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Mã sinh viên: 19IT182

# **LinQ**

using System.Collections.Generic;

using System.Linq;

using static Programs;

class Programs

{

static void Main(string[] args)

{

var brands = new List<Brand>() {

new Brand{ID = 1, Name = "Cong ty AAA"},

new Brand{ID = 2, Name = "Cong ty BBB"},

new Brand{ID = 3, Name = "Cong ty CCC"},

};

var products = new List<Product>()

{

new Product(1, "Ban tra", 400, new string[] {"Xam", "Xanh"}, 2),

new Product(2, "Tranh treo", 400, new string[] {"Vang", "Xanh"}, 1),

new Product(3, "den trum", 500, new string[] {"Trang"}, 3),

new Product(4, "Ban hoc", 200, new string[] {"Trang", "Xanh"}, 1),

new Product(5, "Tui da", 300, new string[] {"do", "den", "Vang"}, 2),

new Product(6, "Giuong ngu", 500, new string[] {"Trang"}, 2),

new Product(7, "Tu ao", 600, new string[] {"Trang"}, 3),

};

/\*In san pham gia 500\*/

var ketqua = from product in products

where product.Price == 500

select product;

Console.WriteLine("San pham gia 500");

foreach (var product in ketqua)

{

Console.WriteLine(product.ToString());

}

/\*Danh Sach Ten San Pham\*/

var ketquaName = from product in products

select product.Name;

Console.WriteLine("Danh Sach Ten San Pham");

foreach (var name in ketquaName) Console.WriteLine(name);

/\*Danh Sach KQ Where\*/

var ketquaWhere = from product in products

where product.Price >= 400

where product.Name.StartsWith("Ban")

select product;

Console.WriteLine("Danh Sach San Pham Gia > 400 Ten Bat Dau la: Ban ");

foreach (var name in ketquaWhere) Console.WriteLine(name);

/\*Danh Sach KQ From\*/

var ketquaFrom = from product in products

from color in product.Colors

where product.Price < 500

where color == "Vang"

select product;

Console.WriteLine("Danh Sach San Pham Gia < 500 Mau Vang ");

foreach (var name in ketquaFrom) Console.WriteLine(name);

/\*Danh Sach KQ OderBy\*/

var ketquaOderBy = from product in products

where product.Price <= 300

orderby product.Price descending

select product;

Console.WriteLine("Danh Sach San Pham Gia <= 300 Sap xep theo Price ");

foreach (var product in ketquaOderBy) Console.WriteLine($"{product.Name} - {product.Price}");

/\*Danh Sach KQ Group By\*/

var ketquaGroup = from product in products

where product.Price >= 400 && product.Price <= 500

group product by product.Price;

Console.WriteLine("Danh Sach San Pham Gia >= 400 hoac <= 500 ");

foreach (var group in ketquaGroup)

{

// Key là giá trị dùng để phân loại (nhóm): là giá

Console.WriteLine(group.Key);

foreach (var product in group)

{

Console.WriteLine($" {product.Name} - {product.Price}");

}

}

/\*Danh Sach KQ Inner Join\*/

var ketquaInnerJoin = from product in products

join brand in brands on product.Brand equals brand.ID

select new

{

name = product.Name,

brand = brand.Name,

price = product.Price

};

Console.WriteLine("Danh Sach San Pham Cung Brand San Xuat Inner Join ");

foreach (var item in ketquaInnerJoin)

{

Console.WriteLine($"{item.name,10} {item.price,4} {item.brand,12}");

}

/\*Danh Sach KQ Left Join\*/

var ketquaLeftJoin = from product in products

join brand in brands on product.Brand equals brand.ID into t

from brand in t.DefaultIfEmpty()

select new

{

name = product.Name,

brand = (brand == null) ? "NO-BRAND" : brand.Name,

price = product.Price

};

Console.WriteLine("Danh Sach San Pham Cung Brand San Xuat Left Join ");

foreach (var item in ketquaLeftJoin)

{

Console.WriteLine($"{item.name,10} {item.price,4} {item.brand,12}");

}

}

public class Product

{

public int ID { set; get; }

public string Name { set; get; } // tên

public double Price { set; get; } // gia

public string[] Colors { set; get; } // cac mau sac

public int Brand { set; get; } // ID Nhãn hiệu, hãng

public Product(int id, string name, double price, string[] colors, int brand)

{

ID = id; Name = name; Price = price; Colors = colors; Brand = brand;

}

// Lấy chuỗi thong tin sản phẳm gồm ID, Name, Price

override public string ToString()

=> $"{ID,3} {Name,12} {Price,5} {Brand,2} {string.Join(",", Colors)}";

}

public class Brand

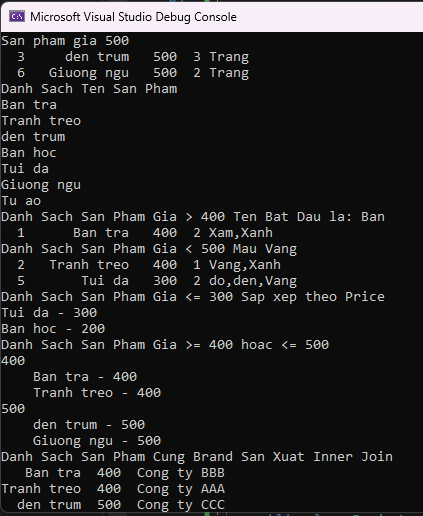
{

public string Name { set; get; }

public int ID { set; get; }

}

}



Text

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