**TASK 2: DATA ANALYSIS WITH COMPLEX QUERIES**

1.Trend: Customer Spending Rank (Window Function)

**Query**: Rank customers by their total order amount.

SELECT

c.first\_name,

c.last\_name,

SUM(o.amount) AS total\_spent,

RANK() OVER (ORDER BY SUM(o.amount) DESC) AS spending\_rank

FROM Customers c

JOIN Orders o ON c.customer\_id = o.customer\_id

GROUP BY c.customer\_id;

**OUTPUT:**

| first\_name | last\_name | total\_spent | spending\_rank |
| --- | --- | --- | --- |
| David | Robinson | 12000 | 1 |
| John | Reinhardt | 700 | 2 |
| John | Doe | 400 | 3 |
| Robert | Luna | 250 | 4 |

2. Subquery: Most Popular Ordered Item

**Query:** Find the item that appears in the highest number of orders.

SELECT item

FROM Orders

GROUP BY item

ORDER BY COUNT(\*) DESC

LIMIT 1;

**OUTPUT:**

| item |
| --- |
| Keyboard |

3. CTE: Avg Shipping Status per Country

**Query:** Use CTE to get shipping count per country and analyze pending vs delivered ratio.

WITH CountryShipping AS (

SELECT

c.country,

s.status,

COUNT(\*) AS status\_count

FROM Shippings s

JOIN Customers c ON s.customer = c.customer\_id

GROUP BY c.country, s.status

)

SELECT

country,

MAX(CASE WHEN status = 'Pending' THEN status\_count ELSE 0 END) AS pending\_count,

MAX(CASE WHEN status = 'Delivered' THEN status\_count ELSE 0 END) AS delivered\_count

FROM CountryShipping

GROUP BY country;

**OUTPUT:**

| country | pending\_count | delivered\_count |
| --- | --- | --- |
| UAE | 1 | 0 |
| UK | 1 | 1 |
| USA | 1 | 1 |