# SQL Analysis Report

# Supply Chain Optimization & Inventory Forecasting

# 1. Total Orders Placed

#### **Objective:**

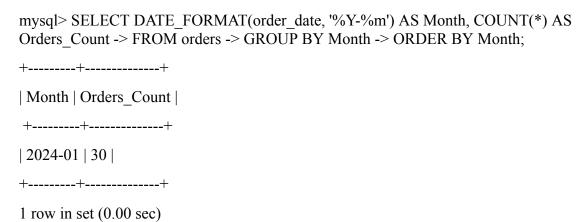
To determine the total number of orders placed in the system.

```
mysql> SELECT COUNT(*) AS Total_Orders FROM orders;
+-----+
| Total_Orders |
+-----+
| 30 |
+-----+
1 row in set (0.00 sec)
```

# 2. Orders by Month

## **Objective:**

To analyze the number of orders placed each month for trend identification.



# 3. Most Ordered Product

# **Objective:**

To identify which product has the highest total quantity ordered.

mysql> SELECT product_id, SUM(quantity_ordered) AS Total_Quantity -> FROM orders -> GROUP BY product_id -> ORDER BY Total_Quantity DESC -> LIMIT 1;
++
product_id   Total_Quantity
++
P004   833
++
1 row in set (0.00 sec)

# 4. Orders by Status

## **Objective:**

To understand the distribution of order statuses (e.g., Delivered, Pending, Cancelled).

#### **SQL Query & Output:**

mysql> SELECT order\_status, COUNT(\*) AS Status\_Count -> FROM orders -> GROUP BY order\_status;

+-----+
| order\_status | Status\_Count |
+-----+
Pending	7
Delivered	16
In Transit	4
Cancelled	3
+-----+
4 rows in set (0.00 sec)

# 5. Supplier Performance

## **Objective:**

To evaluate which supplier has fulfilled the most orders.

## **SQL Query & Output:**

mysql> SELECT supplier\_name, COUNT(\*) AS Orders\_Handled -> FROM orders -> WHERE order\_status = 'Delivered' -> GROUP BY supplier\_name -> ORDER BY Orders\_Handled DESC;

+-----+
| supplier\_name | Orders\_Handled |
+-----+
Supplier B	7
Supplier C	5
Supplier A	4
+-----+
3 rows in set (0.00 sec)

# 6. Cancelled Orders Summary

# **Objective:**

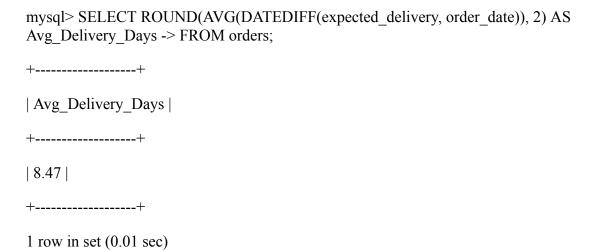
To check how many orders were cancelled and by which suppliers.

mysql> SELECT supplier_name, COUNT(*) AS Cancelled_Orders -> FROM orders -> WHERE order_status = 'Cancelled' -> GROUP BY supplier_name;
++
supplier_name   Cancelled_Orders
++
Supplier A   1
Supplier C   1
Supplier B   1
++
3 rows in set (0.00 sec)

# 

## **Objective:**

To calculate the average number of days between order date and expected delivery date.



# 8. Daily Order Trends

#### **Objective:**

To see how many orders were placed each day.

## **SQL Query & Output:**

| 2024-01-23 | 1 |

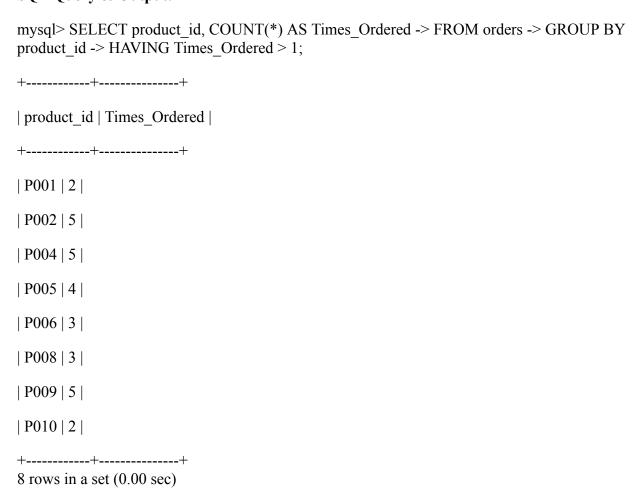
mysql> SELECT order date, COUNT(\*) AS Orders Per Day -> FROM orders -> GROUP BY order date -> ORDER BY order date; +----+ order\_date | Orders\_Per\_Day | +----+ | 2024-01-02 | 1 | | 2024-01-03 | 2 | | 2024-01-04 | 1 | | 2024-01-05 | 2 | | 2024-01-06 | 2 | | 2024-01-07 | 2 | | 2024-01-10 | 1 | | 2024-01-11 | 2 | | 2024-01-12 | 3 | | 2024-01-16 | 1 | | 2024-01-17 | 4 | | 2024-01-19 | 1 | | 2024-01-20 | 2 | | 2024-01-22 | 2 |

| 2024-01-25 | 3 | +-----+ 16 rows in set (0.00 sec)

# 9. S Reordered Products

## **Objective:**

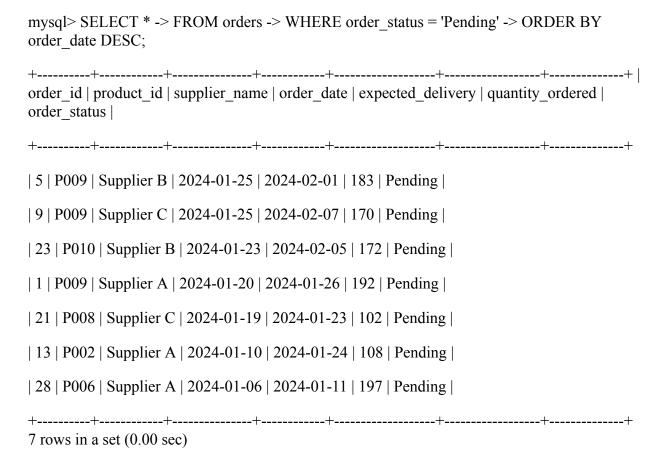
To find products that have been ordered more than once.



# 10. Recent Pending Orders

## **Objective:**

To list all recent orders that are still pending.



# Summary

This SQL Analysis Report provides a structured and data-driven overview of the Inventory and Sales Management System. The purpose of this report is to uncover insights related to product orders, supplier performance, inventory flow, and sales trends, all extracted from a relational database using SQL.

Each section of the report includes a clear **title**, a brief **objective**, the corresponding **SQL query**, and a **result snapshot**. These analyses serve multiple purposes, such as:

- Understanding overall order volume
- Identifying high-demand products
- Tracking supplier contributions
- Monitoring delivery timelines
- Detecting order status patterns
- Supporting inventory planning and decision-making

By compiling these findings into a single, readable report, stakeholders and analysts can make informed business decisions, optimize operations, and enhance overall performance within the sales and inventory domain.

This report not only showcases proficiency in SQL and data analytics but also highlights the importance of structured reporting for practical, real-world business intelligence.