

## Assessment 3

Program: Computer Programming	Course: Design Patterns for Enterprise Development
Code: PROG1322	Credit Value: 6
Type of Evaluation: Test 2	Percentage: 15.00 % (100 Pts)
Date: 20th October 2023(Week 7)	Time: 2 hours 30 minutes (Mid Term Exam)

### Test 2:

**Consider The Following Scenario And Complete Each Tasks Mentioned Below, Follow The Instructions And Submit Zip Folder.**

### Instructions:

1. Use appropriate tool to implementation.
2. Run the all tasks and save the .sql files and take a screenshot as well.
3. Rename the both files as task1.sql and also rename for the screenshots as task1.
4. Create a folder named “StudentID\_FirstName\_MidTermTest” (Eg. Prog1234\_Riddhi\_MidTermTest)
5. Add the files into folder: 1) all .sql 2) all screenshots of each task.
6. As a result, Total 10 files as .sql and 10 images for 10 tasks should be expecting in the created folder.
7. Convert the folder into Zip-folder.
8. Upload the Zip-folder with specific name, into Mid term Test 2(30%)-Week12

## **Demonstration of T-SQL concepts and usage with following scenario.**

### **Scenario: Inventory Management System**

You are responsible for managing an inventory database using T-SQL. The database table, named "Products," stores information about various products, including columns such as ProductID, ProductName, Category, and StockQuantity. Your goal is to perform various T-SQL operations on the "Products" table to demonstrate your proficiency in database management and manipulation.

#### **Tasks:**

**Task 1: Inserting New Products** Begin by populating the "Products" table with new product entries. Write T-SQL statements to insert the following products:

- ProductName: "Laptop" Category: "Electronics" StockQuantity: 50
- ProductName: "Running Shoes" Category: "Sportswear" StockQuantity: 120
- ProductName: "Coffee Maker" Category: "Kitchen Appliances" StockQuantity: 30
- ProductName: "Notebook" Category: "Stationery" StockQuantity: 200

**Task 2: Updating Product Categories** Proceed to update the category of the product "Coffee Maker" to "Appliances."

**Task 3: Adjusting Stock Quantity** As part of inventory management, adjust the stock quantity of the product "Running Shoes" by reducing it to 100.

**Task 4: Creating a Low Stock Alert View** To facilitate inventory monitoring, create a T-SQL view named "LowStockAlert" that displays products with a stock quantity less than 50. This view should show the ProductName, Category, and StockQuantity.

**Task 5: Deleting Products** Implement a process to remove products from the inventory. Write T-SQL statements to delete the product with the ProductName "Notebook."

**Task 6: Restocking Products** Simulate a restocking scenario by increasing the stock quantity of the "Laptop" product by 20 units.

**Task 7: Product Count by Category** Create a query to retrieve a list of unique product categories along with the count of products in each category.

**Task 8: Product Restock Recommendation** Write a query to identify products that are running low on stock (quantity less than 50) and suggest restocking quantities for each of them.

**Task 9: Category Stock Sum** Develop a query to calculate the total stock quantity for each product category.

**Task 10: Expired Products Handling** Suppose you have an "ExpirationDate" column for certain products. Write a query to identify products that have expired and need to be removed from the inventory.