**Advanced Business Problems:**

**1. Top Selling Products**

* **Query**: Top 10 products by total sales value.
* **Challenge**: Include product name, total quantity sold, and total sales value.

**2. Revenue by Category**

* **Query**: Total revenue generated by each product category.
* **Challenge**: Include the percentage contribution of each category to total revenue.

**3. Average Order Value (AOV)**

* **Query**: Compute the average order value for each customer.
* **Challenge**: Include only customers with more than 5 orders.

**4. Monthly Sales Trend**

* **Query**: Monthly total sales over the past year.
* **Challenge**: Display the sales trend, grouping by month, return current\_month sale, last month sale.

**5. Customers with No Purchases**

* **Query**: Find customers who have registered but never placed an order.
* **Challenge**: List customer details and the time since their registration.

**6. Least-Selling Categories by State**

* **Query**: Identify the least-selling product category for each state.
* **Challenge**: Include the total sales for that category within each state.

**7. Customer Lifetime Value (CLTV)**

* **Query**: Calculate the total value of orders placed by each customer over their lifetime.
* **Challenge**: Rank customers based on their CLTV.

**8. Inventory Stock Alerts**

* **Query**: Products with stock levels below a certain threshold (e.g., less than 10 units).
* **Challenge**: Include last restock date and warehouse information.

**9. Shipping Delays**

* **Query**: Identify orders where the shipping date is later than 3 days after the order date.
* **Challenge**: Include customer, order details, and delivery provider.

**10. Payment Success Rate**

* **Query**: Calculate the percentage of successful payments across all orders.
* **Challenge**: Include breakdowns by payment status (e.g., failed, pending).

**11. Top Performing Sellers**

* **Query**: Find the top 5 sellers based on total sales value.
* **Challenge**: Include both successful and failed orders, and display their percentage of successful orders.

**12. Product Profit Margin**

* **Query**: Calculate the profit margin for each product (difference between price and cost of goods sold).
* **Challenge**: Rank products by their profit margin, showing highest to lowest.

**13. Most Returned Products**

* **Query**: Top 10 products by the number of returns.
* **Challenge**: Display the return rate as a percentage of total units sold for each product.

**14. Orders Pending Shipment**

* **Query**: Find orders that have been paid but are still pending shipment.
* **Challenge**: Include order details, payment date, and customer information.

**15. Identify Returning or New Customers**

* **Query**: Categorize customers as returning or new based on their return behavior.
* **Challenge**: List customer ID, name, total orders, and total returns.

**16. Top 5 Customers by Orders in Each State**

* **Query**: Identify the top 5 customers with the highest number of orders for each state.
* **Challenge**: Include the number of orders and total sales for each customer.

**17. Revenue by Shipping Provider**

* **Query**: Calculate the total revenue handled by each shipping provider.
* **Challenge**: Include the total number of orders handled and the average delivery time for each provider.