID' IS NULL OR 'Branch' IS NULL
21             OR 'City' IS NULL
22             OR 'Customer type' IS NULL
23             OR 'Gender' IS NULL
24             OR 'Product line' IS NULL
25             OR 'Unit price' IS NULL
```

A context help message is visible on the right side of the screen: "Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help."

Business Questions Answered

- **Distinct Cities:** 3 (Mandalay, Yangon, Naypyitaw)
- **Product Lines:** 6 (Health and Beauty, Electronic accessories, Home and Lifestyle, Sports and travel, Food and Beverages, Fashion accessories)
- **Frequent Payment Method:** Ewallet
- **City with Highest Revenue:** Naypyitaw
- **Product Line with Highest VAT:** Fashion accessories (4.965%)
- **Customer Type with Highest VAT Payments:** Member (4.965%)
- **Day with Highest Ratings:** Monday (Average Rating of 7.2)

Business Questions Answered

- Average Rating per Product Line:

Product line	average_ratings
Food and beverages	7.1
Health and beauty	7
Fashion accessories	7
Electronic accessories	6.9
Sports and travel	6.9
Home and lifestyle	6.8

Recommendations

- **Product Strategy:**
 - Focus on improving **Health and Beauty Product Line**.
 - Promote high-revenue generating products
- **Sales Strategy:**
 - Increase marketing during **Afternoon**.
 - Introduce offers in **February**.
- **Customer Engagement:**
 - Target **Members** with loyalty programs.
 - Personalized campaigns for **predominant gender** in each branch.

Conclusion and Next Steps

- **Summary:**
 - Detailed insights into product performance, sales trends, and customer segments
 - Data-driven recommendations for boosting sales and customer engagement
- **Next Steps:**
 - Implement recommended strategies
 - Continuous monitoring and analysis for improvement
 - Further analysis on customer feedback and satisfaction

Thank You!