LINQ Extension Methods

Introduction

We will create a list of “Invoice” objects and use LINQ extension methods to manipulate the list data.

What is LINQ?

LINQ (Language Integrated Query) is a data querying API with SQL syntaxes. Once data sources such as a collection of objects, database or XML files are created, LINQ provides various functions to query cached data from them. And then, developers are able to readily retrieve data from any object that implements the IEnumerable<T> interface.

Please refer to more details: https://www.c-sharpcorner.com/UploadFile/72d20e/concept-of-linq-with-C-Sharp/

Requirements

This project is based on LINQ extension methods.

1. Create an Invoice class which includes four properties
   - PartNumber (type int)
   - PartDescription (type string)
   - Quantity of item being purchased (type int)
   - Price(type decimal)

Part Number	Part Description	Quantity	Price
87	Electric Sander	7	57.98
24	Power Saw	18	99.99
7	Sledge Hammer	11	21.50
77	Hammer	76	11.99
39	Lawn Mower	3	79.50
68	Screw Driver	106	6.99
56	Jig saw	21	11.00

2. Perform the following queries on the array of Invoice objects and display the results:
   i) Use LINQ to select from each Invoice the PartDescription and value of the Invoice (i.e. Quantity * Price). Name the calculated column as InvoiceTotal. Order the results by invoice value in ascending order.
   ii) Part description of the part who has highest quantity.
   iii) Average price of the parts.