**Week : 3 Handson.**

**Lab – 1**

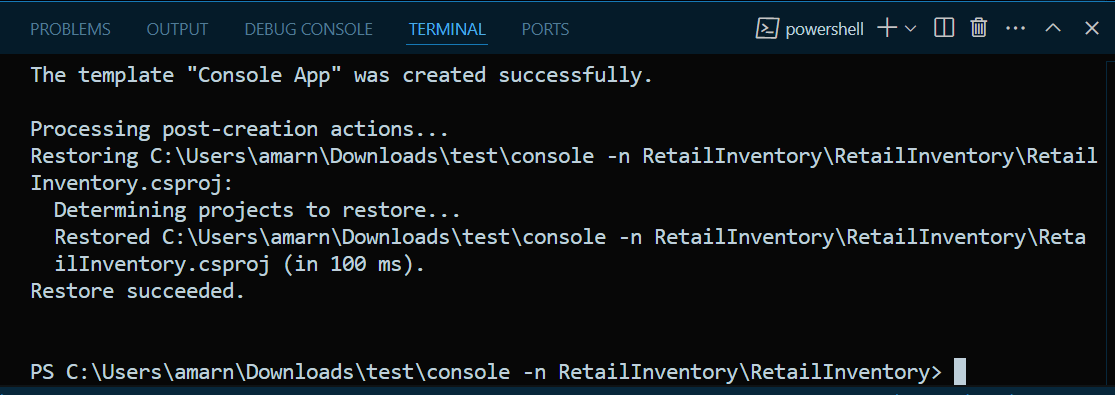
**Object-Relational Mapping (ORM)** is a technique that lets developers interact with a database using high-level programming constructs.

* **Class-to-Table Mapping**: C# classes represent database tables; properties map to table columns.

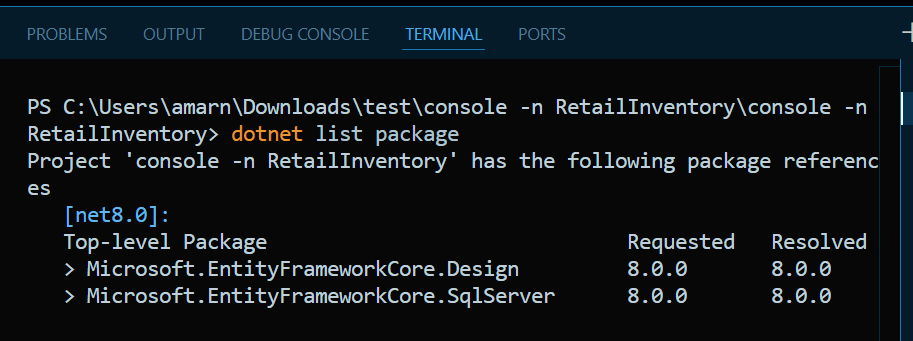
**EF Core vs EF Framework :**

| **Feature** | **EF Core** | **EF Framework (EF6)** |
| --- | --- | --- |
| Platform | Cross-platform (Windows, Linux, macOS) | Windows-only |
| Weight | Lightweight | More mature, less flexible |
| Modern Features | LINQ, async queries, compiled queries | Limited support |
| Flexibility | Better for modern app development | Legacy compatibility |

