MINI PROJECT

# PROBLEM SOLVING WITH SQL

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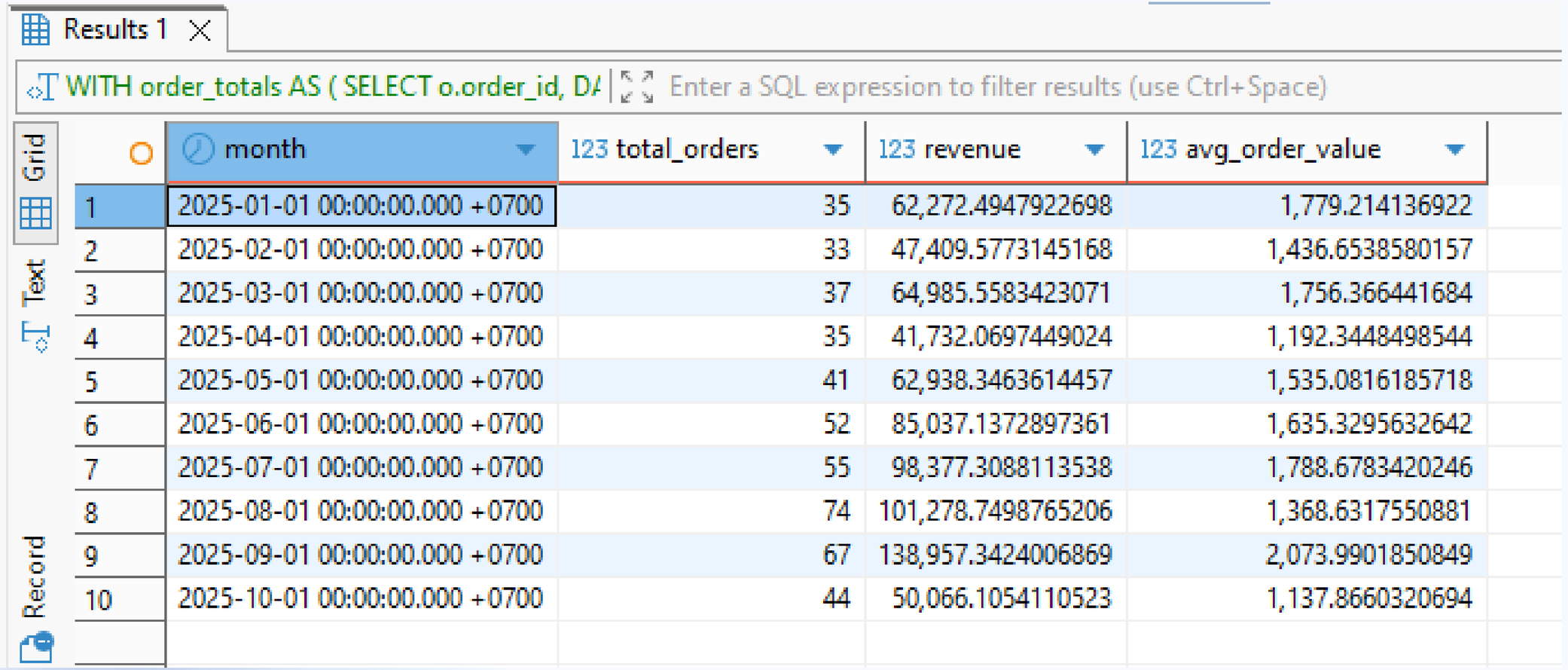
# BUSINESS CONTEXT

Manajemen PT X ingin **brief eksekutif tahun berjalan (YTD)** untuk menutup kuartal dengan strategi yang tepat. Mereka butuh melihat **momentum penjualan bulanan**, lalu mengecek **kualitas pengiriman** (SLA) agar keluhan tidak meningkat. Setelah itu, mereka ingin fokus pada **produk** yang benar-benar menyumbang pendapatan, menilai **performa per sales**, dan terakhir memahami porsi **pelanggan baru vs loyal** agar keputusan marketing & retensi lebih tajam.

