**Exercise 1: Ranking and Window Functions**

-- Create and use a new database for employee analytics

CREATE DATABASE EmployeeAnalyticsDB;

GO

USE EmployeeAnalyticsDB;

GO

-- Create a table for staff performance

CREATE TABLE StaffPerformance (

StaffID INT PRIMARY KEY,

StaffName VARCHAR(100),

Department VARCHAR(50),

PerformanceScore INT

);

GO

-- Insert 15 sample records

INSERT INTO StaffPerformance (StaffID, StaffName, Department, PerformanceScore) VALUES

(1, 'Ravi Teja', 'Research', 91),

(2, 'Sowmya Reddy', 'Research', 95),

(3, 'Venkatesh Goud', 'Research', 91),

(4, 'Bhavani Yadav', 'Development', 88),

(5, 'Karthik Raj', 'Development', 90),

(6, 'Mounika Allam', 'Development', 88),

(7, 'Anil Kumar', 'Support', 80),

(8, 'Padma Priya', 'Support', 82),

(9, 'Srinivas Rao', 'Support', 80),

(10, 'Deepthi Nanduri', 'Support', 78),

(11, 'Harsha Chintala', 'Finance', 87),

(12, 'Pavani Vemula', 'Finance', 89),

(13, 'Jagadeesh Bandi', 'Finance', 87),

(14, 'Lavanya Gurram', 'Finance', 85),

(15, 'Naveen Malladi', 'Finance', 83);

GO

-- Apply ranking and window functions

SELECT

StaffID,

StaffName,

Department,

PerformanceScore,

ROW\_NUMBER() OVER (PARTITION BY Department ORDER BY PerformanceScore DESC) AS RowNum,

RANK() OVER (PARTITION BY Department ORDER BY PerformanceScore DESC) AS ScoreRank,

DENSE\_RANK() OVER (PARTITION BY Department ORDER BY PerformanceScore DESC) AS DenseScoreRank,

NTILE(3) OVER (PARTITION BY Department ORDER BY PerformanceScore DESC) AS ScoreGroup

FROM StaffPerformance;

GO