**Creating a .NET Console App:**



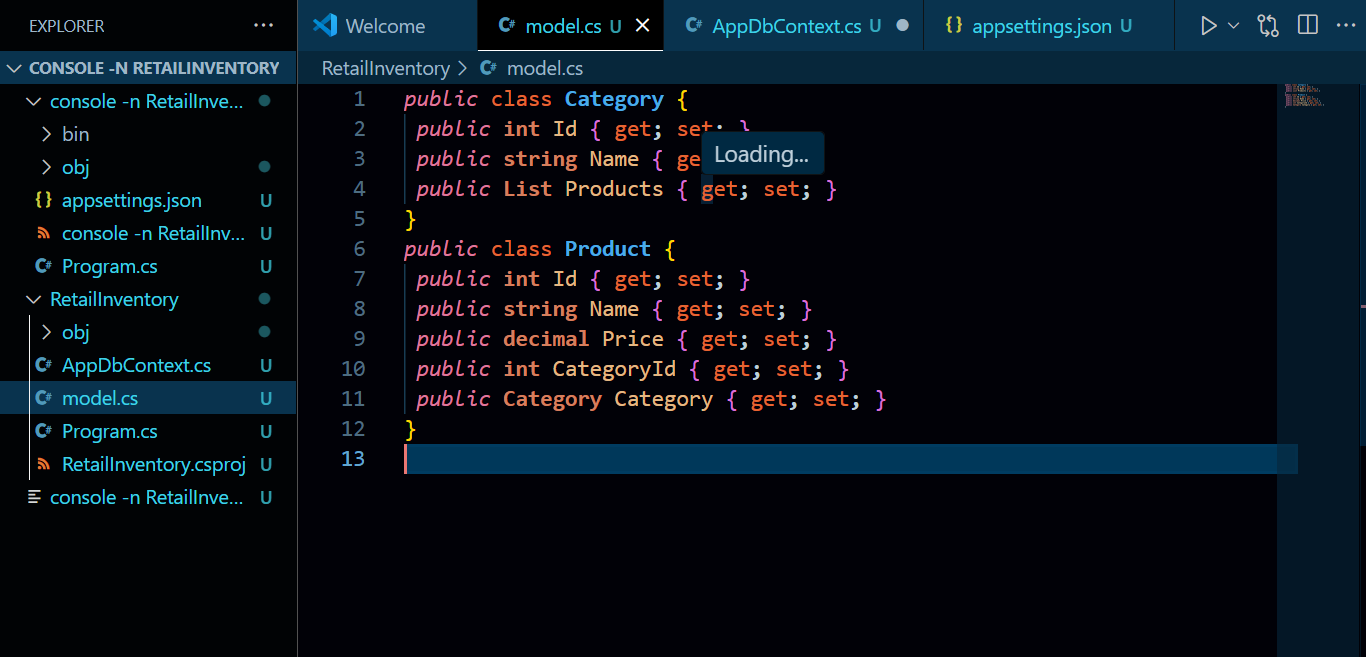
**Installing EF Core Packages :**

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**Lab 2: Setting Up the Database Context for a Retail Store.**

