Creating Programmatic SQL Database Objects

Lab 1 – Implementing Stored Procedures

Overview

In this lab, you need to create a set of stored procedures in the **AdventureWorksLT** database to support a new reporting application. The procedures will be created within a new Reports schema.

Before starting this lab, you should view **Module 1 – Creating Stored Procedures** in the course *Creating Programmatic SQL Database Objects*. Then, if you have not already done so, follow the instructions in the **Getting Started** document for this course to set up the lab environment.

If you find some of the challenges difficult, don't worry – you can find suggested solutions for all of the challenges in the **Lab Solution** folder for this module.

What You'll Need

To complete the labs, you will need the following:
- An Azure SQL Database instance with the AdventureWorksLT sample database. Review the Getting Started document for information about how to provision this.
- The lab files for this course

Setup

1. Using SQL Server Management Studio, connect to the AdventureWorksLT database.

2. Open Lab1Setup.sql from the Setup folder for this course and run the following Transact-SQL:
CREATE SCHEMA Reports;
GO

Challenge 1: Create Stored Procedures

In this exercise, you will create two stored procedures to support one of the new reports.

Review the Reports.GetProductColors Stored Procedure Specification

Review the following design requirements for your stored procedure:

Stored Procedure:	Reports.GetProductColors
Input Parameters:	None
Output Parameters:	None
Output Columns:	Color (from SalesLT.Product)
Notes:	Colors should not be returned more than once in the output. NULL values should not be returned.

Create the Reports.GetProductColors Stored Procedure

Design, implement, and execute the stored procedure in accordance with the design specifications.

Review the Reports.GetProductsAndModels Stored Procedure Specification

1. Review the following design requirements for your stored procedure:

Stored Procedure:	Reports.GetProductsAndModels
Input Parameters:	None
Output Parameters:	None
Output Columns:	ProductID, Name, ProductNumber, SellStartDate, SellEndDate and Color (from SalesLT.Product), ProductModelID (from SalesLT.ProductModel), Description (from SalesLT.ProductDescription).
Output Order:	ProductID, ProductModelID
Notes:	For descriptions, return the Description column from the SalesLT.ProductDescription table.

Create the Reports.GetProductsandModels Stored Procedure

1. Design, implement, and execute the stored procedure in accordance with the design specifications.

Challenge 2: Create Parameterized Stored Procedures

In this exercise, you will create a stored procedure to support one of the new reports.

Review the Reports.GetProductsByColor Stored Procedure specification

1. Review the following design requirements for your stored procedure:

Stored Procedure	Reports.GetProductsByColor
Input parameters	@Color (same data type as the Color column in the SalesLT.Product table)
Output parameters	None
Output columns	ProductID, Name, ListPrice (returned as a column named Price), Color, and Size (from SalesLT.Product)
Output order	Name
Notes	The procedure should return products that have no Color if the parameter is NULL.

Create the Reports.GetProductsByColor Stored Procedure

1. Design and create the Reports.GetProductsByColor stored procedure.
2. Execute the Reports.GetProductsByColor stored procedure with a color of 'Blue'.
3. Execute the Reports.GetProductsByColor stored procedure with a color of NULL.