CS 140 – Introduction to Computer Science, HW4

You will create a backend for organizing data for a store. This program will be tested using only your objects and their methods / member functions using a driver program provided.

Requirements

Based on the provided UML diagram (see following slides to learn more about UML) of the class Product, create the followings:

- Create a class for Product and include all the fields (data members) as indicated in the UML diagram.
- Implement all the member methods as indicated in the UML diagram.
    - void addShipment(int shipmentQuantity, double shipmentCost)
        - Add shipmentQuantity to inventory and increase totalCost by shipmentCost. Do not replace totalCost, just increase its value.
        - Your program should catch negative shipment quantity and negative shipment costs.
    - double getPrice()
        - This function will calculate the current price based on the average cost per item over time plus a 25% markup.
          price = (totalCost / (inventory + numberSold)) * 1.25
    - void processOrder(int Quantity);
        - If there is not enough inventory, display a message that there is no enough items in inventory. Otherwise, decrease inventory by quantity and increase numSold by quantity.
        - Your program should catch negative quantity entries.
- Make sure you have your name and Bronco ID at the top of your code

```
/*    Name: Jane-Joe
*     Bronco ID: 12345678
*     Jon Doe helped me with……
*/
```

- For the given *StoreDriver.java* your program should display the following output,

```
New Guava shipment arrives!
Guava costs $0.31
Guava current inventory is 38 after 12 sold
New Guava shipment arrives!
Guava costs $0.30
Guava current inventory is 98 after 32 sold

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New Gala Apple shipment arrives!
Gala Apple costs $0.38
Gala Apple current inventory is 72 after 28 sold
New Gala Apple shipment arrives!
Gala Apple costs $0.32
Gala Apple current inventory is 267 after 68 sold
```

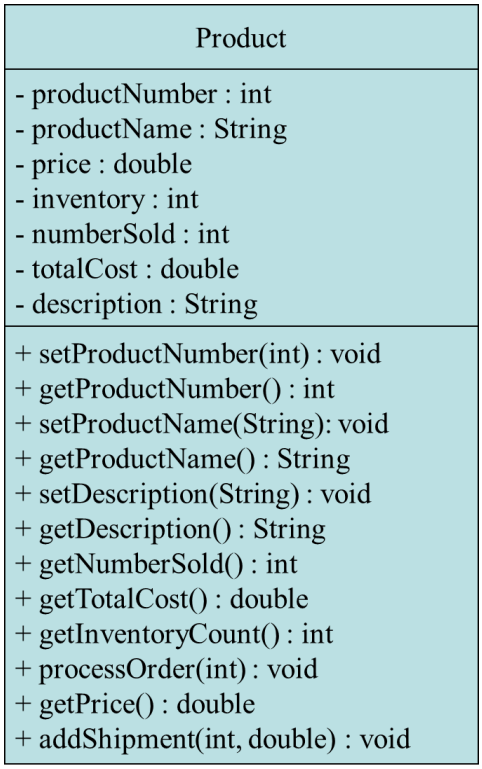

Due: November 15, 2017 by 6.00 PM. submit your Product.java file to Blackboard.

Total Points = 100

- Code complies to requirements: 70 points
- Good coding style: 20 points
- Correctness/Robustness: 10 points