**Steps:**

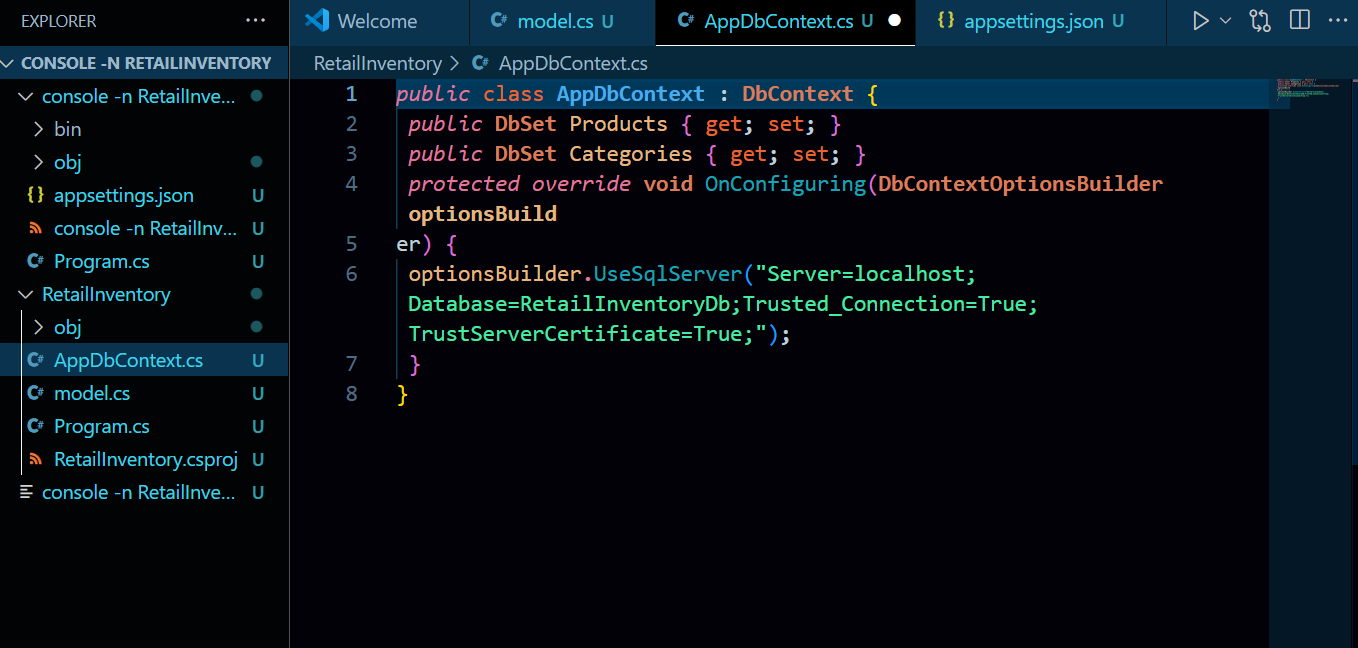
1. **Creating Models:**

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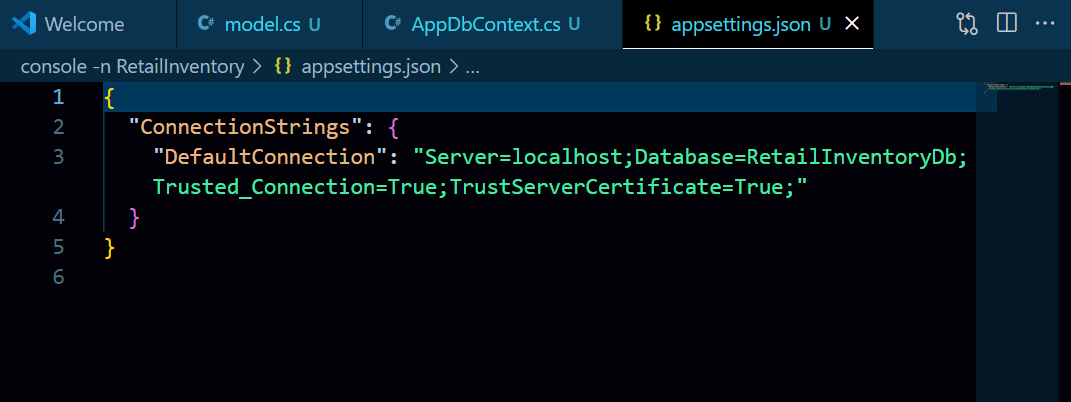
The models have been created successfully.

**2.Create AppDbContext:**

The app dbcontext has been created

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1. **Addding Connection String in appsettings.json :**

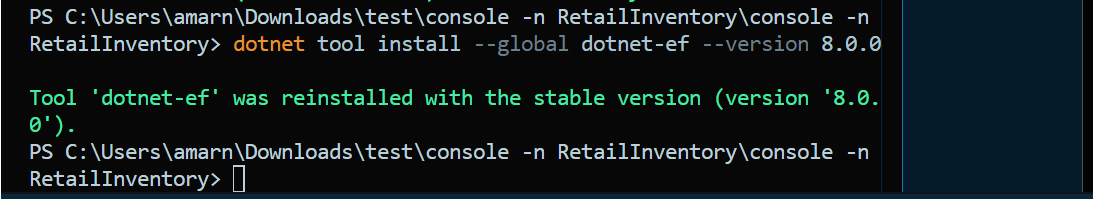
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**Lab 3: Using EF Core CLI to Create and Apply**

