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DATA ANALYTICS JOURNEY

Gross Monthly Sales Report Using SQL

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1 Introduction & Requirement

Gross Monthly Sales Report Using SQL

Built a SQL-based report to calculate gross monthly sales for a specific customer.

Business requirement:
→ Show sales date (monthly view)
→ Calculate total gross sales amount
Purpose:
To track customer revenue contribution over time using accurate pricing logic.

2 Revenue Logic

How Gross Sales Are Calculated

Gross Sales = Sold Quantity × Gross Price
Pricing is joined using:
→ Product code
→ Fiscal year derived from sales date
This ensures pricing accuracy

3 Fiscal Year Function Code

-- BLOCK 1: Get raw sales data WITH january_sales AS (SELECT product_id, SUM(quantity

```sql
CREATE FUNCTION get_fiscal_year (calendar_date DATE)
RETURNS INTEGER
DETERMINISTIC
BEGIN
  -- Declare a variable to store the fiscal year
  DECLARE fiscal_year INT;

  -- Add 4 months to the given calendar date
  -- This shifts Jan-Mar dates into the correct fiscal year
  SET fiscal_year = YEAR(DATE_ADD(calendar_date, INTERVAL 4 MONTH));

  -- Return the calculated fiscal year
  RETURN fiscal_year;
END;
```

Logic:

Calendar Date → +4 Months → Extract Year → Fiscal Year

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SQL Query Used

-- BLOCK 1: Get raw sales data WITH january_sales AS (SELECT product_id, SUM(quantity

```sql
-- Gross monthly sales report using fiscal year-aligned pricing
SELECT
    s.date,
    ROUND(SUM(g.gross_price * s.sold_quantity), 2) AS gross_price_total
FROM fact_sales_monthly s

-- Join pricing table using product code and fiscal year derived from
date
JOIN fact_gross_price g
  ON s.product_code = g.product_code
 AND g.fiscal_year = get_fiscal_year(s.date)

-- Filter data for a specific customer
WHERE s.customer_code = 90002002

-- Aggregate gross sales at date (monthly) level
GROUP BY s.date

-- Show latest dates first
ORDER BY s.date DESC;

```

5 Why This Works & Final Output

→ Reuses the custom get_fiscal_year() function built in Post 1

→ Ensures sales and pricing are aligned to the same fiscal year

→ Aggregates gross revenue at the date (monthly) level

Final Output:

→ Date

→ Total Gross Sales

The final result is exported to Excel for reporting and trend analysis.

SQL scripts and the Excel file are available in the GitHub repository.

6 Skills Demonstrated

→ SQL joins and aggregation
→ Revenue calculation
→ Fiscal year handling
→ Query reusability
→ Business-focused reporting

Question
How do you ensure pricing accuracy in your SQL revenue reports?

7 Project Progression

Project Progression
→ Post 1: Built a reusable fiscal year function to handle Apr–Mar reporting
→ Post 2: Reused the same function to calculate monthly gross sales accurately
→ Ensured pricing and sales data remained aligned across reports
→ Followed a modular, scalable SQL design approach
→ Next: Monthly trends, customer performance, and deeper revenue analysis

Why this helps:
Demonstrates structured learning, query reusability, and real-world analytics workflow.

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Thanks!

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