

Namespace: ShoppingCartApp

Enum: ProductCategory

An enumeration of the available product categories mentioned below:

Enum Values are:

`Clothing`: Clothing products

`Electronics`: Electronics products

`Home`: Home products

`Beauty`: Beauty products

`Groceries`: Grocery products

Class: Product

The base class for all products.

- Fields to include:

`name` (private string): The name of the product.

`price` (private double): The price of the product.

`category` (private ProductCategory): The category of the product.

- Properties

`Name` (string): Gets the name of the product.

`Price` (double): Gets the price of the product.

`Category` (ProductCategory): Gets the category of the product.

- Constructors

`Product(string name, double price, ProductCategory category)`:

Creates a new instance of the `Product` class with the specified name, price & category.

- Methods

`virtual void GetInfo()`: Gets the information about the product.

Class: ClothingProduct

A derived class of `Product` for clothing products.

- Fields to include:

`size` (private string): The size of the clothing product.

`color` (private string): The color of the clothing product.

- Properties to include:

`Size` (string, readonly): Gets the size of the clothing product.

`Color` (string, readonly): Gets the color of the clothing product.

- Constructors

`ClothingProduct(string name, double price, ProductCategory category, string size, string color):`

Creates a new instance of the `ClothingProduct` class with the specified name, price, category, size, and color.

- Methods

`override void GetInfo():` Gets the information about the clothing product.

Class: ElectronicsProduct

A derived class of `Product` for electronics products.

- Fields to include:

`brand` (private string): The brand of the electronics product.

`model` (private string): The model of the electronics product.

- Properties to include:

`Brand` (string, readonly): Gets the brand of the electronics product.

`Model` (string, readonly): Gets the model of the electronics product.

- Constructors

`ElectronicsProduct(string name, double price, ProductCategory category, string brand, string model):`

Creates a new instance of the `ElectronicsProduct` class with the specified name, price, category, brand, and model.

- Methods

`override void GetInfo():` Gets the information about the electronics product.

Class: ShoppingCart

A class that represents a shopping cart.

- Fields to include:

`products` (private Product[]): The products in the shopping cart.

`itemCount` (private int): The number of items in the shopping cart.

- Properties to include:

`Products` (Product[], readonly): Gets the array of products in the shopping cart.

`ItemCount` (int, readonly): Gets the number of items in the shopping cart.

- Constructors

`ShoppingCart(int capacity):` Creates a new instance of the `ShoppingCart` class with the specified capacity.

- Methods

`void AddProduct(Product product)`: Adds a product to the shopping cart.

`void RemoveProduct(Product product)`: Removes a product from the shopping cart.

Namespace: Program

Class: Program

The entry point for the console application.

- Methods

`static void Main(string[] args)`: The main method of the console application.