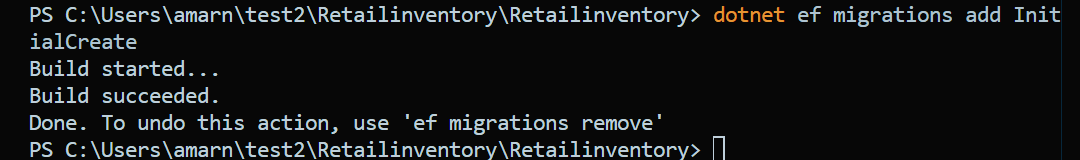
**Migrations.**

**Steps:**

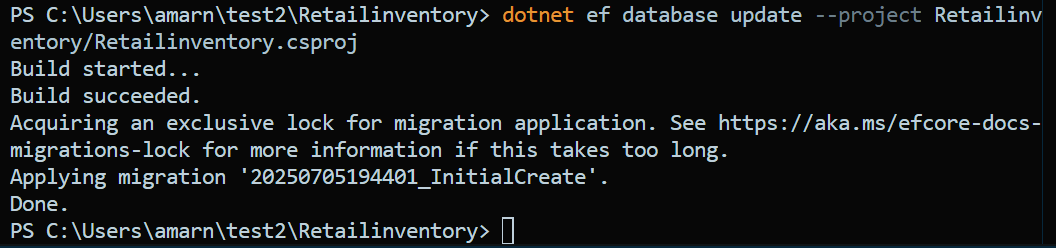
1. **Installing EF Core CLI.**

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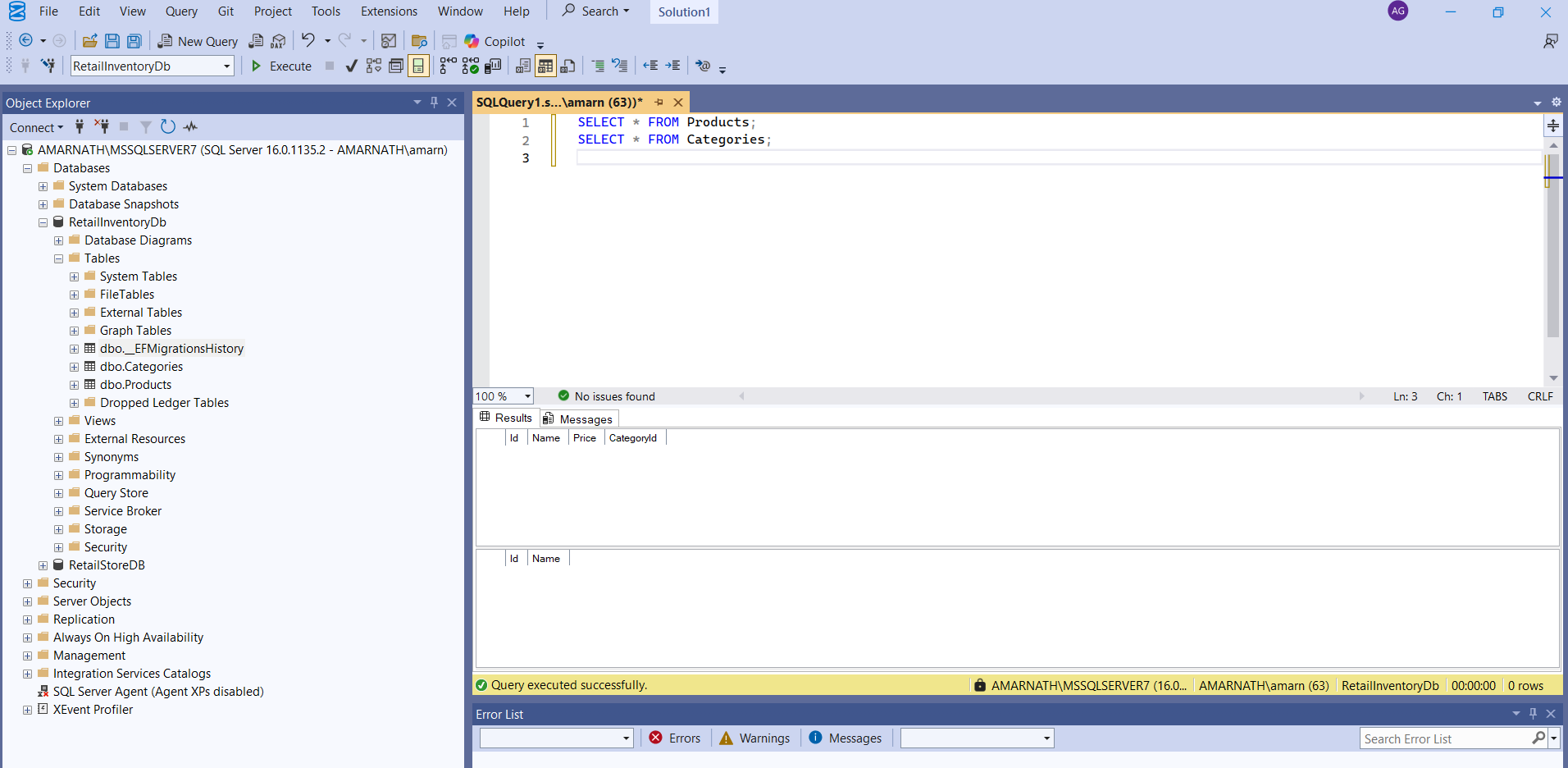
1. **Create Initial Migration:**