# T1
# — MONTHLY PERFORMANCE

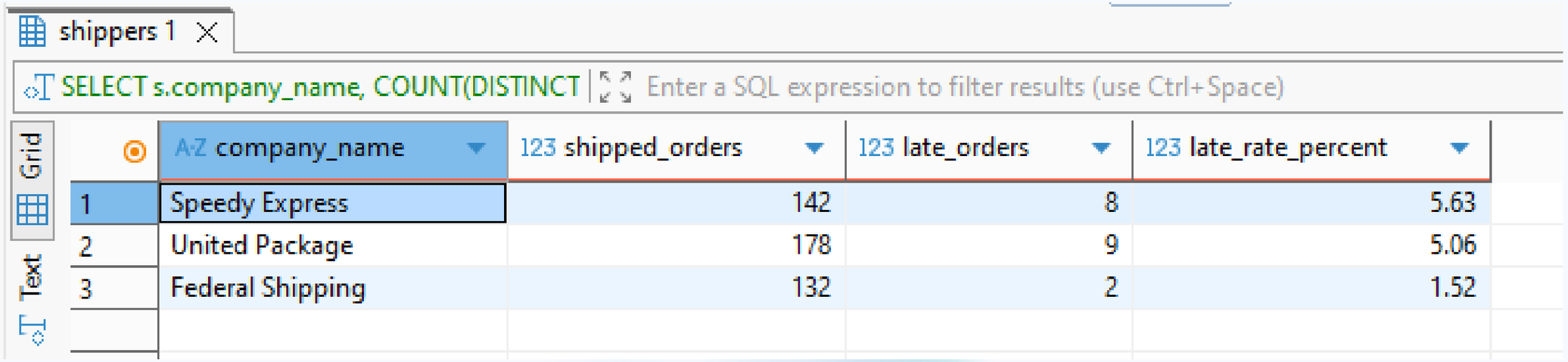
- **Tujuan bisnis**: Amati momentum penjualan bulanan.
- **Pertanyaan**: Tampilkan **jumlah order, total revenue,** dan **avg order value** per **bulan** (di tahun 2025).




| | month | total_orders | revenue | avg_order_value |
|---|---|---|---|---|
| 1 | 2025-01-01 00:00:00.000 +0700 | 35 | 62,272.4947922698 | 1,779.214136922 |
| 2 | 2025-02-01 00:00:00.000 +0700 | 33 | 47,409.5773145168 | 1,436.6538580157 |
| 3 | 2025-03-01 00:00:00.000 +0700 | 37 | 64,985.5583423071 | 1,756.366441684 |
| 4 | 2025-04-01 00:00:00.000 +0700 | 35 | 41,732.0697449024 | 1,192.3448498544 |
| 5 | 2025-05-01 00:00:00.000 +0700 | 41 | 62,938.3463614457 | 1,535.0816185718 |
| 6 | 2025-06-01 00:00:00.000 +0700 | 52 | 85,037.1372897361 | 1,635.3295632642 |
| 7 | 2025-07-01 00:00:00.000 +0700 | 55 | 98,377.3088113538 | 1,788.6783420246 |
| 8 | 2025-08-01 00:00:00.000 +0700 | 74 | 101,278.7498765206 | 1,368.6317550881 |
| 9 | 2025-09-01 00:00:00.000 +0700 | 67 | 138,957.3424006869 | 2,073.9901850849 |
| 10 | 2025-10-01 00:00:00.000 +0700 | 44 | 50,066.1054110523 | 1,137.8660320694 |

