Take-Home lab

A number of Book sellers have a book club that awards points to its customers based on the number of books purchased each month.

Design a class called **BookClub**. Here are the relevant attributes.

* clientName
* numberOfPurchasedBooksPerMonth
* static int totalNumberOfSoldBooks

Be sure to include JavaDoc comments for constructors and methods and not to use any **magic numbers**

Provide a constructor that takes parameters to set only client Name and numberOfPurchasedBooksPerMonth. Pass all the necessary information to the constructor. This constructor must check the numeric parameter to ensure it’s not negative or zero. If the passed parameter was negative or zero an Illegal Argument Exception will be thrown with a suitable error message. The constructor also will add the numberOfPurchasedBooksPerMonth to the totalNumberOfSoldBooks if it was positive. The constructor will also accept a parameter to set the clientName field. The parameter will be used if it was not null. If the passed parameter was null an Illegal Argument Exception will be thrown with a proper error message

* Provide an accessor (get) for each **instance variable and for the static variable as well.** Note that the static variable accessor method is a static method.
* Provide a mutator (set) for clientName and numberOfPurchasedBooksPerMonth.

The mutator of clientName should validate the passed parameter and uses it if it was not null. If the passed parameter was null an IllegalArgumentException will be thrown with a suitable error message.

The mutator of numberOfPurchasedBooksPerMonth should add the passed parameter to the field numberOfPurchasedBooksPerMonth and to the static variable totalNumberOfSoldBooks if the passed parameter was valid. A passed parameter is considered valid if it not negative or zero. If the passed parameter was invalid it will be ignored and the value of the corresponding field will not change.

Note that both instance variable and static variable cannot be decreased.

Write a method called **public int calculateBookPoints()**. The method calculates and **returns** the number of points awarded. The points are awarded as follows:

* If a customer purchases 1 to 3 books, he or she gets 5 points per a book.
* If a customer purchases 4 to 7 books, he or she gets 15 points per a book.
* If a customer purchases 8 to 10 books, he or she gets 30 points per a book.
* If a customer purchases 11 or more books, he or she earns 60 points per a book.

Make sure to use symbolic constants instead of all the numbers in the class.

Upload the finished lab to the appropriate D2L drop box before the deadline. A suggested solution will be discussed in class and labs not already in the drop box will not receive any points.