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Week 2  
**Exercise 1: Ranking and Window Functions**First I added some additional sample data to demonstrate ranking in a better way.  
  
INSERT INTO Products (ProductID, ProductName, Category, Price) VALUES

(5, 'Gaming Mouse', 'Accessories', 150.00),

(6, 'Wireless Keyboard', 'Accessories', 200.00),

(7, 'Monitor', 'Electronics', 800.00),

(8, 'Webcam', 'Accessories', 100.00),

(9, 'Smart Watch', 'Electronics', 400.00),

(10, 'USB Cable', 'Accessories', 25.00);  
  
  
1. Use ROW\_NUMBER() to assign a unique rank within each category.  
**Query:**  
  
USE week2;

GO

SELECT

ProductID,

ProductName,

Category,

Price,

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

FROM Products

ORDER BY Category, Price DESC;  
  
**Output:**  
A table with text on it

AI-generated content may be incorrect.  
  
  
2. Use RANK() and DENSE\_RANK() to compare how ties are handled.  
  
**Query:**

SELECT

ProductID,

ProductName,

Category,

Price,

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

FROM Products

ORDER BY Category, Price DESC;

SELECT

ProductID,

ProductName,

Category,

Price,

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

FROM Products

ORDER BY Category, Price DESC;  
  
**Output:**  
A table with text on it

AI-generated content may be incorrect.  
  
  
3. Use PARTITION BY Category and ORDER BY Price DESC.  
 **Query:**

SELECT

ProductID,

ProductName,

Category,

Price,

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

RANK() OVER (PARTITION BY Category ORDER BY Price DESC) AS RankNum,

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

FROM Products

ORDER BY Category, Price DESC, ProductID;  
  
**Output:**  
A table with numbers and text

AI-generated content may be incorrect.