**Querying – Sorting, Filtering & Grouping Assignment Questions**

1. **Top 3 highest revenue-generating brands**  
   Write a query to calculate total revenue (price \* sales\_volume) per brand and return the top 3.
2. **Monthly scraping trend**  
   Group the data by month and year from scraped\_at, and count how many products were scraped in each period.
3. **Top 2 categories with the highest average price**  
   Find the top 2 product categories with the highest average product price.
4. **Find brand diversity by section**  
   For each section, count how many unique brands are present.
5. **Most frequent price ending digit**  
   Analyze the price values and identify the most frequent last digit after the decimal point (e.g., 0.00, 0.99, etc.).
6. **Detect price anomalies**  
   Find products whose prices are greater than **twice the average price** of their category.
7. **Brand promotion ratio**  
   For each brand, calculate the ratio of promoted (promotion = 'Yes') to non-promoted products.
8. **Popular non-seasonal items**  
   Identify the top 5 non-seasonal products (seasonal = 'No') with the highest sales volume.
9. **Longest product names by category**  
   Find the product with the longest name (LENGTH(name)) in each product category.
10. **Find average sales per price tier**  
    Use a CASE statement to classify price into tiers (e.g., Low, Medium, High) and then compute average sales\_volume per tier.
11. **Sales contribution by section**  
    Show the percentage contribution of each section to the total sales volume.
12. **Brand-section combinations with fewer than 2 products**  
    Find all brand + section combinations that appear less than twice in the dataset.
13. **Duplicate SKU check with different names**  
    Detect if any SKUs are reused with different product names.
14. **URL classification by domain**  
    Extract domain names from url and count how many products are from each domain.
15. **Compare aisle vs end-cap sales**  
    Compare total and average sales\_volume between products located in 'Aisle' and 'End-cap'.
16. **Most descriptive product per brand**  
    For each brand, find the product with the longest description (by character count).
17. **Find inactive categories**  
    Return categories where no product is currently marked under promotion (promotion = 'No' for all).
18. **Dynamic pricing check**  
    Find if any products with the same name have more than one price (implying dynamic pricing).
19. **Find highest revenue section**  
    Aggregate revenue (price \* sales\_volume) per section and return the top 1.
20. **Build a mini product catalog JSON**  
    Generate a JSON-like string output for each section showing product name, price, and brand.