# T2 — SHIPPER SLA (YTD)

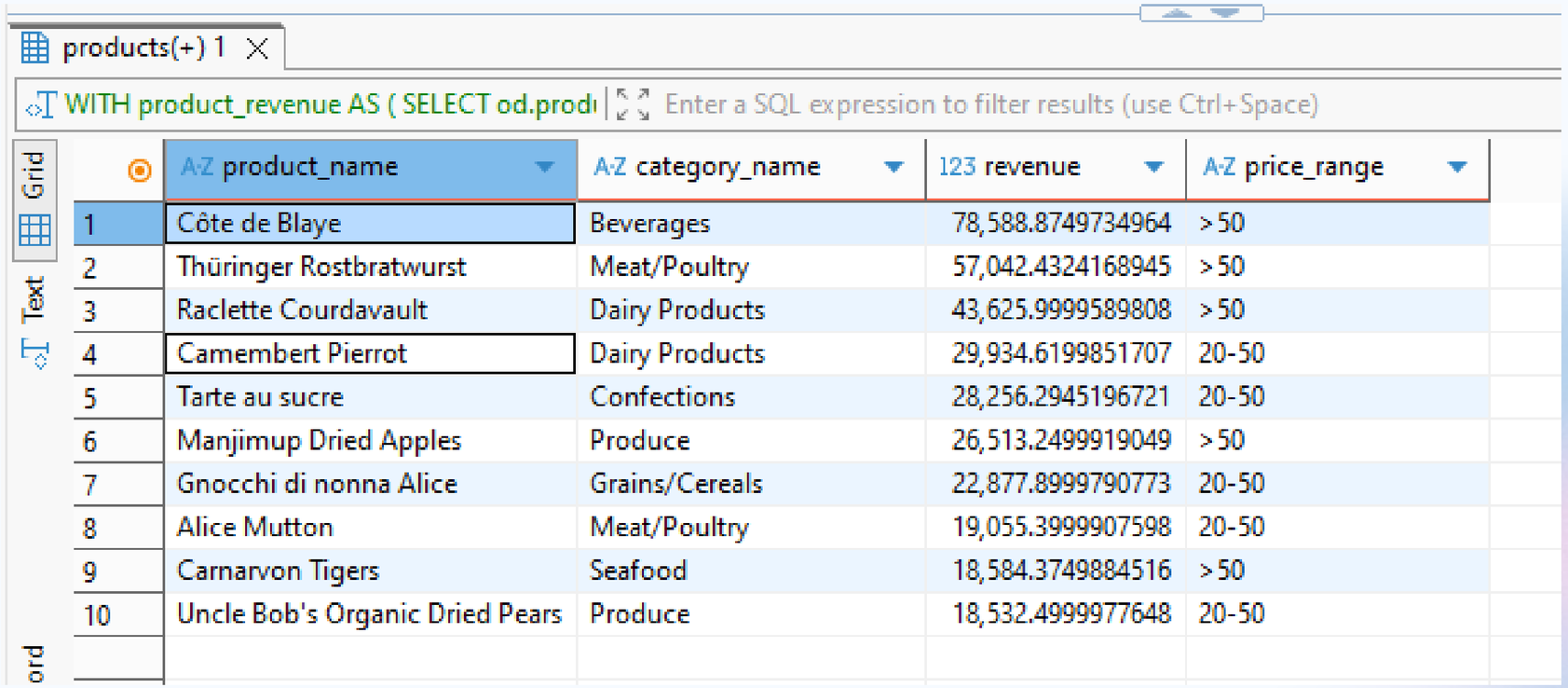
- **Tujuan bisnis**: Evaluasi kurir (SLA).
- **Pertanyaan**: Untuk order **yang sudah dikirim** (YTD), tampilkan per kurir: **shipped_orders, late_orders** (shipped_date > required_date), dan **late_rate_%.**




| | company_name | shipped_orders | late_orders | late_rate_percent |
|---|---|---|---|---|
| 1 | Speedy Express | 142 | 8 | 5.63 |
| 2 | United Package | 178 | 9 | 5.06 |
| 3 | Federal Shipping | 132 | 2 | 1.52 |

# T3 — TOP 10 PRODUCTS BY REVENUE (YTD)

- **Tujuan bisnis**: Fokus ke produk penyumbang pendapatan.
- **Pertanyaan**: Tampilkan **10 produk** ber-revenue tertinggi (YTD) beserta **nama kategori** dan **price_range** (<10, 10–20, 20–50, >50).


products(+) 1

WITH product_revenue AS ( SELECT od.prod | Enter a SQL expression to filter results (use Ctrl+Space)

