**Solution for Joins:**

1.

SELECT  
    e.FirstName || ' ' || e.LastName AS FullName,  
    d.DepartmentName,  
    COUNT(\*) OVER (PARTITION BY e.DepartmentID) AS TotalEmployeesInDepartment  
FROM Employees e  
JOIN Departments d ON e.DepartmentID = d.DepartmentID;

2.

SELECT  
    p.ProjectName,  
    e.FirstName || ' ' || e.LastName AS EmployeeName  
FROM EmployeeProjects ep  
JOIN Employees e ON ep.EmployeeID = e.EmployeeID  
JOIN Projects p ON ep.ProjectID = p.ProjectID;

3.

SELECT  
    d.DepartmentName,  
    COUNT(e.EmployeeID) AS NumberOfEmployees  
FROM Employees e  
JOIN Departments d ON e.DepartmentID = d.DepartmentID  
GROUP BY d.DepartmentName  
ORDER BY NumberOfEmployees DESC  
LIMIT 1;

4.

SELECT  
    d.DepartmentName  
FROM Departments d  
LEFT JOIN Employees e ON d.DepartmentID = e.DepartmentID  
WHERE e.EmployeeID IS NULL;