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

1. **What is ORM?**

ORM stands for Object-Relational Mapping.

ORM maps in‑memory C# classes to relational database tables.

EF Core sits between C# code and SQL Server, and translate LINQ and object operations into SQL queries.

**Benefits:**

* Productivity: Write C# instead of SQL.
* Maintainability: Centralized model definitions.
* Abstraction: Focus on domain logic, not database plumbing.

**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.** Created a .NET Console App using the following code

dotnet new console -n RetailInventory

cd RetailInventory

**5. Install EF Core Packages:**

dotnet add package Microsoft.EntityFrameworkCore.SqlServer

dotnet add package Microsoft.EntityFrameworkCore.Design