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**3.Applying Migration to Create Database:**

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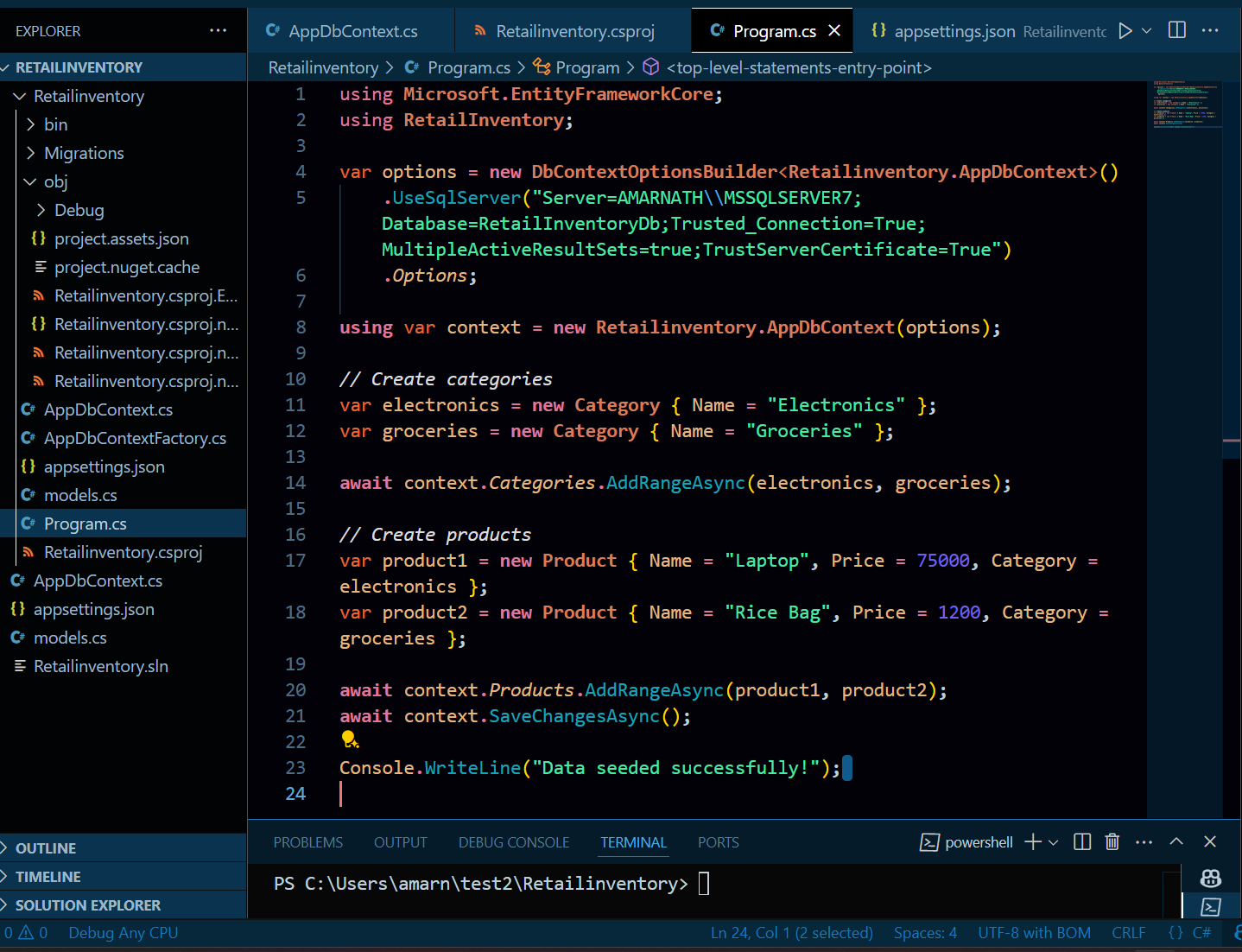
1. **Verifying in SQL Server:**

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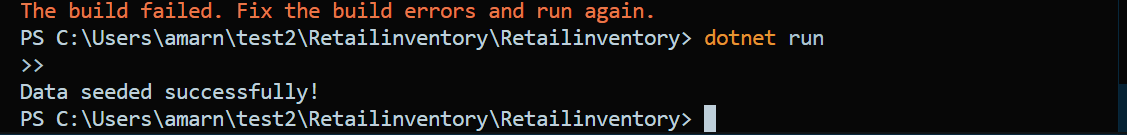
**Lab 4: Inserting Initial Data into the Database**

**Steps:**

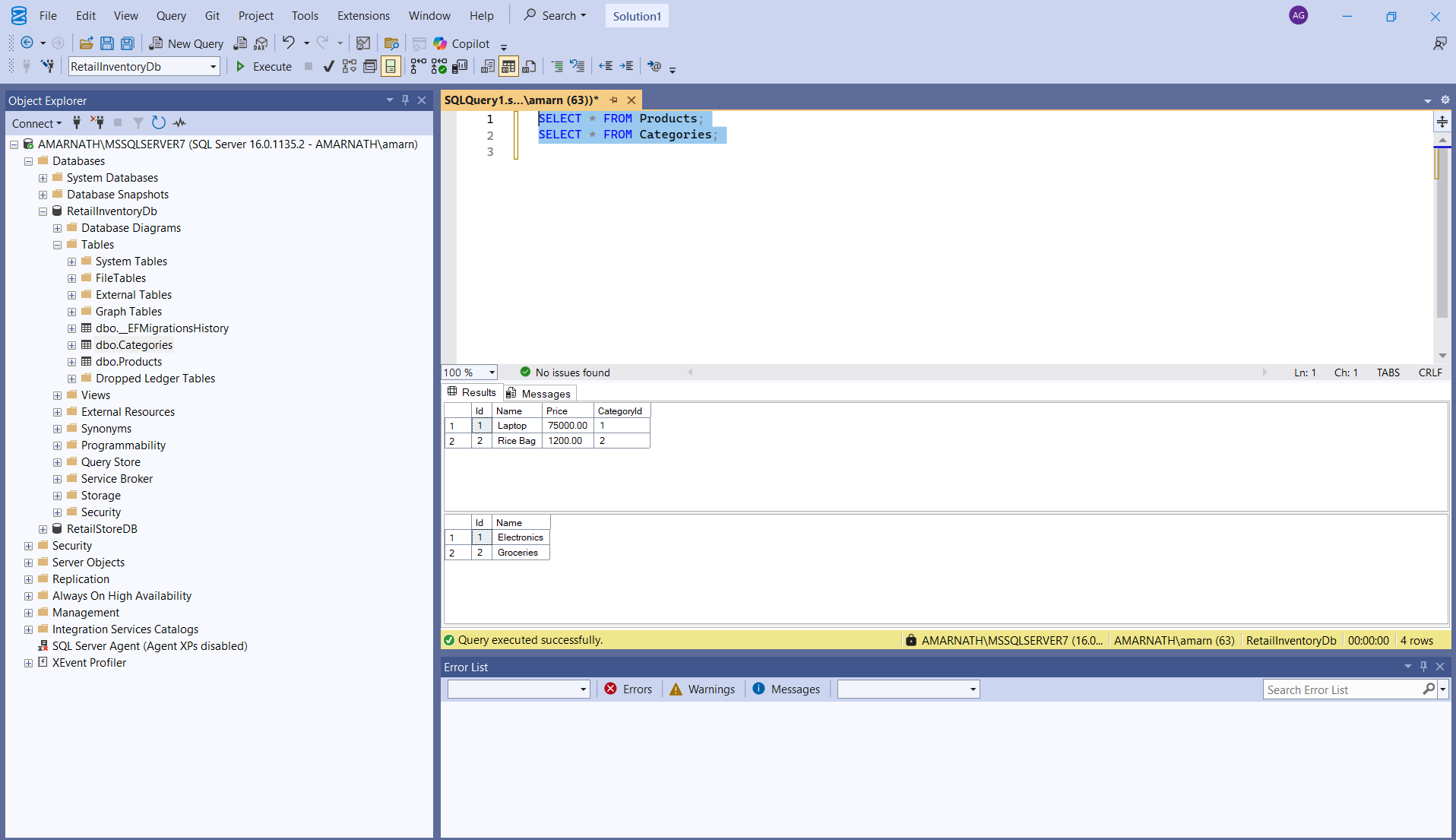
**1.Inserting Data in Program.cs :**

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**2.Run the App: dotnet run**

