**Lab 1: Understanding ORM with a Retail Inventory System**

**Scenario:**

You’re building an inventory management system for a retail store. The store wants to

track products, categories, and stock levels in a SQL Server database.

**Objective:**

Understand what ORM is and how EF Core helps bridge the gap between C# objects and

relational tables.

**Steps:**

1. **What is ORM?**

• Explain how ORM maps C# classes to database tables.

• Benefits: Productivity, maintainability, and abstraction from SQL.

2. **EF Core vs EF Framework:**

• EF Core is cross-platform, lightweight, and supports modern features like

LINQ, async queries, and compiled queries.

• EF Framework (EF6) is Windows-only and more mature but less flexible.

3. **EF Core 8.0 Features:**

• JSON column mapping.

• Improved performance with compiled models.

• Interceptors and better bulk operations.

4. **Create a .NET Console App:**

dotnet new console -n RetailInventory

cd RetailInventory

**5. Install EF Core Packages:**

dotnet add package Microsoft.EntityFrameworkCore.SqlServer

dotnet add package Microsoft.EntityFrameworkCore.Design

**Packages Installation:**

