

Product Listing Web Application

Introduction:

I have developed Product Listing Web Application in Visual Studio 2022 with the project template “ASP.NET Core Web App MVC” created using .NET CLI.

Technology and Tools used:

- Visual Studio 2022
- .Net 7
- C# and ASP.Net CoreMVC
- NUnit testing framework
- Javascript
- Bootstrap

Design Pattern:

I have used **Dependency Injection** as my design pattern with **Singleton** lifetime

About the Application

Solution:

The solution is named as “Homework” contains two projects

1. Homework.Web
2. Homework.Web.Tests

Projects Structure:

1. **Homework.Web**, is ASP.Net core Web Application with MVC. This projects contains:
 - Controllers contains HomeController.cs
 - Models contains Products.cs and ErrorViewModel.cs
 - Views contains Home folder that contains Index.cshtml
 - Services contains IProductService.cs and ProductsService.cs
 - wwwroot contains the Javascript logic.

General Specifications:

The **Homework.Web** project will show all the products fetched from the <https://dummyjson.com/products> RestAPI with following features:

- Each Product is shown as a card containing title, brand and price.
- The Products that have discount percentage greater than or equal to 10%.
- Trending Product which has the highest rating.
- Search functionality for searching the products based on title.
- The application layout is compatible with desktop and mobile mode.

Technical Specifications:

- **IProductService.cs** is the interface for the class **ProductsService.cs**. ProductService class handles the http request to get the products from the api using constructor injection.
- The Service is registered as Singleton in **Program.cs**.
- HomeController uses the **IproductService** to get the products from the API

- Index.cshtml, displays the data received from the controller.
- site.js file contains the Javascript logic for Search functionality.

2. Homework. Web.Tests contains the unit tests for three possible scenarios:

- **Success** scenario, when application receives product data with the successful API request
- **Failure** scenario, when application receives product data with unsuccessful API request
- **Empty** scenario, when application receives empty data with successful API request

Screens

1. Desktop

Products		
Trending Product: cereals muesli fruit nuts		Search
<div>iPhone 9</div> <div>Apple</div> <div>549€</div>	<div>iPhone X</div> <div>Apple</div> <div>899€</div>	<div>Samsung Universe 9</div> <div>Samsung</div> <div>1249€</div>
<div>OPPO F19</div> <div>OPPO</div> <div>280€</div>	<div>Huawei P30</div> <div>Huawei</div> <div>499€</div>	<div>MacBook Pro</div> <div>Apple</div> <div>1749€</div>
<div>Microsoft Surface Laptop 4</div> <div>Microsoft Surface</div> <div>1499€</div>	<div>Infinix INBOOK</div> <div>Infinix</div> <div>1099€</div>	<div>Brown Perfume</div> <div>Royal_Mirage</div> <div>40€</div>
<div>Non-Alcoholic Concentrated Perfume Oil</div> <div>Al Munakh</div> <div>120€</div>	<div>Eau De Perfume Spray</div> <div>Lord - Al-Rehab</div> <div>30€</div>	<div>Hyaluronic Acid Serum</div> <div>L'Oreal Paris</div> <div>19€</div>
<div>Oil Free Moisturizer 100ml</div> <div>Dermive</div> <div>40€</div>	<div>Skin Beauty Serum.</div> <div>ROREC White Rice</div> <div>46€</div>	<div>Freckle Treatment Cream- 15gm</div> <div>Fair & Clear</div> <div>70€</div>
<div>Elbow Macaroni - 400 gm</div> <div>Bake Parlor Big</div> <div>14€</div>	<div>cereals muesli fruit nuts</div> <div>fauji</div> <div>46€</div>	<div>Gulab Powder 50 Gram</div> <div>Dry Rose</div> <div>70€</div>
<div>Plant Hanger For Home</div> <div>Boho Decor</div> <div>41€</div>	<div>Flying Wooden Bird</div> <div>Flying Wooden</div> <div>51€</div>	<div>3D Embellishment Art Lamp</div> <div>LED Lights</div> <div>20€</div>
<div>Handcraft Chinese style</div> <div>luxury palace</div> <div>60€</div>		

Search:

Products		
Trending Product: cereals muesli fruit nuts		ipho
<div>iPhone 9</div> <div>Apple</div> <div>549€</div>	<div>iPhone X</div> <div>Apple</div> <div>899€</div>	

2. Mobile

Products

Trending

Product: cereals
muesli fruit nuts

Search

iPhone 9

Apple549€

iPhone X

Apple899€

Samsung Universe 9

Samsung1249€

OPPOF19

OPPO280€

Huawei P30

Huawei499€

MacBook Pro

Apple1749€

Search:

Products

Trending

Product: cereals
muesli fruit nuts

sam

X

Samsung Universe 9

Samsung1249€