**Advanced SQL Exercises for Online Retail Store**

**Exercise 1: Ranking and Window Functions**

Goal: Use ROW\_NUMBER(), RANK(), DENSE\_RANK(), OVER(), and PARTITION BY.

Scenario:

Find the top 3 most expensive products in each category using different ranking functions.

Steps:

1. Use ROW\_NUMBER() to assign a unique rank within each category.

2. Use RANK() and DENSE\_RANK() to compare how ties are handled.

3. Use PARTITION BY Category and ORDER BY Price DESC.

***SQL QUERY:***

USING ROW\_NUMBER()

SELECT

ProductID,

ProductName,

Category,

Price,

ROW\_NUMBER() OVER (PARTITION BY Category ORDER BY Price DESC) AS rn

FROM Products

To get top 3 most expensive products per category

SELECT \*

FROM (

SELECT

ProductID,

ProductName,

Category,

Price,

ROW\_NUMBER() OVER (PARTITION BY Category ORDER BY Price DESC) AS rn

FROM Products

) ranked

WHERE rn <= 3

USING RANK()

SELECT

ProductID,

ProductName,

Category,

Price,

RANK() OVER (PARTITION BY Category ORDER BY Price DESC) AS rnk

FROM Products

USING DENSE RANK()

SELECT

ProductID,

ProductName,

Category,

Price,

DENSE\_RANK() OVER (PARTITION BY Category ORDER BY Price DESC) AS drnk

FROM Products

OUTPUT:

