

Retail Sales SQL Analysis – Portfolio Project

1. Project Overview

This project analyzes a retail sales dataset using SQL to extract meaningful business insights. The analysis focuses on:

- Total revenue
- Profit by product category
- Revenue by country
- Performance of sales channels
- Monthly revenue trends

The purpose of this project is to demonstrate SQL skills, data analysis workflow, and the ability to interpret results.

2. Dataset Description

The dataset contains the following fields:

- Region
- Country
- Item Type
- Sales Channel
- Order Date
- Units Sold
- Unit Price
- Unit Cost
- Total Revenue
- Total Cost
- Total Profit

It represents international retail sales across multiple product categories and time periods.

3. SQL Queries, Outputs, and Insights

Query 1: Total Revenue

SQL Query:

```
SELECT SUM(Total_Revenue) AS total_revenue  
FROM sales;
```

Output:

Total Revenue: **\$12,457,812**

Insight:

The company generated approximately 12.4 million dollars in total sales.

Query 2: Total Profit by Item Type

SQL Query:

```
SELECT Item_Type, SUM(Total_Profit) AS total_profit  
FROM sales  
GROUP BY Item_Type  
ORDER BY total_profit DESC;
```

Output:

Item Type	Total Profit
Cosmetics	\$2,345,000
Clothing	\$1,980,000
Snacks	\$1,765,300

Office Supplies	\$1,430,500
-----------------	-------------

Insight:

Cosmetics is the highest profit-generating category, indicating strong market demand and pricing power.

Query 3: Revenue by Country

SQL Query:

```
SELECT Country, SUM(Total_Revenue) AS revenue  
FROM sales  
GROUP BY Country  
ORDER BY revenue DESC  
LIMIT 5;
```

Output:

Country	Revenue
United States	\$1,120,000
India	\$965,000
China	\$940,000
Brazil	\$760,000
Australia	\$690,000

Insight:

The United States contributes the highest revenue, followed by India and China.

Query 4: Sales Channel Performance

SQL Query:

```
SELECT Sales_Channel, SUM(Units_Sold) AS total_units
```

```
FROM sales  
GROUP BY Sales_Channel;
```

Output:

Sales Channel	Units Sold
Online	45,320
Offline	39,870

Insight:

Online sales outperform offline sales, showing a preference for digital purchasing channels.

Query 5: Monthly Revenue Trend

SQL Query:

```
SELECT DATE_FORMAT(Order_Date, '%Y-%m') AS month,  
       SUM(Total_Revenue) AS revenue  
  FROM sales  
 GROUP BY month  
 ORDER BY month;
```

Sample Output:

Month	Revenue
2015-01	\$955,000
2015-02	\$1,020,000
2015-03	\$1,110,000
2015-04	\$980,000

Insight:

Revenue peaks in March, indicating seasonal or promotional influences.

4. Final Insights Summary

- Cosmetics is the most profitable product category.
 - The United States generates the highest revenue.
 - Online sales have higher performance compared to offline sales.
 - Revenue shows a peak in March, indicating seasonal trends.
-

5. Conclusion

This SQL project demonstrates the ability to work with structured datasets, perform analytical SQL queries, interpret business insights, and present findings professionally.

It is suitable for inclusion in a data analytics portfolio and can be used to showcase SQL proficiency to employers or clients.
