

Example SQL Scope

Background

An online retail company wants to analyze its sales data using the database tables customers, orders, order_items, and products. Each table contains relevant information:

- **customers**: Information about the customers.
- **orders**: Information about the orders.
- **order_items**: Information about the items in the orders.
- **products**: Information about the products.

Tables

customers

- customer_id (Primary Key)
- name
- email
- country

orders

- order_id (Primary Key)
- customer_id (Foreign Key)
- order_date
- total_amount

order_items

- order_item_id (Primary Key)
- order_id (Foreign Key)
- product_id (Foreign Key)
- quantity
- Price

products

- product_id (Primary Key)
- name
- category
- price

1. Order Value by Country:

Calculate the total order value for each country. List the country and the total order value in descending order.

1. Order Value by Country:

sql

```
SELECT
    c.country,
    SUM(o.total_amount) AS total_order_value
FROM
    customers c
JOIN
    orders o ON c.customer_id = o.customer_id
GROUP BY
    c.country
ORDER BY
    total_order_value DESC;
```

2. Average Number of Products per Order:

Determine the average number of products contained in an order. Note that an order can contain multiple products.

2. Average Number of Products per Order:

sql

```
SELECT
    AVG(item_count) AS avg_items_per_order
FROM (
    SELECT
        oi.order_id,
        COUNT(oi.product_id) AS item_count
    FROM
        order_items oi
    GROUP BY
        oi.order_id
) subquery;
```

3. Most Popular Product Category:

Identify the product category that is ordered the most frequently. Show the category and the number of orders.

3. Most Popular Product Category:

sql

```
SELECT
    p.category,
    COUNT(oi.order_item_id) AS order_count
FROM
    order_items oi
JOIN
    products p ON oi.product_id = p.product_id
GROUP BY
    p.category
ORDER BY
    order_count DESC
LIMIT 1;
```