

# SQL Ques

## Schema: **Sales** Table

| Column Name        | Data Type     | Description                              |
|--------------------|---------------|--|
| <b>sale_id</b>     | INT (PK)      | Unique identifier for each sale          |
| <b>customer_id</b> | INT           | ID of the customer who made the purchase |
| <b>product_id</b>  | INT           | ID of the product sold                   |
| <b>quantity</b>    | INT           | Number of units sold                     |
| <b>price</b>       | DECIMAL(10,2) | Price per unit                           |
| <b>sale_date</b>   | DATE          | Date of sale                             |

## Schema: **Products** Table

| Column Name       | Data Type   | Description                       |
|-------------------|-------------|-----------------------------------|
| <b>product_id</b> | INT (PK)    | Unique identifier for the product |
| <b>category</b>   | VARCHAR(50) | Category of the product           |
| <b>brand</b>      | VARCHAR(50) | Brand name of the product         |

## Practice Questions:

1. Retrieve the total sales amount (price × quantity) for each customer who has made purchases, but only include customers who have spent more than **\$5000** in total.
2. Find the total number of products sold per **product category** but only for products where the total quantity sold is greater than **100 units**.
3. List the number of sales transactions made each **month in 2023**, sorted in descending order by the number of transactions.
4. Get the average price per unit for each product category, but only for categories that have at least **5 different products**.

5. Retrieve the top **3 customers** who have spent the most money in **each product category**.
6. Find all customers who have purchased more than **one unique product** in the same day.
7. Get the total revenue generated from each **brand**, but only include brands where the highest-priced product in that brand is greater than **\$1000**.
8. Find all customers who have purchased **at least one product from every category**.
9. For each **customer and each month**, calculate their total spending. Then, retrieve only those customers who have spent **at least 20% more** in any month compared to their average monthly spending.
10. Find the **customer(s) who made the highest total purchase in a single day**.
11. Retrieve the **best-selling product per category**, defined as the product with the highest total quantity sold.
12. List all customers whose **total spending is in the top 10%** of all customers' spending.