Project4
CECS277 Fall 2021
Due September 27th 11:59 pm
Submit project4.zip folder before the deadline

Please make sure to follow the naming convention for your project. If your project does not run because of the naming issues, you won't receive any credit.

project4.zip should include **project4 Package** and **project4.jar**
project4 package will include the class **Inventory.java,** and **InventorySimulator.java**

Plagiarism/Academic Integrity Policy

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Any form of plagiarism or cheating will result in a failing grade on the assignment (at a minimum), and could result in a failing grade in the course or even university disciplinary action.

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Academic Information and Regulations-Cheating and Plagiarism

Inventory Class

Design an Inventory class that can hold information for an item in a retail store's inventory. The class should have the following private member variables.

Variable Name	Description
itemNumber	An int that holds the item's number.
quantity	An int that holds the quantity of the item on hand.
cost	A double that holds the wholesale per-unit cost of the item

Member Methods	Description
default constructor	Sets all the member variables to 0.
constructor #2	Accepts an item's number, quantity, and cost as arguments. Calls other class methods to copy these values into the appropriate member variables.
setItemNumber	Accepts an int argument and copies it into the itemNumber member variable.
setQuantity	Accepts an int argument and copies it into the quantity member variable.
setCost	Accepts a double argument and copies it into the cost member variable.
getItemNumber	Returns the value in itemNumber.
getQuantity	Returns the value in quantity.
getCost	Returns the value in cost.
getTotalCost	Computes and returns the totalCost.

Boolean ValidInt(int) validates for integer values entered by the user not to be negative. Call this method from **setItemNumber**, and **setQuantity**. Program should loop if negative values entered.

Boolean ValidFloat(double) validates for cost entered by the user not to be negative. Call this method from **setCost**. Program should loop if negative values entered.

Demonstrate the class by writing a simple client program that uses it. This program should user inputs and validate the user inputs to ensure that negative values are not accepted for item number, quantity, or cost.

I executed the jar file generated on the command line the way it was described during lecture.

java -jar project4.jar

Please see the sample output.

```
Demonstrating the default constructor...

Item number: 0
Quantity   : 0
Cost       : 0.0
Total Cost : 0.0

Demonstrating the overloaded constructor...

Item number: 124
Quantity   : 12
Cost       : $84.95
Total Cost : $1019.40

Demonstrating the "set" functions...

Item number: 243
Quantity   : 50
Cost       : $9.50
Total Cost : $475.00

Demonstrating the input validation functions...
```

```
Enter the Item number: -11
Item Number must be 0 or greater. Please re-enter:
1234

Enter the quantity: -12
Quantity must be 0 or greater. Please re-enter:
10

Enter the cost for each item: $-102
Cost must be 0 or greater. Please re-enter
124

Item number: 1234
Quantity   : 10
Cost       : $124.00
Total Cost : $1240.00
```