

Projektas – 10 taškų;

You are a software developer working for VI&KO Inc. - the consultancy arm of the Global EIF NET team!
We have recently been approached by a leading supermarket to help them develop some new software.

Part 1 (5 taškai)

You have been asked to build the software for a new checkout system for a supermarket.
The software takes inputs from the checkouts to produce the total.
This is achieved through the following interface.

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Supermarket
{
    public interface ICheckout
    {
        void AddProduct(IProduct product);
        float total();
    }

    public interface IProduct
    {
        string Name { get; set; }
        string Cost { get; set; }
    }
}
```

Create the code that implements the interface. Initially consider the following 5 products.

Product name	Product cost, Eur	Multi-buy offer
A	0.63	Buy 2 for the price of 1
B	0.20	
C	0.74	Buy 2; get B half price
D	0.11	
E	0.50	Buy 3 for the price of 2

Products can be added in any order and multi-buy offers should apply regardless of order.
Create unit tests to check that this works.

Part 2 (2 taškai)

You have been asked to build the stand alone software (as a separate project) for a new central display/control unit (DCU). The DCU unit is connected to any number of the checkouts and displays and prints the summarizing report for the retail area manager. At the same time, the DCU supervises the products quantities in the retail area and sends the inquiry to the stock manager for the updates of the products quantity in the retail area. From the other side, DCU unit is connected to the stock products database and updates this database (in the real-time). Checkouts are connected to the central display/control unit via serial interface (or message queuing).

Part 3 (2 taškai)

The DCU unit (as created in the part two) is connected with checkouts and updates the checkout local data with the latest information about the stock situation and prices.

Part 4 (1 taškas)

Develop a universal system for input of multi-buy offers via the DCU unit.