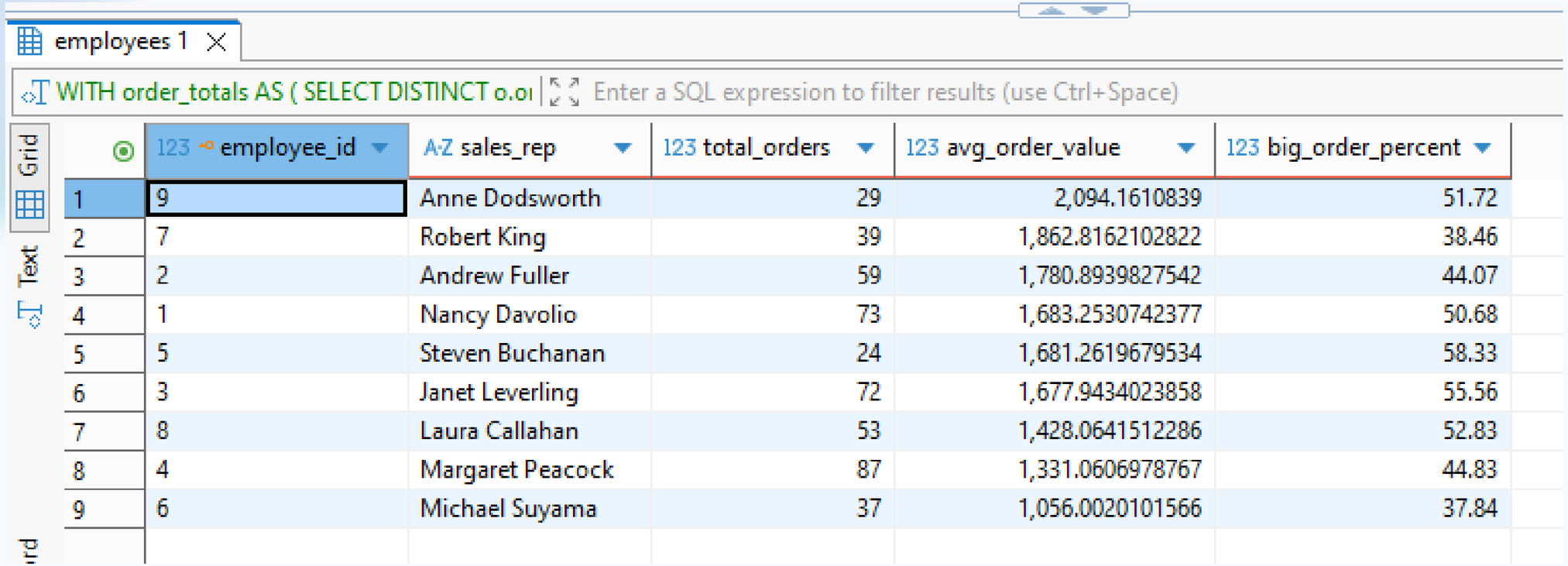
Grid | Text

| | product_name | category_name | revenue | price_range |
|---|---|---|---|---|
| 1 | Côte de Blaye | Beverages | 78,588.8749734964 | >50 |
| 2 | Thüringer Rostbratwurst | Meat/Poultry | 57,042.4324168945 | >50 |
| 3 | Raclette Courdavault | Dairy Products | 43,625.9999589808 | >50 |
| 4 | Camembert Pierrot | Dairy Products | 29,934.6199851707 | 20-50 |
| 5 | Tarte au sucre | Confections | 28,256.2945196721 | 20-50 |
| 6 | Manjimup Dried Apples | Produce | 26,513.2499919049 | >50 |
| 7 | Gnocchi di nonna Alice | Grains/Cereals | 22,877.8999790773 | 20-50 |
| 8 | Alice Mutton | Meat/Poultry | 19,055.3999907598 | 20-50 |
| 9 | Carnarvon Tigers | Seafood | 18,584.3749884516 | >50 |
| 10 | Uncle Bob's Organic Dried Pears | Produce | 18,532.4999977648 | 20-50 |

ord

# T4 — SALES REP SCORECARD (YTD)

- **Tujuan bisnis**: Ringkas performa per sales rep.
- **Pertanyaan**: Per **karyawan** tampilkan **jumlah order, avg order value,** dan % **order besar** (order_total > 1000).




| | employee_id | sales_rep | total_orders | avg_order_value | big_order_percent |
|---|---|---|---|---|---|
| 1 | 9 | Anne Dodsworth | 29 | 2,094.1610839 | 51.72 |
| 2 | 7 | Robert King | 39 | 1,862.8162102822 | 38.46 |
| 3 | 2 | Andrew Fuller | 59 | 1,780.8939827542 | 44.07 |
| 4 | 1 | Nancy Davolio | 73 | 1,683.2530742377 | 50.68 |
| 5 | 5 | Steven Buchanan | 24 | 1,681.2619679534 | 58.33 |
| 6 | 3 | Janet Leverling | 72 | 1,677.9434023858 | 55.56 |
| 7 | 8 | Laura Callahan | 53 | 1,428.0641512286 | 52.83 |
| 8 | 4 | Margaret Peacock | 87 | 1,331.0606978767 | 44.83 |
| 9 | 6 | Michael Suyama | 37 | 1,056.0020101566 | 37.84 |

# T5
# — NEW VS LOYAL CUSTOMERS (YTD)

- **Tujuan bisnis**: Pahami porsi akuisisi vs retensi.
- **Pertanyaan**: Segmentasi order YTD ke **NEW** (first order customer di tahun ini) vs **LOYAL** (first order sebelum tahun ini). Tampilkan **orders** dan **revenue**.

Results 1

WITH first_order AS ( SELECT customer_id, M | Enter a SQL expression to filt

Grid

Text

| | segment | orders | revenue |
|---|---|---|---|
| 1 | LOYAL | 446 | 736,085.5403413656 |
| 2 | NEW | 27 | 16,969.1500034258 |

thank you!