Case Study: Retail Analytics Using SQL

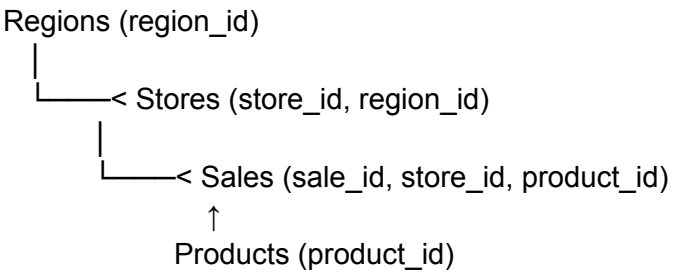
Problem Statement:
A national retail chain with stores spread across various regions wants to analyze its sales data to uncover trends in product performance, regional demand, and revenue contributions. The data team is tasked with using SQL (via SQLite) to extract actionable insights.

Database Schema (4 Tables)

1. **Regions**
    - `region_id` (PK)
    - `region_name`
2. **Stores**
    - `store_id` (PK)
    - `store_name`
    - `region_id` (FK → Regions)
3. **Products**
    - `product_id` (PK)
    - `product_name`
    - `category`
    - `price`
4. **Sales**
    - `sale_id` (PK)
    - `store_id` (FK → Stores)

- `product_id` (FK → Products)
- `quantity`
- `sale_date`

ER Reference



Note: Use SQL script given separately to create tables and populate records. Check if any corrections are required.

Questions

1. List all stores along with their region names.
2. Find total revenue (price × quantity) generated by each store.
3. Find the top 3 best-selling products by quantity.
4. Show the total sales revenue generated in each region.
5. Find the number of products sold in each category.
6. List the products that have never been sold.
7. Get the average quantity sold per product.
8. Find the products with total sales quantity > 3 (using HAVING).
9. Display sales records where quantity > 2 and date is after '2024-04-05'.
10. Find the name of the region that generated the highest total sales revenue.