**Evidence 03:**

1.       Create a console application Find out all the Product information by creating At least Three Class Name Category,Product, ProductModel. (Data of 3 table given in desktop as Product.txt file.) You must join three tables.

**Name** = HL Mountain Frame - Black, 44, Mountain Frames, HL Mountain Frame,

**ProductNumber** = FR-M94B-44,

**StandardCost**= 699.0928,

**ListPrice** = 1349.6,

**Weight** = 1251.91

----------------

**Name** = LL Road Frame - Red, 44, Road Frames, LL Road Frame,

**ProductNumber =** FR-R38R-44,

**StandardCost** = 187.1571,

**ListPrice** = 337.22,

**Weight** = 1052.33

**Name =** ML Mountain Frame - Black, 38, Mountain Frames, ML Mountain Frame-W,

**ProductNumber**= FR-M63B-38,

**StandardCost** = 185.8193,

**ListPrice** = 348.76,

**Weight**= 1238.3

---------------

**Name** = Mountain-100 Black, 38, Mountain Bikes, Mountain-100,

**ProductNumber =** BK-M82B-38,

**StandardCost**= 1898.0944,

**ListPrice** = 3374.99,

**Weight**= 9230.56

**Solution Evidence 03:**

**ProductCategory:**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace ProductLINQ

{

public class ProductCategory

{

public int ProductCategoryID { get; set; }

public string Name { get; set; }

public virtual ICollection<Product> Products { get; set; }

public ProductCategory()

{

Products = new HashSet<Product>();

}

public ProductCategory(int productCategoryID, string name) : this()

{

ProductCategoryID = ProductCategoryID;

Name = name;

}

}

}

**ProductModel:**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace ProductLINQ

{

public class ProductModel

{

public int ProductModelID { get; set; }

public string Name { get; set; }

public virtual ICollection<Product> Products { get; set; }

public ProductModel()

{

Products = new HashSet<Product>();

}

public ProductModel(int productModelID, string name) : this()

{

ProductModelID = productModelID;

Name = name;

}

}

}

**Product:**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace ProductLINQ

{

public class Product

{

public int ProductID { get; set; }

public string Name { get; set; }

public string ProductNumber { get; set; }

public string Color { get; set; }

public double StandardCost { get; set; }

public double ListPrice { get; set; }

public int Size { get; set; }

public double Weight { get; set; }

public int ProductCategoryID { get; set; }

public int ProductModelID { get; set; }

public virtual ProductCategory ProductCategory { get; set; }

public virtual ProductModel ProductModel { get; set; }

public Product()

{

}

public Product(int productID, string name, string productNumber, string color, double standardCost, double listPrice, int size, double weight, int productCategoryID, int productModelID) :this()

{

ProductID = productID;

Name = name;

ProductNumber = productNumber;

Color = color;

StandardCost = standardCost;

ListPrice = listPrice;

Size = size;

Weight = weight;

ProductCategoryID = productCategoryID;

ProductModelID = productModelID;

}

}

}

Program:

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace ProductLINQ

{

class Program

{

static void Main(string[] args)

{

Product[] Products = new Product[]

{

new Product { ProductID = 1, Name = "LL Road Frame - Red, 44", ProductNumber = "FR-R38R-44", Color = "Red", StandardCost = 187.1571, ListPrice = 337.22, Size = 44, Weight = 1052.33, ProductCategoryID = 18, ProductModelID = 9 },

new Product { ProductID = 2, Name = "LL Road Frame - Red, 48", ProductNumber = "FR-R38R-48", Color = "Red", StandardCost = 187.1571, ListPrice = 337.22, Size = 48, Weight = 1070.47, ProductCategoryID = 18, ProductModelID = 9 },

new Product { ProductID = 3, Name = "LL Road Frame - Red, 52", ProductNumber = "FR-R38R-52", Color = "Red", StandardCost = 187.1571, ListPrice = 337.22, Size = 52, Weight = 1088.62, ProductCategoryID = 18, ProductModelID = 9 }

};

ProductCategory[] ProductCategories = new ProductCategory[]

{

new ProductCategory { ProductCategoryID = 1, Name = "Bikes" },

new ProductCategory { ProductCategoryID = 2, Name = "Components" },

new ProductCategory { ProductCategoryID = 3, Name = "Clothing" },

new ProductCategory { ProductCategoryID = 4, Name = "Accessories" },

new ProductCategory { ProductCategoryID = 5, Name = "Mountain Bikes" },

new ProductCategory { ProductCategoryID = 6, Name = "Road Bikes" },

new ProductCategory { ProductCategoryID = 7, Name = "Touring Bikes" },

new ProductCategory { ProductCategoryID = 8, Name = "Handlebars" },

new ProductCategory { ProductCategoryID = 9, Name = "Bottom Brackets" },

new ProductCategory { ProductCategoryID = 10, Name = "Brakes" },

new ProductCategory { ProductCategoryID = 11, Name = "Chains" },

new ProductCategory { ProductCategoryID = 12, Name = "Cranksets" },

new ProductCategory { ProductCategoryID = 13, Name = "Derailleurs" },

new ProductCategory { ProductCategoryID = 14, Name = "Forks" },

new ProductCategory { ProductCategoryID = 15, Name = "Headsets" },

new ProductCategory { ProductCategoryID = 16, Name = "Mountain Frames" },

new ProductCategory { ProductCategoryID = 17, Name = "Pedals" },

new ProductCategory { ProductCategoryID = 18, Name = "Road Frames" },

new ProductCategory { ProductCategoryID = 19, Name = "Saddles" }

};

ProductModel[] ProductModels = new ProductModel[]

{

new ProductModel { ProductModelID = 1, Name = "Classic Vest" },

new ProductModel { ProductModelID = 2, Name = "Cycling Cap" },

new ProductModel { ProductModelID = 3, Name = "Full-Finger Gloves" },

new ProductModel { ProductModelID = 4, Name = "Half-Finger Gloves" },

new ProductModel { ProductModelID = 5, Name = "HL Mountain Frame" },

new ProductModel { ProductModelID = 6, Name = "HL Road Frame" },

new ProductModel { ProductModelID = 7, Name = "HL Touring Frame" },

new ProductModel { ProductModelID = 8, Name = "LL Mountain Frame" },

new ProductModel { ProductModelID = 9, Name = "LL Road Frame" },

new ProductModel { ProductModelID = 10, Name = "LL Touring Frame" }

};

var result = Products

.Select(pd => new { pd.Name, pd.ProductNumber, pd.StandardCost, pd.ListPrice, pd.Weight, pd.ProductCategoryID, pd.ProductModelID })

.Join(ProductCategories, pr => pr.ProductCategoryID, pc => pc.ProductCategoryID, (pr, pc) => new { pr.Name, Category = pc.Name, pr.ProductNumber, pr.StandardCost, pr.ListPrice, pr.Weight, pr.ProductModelID })

.Join(ProductModels, prc => prc.ProductModelID, pm => pm.ProductModelID, (prc, pm) => new { prc.Name, prc.Category, Model = pm.Name, prc.ProductNumber, prc.StandardCost, prc.ListPrice, prc.Weight }).OrderBy( a => a.Name).ThenBy(a => a.Category).ThenBy(a => a.Category);

foreach(var row in result)

{

string aProduct = row.ToString();

Console.WriteLine(aProduct.Replace("{ ", "").Replace(" }", ""));

}

Console.ReadKey();

}

}

}