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.

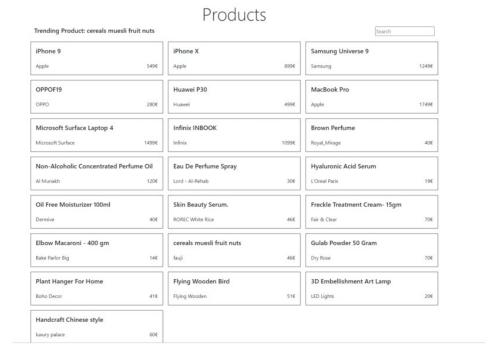
Technical Specifications:

- **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

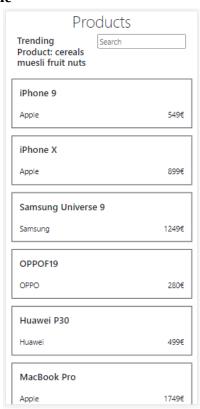
1. Desktop



Search:

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

2. Mobile



Search:

