**Exercise 3. E-commerce Platform Search Function**

using System;

using System.Collections.Generic;

public class Product

{

    public int Id;

    public string Name;

    public string Category;

    public double Price;

    public void Display()

    {

        Console.WriteLine($"ID: {Id} | {Name} | {Category} | ₹{Price}");

    }

}

public class Program

{

    static List<Product> products = new List<Product>();

    public static void Main(string[] args)

    {

        SeedProducts();

        bool exit = false;

        while (!exit)

        {

            Console.WriteLine("\n --------- E-Commerce Search Menu -----------");

            Console.WriteLine("1. View All Products");

            Console.WriteLine("2. Search by Product Name");

            Console.WriteLine("3. Search by Category");

            Console.WriteLine("4. Search by Price Range");

            Console.WriteLine("5. Exit");

            Console.Write("Enter your choice (1-5): ");

            string choice = Console.ReadLine();

            switch (choice)

            {

                case "1":

                    ViewAllProducts();

                    break;

                case "2":

                    SearchByName();

                    break;

                case "3":

                    SearchByCategory();

                    break;

                case "4":

                    SearchByPriceRange();

                    break;

                case "5":

                    exit = true;

                    Console.WriteLine("Thank you");

                    break;

                default:

                    Console.WriteLine("Invalid choice. Please enter a number from 1 to 5.");

                    break;

            }

        }

    }

    static void SeedProducts()

    {

        products.Add(new Product { Id = 1, Name = "iPhone 15", Category = "Electronics", Price = 79999 });

        products.Add(new Product { Id = 2, Name = "T-Shirt", Category = "Clothing", Price = 999 });

        products.Add(new Product { Id = 3, Name = "Dell Laptop", Category = "Electronics", Price = 55000 });

        products.Add(new Product { Id = 4, Name = "Running Shoes", Category = "Footwear", Price = 2500 });

        products.Add(new Product { Id = 5, Name = "Mixer Grinder", Category = "Appliances", Price = 4500 });

    }

    static void ViewAllProducts()

    {

        Console.WriteLine("\n All Available Products:");

        foreach (var p in products)

        {

            p.Display();

        }

    }

    static void SearchByName()

    {

        Console.Write("\nEnter product name to search: ");

        string keyword = Console.ReadLine().ToLower();

        bool found = false;

        foreach (var p in products)

        {

            if (p.Name.ToLower().Contains(keyword))

            {

                p.Display();

                found = true;

            }

        }

        if (!found)

            Console.WriteLine("No products found with that name.");

    }

    static void SearchByCategory()

    {

        Console.Write("\nEnter category to search (e.g., Electronics): ");

        string category = Console.ReadLine().ToLower();

        bool found = false;

        foreach (var p in products)

        {

            if (p.Category.ToLower() == category)

            {

                p.Display();

                found = true;

            }

        }

        if (!found)

            Console.WriteLine("No products found in that category.");

    }

    static void SearchByPriceRange()

    {

        Console.Write("\n Enter minimum price: ");

        double min = Convert.ToDouble(Console.ReadLine());

        Console.Write(" Enter maximum price: ");

        double max = Convert.ToDouble(Console.ReadLine());

        bool found = false;

        foreach (var p in products)

        {

            if (p.Price >= min && p.Price <= max)

            {

                p.Display();

                found = true;

            }

        }

        if (!found)

            Console.WriteLine("No products found in that price range.");

    }

}