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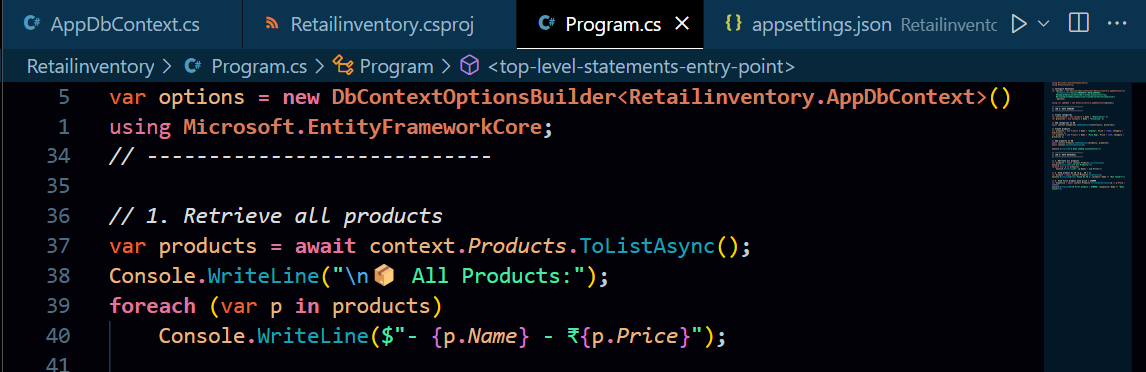
**3.Verifying in SQL Server: Check that the data is inserted correctly.**

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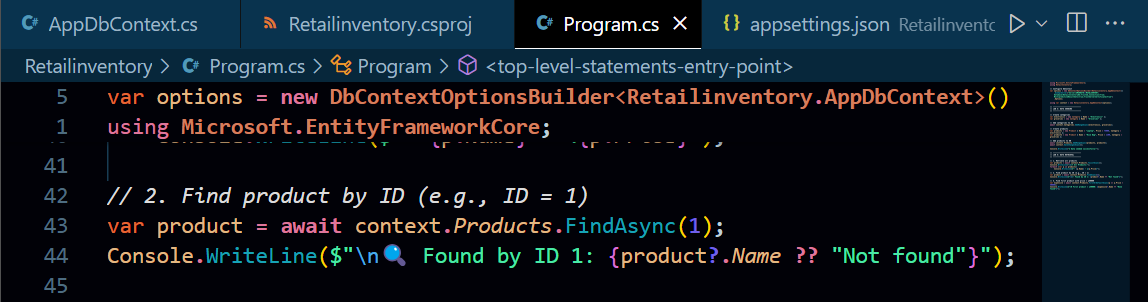
**Lab 5: Retrieving Data from the Database.**

**Steps:**

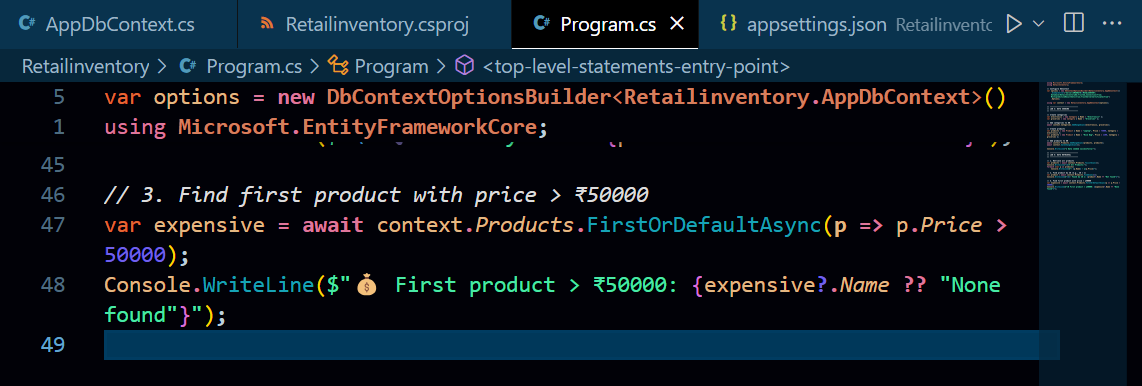
1. **Retrieve All Products:**

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1. **Find by ID:**

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1. **FirstOrDefault with Condition:**

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