

## lab 2: Setting Up the Database Context for a Retail Store

### Code:

```
using Microsoft.EntityFrameworkCore;
using Microsoft.Extensions.Configuration;
using System.IO;

namespace lab2
{
    public class AppDbContext : DbContext
    {
        public DbSet<Product> Products { get; set; }
        public DbSet<Category> Categories { get; set; }

        protected override void OnConfiguring(DbContextOptionsBuilder optionsBuilder)
        {
            // Load connection string from appsettings.json
            var config = new ConfigurationBuilder()
                .SetBasePath(Directory.GetCurrentDirectory())
                .AddJsonFile("appsettings.json", optional: false, reloadOnChange: true)
                .Build();

            var connectionString = config.GetConnectionString("DefaultConnection");

            optionsBuilder.UseSqlServer(connectionString);
        }
    }
}

namespace lab2
```

```

{
    public class Product
    {
        public int Id { get; set; }

        public string Name { get; set; }

        public decimal Price { get; set; }


        public int CategoryId { get; set; }

        public Category Category { get; set; }
    }
}

using lab2;

using System;

using System.Linq;


namespace lab2
{
    class Program
    {
        static void Main(string[] args)
        {
            using (var context = new AppDbContext())
            {
                if (!context.Categories.Any())
                {
                    var cat1 = new Category { Name = "Electronics" };

                    var cat2 = new Category { Name = "Groceries" };
                }
            }
        }
    }
}

```

```

context.Categories.AddRange(cat1, cat2);

context.Products.AddRange(
    new Product { Name = "Laptop", Price = 999.99m, Category = cat1 },
    new Product { Name = "Rice", Price = 40.50m, Category = cat2 }
);

context.SaveChanges();
}

var products = context.Products
    .Select(p => new { p.Name, p.Price, Category = p.Category.Name })
    .ToList();

foreach (var p in products)
{
    Console.WriteLine($"{p.Name} - {p.Category} - Rs.{p.Price}");
}
}

}

{
    "ConnectionStrings": {
        "DefaultConnection":
        "Server=(localdb)\MSSQLLocalDB;Database=RetailStoreDb;Trusted_Connection=True
        ;"
    }
}

using lab2;

```

```
using System.Collections.Generic;
```

```
namespace lab2
```

```
{
```

```
    public class Category
```

```
    {
```

```
        public int Id { get; set; }
```

```
        public string Name { get; set; }
```

```
        public List<Product> Products { get; set; }
```

```
    }
```

```
}
```

```
<Project Sdk="Microsoft.NET.Sdk">
```

```
    <PropertyGroup>
```

```
        <OutputType>Exe</OutputType>
```

```
        <TargetFramework>net8.0</TargetFramework>
```

```
        <ImplicitUsings>enable</ImplicitUsings>
```

```
        <Nullable>enable</Nullable>
```

```
    </PropertyGroup>
```

```
    <ItemGroup>
```

```
        <PackageReference Include="Microsoft.EntityFrameworkCore" Version="9.0.6" />
```

```
        <PackageReference Include="Microsoft.EntityFrameworkCore.SqlServer"
Version="9.0.6" />
```

```
        <PackageReference Include="Microsoft.EntityFrameworkCore.Tools"
Version="9.0.6">
```

```
            <PrivateAssets>all</PrivateAssets>
```

```
<IncludeAssets>runtime; build; native; contentfiles; analyzers;
buildtransitive</IncludeAssets>

</PackageReference>

<PackageReference Include="Microsoft.Extensions.Configuration.Json"
Version="9.0.6" />

</ItemGroup>

<ItemGroup>

<None Update="appsettings.json">

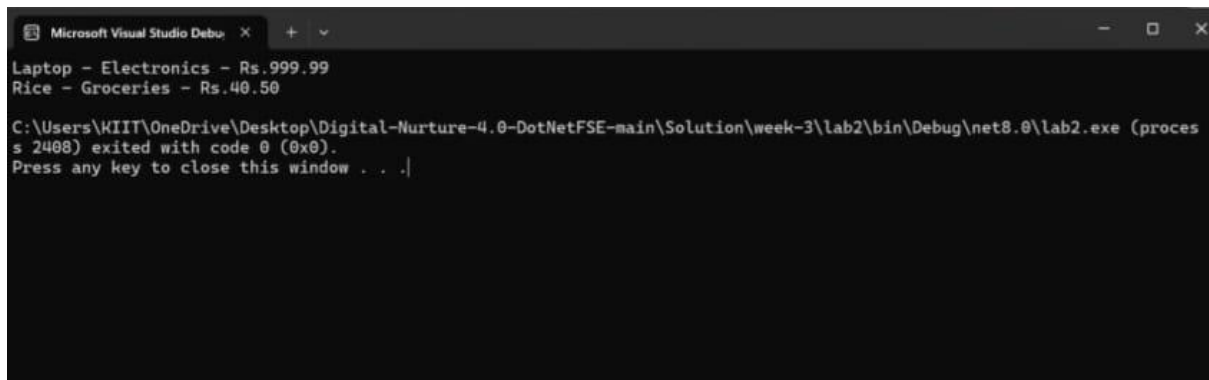
<CopyToOutputDirectory>PreserveNewest</CopyToOutputDirectory>

</None>

</ItemGroup>

</Project>
```

### Output:

A screenshot of a Visual Studio Debug Console window. The window title is "Microsoft Visual Studio Debug Console". The output text is as follows:

```
Laptop - Electronics - Rs.999.99
Rice - Groceries - Rs.40.50

C:\Users\HIIT\OneDrive\Desktop\Digital-Nurture-4.0-DotNetFSE-main\Solution\week-3\lab2\bin\Debug\net8.0\lab2.exe (process 2408) exited with code 0 (0x0).
Press any key to close this window . . .|
```

