**exercise 1: Create a Stored Procedure**

Goal: Create a stored procedure to retrieve employee details by department.

Steps:

1. Define the stored procedure with a parameter for DepartmentID.

2. Write the SQL query to select employee details based on the DepartmentID.

3. Create a stored procedure named `sp\_InsertEmployee` with the following code:

CREATE PROCEDURE sp\_InsertEmployee

@FirstName VARCHAR(50),

@LastName VARCHAR(50),

@DepartmentID INT,

@Salary DECIMAL(10,2),

@JoinDate DATE

AS

BEGIN

INSERT INTO Employees (FirstName, LastName, DepartmentID, Salary, JoinDate)

VALUES (@FirstName, @LastName, @DepartmentID, @Salary, @JoinDate);

END

Code:

IF OBJECT\_ID('sp\_InsertEmployee', 'P') IS NOT NULL

DROP PROCEDURE sp\_InsertEmployee;

GO

CREATE PROCEDURE sp\_InsertEmployee

@FirstName VARCHAR(50),

@LastName VARCHAR(50),

@DepartmentID INT,

@Salary DECIMAL(10,2),

@JoinDate DATE

AS

BEGIN

SET NOCOUNT ON;

INSERT INTO Employees (FirstName, LastName, DepartmentID, Salary, JoinDate)

VALUES (@FirstName, @LastName, @DepartmentID, @Salary, @JoinDate);

END;

GO

IF OBJECT\_ID('sp\_GetEmployeesByDepartment', 'P') IS NOT NULL

DROP PROCEDURE sp\_GetEmployeesByDepartment;

GO

CREATE PROCEDURE sp\_GetEmployeesByDepartment

@DepartmentID INT

AS

BEGIN

SET NOCOUNT ON;

SELECT

EmployeeID,

FirstName,

LastName,

DepartmentID,

Salary,

JoinDate

FROM

Employees

WHERE

DepartmentID = 2;

END;

GO

C# code:

using System;

using System.Data;

using System.Data.SqlClient;

namespace EmployeeByDepartmentApp

{

class Program

{

static void Main(string[] args)

{

string connectionString = @"Data Source=localhost;Initial Catalog=sp\_GetEmployeeCountByDepartment;Integrated Security=True";

Console.Write("Enter Department ID to view employees: ");

if (!int.TryParse(Console.ReadLine(), out int departmentId))

{

Console.WriteLine("Invalid input. Department ID must be a number.");

return;

}

try

{

using (SqlConnection conn = new SqlConnection(connectionString))

{

using (SqlCommand cmd = new SqlCommand("sp\_GetEmployeesByDepartment", conn))

{

cmd.CommandType = CommandType.StoredProcedure;

cmd.Parameters.AddWithValue("@DepartmentID", departmentId);

conn.Open();

SqlDataReader reader = cmd.ExecuteReader();

if (reader.HasRows)

{

Console.WriteLine("\nEmployee Details:");

Console.WriteLine(new string('-', 80));

// Print column headers

for (int i = 0; i < reader.FieldCount; i++)

{

Console.Write($"{reader.GetName(i),-20}");

}

Console.WriteLine("\n" + new string('-', 80));

// Print rows

while (reader.Read())

{

for (int i = 0; i < reader.FieldCount; i++)

{

Console.Write($"{reader[i],-20}");

}

Console.WriteLine();

}

}

else

{

Console.WriteLine("No employees found in this department.");

}

reader.Close();

}

}

}

catch (SqlException ex)

{

Console.WriteLine("SQL Error: " + ex.Message);

}

catch (Exception ex)

{

Console.WriteLine("Unexpected Error: " + ex.Message);

}

Console.WriteLine("\nPress any key to exit...");

Console.ReadKey();

}

}

}

output

Enter Department ID to view employees: 2

Employee Details:

--------------------------------------------------------------------------------

EmployeeID FirstName LastName DepartmentID Salary JoinDate

--------------------------------------------------------------------------------

2 Jane Smith 2 6000.00 22-03-2019 12:00:00 AM

Press any key to exit...