Customers:

| customer\_id | name | email | join\_date |

|-------------|-----------|----------------------------|------------|

| 1 | John Doe | john.doe@example.com | 2023-01-15 |

| 2 | Jane Smith| jane.smith@example.com | 2023-02-20 |

| 3 | Alice Lee | alice.lee@example.com | 2023-03-10 |

| 4 | Bob Brown | bob.brown@example.com | 2023-04-05 |

Orders:

| order\_id | customer\_id | order\_date | total\_amount |

|----------|-------------|------------|--------------|

| 101 | 1 | 2023-01-20 | 150.00 |

| 102 | 2 | 2023-02-25 | 75.50 |

| 103 | 3 | 2023-03-12 | 200.25 |

| 104 | 1 | 2023-04-08 | 180.75 |

Order\_Items:

| order\_item\_id | order\_id | product\_id | quantity | unit\_price |

|---------------|----------|------------|----------|------------|

| 1 | 101 | 1 | 2 | 50.00 |

| 2 | 101 | 3 | 1 | 25.00 |

| 3 | 102 | 2 | 1 | 30.00 |

| 4 | 103 | 1 | 3 | 50.00 |

| 5 | 103 | 4 | 2 | 20.00 |

| 6 | 104 | 2 | 2 | 30.00 |

| 7 | 104 | 3 | 1 | 25.00 |

Products:

| product\_id | name | category | price |

|------------|-------------------|----------|-------|

| 1 | Laptop | Electronics | 500.00 |

| 2 | Smartphone | Electronics | 300.00 |

| 3 | Headphones | Electronics | 100.00 |

| 4 | T-shirt | Fashion | 25.00 |

| 5 | Book | Books | 10.00 |

Reviews:

| review\_id | product\_id | customer\_id | rating | review\_text |

|-----------|------------|-------------|--------|---------------------|

| 1 | 1 | 1 | 5 | Great product! |

| 2 | 2 | 2 | 4 | Good smartphone. |

| 3 | 3 | 3 | 3 | Decent headphones. |

| 4 | 4 | 1 | 5 | Love the t-shirt! |

| 5 | 1 | 3 | 4 | Fast laptop. |

| 6 | 2 | 1 | 3 | Average phone. |

Tasks:

Level 1

* Write a SQL query to find the total revenue generated by the company in the last quarter, broken down by month.
* Determine the top 5 best-selling products by revenue, considering only orders placed by customers who have joined before April 1, 2023.
  + Productid, productname, category, revenue
* Identify the customers who have placed orders in at least 3 different categories, and list the total number of categories they've ordered from.
* Calculate the average rating of each product based on customer reviews, considering only products that have at least 5 reviews.
* Find the customer who has spent the most amount of money on orders, excluding orders with a total amount less than $100.

Level 2

* Customer Retention Analysis:
  + Write a query to calculate the percentage of customers who made repeat purchases (i.e., placed more than one order) within 90 days of their first purchase, considering only customers who joined before april 1, 2023.
* Monthly Product Sales Growth:
  + Develop a query to calculate the month-over-month percentage growth in total revenue for each product category from January 2023 to March 2023.
* Average Order Value Analysis:
  + Create a query to find the average order value (AOV) for each month in the last quarter, considering only orders with a total amount greater than $100.
* Product Review Sentiment Analysis:
  + Write a query to categorize products based on their average review rating as follows: "Highly Rated" for products with an average rating of 4 or above, "Moderately Rated" for products with an average rating between 3 and 4, and "Low Rated" for products with an average rating below 3.
* Customer Loyalty Analysis:
  + Develop a query to identify the top 10% of customers who contributed the highest total revenue to the company during the last quarter, excluding customers who joined within the last month of the quarter.